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ABSTRACT

This course curriculum is intended for community college instructors and administrators to use in implementing an intermediate information processing course. A student's course syllabus provides this information: credit hours, catalog description, prerequisites, required texts, instructional process, objectives, student evaluation, and class schedule. A student lab guide is divided into six units. For each lesson within a unit, these materials are provided: objectives, a list of learning activities, information sheets, and exercises. Unit topics are database management, electronic spreadsheets, desktop management software, local area networks, electronic mail, and technical reports. The instructor's course syllabus outlines prerequisites, required tests, references, required equipment and materials, instructional process, and student evaluation. Competency statements and a course outline are included. The instructor's guide presents this information for each unit: contents, objectives, required equipment and materials, procedures, learning activities, evaluation, and answer keys. (YLB)

Curriculum Improvement Project

Region II

INTERMEDIATE INFORMATION PROCESSING

Developed by Beth Sartor

Prepared by:

Galveston College

With Support From:
Coordinating Board
Texas College and University System
Division of Community Colleges
and Technical Institutes
PVEP 87-1030-B-2
Project Director: Cheryl L. Willis, Ph.D.

June 30, 1987

FOREWORD

Galveston College is not unlike other small community colleges trying to keep its curriculum in sight of rapidly changing technologies. We are unique, however, in that we were given an opportunity by the Coordinating Board of the State of Texas through a grant of Carl D. Perkins Act vocational funds to undertake a major curriculum improvement project which had as its focus curricula for accounting, the allied health professions, microcomputer applications, and office occupations. The course curriculum that you have before you is one of nine courses or modules that were developed from this project. What cannot be immediately evident to you, though, is the sense of cooperation that governed the various phases of the project. The resulting benefits to the College, its faculty, and its staff as a result of this project, were many, including increased knowledge of the curriculum improvement process, increased knowledge of the ramifications of networking microcomputers, increased awareness of the vocational programs of other community colleges, and increased awareness of the need for staff development opportunities. The enduring impact of this project will come in the months ahead as our instructors, and hopefully other instructors across Region II and the state, implement the curricula. We at Galveston College are proud of the results of the Curriculum Improvement Project and hope that your college will share the benefits.

Dr. Marc A. Nigliazzo
Vice President and Dean of Instruction
June 10, 1987

REGION II

CURRICULUM IMPROVEMENT PROJECT

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Copies of the above course curriculum are available for a nominal cost from: Division of Business and Technology
Galveston College
4015 Avenue Q
Galveston, TX 77550

A C K N O W L E D G M E N T S

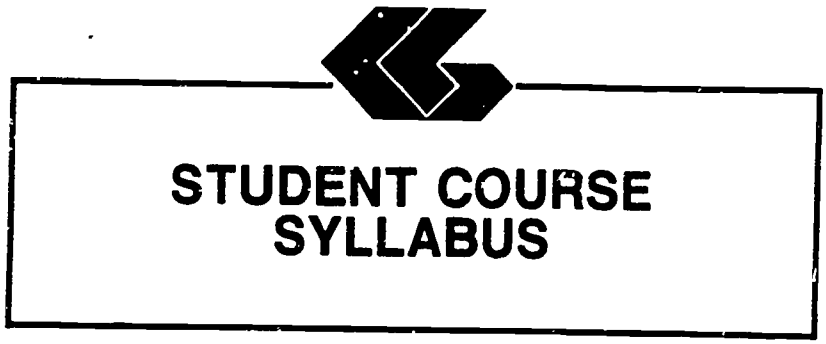
This course curriculum represents but one of the many final products of the Curriculum Improvement Project. I want to take this opportunity to thank those individuals who worked so hard together to bring this project to a successful conclusion. To the administration and the Board of Regents of Galveston College I wish to express my appreciation for their willingness to accept the challenges and risks associated with a project of this magnitude and for having the forethought to see its benefits for the college and the community. To the support staff in the Business Office and the Office of Planning and Development, thank you for your patience and helpfulness in providing the project staff with everything we needed--yesterday. To Karla Back, Assistant Dean of the Division of Business and Technology, for her constant encouragement of the vision of the project, I will be forever grateful. My most heartfelt thanks, though, go to the project team--all of the curriculum writers who gave 110 percent effort whenever it was needed; the various editors and word processors who helped us along the way; Paul Fama, Research Associate, who provided constancy and consistency; and Mary James, project secretary, who kept us all sane.

Galveston, Texas
June 30, 1987

Cheryl L. Willis, Ph.D.
Project Director

P R E F A C E

The role of the secretary and how work is accomplished in the office will change significantly in the next 5 to 10 years. Intermediate Information Processing takes into account the likely new functions of the secretary in an integrated office environment. The following course curriculum should be used as a resource by fellow instructors and administrators when making decisions about implementing a similar course at their institutions. This course curriculum contains four parts--student's course syllabus, student's laboratory guides for each unit, instructor's course syllabus, and instructor's guides for each unit of the course. The materials presented in this course curriculum are only a suggested format for a course of this nature and, as typical with community college curriculum, will undergo revision in the future. The author and Galveston College welcome your comments regarding your experience with these materials.


STUDENT COURSE
SYLLABUS

OFT 2401: Intermediate Information Processing

STUDENT'S COURSE SYLLABUS

Course Title: Intermediate Information Processing

Course Number:

OFT	2401	3	2	4
Prefix	No.	Lecture Hrs.	Lab Hrs.	Credit Hrs.

Course Description:

Information processing applications in a networked environment. Students will learn to use advanced word processing applications in addition to learning practical applications of a spreadsheet, data base, and graphics, as well as electronic mail and files. Lab fee.

Prerequisites:

OFT 1402 - Principles of Information Processing
This course gives hands-on experience in the basic operation of word processing on microcomputers. Course also covers theory, concepts, word processing system components and business applications necessary to develop proficiency-level skills.

CSC 1402 - Microcomputers and Their Applications
A study of microcomputer systems and their uses. Programming fundamentals of microcomputers, design, operation, and applications.

ACT 1401 - Elementary Accounting
An introductory course to provide the clerical, management and secretarial student with a knowledge of bookkeeping procedures which may be encountered in personal service enterprises, merchandise, notes and interest, the accrual basis of accounting, periodic summaries, and adjusting and closing accounts at the end of an accounting period.

Texts:

A. Spreadsheet

DDC Spreadsheets: Skill Building Exercises and Applications, by Iris Blanc and Cathy Vento, Dictation Disk Company, 1986. (Also Teacher Manual to Accompany)

Quick Reference Guide for Introductory Lotus 1-2-3 and for the IBM PC; correlated to DDC Spreadsheets: Applications and Exercises, by Iris Blanc and Elinore J. Hildebrandt, Dictation Disk Company, 1986.

B. Database

Database Applications, by William O. Drum, South-Western Publishing Company, 1986.

References:

The Illustrated Lotus 1-2-3 Book, by Thomas H. Berlinger and David T. Reeves, Wordware Publishing, Inc., 1985.

Lotus 1-2-3 A Ready Reference Manual, by Catherine Garrison, Mercedes A. McGowen, and Marilyn K. Popyk, Addison-Wesley Publishing Company, Inc., 1987.

Learning To use Supercalc3, dBase III, and Wordstar 3.3: an Introduction, by Gary B. Shelly and Thomas J. Cashman, Boyd & Fraser Publishing Company, 1986.

Microcomputer: Software and Applications, by Dennis P. Curtin and Leslie R. Porter, Prentice-Hall Publishing Company.

Equipment and Materials Required:

A. Software:
   1. DisplayWrite 4 by IBM
   2. Lotus 1-2-3 by Lotus Development Corp.
   3. dBase III by Ashton Tate
   4. SideKick by Borland International, Inc.
   5. Tutorial on E-mail by Applied Data Research.

B. Microcomputers with sufficient memory to run software the school has available. A ratio of one student to each microcomputer is necessary since this course requires hands-on exercises to be completed independently.

Instructional Process:

1. Student's Laboratory Guides provide outlines of laboratory assignments, equipment and materials, and steps to follow to complete each lab assignment.

2. Tests and quizzes will be given periodically.

3. Homework will be assigned as necessary.

Objectives:

Upon completion of this course, the student will be able to:

A. Design, create, edit, combine and copy electronic spreadsheet files, and produce graphs using electronic spreadsheet software.

B. Design, create, edit, update, combine and copy database files, and produce labels and reports using a database management system.

C. Define desktop management system, and use a desktop management software package.

D. Transfer database and electronic spreadsheet files to word processing files.

E. Produce a business or technical report, given a collection of data, using word processing, spreadsheet, graphics and database management software.

F. Demonstrate an understanding of decision-support functions by creating database and electronic spreadsheet files to use as decision-support (management) tools.

G. Use an electronic spreadsheet for basic bookkeeping functions.

H. Define and explain the functions and advantages of a local area network.

I. Evaluate factors in selecting a local area network.

J. Define and describe the functions of an electronic mail system.

K. Complete electronic mail tutorial.

L. Develop and demonstrate responsible work behavior in an automated environment and in a local area network environment.

M. Establish procedures for efficient work flow while working in a shared environment (LAN).

N. Exhibit a professional attitude in completing assigned tasks.

O. Exhibit independence in comprehending and applying written instructions given in software documentation and assigned tasks.

Evaluation of Students:

Examinations:

There will be two unit tests, one progress test, and one final project (Technical Report). No make-up exams will be given without prior approval.

Laboratory/Homework:

Assignments will be due according to lesson schedule. All assignments must be in mailable form. All exercises for one unit will be averaged for one unit grade. Late assignments will not be accepted after one week past the due date.

Work Habits:

Technique makes up 10% of the final grade. The technique grade will evaluate the student's ability to work alone asking questions only when necessary, the ability to make decisions after reading and comparing information, the ability to use the software with a minimum amount of help from the instructor, the ability to use time wisely, the ability to bring all necessary supplies and books to class, and the ability to maintain a positive attitude toward the course and the instructor.

Grades:

Final Grade Determination:
Grading Scale (suggested)

Unit Exams:
Unit 1 10%
Unit 2 10%

Lab Exercises:
Units 1, 2, 3, 4, and 5 40%

Final Project:
Unit 6 15%

Homework:
(Includes weekly library reports) 15%

Techniques and Work Habits:
(See attached form) 10%

FINAL SEMESTER GRADE ---------- 100%

Techniques and Work Habits

Name of student observed _____

Ten percent of your final grade is determined by the technique you practice throughout the semester. Your instructor has observed your display of the following behavior that is commendable or that needs attention.

	Dates Observed	Acceptable	Needs Attention
Ability to read and follow instructions.	_____	_____	_____
Works quietly without wasting time visiting with neighbor.	_____	_____	_____
Does not exhibit frustrations by making verbal protests or complaints.	_____	_____	_____
Remains calm and attentive to work.	_____	_____	_____
Consults with others only when necessary to resolve a problem.	_____	_____	_____
Makes an attempt to make work more efficient.	_____	_____	_____
Brings supplies to class.	_____	_____	_____
Accepts responsibility of completing work on time.	_____	_____	_____
Exhibits pride in documents turned in.	_____	_____	_____
Attendance and tardies.	_____	_____	_____

STUDENT LAB GUIDE

STUDENT'S LABORATORY GUIDE

OFT 2401: INTERMEDIATE INFORMATION PROCESSING

INTRODUCTION

In the last ten years, the role of the secretary has changed both rapidly and drastically. Most of these changes have been due to technological advances that make the secretary's work more efficient and productive.

The traditional secretary was required to be able to type, file, use a calculator, do simple bookkeeping, process the mail, schedule appointments, answer the phone/placing calls, and compose correspondence. Today's secretary still does all of these tasks, but most of these tasks are completed with the help of a microcomputer or mainframe and several different types of applications software.

Most of the typing and composing is now done on a word processor. Records are kept on a database management package. Bookkeeping is done using electronic spreadsheet software. Scheduling appointments and placing phone calls are also aided by the microcomputer with desktop management or office management software.

The Secretary has become an information processor. The field of information processing has opened up new career paths for secretaries.

This course, Intermediate Information Processing will acquaint you with some of the most popular business application software packages--Lotus 1-2-3, dBase III, and Sidekick.

STUDENT'S LABORATORY GUIDE

OFT 2401: INTERMEDIATE INFORMATION PROCESSING

INTRODUCTION

READING/SUMMARY ASSIGNMENT

You are constantly affected by our changing technological environment--the development of improved equipment and software as well as new attitudes and skills required to work in this environment.

Read one article a week throughout the entire course. Compose a summary of each article on your word processor. Include a source note giving the article title, author, the name of the magazine. Read only this year's magazines.

Read in the following content fields:

The Changing Role of the Secretary
New Equipment and Software
Career Paths for Secretaries
Career Paths in Information Processing

UNIT I

DATABASE MANAGEMENT

STUDENT'S LABORATORY GUIDE

UNIT I: DATABASE MANAGEMENT

LESSON 1: Concepts and Definitions

OBJECTIVES

1. Define and describe database.
2. Define redundant data and explain how a database management system reduces or does away with redundant data.
3. List the features usually included in a database management system.
4. Explain how data security and updates are accomplished when several users are sharing the same database.
5. Define the following terms: database management system, relational database, file, record, field, character field, date field, numeric field, logical field, memo field, file name, and command.

LEARNING ACTIVITIES

Date	Activity	Grade
_____	1. Read and study the following information concerning database management.	
_____	2. Using the objectives as study questions, write the answers to each one.	_____
_____	3. Complete Crossword Puzzle 1.	_____

DATABASE CONCEPTS

A database is a collection of data organized so that it can be retrieved and used by anyone needing it. Users may need only parts of the data stored in a database.

For example, we have a database of employees which includes the name, address, telephone number, employee number, salary, department, social security number and any other information we may need. The personnel department would need only certain parts of this information and the payroll department would need only certain parts such as name, social security number, and salary. Each department in the company would want a list of employees in their department only.

Each user has a different use or purpose to be served by the database, but several departments will need some of the same information, such as the employee name. This type of information is called redundant data; it is data that is the same for many users.

Now, each of these departments could set up a file which would include only the parts of the information that they needed, but this would require rekeying the same information many times. The solution to this problem is to put all the information in the same database; then, each user shares this database. Once the data is entered once in the database, each user can use any part of it and can print it out in any format he wants using a database management system.

A database management system is an application software package that can be used to create a database and store, access, sort, and make additions, deletions, and changes to that database. dBase II, dBaseIII, and pfs:FILE are a few examples of database management systems. You will be using dBase III to complete your modules for this class.

Common features included in most database management systems are:

1. The ability to establish data relationships within the database,
2. The facilities to create the database, load it with data, and maintain and update the database,
3. The facilities to allow the user to access the database and use the data stored there, and
4. A procedure for data security and control.

Data security is of utmost importance because corrupted data or data that is not kept up to date is of no use. However, only authorized people should be allowed to change the data in the main database so that the data will remain correct and up to date for all users.

The student record forms shown in diagram 1 will be used for creating and storing a database on disk. If we compare an electronic database to a manual filing system, we find that the entire set of records are referred to as a file. In our example, all the student records would be included in one file. Each form which contains information on one student is called a record.

The parts of this record, that is, the individual bits of information such as student name, student number, date enrolled, major, GPA, currently enrolled, etc., are called fields. In this example, the items printed in bold will be fields.

Student Name ____________________ **Student No.**______________

Date Enrolled ___________________ **Major** _______________

GPA _______ **Currently Enrolled?**___ **Keyboard Speed**______

Date of Graduation ______ **Major Related?**___ **Pay** ___________

Student Name ____________________ **Student No.**______________

Date Enrolled ___________________ **Major** _______________

GPA _______ **Currently Enrolled?**___ **Keyboard Speed**______

Date of Graduation ______ **Major Related?**___ **Pay** ___________

Student Name ____________________ **Student No.**______________

Date Enrolled ___________________ **Major** _______________

GPA _______ **Currently Enrolled?**___ **Keyboard Speed**______

Date of Graduation ______ **Major Related?**___ **Pay** ___________

DIAGRAM 1

In this course you will be using dBase III, a relational database, to create files. A relational database is one in which the information is printed in a series of rows and columns. The first file you will create is the Student File. The rows will contain the data (the information) on each student. The columns will contain the fields of information. All of the student records we enter into the database will comprise the student file. See Diagram 2 which shows a partial listing of the file.

STUDENT FILE

COLUMNS ARE FIELDS

ROWS ARE RECORDS

STUDENT NO.	STUDENT NAME	DATE ENR.	MAJOR	GPA	CUR ENR
6987	SMITH, KAY	08/25/86	IP	3.5	Y
9883	JONES, LEA	01/13/86	ES	2.7	Y
1010	MITCHELL, JIM	07/08/86	IP	3.2	Y
2020	KURT, SHARON	01/13/86	LS	3.5	Y
1327	SIMS, JAN	07/08/86	MS	3.0	Y

DIAGRAM 2

FIELD TYPES

There are several field types in databases. In dBase 3, the field types are character fields, date fields, numeric fields, logical fields, and memo fields. Study the chart below and use it as a reference as you plan and create your database files.

FIELD TYPE	DEFINITION	MAXIMUM NUMBER OF CHARACTERS
Character fields	Stores any printable character that can be entered from the keyboard	254
Date fields	Stores dates, usually in the format mm/dd/yy; can be used to add or subtract a number	8
Numeric fields	Stores integers (whole numbers, no decimal point) or decimal numbers; may contain + or -	15
Logical fields	Stores a single character that means a condition is true or false. Used T = true; F = false; Y = Yes; N = No (May use lowercase)	1
Memo fields	Stores large blocks of text such as words or sentences	4,000

CROSSWORD PUZZLE 1

Complete the crossword puzzle on the next page.

Down

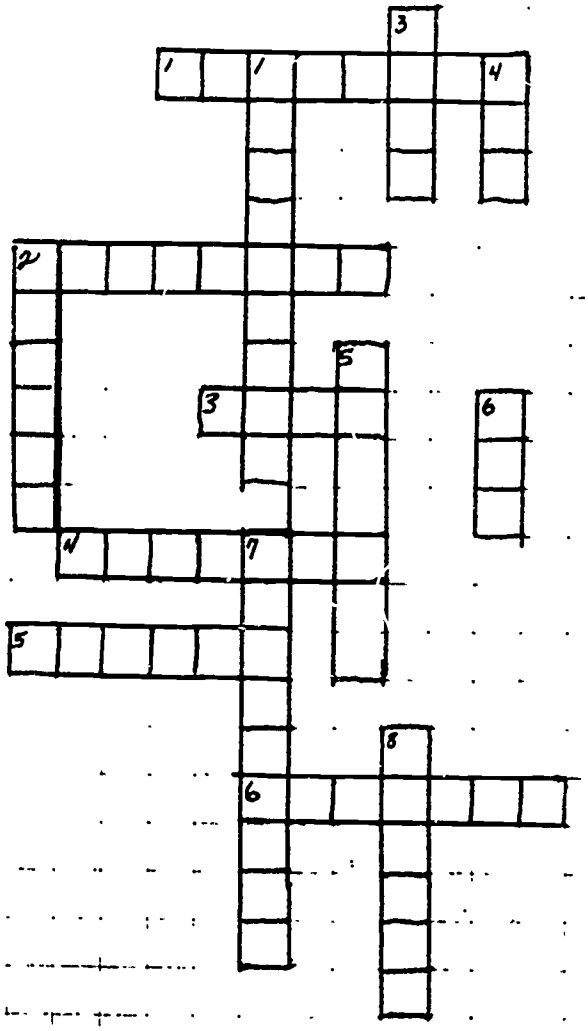
1. A student name would be stored in a ____ field
2. The database management system we will use in this class is ____
3. A collection of records is a ____
4. In a logical field, a Y stands for ____
5. ____ fields store data that satisfies a condition, either true o false
6. A character field may contain ____ characters
7. Data that is the same for many different users is called ____ data
8. The columns in a data base store ____

Across

1. The controls and procedures that are developed to ensure that a database is accurate and up-to-date are referred to as ____
2. A collection of data that can be retrieved and used by anyone needing it is a ____
3. ____ fields store the most data
4. A GPA would be stored in a ____ field
5. A row in a data base stores ____
6. A numeric field can store integer and ____ numbers

DATABASE

CROSSWORD PUZZLE 1



STUDENT'S LABORATORY GUIDE

UNIT 1: DATABASE MANAGEMENT

LESSON 2: PLANNING AND CREATING THE DATABASE

OBJECTIVES

1. Determine the structure of the database.

2. Name the fields.

3. Determine the width of each field.

4. Name the file according to rules given.

5. Plan and create a database given a set of data.

6. Use the following commands and/or functions in dBase: (Commands are listed in ALL CAPS for easy reference.)
   - load dBase III
   - **CLEAR**
   - **CREATE**
   - correct errors
   - view previous records when adding records to the database
   - **APPEND**
   - **DISPLAY ALL**
   - **DISPLAY ALL TO PRINT**
   - **LIST**
   - **LIST TO PRINT**
   - **QUIT**
   - **HELP**

LEARNING ACTIVITIES

Date	Activity	Grade
_____	1. Read the handout "Planning a Database".	
_____	2. Study the dBase Planner handout.	
_____	3. Read and study the dBase Planner, Example. The plans for creating the Student file are recorded on this planner. You will use this planner to create the database in Exercise 1.	
_____	4. Read the Help Command Handout.	
_____	5. Complete Exercise 1, Creating a dBase III File.	_____
_____	6. Check your printout using the key provided.	
_____	7. Complete exercise 2. Read and follow instructions.	_____
_____	8. Complete exercise 3. Read and follow instructions.	_____

PLANNING A DATABASE

A four-step plan is useful in planning your database:

It is a good idea to write the plans and discuss them with the users of the database to be sure you are including everything you needed. This can help avoid later revisions.

A written plan also provides information for data entry that will help all users to enter the data correctly.

The following plan must be followed (at least mentally) to set up the database. We will write our plans since this is the first database you will create.

1. Determine the structure of the database.
   a. list the types of information which will be a part of the database.

2. Name the fields.
   a. names should be short, but identify the information accurately

3. Determine the type and width of each field.

4. Name the database file.
   a. File names can be up to eight characters in length.
   b. The first character must be a letter of the alphabet.
   c. Other characters can be letters, numeric digits, or underscore.
   d. dBase III will supply the extension dbf (database file) if one is not supplied.
   e. Use a logical name to identify the contents of the file.

dBASE III PLANNER

Step 1-- Define purpose; information needed.

Step 2 & 3--Name the fields; determine their type and width.

Field Description	Field Name	Field Type	Width	Decimal Position

NOTES: Include items such as abbreviations used in the data, upper case or lower case, format for name, etc.

Step 4--Name

Name of dBase file _____

dBASE III PLANNER, EXAMPLE

Step 1-- Define purpose; information needed.

In the student database we want to be able to look up the student number, student name, date of first enrollment, major, GPA, and whether or not the student is currently enrolled.

Step 2 & 3--Name the fields; determine their type and width.

Use the following for the student database:

Field Description	Field Name	Field Type	Width	Decimal Position
Student number	Number	Character	4	
Student name	Name	Character	20	
Date first enrolled	Date	Date	8	
Major	Major	Character	2	
GPA	GPA	Numeric	3	2
Currently Enrolled?	Enr.	Logical	1	

NOTES: Include items such as abbreviations used in the data, upper case or lower case, format for name, etc.

Student name: Enter in all caps; use middle initial if provided.

Major: Use the abbreviations
LS = Legal Secretary
MS = Medical Secretary
ES = Executive Secretary
IP = Information Processing

GPA: Carry to two decimal places.

Currently Enrolled? Enter Y = yes
Enter N = no

Step 4--Name

Name of dBase file STUDENT

THE HELP COMMAND

dBase III has an on screen help command. The F1 key is used to access help command menus.

Another way to use HELP is to type HELP COMMAND at the dot prompt. For example if you needed help with displaying your database, you would type HELP DISPLAY. DISPLAY is one of the commands used in dBase. You can type HELP followed by any dBASE command, and the appropriate help screen will display.

Try accessing some help screens as you work with dBase in the following exercises.

EXERCISE 1, DATA

Use the following data to create the student database. See the next page for steps to follow in creating the database.

6987	SMITH, KAY	JAN. 13, 86	IP	3.58	Y
8773	JONES, LEA	JUNE 2, 85	ES	2.71	Y
1010	MITCHELL, JIM	JAN. 15, 86	IP	3.25	Y
1327	SIMS, JAN	JAN. 15, 86	MS	3.15	Y
2887	LASSITER, JANET	JAN. 15, 85	IP	2.50	Y
8746	SANTOS, LIZ	JAN. 15, 86	IP	3.95	Y
9773	LYNN, CARRIE	JAN. 13, 84	MS	2.77	N
7836	JOHNSON, MIMI	JUNE 2, 85	MS	3.60	Y
9833	LOOPER, JAMES	AUG. 21, 86	IP	3.80	Y
2773	HILL, ANNA	AUG. 21, 86	IP	3.50	Y
2873	DERRICK, JANICE	AUG. 21, 86	IP	2.95	Y
8377	SMITH, KAE	JUNE 2, 85	ES	3.0	Y
1787	JONES, WANDA	AUG. 21, 85	LS	3.95	N
1987	NORTH, RENDA	JAN. 13, 84	MS	3.25	N
8736	TRENT, KIMBERLY	JUNE 1, 84	LS	2.90	N
2978	THOMAS, BETTY	JUNE 1, 84	LS	3.75	Y
2987	CROWLEY, JUNE	AUG 21, 86	IP	2.90	Y
9837	DAVIS, LANA	AUG 21, 86	IP	2.75	Y
6376	CORWIN, AMY	JAN. 15, 86	LS	2.50	Y
7656	FRANCISCO, BETH	JAN. 15, 86	LS	4.00	Y
6450	HODGE, MOLLY	JUNE 2, 85	MS	4.00	Y
5867	RICE, JERRY	JUNE 2, 85	LS	3.75	Y

EXERCISE 1

Creating a dBase III File

On all exercises, commands will be typed in all caps for easy reference. Always press enter after typing a command. You will be reminded to press enter on the first few steps.

The backspace key and the cursor and delete keys can be used to correct errors while entering commands, field names, data, etc.

The enter and return keys are the same. Either word may be used in the steps to complete each exercise.

Steps	Explanation
LOADING DBASE:	
1. Boot with Dos. Place dBase disk in drive A, and type dbase. Press Enter	The dBase program will load into the main memory of the micro.
CLEARING THE SCREEN	
2. The first screen you see includes information about dBase licensing.	The licensing information is followed by a . which is followed by a blinking underscore cursor. . is called a dot prompt.
3. Type CLEAR. Press Enter.	The word "clear" appears at the dot prompt. When you press enter, the screen should show only the dot and the cursor.
SETTING THE DATA DRIVE	
4. Type SET DEFAULT TO B:	This sets up dBase to store your files on drive b.
5. Type CREATE. Press Enter.	The screen will say "Enter the name of the new file:"
6. Type Student. Press Enter.	The file name is listed as student.dbf. dBase adds the three letter file identifier, dbf, which stands for database file.
7. Type Number Press enter.	When you press enter, number is stored as the field name, and the cursor goes to field type.
8. Press the space bar.	Each time you press the space bar while the cursor is in the type area, you will see a different type of field displayed.

Steps	Explanation
9. Press the space bar until Char/text appears in window. Press enter.	Char/text will be stored as the field type for number. The cursor will move to width.
10. Type 4. Press enter.	This indicates that we are allowing 4 characters for the field, number. Since a char/text field cannot contain decimals, the cursor moves to the next line. A 2 appears on this line to indicate that you are now creating the second field of your dBase structure for this file.
11. Follow Steps 7-10 to create fields for name, date, major GPA, and enrolled.	Use the dBase Planner that you completed for information about each field.
12. When you have finished entering the enrolled field, the cursor should be on line 7 in the column, field name. Press enter.	This tells dBase that you are finished adding fields; you get the message Hit Return to confirm--any other key to resume.
14. If you are certain that your structure is correct, print screen; then press enter.	The screen will be cleared and the message "Input data records now? (Y/N)" will appear.
15. Type Y.	The first record screen will appear. It lists the field names you just created. It also supplies a Record No.
16. Enter the data for the first record. (see page 7)	If the data takes up all the space we allowed for it, the cursor will automatically move to the next field. If not, press enter to move to the next field.
17. Enter data for all students listed on page 7. Read the following NOTES before entering data. Try using the keys mentioned as you enter data.	

NOTES: As you enter records, you can use the cursor keys, the backspace key, and delete keys to correct errors. You can also enter records either in the insert mode or the replace mode.

You can view a previously entered record by pressing the Pg Up key. Return to the last record entered by pressing the Pg Dn key.

If you accidentally press return and go to the dot prompt before you finish entering data, type APPEND and press enter: the screen will return to the field name for the next record.

Steps	Explanation
18. After the last student data is entered, press enter while the cursor is in the blank number window on record 23.	This will return you to the dot prompt.
19. At the dot prompt, type DISPLAY ALL.	The records you entered will be displayed on the screen in the order in which you entered them.

Turn on the printer and check to see that it is on line.

20. At the dot prompt, type DISPLAY ALL TO PRINT	This will send the Student database to the printer.

The LIST and LIST TO PRINT commands work in much the same way, except that LIST will scroll the new records onto the screen when the screen is full. DISPLAY ALL lists a screen full and then asks you to press any key to continue.

21. At the dot prompt, type QUIT.	This exits the dBase program and goes back to DOS.

NOW YOUR DATABASE IS READY FOR USE! CHECK IT AND GO ON TO THE NEXT LESSON!

EXERCISE 2

1. Plan and create a database listing Information Processing Department Personnel. The employee identification number, the employee name, their title, their date of employment, and hourly salary will be needed.

   a. Plan the database using the dBase Planner form.
   b. Create the database and enter records given.
   c. Print

Following is an employee list for the Information Processing Department.

27270; ADURHOLD, ANN; PROOFREADER; SEPTEMBER 9, 1985; 8.50

63636; COPELAND, MARY; SECRETARY; JULY 29, 1984; 7.50

58909; THOMPSON, WILLIAM; INFORMATION PROCESSOR 2; JANUARY 22, 1986; 12.25

87654; THOMASSON, JAMIE; INFORMATION PROCESSOR 1; 10.00; JUNE 16, 1986

38390; BREMER, JANIE; PROOFREADER; SEPTEMBER 20, 1986; 10.00

39389; MIDDLETON, JOAN; INFORMATION PROCESSOR 2, JUNE 11, 1985, 14.00

76455; RUSTON, MIKE; INFORMATION PROCESSOR 1, AUGUST 15, 1985; 11.60

98878; SIPES, DONNA, INFORMATION PROCESSOR 1, AUGUST 15, 1985; 11.75

98277; ZANER, LAURA; INFORMATION PROCESSOR 1, JULY 1, 1985; 11.75

77387; PLAYER, LINDA; MANAGER, JULY 1, 1985; 21.25

98399; MITCHELL, RHONDA; INFORMATION PROCESSOR 2, JULY 1, 1986; 13.50

38388; HOLDEN, WANDA; PROOFREADER; JULY 1, 1986; 9.50

38883; LEMONS, DEBORAH; INFORMATION PROCESSOR 2, JULY 1, 1986, 13.75

39387; CROSS, JANA; INFORMATION PROCESSOR 1, AUGUST 22, 1985; 11.75

29987; BEACH, JERILYN; INFORMATION PROCESSOR 1, JULY 1, 1985; 12.00

EXERCISE 3

1. Plan and create a database which includes inventory and maintenance information on equipment. The serial number, type of equipment, model, the date purchased, date of maintenance, cost of maintenance or contract, and whether or not the equipment is on maintenance contract or a per call basis. If maintenance is on a per call basis include the cost/hr. for a maintenance call.

   a. Plan the database using the dBase Planner form.
   b. Create the database and enter records given.
   c. Print

Following is a partial list of equipment for the business department.
C = CALCULATOR T = TYPEWRITER M = MICRO

28288; C; VICTOR; PURCHASE DATE, JULY 22, 1985; NO CONTRACT; 20.00/HR; NO MAINTENANCE

28289; C; VICTOR; PURCHASE DATE, JULY 22, 1985; NO CONTRACT; 20.00/HR; AUGUST 29, 1986

28290; C; VICTOR; PURCHASE DATE, JULY 22, 1985; NO CONTRACT; 20.00/HR; APRIL 4, 1987

28291; C; VICTOR; PURCHASE DATE, JULY 22, 1985; NO CONTRACT; 20.00/HR; NO MAINTENANCE

28292; C; VICTOR; PURCHASE DATE, JULY 22, 1985; NO CONTRACT; 20.00/HR; NO MAINTENANCE

28293; C; VICTOR; PURCHASE DATE, JULY 22, 1985; NO CONTRACT; 20.00/HR; JANUARY 28, 1986

28294; C; SANTRON; PURCHASE DATE, JULY 22, 1985; YES CONTRACT; NO MAINTENANCE

28295; C; SANTRON; PURCHASE DATE, JULY 22, 1985; YES CONTRACT; FEBRUARY 22, 1986

28296; C; SANTRON; PURCHASE DATE, JULY 22, 1985; YES CONTRACT; NO MAINTENANCE

28297; C; SANTRON; PURCHASE DATE, JULY 22, 1985; YES CONTRACT; JUNE 14, 1986

28298; C; SANTRON; PURCHASE DATE, JULY 22, 1985; YES CONTRACT; JUNE 14, 1986, SEPTEMBER 5, 1986

28299; C; SANTRON; PURCHASE DATE, JULY 22, 1985; YES CONTRACT; NO MAINTENANCE

dBASE III PLANNER

Step 1-- Define purpose; information needed.

Step 2 & 3--Name the fields; determine their type and width.

Field Description	Field Name	Field Type	Width	Decimal Position

NOTES: Include items such as abbreviations used in the data, upper case or lower case, format for name, etc.

Step 4--Name

Name of dBase file _____

dBASE III PLANNER

Step 1-- Define purpose; information needed.

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dBASE III PLANNER

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NOTES: Include items such as abbreviations used in the data, upper case or lower case, format for name, etc.

Step 4--Name

Name of dBase file _____

STUDENT'S LABORATORY GUIDE

UNIT 1: DATABASE MANAGEMENT

Lesson 3: Editing, Displaying, Counting, Sum, and Average

OBJECTIVES

The student will be able to:

1. Use the following commands in dBase III:
   DIR
   USE
   DISPLAY STRUCTURE
   DISPLAY OFF
   DISPLAY NEXT
   DISPLAY RECORD
   GO
   GOTO
   DISPLAY FOR
   COUNT
   AVERAGE
   SUM
   APPEND
2. Display certain fields and records.
3. Use relational operators with the DISPLAY FOR command.
4. Search for conditional data in the file, for example, search for a certain name.
5. Display logical fields.
6. Use logical operators with the DISPLAY FOR command.

LEARNING ACTIVITIES

Date	Activity	Grade
_____	1. Complete and check Exercise 1.	_____
_____	2. Complete and check Exercise 2.	_____
_____	3. Complete and check Exercise 3.	_____

EXERCISE 1

Steps	Function
1. At the dot prompt, type dir b:	This gives you a list of documents you have on drive b so far. You should have student.dbf listed.
2. Type USE STUDENT.	The USE command tells dBase that you want to open an existing file. USE STUDENT, therefore lets us use the student file created in the last lesson.

NOTE: ONCE YOU HAVE SPECIFIED THE FILE USING THE USE COMMAND, THAT IS THE ACTIVE FILE UNTIL YOU CLOSE IT AND SPECIFY ANOTHER FILE TO USE.

3. Type DISPLAY STRUCTURE. Print screen.	The DISPLAY STRUCTURE command allows you to review the structure used with this file. The screen includes the filename, the number of records entered so far, date of last update, field information, and total number of characters.
4. Type DISPLAY OFF. Then type LIST. Print screen.	Notice that the records are listed without the record ID number usually supplied by dBase III. This is because you turned off the record ID no. with the DISPLAY OFF command.
5. Read the handout, Displaying Selected Records.	Use it for reference.
6. Type DISPLAY ALL NAME, MAJOR. Print screen.	The name and major fields will be displayed.
7. Type DISPLAY ALL MAJOR, GPA. Print screen.	The major and gpa fields will be displayed.
8. Type DISPLAY ALL DATE, NAME. Print screen.	Notice that the date field is displayed first.
TURN ON PRINTER 9. Type DISPLAY ALL NAME, GPA TO PRINT.	The name and GPA fields will be listed by the printer.

10. Type DISPLAY RECORD 7.
Print screen.

The system searches for record number 7 using the record ID numbers that it assigned when the database was created.

11. Type DISPLAY NEXT 5.
Print screen.

The next five records are displayed, beginning with the active record, record 7. So you should see records 6 through 10 displayed.

13. a. Type GOTO TOP. Press enter.
b. Type DISPLAY.

GOTO TOP sends dBase III in search of the first record in the file. When you then type DISPLAY and press enter, the first record is displayed.

14. a. Type GOTO BOTTOM.
b. Type DISPLAY.

GOTO BOTTOM sends dBase III in search of the last record in the file.

NOTE: The commands GO TOP AND GO BOTTOM will do the same thing. The command GOTO followed by a record number will search that record. Again, you must type "display" to see the record once it is searched.

15. Read the DISPLAY FOR explanation that follows.

DISPLAY FOR

dBase can display records and fields within records based upon conditions specified within a DISPLAY FOR command. The correct format for this command is DISPLAY FOR {CONDITION}. For example, DISPLAY FOR NUMBER = 222 would search for and display the record with the number equal to 222.

Relational operator symbols are used in the DISPLAY FOR command. They are:

=	Equal to
<	Less than
>	Greater than
<=	Less than or equal to
>=	Greater than or equal to
<>	Not equal to

16. Type DISPLAY FOR MAJOR = "IP" TO PRINT.

The Information Processing Majors will be displayed.

17. Type DISPLAY FOR GPA > 3.5 TO PRINT.

The students with a GPA of greater than 3.5 will be displayed.

18. Type DISPLAY FOR NAME = "SMITH". — This can be used to search for a record by name or other condition.

19. Type DISPLAY FOR NAME = "C". — The names starting with "c" will be displayed.

YOU CAN SEE THAT THIS COMMAND IS VERY USEFUL AND VERSATILE.

20. Type DISPLAY FOR ENR TO PRINT.. — This displays all currently enrolled students; all students who have a y or t under enrolled.

21. Read the Logical Oper tors description that follows.

Logical operators an also be used in commands. The Logical operators are:

.NOT.	Test to determine if a condition is not true
.AND.	Used to combine conditions; both conditions must be true for the condition combined by the entry
.OR.	Used to combing conditions; one or the other condition must be true for the combined condition to be true

22. Type DISPLAY FOR .NOT. ENR. — Those students not currently enrolled will be displayed.

23. Type DISPLAY FOR MAJOR = "IP" .AND. GPA > 3.0 TO PRINT. — Information processing student with a GPA higher than 3.0 will display.

24. Type DISPLAY FOR MAJOR = "IP" .OR. GPA > 3.5 TO PRINT. — Information processing students will displayed (any (GPA) as well as other majors with GPA greater than 3.5.

25. Type COUNT. — The number of records in the active database will be displayed (22).

26. Type COUNT FOR MAJOR = "IP" — The number of IP students will be displayed (8).

27. Type COUNT FOR GPA >= 3.5 — The number of students with GPA 3.5 or above will display (10).

The AVERAGE command can be used to get the mathematical average of a numeric field.

28.	Type AVERAGE GPA.	The average GPA for all students will be displayed (3.33).
29.	Type AVERAGE GPA FOR MAJOR = "LS".	The average GPA for all Legal Secretary students will display (3.48).
30.	Type USE.	This closes the student file.
31.	Type USE IPPERSON.	This opens the information processing personnel file and makes it the active database.

The SUM command can be used to total one or more numeric fields in the active database.

32.	Type SUM PAY.	This adds the hourly pay rate for all employess and displays this information. ($179.10)
33.	Type SUM PAY FOR TITLE = PROCESSOR 2.	The sum of the hourly pay for the category Information Processor 2's is displayed. (53.50)

EXERCISE 2

1. Display the information processing personnel database and print it.

2. What is the average salary of the title processor 2? _____
   processor 1? _____

3. What is the exact command you gave in each case in question 2 to determine the averages in dBase?

4. What is the total hourly pay for all personnel in proofreading? _____

5. What command did you use to determine this total?

6. Print a list of employees that make $13.00/hr. or more.

7. What is the exact command used to determine this.

EXERCISE 3

1. Add the following records to the maintenance database.
   Type USE MAINTEN
   Type APPEND. Press enter; then add the following records.

27666; T; OLIVETTI; PURCHASE DATE JANUARY 15, 1985; YES CONTRACT NO MAINTENANCE

27667; T; OLIVETTI; PURCHASE DATE JANUARY 15, 1985; YES CONTRACT SEPTEMBER 14, 1986, MARCH 19, 1987

27668; T; OLIVETTI; PURCHASE DATE JANUARY 15, 1985; YES CONTRACT NO MAINTENANCE

27669; T; OLIVETTI; PURCHASE DATE JANUARY 15, 1985; YES CONTRACT NO MAINTENANCE

27070; T; IBM; PURCHASE DATE JANUARY 15, 1975; YES CONTRACT JUNE 22, 1978, APRIL 16, 1980, OCTOBER 11, 1983, MAY 22, 1985 AUGUST 24, 1986, SEPTEMBER 11, 1987, JANUARY 19, 1987

27071; T; IBM; PURCHASE DATE JANUARY 15, 1980; YES CONTRACT OCTOBER 21, 1983, JANUARY 29, 1986, SEPTEMBER 22, 1987

27072; T; IBM; PURCHASE DATE JANUARY 15, 1984; YES CONTRACT AUGUST 22, 1985, JULY 21, 1986, SEPTEMBER 12, 1987, NOVEMBER 14, 1987, JANUARY 21, 1987

29111; M; IBM; PURCHASE DATE AUGUST 22, 1986, YES CONTRACT; OCTOBER 11, 1986

29112; M; IBM; PURCHASE DATE AUGUST 22, 1986, YES CONTRACT; SEPTEMBER 23, 1986, APRIL 4, 1987

29113; M; IBM; PURCHASE DATE AUGUST 22, 1986, YES CONTRACT; NO MAINTENANCE

29200; M; NCR; PURCHASE DATE OCTOBER 11, 1986, YES CONTRACT; NO MAINTENANCE

29201; M; NCR; PURCHASE DATE OCTOBER 11, 1986, YES CONTRACT; JANUARY 21, 1987

29203; M; NCR; PURCHASE DATE OCTOBER 11, 1986, YES CONTRACT; NOVEMBER 3, 1986, NOVEMBER 17, 1986, OCTOBER 1, 1986

29204; M; NCR; PURCHASE DATE OCTOBER 11, 1986, YES CONTRACT NO MAINTENANCE

7300010; D; IBM; PURCHASE DATE AUGUST 21, 1983, NO CONTRACT; 100/HR.; SEPTEMBER 30, 1986

7300011; D; IBM; PURCHASE DATE AUGUST 21, 1983, NO CONTRACT; 100/HR.; NO MAINTENANCE

2. After adding all records, type USE MAINTEN to store additions on disk.

3. Print a list of all equipment that we do not carry a service contract on.

STUDENT'S LABORATORY GUIDE

UNIT I: DATABASE MANAGEMENT

Lesson 4: Sorting

OBJECTIVES

1. Define and describe sort and key field.
2. Sort in ascending and descending order.
3. Sort selected fields from a file.
4. Sort on multiple fields.
5. Define and use the following commands:
   SORT TO filename ON field name
   SORT TO filename ON field name /D (Descending)
   SORT TO filename ON field name FOR field name
   SORT TO filename ON field name, field name

LEARNING ACTIVITIES

Date	Activity	Grade
_____	1. Read handout on The Sort Command.	
_____	2. Complete Exercise 1.	_____
_____	3. Complete Exercise 2.	_____

THE SORT COMMAND

The records in a database are displayed in the order in which they were entered unless we change that order using the SORT command. Records can be sorted in several different sequences. For example, we may want an alphabetical list by last name, in ascending or descending order by pay rate or GPA, or by last name within departments or majors.

Look at the student database. If we want an alphabetical list by last name, we would sort using the field name, name. This field is called the key field--the field used as the basis for sorting. If we wanted an alphabetical list by last name within each major, we would use two key fields--name and major.

Unless you specify otherwise, dBase III sorts fields in ascending order. You will learn to sort in descending order as well.

When you sort a database, you store the newly created file under another filename. This filename should be something logical which will identify the sort pattern and the file being sorted. The original file will remain in its original order. For example, we could alphabetically sort student.dbf to a file we name alphastu.dbf. Another way to name sorted files is to number them; for example, sort1, sort2, sort3.

EXERCISE 1

Steps	Explanation
1. Set the default drive to b: Use the ipperson file.	
2. Type SORT TO SORT1 ON NAME.	While sorting takes place, the message 00% sorted appears on screen. When sorting is completed, the message 100% Sorted No. of records sorted is shown.
3. To display the sorted file, type USE SORT1; then type DISPLAY ALL. Print. Type USE to close SORT1.	The sorted file will display on your screen.
4. USE IPPERSON. Type SORT ON NAME TO SORT2. Display the file.	You will get the same results using ON or TO after the command SORT.
5. Type SORT TO SORT3 ON PAY DESCENDING. Use SORT3; print.	The sorted file will contain records listed in descending order by hourly pay.
6. USE IPPERSON. Type SORT TO SORT4 ON TITLE, NAME. Print.	The new file will be sorted first by department and then by names within each department. You must specify the most important field first when sorting on more than one field.
7. Use the Student file. Type SORT TO SORT 5 ON NAME FOR ENR. Print.	This sort operation uses a logical field as one of the key fields. The output will contain all currently enrolled students sorted by name. The condition FOR followed by a logical field name gives this result.
8. Type SORT TO SORT6 ON MAJOR FOR ENR. Print. Remember to close the file.	This file will contain a list of currently enrolled students sorted by major.

EXERCISE 2

Use the commands you learned in lesson 4 to sort the student file as indicated. Record the commands used for each and print a copy of each new file.

1. Sort the student file starting with the most recent date. Name the new file stusort1.

2. Sort the student file with GPA in ascending order. Name the new file stusort2.

3. Sort the student file to obtain a list of all students by major. Name the file stusort3. Print a list of Information Processing and Legal secretary students.

EXERCISE 3

Use the commands you have learned to add to and sort the information processing personnel file as indicated. Record the commands used for each and print a copy of each new file. Use the file name ipsort1.

1. a. Add the following records to the ipperson.dbf.

34452; SINGH, GEORGIA; PROOFREADER; 09/12/86; 9.00

77387; ABBOT, LILA; PROCESSOR 2; 10/21/85; 12.75

98837; KRAMER, PHYLLIS; PROCESSOR 2; 11/11/85; 13.00

87379; TRENT, MICHAEL; PROCESSOR 1; 12/01/85; 12.00

45834; SIMS, MONICA; PROCESSOR 1; 09/18/85; 11.75

87837; SIMSON, KALA; PROCESSOR 2; 08/26/85; 13.75

93837; LANDON, REBECCA; PROOFREADER; 09/06/85; 9.50

   b. Sort the updated file by name.

2. Sort this file in order of date hired starting with 1984. Name the file persort.1

3. Sort the file by pay rate with the
   a. lowest pay listed first. Name this one paysorta.

   b. highest pay listed first. Name this one paysortd.

4. Sort the file by title and name with title being the most important sort. Name the file titleper.

5. What is the average salary of the position
   a. proofreader

   b. processor 1

   c. processor 2

STUDENT'S LABORATORY GUIDE

UNIT 1: DATABASE MANAGEMENT

Lesson 5: Creating and Printing Reports

OBJECTIVES

1. Use a printer spacing chart to design dBase report form.
2. Create and print a dBase report including a page number, the date, a title, and column headings.
3. Create and print a report using selected records from a file.
4. Modify a report.
5. Prepare and print a report with subtotals.
6. Use the following commands:
   CREATE REPORT

LEARNING ACTIVITIES

Date	Activity	Grade
_____	1. Read the handout Designing a dBase Report.	
_____	2. Design your report in exercise 1 using the examples given and a printer spacing chart.	_____
_____	3. Complete exercise 1.	_____
_____	4. Complete exercise 2.	_____
_____	5. Complete exercise 3.	_____

DESIGNING A dBASE REPORT

So far, our printouts of files have been lists in simple format. We have not changed the appearance of the output; only the order of the records listed.

However, dBase has a report-generating feature that allows you to print report in a more usable business-like format. This feature allows you to create a report that includes a page number, a date, a title, column headings, subtotals, totals, etc.

To use this feature, the command CREATE REPORT is used. This one command begins a series of screens on which you are prompted to enter information. It will be very important for you to read what is on each screen as you create reports. Most of the instructions are on the screens.

Designing a report using a printer spacing chart or graph paper is recommended. You will need something to refer to as you enter your format choices on each screen. The chart will help you visualize your report format. An example is included for reference.

THE PRINTER SPACING CHART

Look at the printer spacing chart. You will follow these steps in designing reports in this lesson. (see page 10)

1. Determine the left margin.

   On the example given, a left margin of 5 was used.

2. Enter the page number, the date, and the report heading. The page number and date location are pre-determined by dBase. The report heading will be centered automatically by dBase when you have completed the next step.

3. Determine what your column headings will be. Try to keep them no longer than the width of the field they identify. You can use more than one line for column headings. They will be followed by three blank lines.

   In the example, the column headings employee name, department name, pay rate, and weekly pay are used.

4. Mark off with x's the number of characters allowed in each field.

   In the example, 20 characters are allowed for the employee name, 10 for the department name, 5 for the pay rate (including one for the decimal) and 8 for the weekly pay. Once you have done this, the spaces remaining to the right of the entries make up the right margin. In the example, the right margin is 28. We used 5 spaces for the left margin and 47 for the report area; we had 80 columns to work with (80-52=28)

Summary

dBase provides the following: location and display of the page number, date, 3 blank lines after the report heading, 1 blank line between each field, the entry Total and the actual total at the bottom of the report.

You control the rest.

EXERCISE 1, LESSON 5

DESIGNING A REPORT

In this exericse, we will design a report form for the information processing file. It will include the name, title, hourly pay, and weekly pay.

1. Determine the left margin.

   We will use a left margin of 10. Remember that this is determined by you. We are using 10 because our report will use only four fields and will not require much space horizontally.

2. Enter the page number, the date, and the report heading. The page number and date location are pre-determined by dBase. The report heading will be centered automatically by dBase when you have completed the next step.

   Write the page number 1, the current date, and the report heading INFORMATION PROCESSING PAYROLL on the chart.

3. Determine what your column headings will be. Try to keep them no longer than the width of the field they identify. You can use more than one line for column headings. They will be followed by three blank lines.

   We will use Employee Name, Title, Pay Rate and Weekly Pay for our column headings. Record these on the printer spacing chart.

4. Mark off with x's the number of characters allowed in each field. Refer to the file structure if you do not remember the number allowed in each field.

   Record x's for the width of the name field, the width of the title field and the width of the pay field. Allow 8 columns for the weekly pay.

Check your work: Your right margin should be 21.

NOW THAT THE REPORT IS DESIGNED, USE dBASE TO HELP YOU GENERATE THE REPORT FORMAT!

EXERCISE 2, LESSON 5

CREATING THE REPORT

1. Make ipperson.dbf the active file. Type CREATE REPORT PAYROLL.

   This filename will be Payroll.frm.

   The CREATE REPORT command is issued followed by a filename under which you want the report form stored. dBase will supply an identifier, .frm after the filename; this indicates that it is a report form.

2. At the top of the first screen, you will see the name of the active file, along with its structure. Beneath the double lines is the display Page heading; the cursor is in the reverse video area. Type Information Processing Payroll.

   There is room for a four line heading in the report. We need only one line. Press enter until the cursor is on the line Page width positioned at 80. 80 is the default width. We will not change it. Press enter to accept it.

3. Now the cursor is positioned on the Left margin selection line. Enter 10, the left margin we decided to use.

   When you press enter, the value you selected will be displayed.

4. Fill in the remaining lines. Right margin = 21. # lines /page: = 58. Double space report? N

   Press enter after each choice is made. Accept # of lines/page = 58. This is the default.

5. The next screen allows you to set up subtotals on a report. Press pgdn.

   PgDn takes you to the next screen; you will not need subtotals for this report.

6. On this screen you will set up field 1. The >>> stand for the columns in the left margin. The <<<< indicate columns left (remaining).

   Notice that the <<<< changes as you type.

7. The cursor is in the first reverse video block, field contents. Type the first field name to use, NAME.

   Remember: Field contents = field name.

8. In the next block, Field header, type the column heading you want to appear in the report. Space six times to center the heading. Type EMPLOYEE. Press enter. Type NAME centered under EMPLOYEE. Press Enter. Press PgDn.

When you press PgDn, the next screen will appear.

9. Fill in the screens for fields 2 and 3.

Field 2 information is similar to field 1.

10. On the screen for field 3, you will fill in the decimal position for the field pay. Total? N

Press PgDn when this screen is completed; then follow steps listed for field 4.

11. For the Field contents, type PAY * 40.

This indicates to dBase to figure the weekly pay using 40 hours times hourly pay.

12. Set decimal places to 2. Press enter. Set total to Y.

dBase will figure the weekly pay.

13. Type Weekly Pay as the Field header. Place Weekly on line 1 & Pay on line 2.

Notice that field width is already displayed as 8. dBase figures this by adding the field width of pay (5) plus the width of 40 (2) plus one extra space.

14. Since a width of 8 is correct, press PgDn to accept it and go to the next screen.

On this screen the report format is displayed. Proofread it. Notice that columns left = 0; we have used the entire report area.

15. If you need to make corrections, depress PgUp to return to previous screens. Use PgDn to return to this last screen after making any corrections.

16. Press CTRL + END to save the report form on disk. The screen returns to the dot prompt.

This report form will be saved under the filename PAYROLL.FRM and can be used again.

17. Type REPORT FORM PAYROLL TO PRINT.

The report will print and will be displayed on the screen. Notice that the heading pay rate & weekly pay are right justified; this is the format dBase III uses.

EXERCISE 3, LESSON 5

PREPARING REPORTS USING SELECTED RECORDS

REPORTS WITH SUBTOTALS

Reports using selected records:

Steps	Explanation
1. Type Use TITLEPER.	This makes TITLEPER the active file. This is the file you created previously by sorting on title and name.
2. Type REPORT FORM PAYROLL FOR TITLE = "PROCESSOR 1" TO PRINT.	This simple command allows you to print information in many varied ways. All Processor I employees are printed and displayed in alpha order.

Reports with subtotals:

Next, let's produce a report with groups of employees by title with subtotals of hourly pay for each group. We could create another report form, but instead we will modify IPPAYROL.

1. TITLEPER is already the active file. Type MODIFY REPORT PAYROLL. Press Enter.	You will see the first screen that you created previously. All entries on this screen are correct.
2. Press PgDn.	This screen allows us to specify subtotals.
3. The cursor is at Group/ subtotal on: Type Title	This tells dBase III to take a subtotal each time the group Title changes.
4. Press CTRL + END.	There are no other changes needed so we save this new report form.
5. Type USE TITLEPER. Type REPORT FORM PAYROLL TO PRINT.	The report will print in the new format, including subtotals.

EXERCISE 5, LESSON 5

1. Create a report to list student number, student name, and major sorted in alpha order by name. Name the report form Major. Use a left margin of 25.

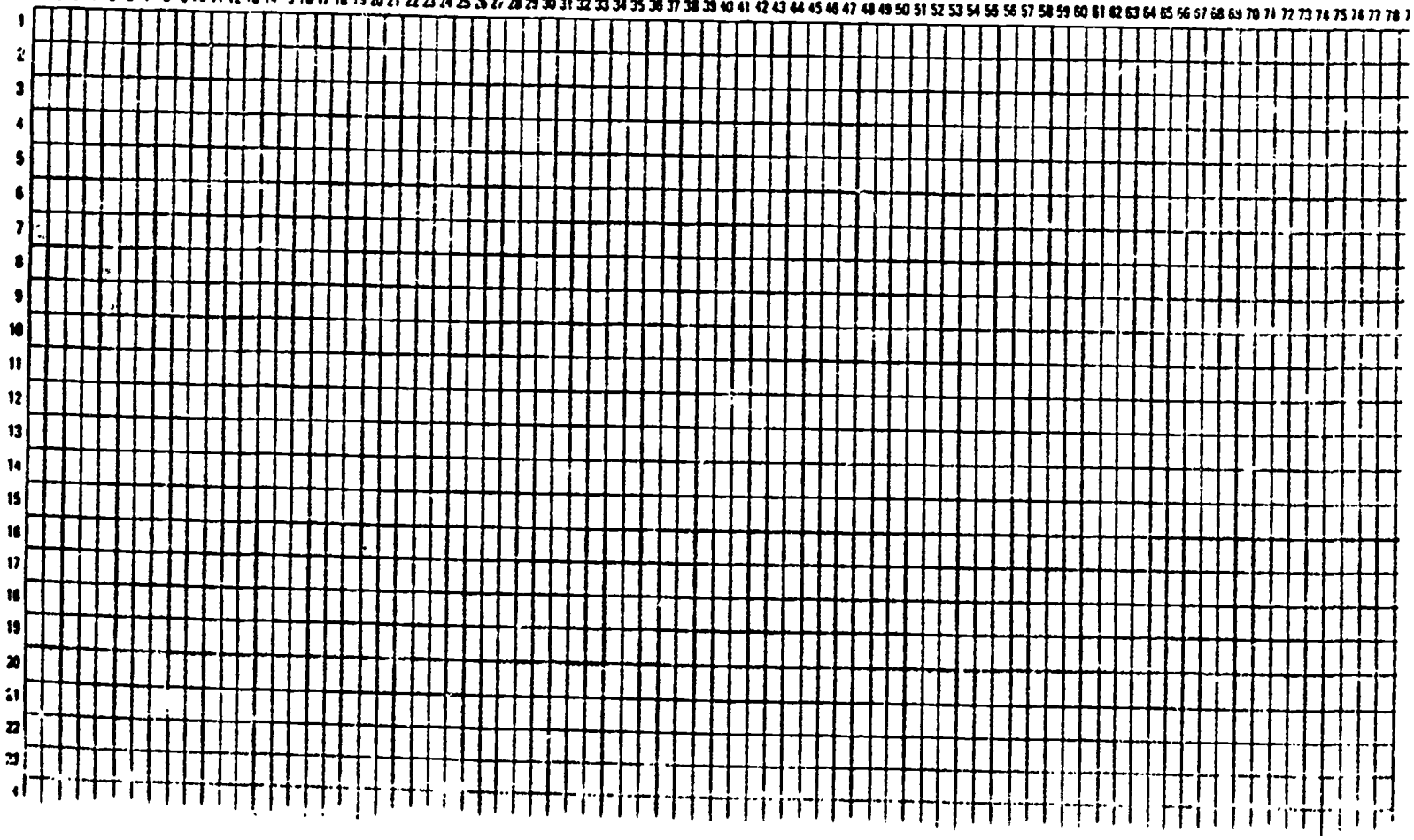
2. Create a report using name, major and GPA in alpha order by name. Name the report GPA.

3. Modify the GPA report to print the file grouped by major with GPA in ascending order.

PRINTER SPACING CHART

PROGRAM TITLE_____

CHART TITLE_____



STUDENT'S LABORATORY GUIDE

UNIT I: DATABASE MANAGEMENT

Lesson 6: Keeping the Database Up-To-Date

OBJECTIVES

1. Add records to a file.
2. Delete records from a file
3. Change existing records.
4. Use the commands:
   - APPEND
   - INSERT
   - APPEND FROM
   - DELETE RECORD #
   - DELETE FOR FIELD = " "
   - SET DELETED ON/OFF
   - RECALL
   - PACK
   - EDIT RECORD #
   - CHANGE
   - BROWSE
   - REPLACE

LEARNING ACTIVITIES

Date	Activity	Grade
_____	1. Complete Exercise 1.	_____
_____	2. Complete Exercise 2.	_____

EXERCISE 1, UNIT 6

ADDING TO AND DELETING RECORDS

Three main functions that keep a database up-to-date are to:
1) add records
2) delete records (temporary and permanent)
3) change existing records

You have already learned to add records to a file by use of the APPEND command.

In this lesson you will learn some additional ways to add records to a database.

1. Type Use IPPERSON. Type GOTO 12. Type INSERT.	The data entry screen will be displayed for record 13
2. Enter the following for record 13: Ray Jones; 16281; Proofreader; 3/25/87, 8.75.	
3. Type DISPLAY ALL TO PRINT	Notice that the data for Jones is in the record 13 position. The other records have been moved down.

dBase also allows you to bring data from another database file into the currently open file. If any records are marked for deletion, they will not be included. If the two data files have different structures, only fields that have the same structure (name and type) will be copied. The APPEND FROM command is used tc combine two database files. This command may be used to combine the work of two or more people working on separate computers.

Steps	Explanation
1. Obtain the dBase exercise disk from your instructor. Boot with DOS. Place the exercise disk in drive a. Place your disk in drive b> At the A>, type COPY EX1UN6.DBF B: Press enter.	This will copy the database file exlun6.dbf to your disk. It has the same structure as your file, student.dbf.
2. Type USE STUDENT. Type APPEND FROM EX1UN6. Press enter.	This will bring student records stored in exlun6 to your student file.
3. Type DISPLAY ALL TO PRINT. Type CTRL + END to save.	Notice the new records.

The DELETE command:
(Temporary deletion)

DELETE = delete the active record
DELETE RECORD # = delete the record number indicated
DELETE FOR NAME = "BREMER, JANIE" would delete Janie Bremer's record.

Try some of these commands:

1. Use IPPerson. Display record 11. Type delete.	Record 11 will be marked for deletion with an asterisk.
2. Type DISPLAY ALL.	Notice that record 11 is still listed, but has an asterisk by it; this is how dBase III marks records for deletion. The file is not physically deleted from the file. In fact, when count, sum or averagae is used, this record will be included.
3. Type SET DELETED ON. Type DISPLAY ALL.	The deleted record has become invisible.
4. Type SET DELETED OFF.	The record is visible again.
5. Type DELETE FOR NAME = "BREMER, JANIE"	This marks Janie Bremer's record for deletion.
6. Type RECALL FOR NAME = "BREMER, JANIE". DISPLAY ALL	The deletion mark (*) is removed.
7. Type RECALL RECORD 11. DISPLAY ALL	Record 11 is recalled. The * is removed.

Now, let's permanently remove some records.
PACK = PERMANENT REMOVAL

PACK is a very powerful command. It is a good idea to make a backup of a file before using the pack command or any other command that makes either permanent or global changes to a file. (Global changes affect a large number of records in a file.)

Step	Explanation
1. Type USE IPPERSON. Type COPY TO IPPERSO2. Type USE IPPERSO2.	We are copying the original file to a new file so that we will not permanently delete records from the original file.

2. Type SET DELETED OFF.
   Type DELETE RECORD 11.
   Type DELETE RECORD 5.

   Notice that record 11 and 5 are marked for deletion.

3. Type PACK.
   DISPLAY ALL.

   The records have been removed permanently.

EXERCISE 2, LESSON 6

CHANGING RECORDS

The third way to keep the database up-to-date is to change the information in the records.
Use these commands to change records:

EDIT
CHANGE FOR
BROWSE
REPLACE

Step	Explanation
1. Use IPPERSON file. Type EDIT RECORD 3.	The screen for record 3 is displayed.
2. Press the down arrow key to move the cursor to the pay field. Type 12.50.	The new pay 12.50 should display.
3. Type CTRL + END.	This saves the change and exits to the dot prompt.
4. Type CHANGE FOR NAME = "RUSTON, MIKE".	Mike Ruston's record is displayed.
5. Cursor to title and enter Processor 2. Type CTRL + END.	
6. Type GOTO TOP. Type BROWSE.	The IPPERSON file will be displayed. The current active record is highlighted. It is record 1 because we used the GOTO TOP command.
7. Press Down Arrow key or Up Arrow key to highlight different records.	Notice that as you move, the highlight, the record no. is displayed on line one.
8. Move down to Sipes, Donna. Use the right arrow key to move the blinking cursor to pay. Press the home key to move it back to number; press te end key to move it back to pay.	Notice that end moves the cursor one field to the right each time it is depressed; home moves it one field to the left.
9. Type 12.00 in the pay field. Press the home key to move back to number.	This changes pay from 11.75 to 12.00 for Donna Sipes.

10. Use the Dn Arrow to move the highlight down to the line after the last record.

A message will appear. Add new record? (Y/N)

11. Type Y. Press Enter.

Enter: 86310; Mixson, Chase; Processor 1; 3/25/87; 11.25.

12. Type CTRL + END to save these changes. Type DISPLAY ALL TO PRINT.

The REPLACE command:

The REPLACE command can make systematic changes--changes that automatically search for & change data--in most or all records.

Steps	Explanation
1. Type USE IPPERSON. Type SET SAFETY ON.	Since replace can change large numbers of records, using the SET SAFETY ON command provides an opportunity to cancel the replace command before the permanent change is made.
2. Type REPLACE ALL PAY WITH PAY * 1.07.	This tells dBase to multiply current hourly pay by 1.07, thus giving everyone a 7% raise.
3. Remember to type CTRL + END to save the change. DISPLAY ALL TO PRINT.	

STUDENT'S LABORATORY GUIDE

UNIT I: DATABASE MANAGEMENT

Lesson 7: LABELS

OBJECTIVES

1. Design and produce mailing labels.
2. Use the following commands:
   CREATE LABEL
   LABEL FORM

LEARNING ACTIVITIES

Date	Activity	Grade
_____	1. Complete Exercise 1.	_____

EXERCISE 1, LESSON 7

LABELS

Many different kinds of labels can be produced using dBase III. We will use the label generation function to produce mailing labels.

Creating a label format is much like creating a report format. The file created will have an .LBL extension.

Obtain the database exercise disk from your instructor. Copy aps.dbf onto your disk. Display this file. You will see that it has the name, address, city, state, and zip. You will be preparing mailing labels for all applicants.

Labels are available in many different sizes on special computer forms. Before creating labels, you should

Steps

1. Copy the database file APS onto your diskette.
   Type USE APS.
   Type CREATE LABEL

   The first screen is for dimensional information. The default settings for dBase are Width, 34; Height, 6; Left Margin, 0 Lines between labels, 0; Number of labels across, 1.

If your labels were a different size, you would measure them and enter the dimensions on this screen. For this exercise accept the defaults.

2. Press enter to get to the second screen.

   The second screen is for label contents. Fill this in with the fields we will use from the APS file.

3. On line 1, type NAME
   On line 2, type ADDRESS
   On line 3, type CITY, STATE, ZIP
   Press enter twice.

   This tells dBase to search APS file for this data.

4. Type LABEL FORM APS TO PRINT.

   All data from the file will be printed unless you sort selected data to another file to use or use a FOR condition.

STUDENT'S LABORATORY GUIDE

UNIT I: DATABASE MANAGEMENT

LESSON 8: PROJECT I: PACIFIC TALENT AND MODEL AGENCY

OBJECTIVES:

The student will be able to:

1. Create a database file from source documents.
2. Enter records, sort, create and print reports, add records, modify records and print selected lists without being given step by step instructions for the software being used.
3. Work independently to make decisions on which functions to use to accomplish each activity.

LEARNING ACTIVITIES

Date	Activity		Grade
_____	1. Read pages 1-3 of the text, DATABASE APPLICATIONS.		_____
_____	2. Complete:		
	Activity:	Page:	
_____	1	3	_____
_____	2	5	_____
_____	3	6	_____
_____	4	7	_____
_____	5	8	_____
_____	6	9	_____
_____	7	9	_____
_____	8	10	_____
_____	9	11	_____
_____	10	11	_____
_____	Database Report 1-1	13	_____

STUDENT'S LABORATORY GUIDE

UNIT I: DATABASE MANAGEMENT

Lesson 9: PROJECT 2: COMPUTERS USED TO EDUCATE

OBJECTIVES

The student will be able to:

1. Create a database file from source documents.
2. Enter records, sort, create and print reports with calcuations, add records, modify records, design a new report format, create and print labels from selected records, and print selected lists without being given step by step instructions for the software being used.
3. Work independently to make decisions on which functions to use to accomplish each activity.

LEARNING ACTIVITIES

Date	Activity		Grade
_____	1. Complete:		
	Activity:	Page:	
_____	1	27	_____
_____	2	28	_____
_____	3	29	_____
_____	4	30	_____
_____	5	31	_____
_____	6	31	_____
_____	7	33	_____
_____	8	33	_____
_____	9	34	_____
_____	10	34	_____
_____	11	35	_____

INTERMEDIATE INFORMATION PROCESSING
Student's Laboratory Guide
Unit I, Lesson 9

Date	Activity:	Page:	Grade
_____	12	36	_____
_____	13	36	_____
_____	14	37	_____
_____	15	37	_____
_____	Database Report 2-1		_____
_____	Database Report 2-2		_____

STUDENT'S LABORATORY GUIDE

UNIT I: DATABASE MANAGEMENT

Lesson 10: PROJECT 3: CIRCLEVILLE COMMUNITY HOSPITAL

OBJECTIVES

The student will be able to:

1. Create a database file from source documents.
2. Enter records, sort, create and print reports with calcuations and with sub-groups, add records, modify records, design a new report format, create and print labels from selected records, and print selected lists without being given step by step instructions for the software being used.
3. Work independently to make decisions on which functions to use to accomplish each activity.

LEARNING ACTIVITIES

Date	Activity		Grade
_____	1. Complete:		
	Activity:	Page:	
_____	1	55	_____
_____	2	57	_____
_____	3	57	_____
_____	4	58	_____
_____	5	58	_____
_____	6	59	_____
_____	7	60	_____
_____	8	61	_____
_____	9	61	_____
_____	10	62	_____
_____	11	62	_____

Date	Activity:	Page:	Grade
_____	12	63	_____
_____	13	63	_____
_____	14	64	_____
_____	15	64	_____
_____	Database Report 3-1	67	_____
_____	Database Report 3-2	67	_____

STUDENT'S LABORATORY GUIDE

UNIT II: ELECTRONIC SPREADSHEETS

LESSON 2: Building the Worksheet

OBJECTIVES

The student will be able to:

Exercise 1:

1. Boot Lotus.
2. Edit entries.
3. Use Help.
4. Set column width (global and local)
5. Format display of numeric values.
6. Format Display of labels.
7. Enter values.
8. Copy values to a range of cells.
9. Print screen.

Exercise 3:

10. Enter Formulas
11. Copy formulas to a range of cells.
12. Use the @sum function.
13. Save a worksheet to disk.

Exercise 4:

14. Retrieve a worksheet stored on disk.
15. Format the printout of the worksheet.
16. Print the worksheet using the Print menu.
17. Exit Lotus 1-2-3 correctly. (See p. 15 of Lesson 2)

LEARNING ACTIVITIES

Date	Activity	Grade
_____	1. Read the handout Building A Worksheet.	
_____	2. Complete Laboratory Guide Exercise 1.	_____
_____	3. Complete Laboratory Guide Exercise 2.	_____
_____	4. Complete Laboratory Guide Exercise 3. Read Quitting Lotus on page 15.	_____
_____	5. Complete Laboratory Guide Exercise 4.	_____
_____	6. Complete textbook Lesson 2: NOTE: USE THE QUICK REFERENCE GUIDE AS NEEDED.	
	Exercise 4	_____
	Exercise 5	_____

Exercise 6 _____

Exercise 7 _____

Exercise 8 _____

Exercise 9 _____

BUILDING A WORKSHEET

Editing Entries

As you enter data, you will correct errors as follows: press the F2 key to change to Edit Mode, move the cursor if needed, and then type the correction. The backspace key deletes characters to the left of the cursor while in edit mode. For more information on editing, see QUICK REFERENCE GUIDE, p. 19.

Getting Help

You may also want to use the Help function provided by Lotus. To access the Help screens, press F1. You may access Help while typing an entry or between commands. Return to the worksheet by pressing Esc.

The exercises provided in this and the following units will contain step-by-step instructions. You will also be given a page number for the QUICK REFERENCE GUIDE. You may look up the procedure in the QUICK REFERENCE GUIDE to become familiar with its format and the instructions given; however, for the first exercise, follow the steps given in this handout.

We will build a worksheet showing the expenditures for the Information Processing Department for the first quarter.

Steps in Building a Worksheet

1. Construct the blank form for the budget. This step includes formatting the worksheet and entering all labels.

2. Fill in the budgeted and expenditure amounts for each month. This step includes entering all numbers which will be used for calculating.

3. Enter formulas in the cells that display totals or percentages.

4. Store the budget on the data disk.

5. Print the budget.

YOU WILL NEED A FORMATTED DISK ON WHICH TO STORE WORKSHEETS CREATED IN THIS CLASS.

UNIT II

LESSON 2

LABORATORY GUIDE EXERCISE 1

Constructing the Blank Form
Formatting

Booting Lotus (QUICK REFERENCE GUIDE, p. 1)

1. Boot Lotus 1-2-3 and go to the blank form for the worksheet.

   You will need 5 columns, one for labels, three for months, and one for total expenditures per item to date.

NOTE: IF YOU ARE USING A MICROCOMPUTER WITH TWO DRIVES, FOLLOW THE PROCEDURE BELOW TO CHANGE THE DEFAULT DATA STORAGE DRIVE TO B:

Type /WGDD. Check to see if B: is specified as the startup directory If it is, press enter, then Q to accept B: as the correct drive.

If it is not,

1) remove the write protect tab from your system disk. and replace it in drive A
2) press Esc (escape key)
3) Type B:\ to indicate that you wish to store data on drive B.
4) Press return.
5) Type U to indicate that you want to update the Global Default Directory.
6) Press Q to return to the worksheet in Ready mode.

Setting the Column Width (QUICK REFERENCE GUIDE, p. 20)

2. First, we will set column width to 12.

   The default for column width in 1-2-3 is 9 characters; therefore, we will change the column width to meet our needs.

3. Type /WGC to select Worksheet Global Column. Type 12 and press enter.

   This changes the column width to 12 spaces for all columns.

4. However, the first column will contain labels which contain more than 12 columns.

   We will change only column A this time since this is where labels needing more columns will be listed.

5. Move the pointer to the top row in column A. (A1)

   Use the pointer movement keys.

6. Type /WC. Press Enter to select set. Type 20 & press enter.

   WC selects width for column A (where the pointer is.) Typing 20 sets the column width for column A to 20.

Formatting the Display of Numeric Values (QUICK REFERENCE GUIDE, p. 22)

7. Type /WGF. /WGF gives you the format screen.

Release 1.0 The two formats for displaying currency are: currency and comma.

The currency option places commas between thousands, put negative figures in parentheses, allows a choice of a fixed number of decimal places and includes a dollar sign before each entry.

The comma option is the same, except that no dollar sign is shown.

The percent option shows the value times 100 followed by a percent sign and a specified (0-12) number of decimal places. Used whenever you are representing a value as a percentage. Example: 10.5%

The fixed option assigns the number of decimal places (0-12). Used when you need to show decimals but do not need other formatting options. Example: 33.22 (two fixed decimal places)

See the QUICK REFERENCE GUIDE FOR ADDITIONAL NOTES ON VERSION 2.0

8. Use the RtArrow key to move the pointer to currency. Press enter. This selects the currency option.

9. Next, 1-2-3 asks you for the number of decimal places; type 2; press enter.

10. Check to see that the cell pointer has remained in cell A1.

You will start entering column and row titles here. Since these are text (not numbers), they are labels.

Formatting Labels (QUICK REFERENCE GUIDE, p. 21.)
Labels are left justified upon entry unless you change the format by doing one of the following:

To center a label, type the caret (^) key before the text.

To right justify a label, type the quotation key (") before the text.

Complete the following steps to center the labels in row 1; we will leave the labels in column A left justified.

11. Type CATEGORIES in all caps. Press Enter.

Categories will be centered in cell A1.

12. Press the RtArrow key to move the pointer to cell B1. Type ^JANUARY in all caps. Press RtArrow key.

JANUARY will be centered in cell B1. The entry is made and the pointer moves to cell C1.

13. Finish entering the labels in row 1 in centered format.

The labels are February, March, and Tot Ex/Item.

14. To move the pointer to cell A3, press the F5 key; type A3; press enter.

The pointer appears in cell A3.

15. The labels in column A will be entered left justified. Type Beginning Balance. Press enter.

Beginning Balance will display left justified in cell A3.

16. Press the DnArrow key twice to move the pointer to cell A5. Type Expenditures. Press the DnArrow key.

Expenditures will be displayed in cell A5 and the pointer will move to cell A6.

17. Continue to type labels as shown by entering labels and pressing the DnArrow key to move the pointer to the appropriate cell.

The labels are Supplies, Maintenance, Lease, Maintenance Contracts, and Total Expen/mo. (Cell A12)

18.	Print screen and compare your completed blank form for the Budget with the key provided.	Make corrections as necessary. This blank form must be correct in order to continue to build the worksheet according to the instructions given.

LABORATORY GUIDE EXERCISE 2

Entering Values--Balances and Expenditures

Entering Values (QUICK REFERENCE GUIDE, p. 7)

1. Move the pointer to cell B3; type 118000.00; Press enter.	Remember to use the F5 (GOTO) key. Notice that this entry displays as $118,000.00. This is the format we selected previously for numerical entries.
2. Go to cell B6. Type 1500.75; press down arrow key.	The entry $1,500.75 displays in cell B6 and the pointer moves to cell B7.
3. Type 600.75; press DnArrow.	The $600.75 is entered as the maintenance expenditure for January and the pointer goes to cell B8.

Copying (QUICK REFERENCE GUIDE, p. 11 ... note that this uses the pointing method rather than the typing method that we use to indicate range)

The amount paid for leasing equipment is the same for each month. 1-2-3 allows you to enter this value once and copy it to other cells as needed. Do the following steps to enter 8333.33 in cell B8 and copy it to cells C8 & D8.

4. Type 8333.33; press enter. Type /C to access the copy command.	$8,333.33 is displayed in cell B8; the pointer remains in cell B8. The pointer must be in cell B8 to complete the following steps accurately.
5. 1-2-3 Screen says: Enter range to copy from: B8.. B8.	1-2-3 asks for a range of cells to copy information from and guesses that it is cell B8.

Press enter to accept B8 as the cell to copy from.

7. At the right of the first message, the screen says: Enter range to copy to: B8 appears.	1-2-3 is asking for a range of cells to copy information to.
8. Type C8.D8. Press enter.	This tells 1-2-3 to copy the value in B8 ($8333.33) to cells C8 & D8. $8333.33 should now display in B8, C8 & D8.

9. Continue to enter the following amounts as indicated.

Beginning Bal.	Jan.	Feb.	March
	118,000.00		
Expenditures:			
Supplies	1,500.75	1,625.80	1,495.60
Maintenance	600.75	235.90	781.21
Lease	8,333.33	8,333.33	8,333.33
Maint. cont.	3,500.00	2,187.80	4,687.11

10. Check your worksheet with the key provided.

LABORATORY GUIDE EXERCISE 3

Entering Formulas
Saving a Worksheet

To complete your worksheet, you will enter formulas to calculate the Beginning Balance, the Total Expenditures per Item, and the Total Expenditures per Month.

1. Go to cell B12; type +B6+B7+B8+B9; press enter. This calculates the Total Expenditures for the month of January.

   Notice that you must type a + before B6 so that 1-2-3 will not take B6 as a label. The calculated amount in B12 is $13,934.83. Check your answer.

You will use the copy command to copy the formula in B12 to C12 and D12 to calculate the Total Expenditures per Month for February and March.

2. Type /C.
   Press enter.

   /C invokes the copy command and enter accepts B12 as the <u>from</u> range.

   Type C12.D12.
   Press Enter.

   Tells 1-2-3 to use the same formula in cells C12 & D12. The calculated values display in cells C12 & D12.

3. Go to cell C3.
   Type +B3-B12.
   Press enter.

   This tells 1-2-3 to subtract total expenditures for January from the Beginning Balance for January. The result is the Beginning Balance for February.

4. Use the copy command to copy the formula to cell D3 for March.

   Check your figures.
   Cell C3 = $104,065.17
   Cell D3 = $191,682.34

5. Go to cell E6; type @Sum(B6.D6). Press enter.

   The @Sum command tells 1-2-3 to add the numbers indicated by the range we give. This is a shorter way to say +B6+C6+D6. The calculated result is $4,622.15: it displays in cell E6.

6. Use the copy command to copy this formula to cells E7 through E9.

   a. Type /C. Press enter.

   /C invokes the copy command; Enter accepts E8 as the <u>from</u> range.

b. Type E7.E9. Press enter. — Tells 1-2-3 to copy to E7 through E9 inclusive.

7. Print screen and compare your worksheet with the key. — Make corrections as needed.

SAVING THE WORKSHEET ON A DISKETTE

The worksheet is just in the main memory of the computer; therefore, it you turned off the power, you would lose the worksheet. To save a permanent copy of the worksheet for future use, store it on the data disk.

1. Type /FS to invoke the File Save command.

2. Type IPBUDGET for the file name and press enter. File name rules in Lotus are similar to filename rules in other applications software. The name must be 8 characters or less and contain no spaces. The characters of the alphabet and 0-9 can be used in the name.

3. When you press enter, the light on drive B: will indicate that the worksheet is being saved. It is saved with the extension .wks.

4. Quit Lotus: See p. 15 of this lesson.

LABORATORY GUIDE EXERCISE 4

Retrieving, Formatting the Printout, and Printing

BOOT LOTUS

RETRIEVING THE WORKSHEET (QUICK REFERENCE GUIDE, p. 6)

1. In the worksheet area, type /FR to invoke the File Retrieve command.

2. Type the name of the worksheet and press the enter key.

PRINTING THE WORKSHEET (QUICK REFERENCE GUIDE, p. 12 ... Formatting the Printout is not covered in the QUICK REFERENCE GUIDE)

1. Type /P to invoke the PRINT command.

2. Lotus gives you an option to print the worksheet now or create a file that can be printed later. With the pointer on "Printer", press the Enter key to print the worksheet now.

3. The Print Menu is displayed with several options for formatting the printout of the worksheet. The Range option must always be used when printing the worksheet.

   a. Move the pointer to Range and press enter.

   b. Type A1.14 tell Lotus to print the entire worksheet.

   c. Move the pointer to Options and press enter; this displays another set of formatting options.

   d. Move the pointer to Margins and press enter. To set the margins:
      1. Move the pointer to Left and press enter.
      2. Type the number 0 and press enter twice to set the left margin at 0.
      3. Move the pointer to Right and press enter.
      4. Type 80 and press enter.

   e. To print a heading on the worksheet:
      1. Move the pointer to header and press enter.
      2. To center a heading type |Information Processing Budget. Press enter.

We have now set up the format of the worksheet by including commands for the range, the margins and the heading. These formatting options are not a permanent part of the worksheet unless we save the worksheet after setting them.

To print the worksheet without saving the format:

1. Move the pointer to Quit; press enter.

2. Check to see that the printer is on; move the pointer to Go and press enter.

   Notice that the worksheet prints without the border and control panel.

3. Move the pointer to Page and press enter to advance the paper in the printer.

4. Quit to return to the worksheet.

QUITTING LOTUS 1-2-3 (QUICK REF. GUIDE, p. 32)

All application programs have a certain, correct method for quitting work and exiting the program.

To quit and exit Lotus, always follow these steps:

1. Save the worksheet with the File Save command.
2. Type /Q to invoke the Quit command.
3. Confirm the command by moving the pointer to Yes; press enter.
4. When the Lotus Access System Menu is displayed, type the letter E for exit; then type Y to confirm this choice.

STUDENT'S LABORATORY GUIDE

UNIT II: ELECTRONIC SPREADSHEETS

Lesson 3: Retrieving Files, Entering Values, Overwriting Files, and Printing

NOTE: You have learned the basic functions needed to create worksheets. However, additional functions will be presented using the QUICK REFERENCE GUIDE and assignments from your textbook, SPREADSHEETS SKILL BUILDING EXERCISES AND APPLICATIONS.

OBJECTIVES

The student will be able to:

1. Retrieve files.
2. Enter values.
3. Overwrite files.
4. Print using Print screen.
5. Format a worksheet from narrative data.

LEARNING ACTIVITIES

Complete the following textbook exercises from Lesson 3. Additional instructions are given in this study guide if needed.

Date	Activity	Grade
_____	1. Complete Exercise 10.	_____
_____	2. Complete Exercise 11.	_____
_____	3. Complete Exercise 12.	_____
_____	4. Complete Exercise 13.	_____
_____	5. Complete Exercise 14.	_____
_____	6. Complete Exercise 15.	_____
_____	7. Complete Exercise 16.	_____
_____	8. Complete Exercise 17.	_____

STUDENT'S LABORATORY GUIDE

UNIT II: ELECTRONIC SPREADSHEETS

Lesson 4: Entering Formulas, Order of Precedence

NOTE: You have learned the basic functions needed to create worksheets. However, additional functions will be presented using the QUICK REFERENCE GUIDE and assignments from your textbook, SPREADSHEETS SKILL BUILDING EXERCISES AND APPLICATIONS.

OBJECTIVES

The student will be able to:

1. Enter formulas.
2. Identify cell addresses necessary to develop a formula.
3. Enter formulas using arithmetic symbols:
   - + (addition)
   - - (subtraction)
   - * (multiplication)
   - / (division)
4. Define order of calculation.
5. Use parentheses to indicate order of calculation.

LEARNING ACTIVITIES

Date	Activity	Grade
_____	1. Complete Laboratory Guide Exercise 1.	____

Complete the following textbook exercises from Lesson 4.

_____	2. Complete Exercise 18.	____
_____	3. Complete Exercise 19.	____
_____	4. Complete Exercise 20.	____
_____	5. Complete Exercise 21.	____
_____	6. Complete Exercise 22.	____
_____	7. Complete Exercise 23.	____
_____	8. Complete Exercise 24.	____
_____	9. Complete Exercise 25.	____

LABORATORY GUIDE EXERCISE 1

Order of Calculation

What are Arithmetic Operators?

The arithmetic operators are:

^	exponentiation
*	multiplication
/	division
+	addition
-	subtraction

Order of Calculation

In a formula, arithmetic operations are performed from left to right. If there are no parentheses in the formula, exponentiation is performed first. Next multiplication and division are performed. Finally, addition and subtraction operations are completed.

Operations enclosed in parentheses are evaluated before the other computations are performed. Within parentheses, the above order of calculation is used. If a formula contains more than one set (nested) of parentheses, the innermost pair are evaluated first. The outermost pair is evaluated last.

Example 1. +C1/6+E2*G3

ORDER OF CALCULATION IS:

1. C1 WILL BE DIVIDED BY 6.
2. E2 AND G3 WILL BE MULTIPLIED
3. The results of the above operations will be added.

Example 2. +C1/(6+(E2*G3))

NOTICE THE DIFFERENCE IN THE ORDER OF CALCULATION DUE TO THE PARENTHESES.

1. E2 AND G3 will be multiplied.
2. The result of the above operation will be added to 6.
3. C1 will be divided by the sum in step 2.

Calculate the following formulas and enter your answer in the space provided.

1. 8/2 + 20*2 =
2. 40/(6+2) =
3. 2*(3+6)/3 =
4. 2 * 3 + 6 / 3 =
5. $2^2 * 3$ =
6. $(2 * 3)^2$ =

Check your answers: 1 = 44; 2 = 5; 3 = 6; 4 = 8; 5 = 12; 6 = 36.

Using Operators in Formulas

1. Be sure that all of the cells used in the calculation are properly formatted.

2. Enter the operator followed by the number or address controlled by the operator.

STUDENT'S LABORATORY GUIDE

UNIT II: ELECTRONIC SPREADSHEETS

LESSON 5: Erasing Cell Entries and Entering Formulas

OBJECTIVES

The student will be able to:

1. Correct errors after entry using the erase command.
2. Enter formulas using ranges.
3. Enter formulas using the functions SUM, MAX, COUNT, AVERAGE, AND MIN.

LEARNING ACTIVITIES

Date	Activity	Grade
_____	1. Read Erasing a Range of Cells, p. 5 in QUICK REFERENCE GUIDE	
	2. Read and study the LOTUS FUNCTIONS handout.	
_____	3. Read Using Built-in Functions, page 10, of QUICK REFERENCE GUIDE.	

Complete the following textbook exercises in Lesson 5.

_____	4. Complete exercise 26.	_____
_____	5. Complete exercise 27.	_____
_____	6. Complete exercise 28.	_____
_____	7. Complete exercise 29.	_____
_____	8. Complete exercise 30.	_____
_____	9. Complete exercise 31.	_____
_____	10. Complete exercise 32.	_____

LOTUS FUNCTIONS

Lotus has several built-in functions to be used for calculation. The functions we will use in this class include SUM, MAX, COUNT, AVERAGE, AND MIN. These are discussed below.

SUM

SUM totals the values of the named cells. It is commonly used to add a series of values.

Totaling a Range of Values:

The range being totaled may contain numbers, cell addresses, or arithmetic expressions. The correct format for this function is

@SUM(begin-range.end-range)

For example, @SUM(B3.B9) would total the contents of cells B3 through B9.

Totaling Values:

You may also enter any number of values directly into the SUM function by using the format:

@SUM(first-value,next-value,...last value)

For example, @SUM(B2,C3,D40) totals the contents of cells B2, C3 and D40.

@SUM(A2.A40,B2,D1.D4) totals the contents of A2 through A40, the contents of B2, and the contents of D1 through D4.

MAX

MAX finds the largest value in the named cells. The ERR message is returned if the list is empty. Blank cells are ignored.

Finding the Greatest Value in a Range

The correct format for this function is
@MAX(begin-range.end-range)

For example @MAX(A1.A10) locates the biggest value in the list A1 through A10.

Finding the Biggest Value in a List

The correct format for this function is:
@MAX(first-value,next-value,...last-value)

For example @MAX(B2.B5,12,D4-D6) will determine which of the values listed is greatest.

COUNT

COUNT counts the number of non-blank cells in a list. Count is used when you need to know how many items you have. The ERR message is returned if the list is empty. Labels are included in the count

Counting a Range of Values

The range being counted may consist of numbers, cell addresses, or arithmetic expressions.

The correct format for this function is:
@COUNT(begin-range.end-range)

For example @COUNT(B1.B10) returns the count of the list B1 through B10. The result is 10.

Counting Values

Another format is to enter the list to be counted directly into the function:
@COUNT(first-value1, next-value, ...last-value)

For example: @COUNT(a2,12,c4.c6) will count the values in the list.

Counting Columns

The @COL function is used when measuring the size of a range. For example, you want to know if a range will print on one page. It is also useful for verifying that you entered all of the columns of data on your list. Columns containing labels and spaces are counted.

The correct format for this function is:
@COLS(range)

Example: @COLS(D1.D4)

Counting Rows

The @ROW function is used when measuring the length of a range. For example, you want to be sure you have included all of the rows of data on your list. Cells containing spaces and labels are counted.

The correct format for this function is:
@ROW(range)

Example: @ROW(D1.D4)

AVERAGE

Average calculates the average value of the named values by totaling the values in the cells and then dividing the total by the cell count.

If a cell contains a label, it will be included in the cell count. If this is not desirable, define the range so that it excludes cells containing labels.

Cells containing blanks are ignored, so be sure that empty cells contain zeros rather than blanks. If every cell in a range is blank, the result of the calculation is ERR.

Averaging a Range of Values

The range being averaged may contain numbers, cell addresses, or arithmetic expressions.

The correct format for this function is:

@AVG(begin-range.end-range)

Example: @AVG(A1.A10) averages the contents of cells A1 through A10.

@AVG(D2.E4) totals the contents of the column D starting at D2 and the contents of column E1 through E4.

Averaging Values

To enter any number of values directly in to the @AVG function use the format:

@AVG(first-value1,next-value,...last-value)

Example:

@AVG(A2,12,C4.C6) will total the values specified and then divide the result by the number of values counted.

MIN

MIN finds the smallest value in the named cells. The ERR message is returned if the list is empty. Blank cells are ignored, but labels are assigned a value of 0. As a result, you will usually want to exclude labels from the value range.

Finding the Lowest Value in a Range

The correct format for this function is:

@MIN(begin-range.end-range)

Example: @MIN(A1.A10) locates the lowest value in the list A1 through A10.

Finding the Lowest Value in a List

To enter the list to be examined directly into the function use the format:

@MIN(first-value1,next-value,.last-value)

Example:

@MIN(B2,14,D4.D6) will determine which of the values listed is the smallest)

STUDENT'S LABORATORY GUIDE

UNIT II: ELECTRONIC SPREADSHEETS

LESSON 6: Copying Formulas

OBJECTIVES

The student will be able to:
1. Copy a cell
2. Copy formulas that are "relative" or "absolute".
3. Copy a range of cells.
4. Print using options.
5. Scroll horizontally and vertically.

LEARNING ACTIVITIES

Date		Activity	Grade
Complete the following textbook exercises from Lesson 6.			
_____	1.	Complete Exercise 33.	_____
_____	2.	Complete Exercise 34.	_____
_____	3.	Complete Exercise 35.	_____
_____	4.	Complete Exercise 36.	_____
_____	5.	Read and study page 9-10, Entering Formulas For Absolute Conditions in the QUICK REFERENCE GUIDE.	
_____	7.	Complete Exercise 37. Refer to pages 9 & 10 of the QUICK REFERENCE GUIDE if needed to complete Step 3 of this exercise.	_____
_____	8.	Read page 12 of the QUICK REFERENCE GUIDE to review printing. You will use the print function of Lotus instead of print screen for the remaining exercises in this class.	
_____	9.	Complete Exercise 38.	_____
_____	10.	Complete Exercise 39. You will print only a portion of the worksheet this time.	_____
_____	11.	Complete Exercise 40.	_____
_____	12.	Complete Exercise 41.	_____

STUDENT'S LABORATORY GUIDE

UNIT II: ELECTRONIC SPREADSHEETS

LESSON 7: Modifying the Worksheet

OBJECTIVES

The student will be able to:

1. Insert and delete columns and rows.
2. Fix horizontal and vertical titles.
3. Move cells, columns and rows.
4. Draw horizontal lines.
5. Edit labels, values and formulas.

LEARNING ACTIVITIES

Date		Activity	Grade
Complete the following textbook exercises.			
_____	1.	Read page 15 of the QUICK REFERENCE GUIDE.	
_____	2.	Complete Exercise 42. (Do not print this exercise)	_____
_____	3.	Read page 19 of the QUICK REFERENCE GUIDE.	_____
_____	4.	Complete Exercise 43. (Print this worksheet in two sections or use the compressed print option)	_____
_____	5.	Read page 16 of the QUICK REFERENCE GUIDE.	_____
_____	6.	Complete Exercise 44.	_____
_____	7.	Complete Exercise 45.	_____
_____	8.	Read page 17 of the QUICK REFERENCE GUIDE.	_____
_____	9.	Complete Exercise 46.	_____

_____ 10. Read page 18 of the QUICK REFERENCE GUIDE. _____

_____ 11. Complete Exercise 47. _____

_____ 12. Complete Exercise 48. _____

_____ 13. Complete Exercise 49. _____

STUDENT'S LABORATORY GUIDE

UNIT II: ELECTRONIC SPREADSHEETS

LESSON 8: Setting Column Width, Drawing Vertical Lines, and Formatting Labels, Values, and Numeric Data

OBJECTIVES

The student will be able to:

1. Set column width.
2. Draw vertical lines.
3. Format values and labels.
4. Format numeric data.
5. Use global and local commands in formatting.

LEARNING ACTIVITIES

Date		Activity	Grade
NOTE:		Ycu may refer to the worksheet completed in Study Guide Fxercises 1-4 of Lesson 2 to review concepts used in this lesson as well as use the QUICK REFERENCE GUIDE when needed.	
_____	1.	Read pages 20 & 21 of the QUICK REFERENCE GUIDE.	_____
_____	2.	Complete Exercise 50.	_____
_____	3.	Read pages 18 & 22 of the QUICK REFERENCE GUIDE.	_____
_____	4.	Complete Exercise 51.	_____
_____	5.	Complete Exercise 52.	_____
_____	6.	Complete Exercise 53.	_____
_____	7.	Complete Exercise 54.	_____
_____	8.	Complete Exercise 55.	_____
_____	9.	Complete Exercise 56.	_____
_____	10.	Complete Exercise 57.	_____
_____	11.	Complete Exercise 58.	_____

_____ 12. Complete Exercise 59. _____

_____ 13. Complete Exercise 60. _____

_____ 14. Complete Exercise 61. _____

_____ 15. Complete Exercise 62. _____

_____ 16. Complete Exercise 63. _____

STUDENT'S LABORATORY GUIDE

UNIT II: ELECTRONIC SPREADSHEETS

LESSON 9: CREATING WINDOWS

OBJECTIVES

The student will be able to:

1. Create windows.
2. Search the worksheet for data using the lookup function.

LEARNING ACTIVITIES

Date	Activity	Grade
_____	1. **Read page 23 of the QUICK REFERENCE GUIDE.**	
_____	2. **Complete Exercise 64.**	_____
_____	3. **Complete Exercise 65.**	_____
_____	4. **Complete Exercise 66.**	_____
_____	5. **Complete Exercise 67.**	_____

STUDENT'S LABORATORY GUIDE

UNIT II: ELECTRONIC SPREADSHEETS

LESSON 10: Creating, Saving and Printing Graphs

OBJECTIVES

The student will be able to:

1. Name and describe the five types of graphs available on Lotus 1-2-3.

2. Name and describe the graph commands used in the exercises for this unit.

3. Name and describe the PrintGraph commands.

4. Create a bar graph, stacked-bar graph, line graph, pie chart, and XY graph using the following graph commands:
   - XABCDEF
   - TYPE
   - GRAPH NAME CREATE
   - VIEW
   - GRAPH SAVE
   - GRAPH OPTIONS B&W
   - GRAPH OPTIONS DATA LABEL
   - GRAPH OPTIONS COLOR
   - GRAPH OPTIONS GRID
   - GRAPH OPTIONS LEGEND
   - GRAPH OPTIONS TITLE
   - GRAPH OPTIONS FORMAT
   - SCALE FORMAT

5. Use the following PrintGraph commands:

   SELECT
   GO
   ALIGN
   PAGE
   QUIT

LEARNING ACTIVITIES

Date	Activity	Grade
_____	1. Read and study the handout Introduction to Graphs for Lotus 1-2-3.	___

_____ 2. Read and study the handout The Graph Commands.

_____ 3. Complete Laboratory Guide Exercise 1. _____

_____ 4. Read and study the handout Printing a Graph. _____

_____ 5. Complete Laboratory Guide Exercise 2. _____

_____ 6. Complete Laboratory Guide Exercise 3. _____

_____ 7. Complete Laboratory Guide Exercise 4. _____

_____ 8. Complete Laboratory Guide Exercise 5. _____

_____ 9. Complete Laboratory Guide Exercise 6. _____

_____ 10. Complete Laboratory Guide Exercise 7. _____

_____ 11. Complete Progress Test 1, Lesson 2, Unit II, Graph Commands and PrintGraph Commands. _____

Complete the following textbook exercises.

_____ 12. Complete exercise 71. _____

_____ 13. Complete exercise 72.

_____ 14. Complete exercise 73. _____

_____ 15. Complete exercise 74. _____

_____ 16. Complete exercise 75. _____

_____ 17. Complete exercise 76. _____

_____ 18. Complete exercise 77. _____

INTRODUCTION TO GRAPHS FOR LOTUS 1-2-3

Lotus 1-2-3 has Graph commands to create graphs from the data in a worksheet. Once the graph is constructed, you may either display it on the monitor or print it. Lotus can create five types of graphs: bar graphs, stacked-bar graphs, line graphs, XY graphs, and pie charts.

Bar graphs, stacked-bar graphs, and line graphs can show as many as six data sets. XY graphs plot two sets of data--one set on the X-axis, the other on the Y-axis. Pie charts show a breakdown by percentage on one set of data.

A bar graph shows the change in a variable (a data set) or variables with a change in some other variable (such as time).

A pie chart shows the contribution of the various components to the whole.

A stacked-bar graph is a combination of a bar graph and a pie chart. It shows the contribution of the components of some variable as another variable changes.

An XY graph shows the relationship between two variables.

To complete the exercises in this unit, you must have a graphics monitor to display the graph. A monochrome monitor can be used to create graphs but it cannot display them. However, you can save a graph as a special type of file and print it later using the PrintGraph program that comes with Lotus.

THE GRAPH COMMANDS
(A Summary)

Look at page i of the QUICK REFERENCE GUIDE. This is a menu map of the Graph commands in Lotus. Refer to this map as you read the following descriptions of the graph commands.

TYPE--selects one of five graph types (line, bar, xy, stacked bar, pie)

XABCDEF--specifies the range of the one to six sets of data that can be represented by a graph

The A command specifies the first set of data for bar, stacked-bar, and line graphs; the only set of data for pie charts; and the set of data plotted on the y-axis of xy graphs.

Commands B-F are used to specify the second, third, fourth, fifth, and sixth sets of data respectively, for bar, stacked-bar and line graphs.

Command X is used to specify the set of data plotted on the x-axis of an xy graph and is used to specify labels for the segments in a pie chart.

RESET--erases all graph settings

VIEW--displays the graph on the monitor (must have a graphics monitor)

SAVE--stores the graph in a special file that can be printed with the PrintGraph program

OPTIONS--a set of commands which select the options for constructing a particular graph:

LEGEND--adds legends that identify the patterns, colors, or symbols used for the various sets of data

FORMAT--specifies the type of display for line and xy graphs

TITLES--writes the titles for each axis and for the graph itself

GRID--adds horizontal and/or vertical grid lines to the graph

SCALE--offers automatic or manual setting of the scales for the axes of the graph and various formats for the display of the scale numbers

GRAPH COMMANDS, CONT.

COLOR--displays the graph in several colors rather than patterns of a single color

B&W--(Black and White) displays the graph in contrasting cross-hatch patterns in a single color

DATA-LABELS--specifies a range of labels for the first data points of the sets of data

QUIT--takes you out of the options menu

NAME--a set of commands which give a name to a particular graph so that you can recall the specifications to display the graph again

USE--selects a named set of graph specifications and then displays the graph

CREATE--gives a name to the current graph specifications

DELETE--deletes a named graph

RESET--erases all named graphs

LABORATORY GUIDE EXERCISE 1

Creating, Viewing and Saving a Bar Graph

Refer to the handouts Introduction to Graphs for Lotus 1-2-3 and The Graph Commands handouts as needed.

You will construct, view and save a bargraph.

1. Obtain the exercise disk from your instructor and copy the worksheet file "graphws" to your data disk. This worksheet will be used for several graph exercises.
2. Boot lotus and retrieve the worksheet named graphws.
3. Type /G to access the Graph commands.
4. Type A to select the A command.
5. Lotus prompts you to enter the first data range. Type B3.G3 and press enter.
6. Type B to select the B command.
7. Lotus prompts you to enter the second data range. Type B4.G4; press enter.
8. Type C to select the C command.
9. Lotus prompts you to enter the third data range. Type B5.G5; press enter.
10. Type D to select the D command.
11. Lotus prompts you to enter the fourth data range. Type B6.G6; press enter.
12. Type T to select the Type of graph.
13. Type B to select a bar graph.
14. Type N to access the graph Name menu.
15. Type C to Create a graph name. Lotus prompts you as follows: Enter graph name:
16. Type bar as the name of the graph and press enter. (The name can contain 14 characters or less)
17. Typ to view the graph you have created.

18. Press any key to return to the graph menu.

19. Type S to access the Graph Save command. This stores the file as a .PIC file to be printed later using the PrintGraph program.

20. Type BARGRAPH as the file name and press enter to save the graph.

PRINTING A GRAPH

You will use the PrintGraph program to print the graphs completed in the following exercises.

Accessing the PrintGraph Program

If you are still in the Lotus program:

1) end the session and exit to the Lotus Access system.

2) Type P to select the PrintGraph program.

3) Insert the Lotus PrintGraph disk in drive A and press enter.

If you are starting the PrintGraph Program from DOS:

1) Insert the PrintGraph program disk in drive A.

2) Type Printgraph; press enter.

After accessing the PrintGraph program in one of the two ways listed above, the PrintGraph menu appears on the screen. Look at the menu as you read the following descriptions of each item.

SELECT--selects the graph or graphs to be printed

OPTIONS--changes the print settings: the colors, the fonts, the graph size and the modes

GO--prints a graph or graphs after they are selected with the Select command

CONFIGURE--changes the configuration settings: the directories, the printer type, the printer connection, and the page size

ALIGN--indicates to Lotus that the printer paper has been adjusted and that the present position is at the top of a page

PAGE--advances the printer to the top of the next page

QUIT--ends the print session and returns to the Access menu

Procedure for Printing a Graph

1. Check to see that the printer is turned on and loaded with paper. Use the Page and Align commands, if necessary, to adjust the printer to the top of the paper.

2. Use the Select command to select the graph or graphs to be printed.

3. Use the Options command to select any desired printing options.

4. Use the Configure command to make any necessary changes in the settings for the hardware to be used for printing.

5. Select the Go command to print the selected graphs.

NOTE: YOU WILL NOT NEED TO SET THE OPTIONS AND THE CONFIGURE COMMANDS FOR EXERCISES COMPLETED FOR THIS CLASS; THESE HAVE BEEN SET UP FOR YOU UNLESS OTHERWISE INSTRUCTED.

LABORATORY GUIDE EXERCISE 2

Printing a Graph

To print the graph created in Laboratory Guide Exercise 1:

1. Load the PrintGraph program.

2. Type S to access the select command. The list of all graph files (files with the PIC extension) in the Picture directory is displayed.

3. Highlight the bargraph file; press enter.

4. Type G to select the Go command. The graph will print. If you selected more than one graph to print, they would be printed in the order selected.

LABORATORY GUIDE EXERCISE 3

Creating a Stacked-Bar Graph

1. Boot Lotus 1-2-3 and retrieve the worksheet named graphws.
2. Type /G to access the Graph command menu.
3. Type A to select the A command.
4. Lotus prompts you to enter the first data range. Type B3.G3 and press enter.
5. Type B to select the B command.
6. Lotus prompts you to enter the second data range. Type B4.G4; press enter.
7. Type C to select the C command.
8. Lotus prompts you to enter the third data range. Type B5.G5; press enter.
9. Type D to select the D command.
10. Lotus prompts you to enter the fourth data range. Type B6.G6; press enter.
11. Type T to select the Type of graph.
12. Type S to select a stacked-bar graph.
13. Type N to access the graph Name menu.
14. Type C to Create a graph name. Lotus prompts you as follows: Enter graph name:
15. Type stack as the name of the graph specifications and press enter. (The name can contain 14 characters or less)
16. Type V to view the graph you have created.

17. Press any key to return to the graph menu.

18. Type S to access the Graph Save command. This stores the file as a .PIC file to be printed later using the PrintGraph program.

19. Type stackbar as the name of the graph and press enter to save the graph.

20. Print the graph.

LABORATORY GUIDE EXERCISE 4

Using Graph Options--B&W or Color and Data-labels

1. Create the bargraph from Laboratory Guide Exercise 1, using steps 1 through 13. Do not name the graph yet.

2. Type V to view the graph and check it; it should look like the graph created in exercise 1.

3. Press any key to return to the Graph menu.

Graph Option Black & White

4. Type OB to access the Graph Options B&W command. (See menu map, page i of the QUICK REFERENCE GUIDE.)

5. Type Q to return to the graph menu.

Graph Option Data-label

6. Type OD to access the Graph Options Data Label command.

7. Type A to select the first data range.

8. Type A3 and press Enter. This centers the label "material" above the first bar.

9. Type B to select the second data range.

10. Type A4 and press Enter to select the label "Labor" for the second bar.

11. Repeat these steps to label the other bars:

Data Range	Label
C	A5
D	A6

12. Type V to view the graph with labels. Return to the graph menu.

13. Type NC to access the Graph Name Create command.

14. Type optionbd and press enter.

15. Type S to store the graph as a picture. Save it using the name Graph1.

16. Print the graph.

Optional Exercise for Color Monitors:

1. Create the bar graph described above; omit steps 4 & 5.

2. Type OC to access the Graph Options Color command. The Graph Options Color command to display the bars of each bar and stacked-bar graph and the lines of each line graph in a different color. The data sets are displayed in the following colors:

A	White
B	Red
C	Blue
D	White
E	Red
F	Blue

The axes, grid lines, scale numbers and titles are shown in white. The GOC command is stored in memory to be used when you use View.

LABORATORY GUIDE EXERCISE 5

Using Graph Options--Grid, Legend, and Title

Job 1

Graph Options Grid

The Graph Option Grid command is used to add horizontal and vertical grid lines to a graph.

1. Create the bar graph from Laboratory Guide Lesson 1, Steps 1-13. Stay on the Graph menu.
2. Type OB to call the Graph Options Grid command.
3. Type B to select both horizontal and vertical grid lines.
4. Type Q to return to the Graph menu.
5. Type V to display the graph. Observe the grid lines.
6. Type any key to return to the Graph menu.
7. Type NC to create a name for these specifications; type optiongrid; press enter.
8. Save this graph under the name graph2.
9. Print the graph.

Job 2

Graph Options Legend

The Graph Options Legends command can be used to identify the various data sets of graphs containing more than one set.

1. Create the bar graph from Laboratory Guide Lesson 1, steps 1-13. Stay on the Graph menu.
2. Type OL to access the Graph Options Legend command.
3. Type A to select the A data range.
4. Type Mt1 and press enter to create the A range legend.

5. Repeat steps 3 (with a different range) and 4 to enter the following legends:

B	Lab
C	Sup
D	G&A

Notice that the legends do not have much display space; therefore keep them as short as possible. They may use 19 characters or less.

6. Type Q to return to the Graph menu.

7. Type V to display the graph. The legends appear on the bottom line of the graph.

8. Type any key to return to the graph menu.

9. Type NC; use the name opleg, and enter to name the specifications.

10. Type S to save the file; name it graph3.

11. Print the graph.

Job 3

Graph Options Title

The Graph Options Title command allows the user to create titles for the graph and for each axis. The graph title may be either one or two lines long. It is displayed above the graph and centered.

The title for the x-axis is displayed below the X-axis labels and above the legends.

The title for the y-axis is displayed vertically beside the axis.

1. Create the bar graph from Laboratory Guide Lesson 1, Steps 1-13. Stay on the Graph menu.

2. Type OT to call the Graph Options Titles command.

3. Type F to create the first line of the graph title.

4. Type Operating Expenses and press enter.

5. Type T and then S to create the second line.

6. Type 1st and 2nd Quarters and press Enter.

7. Type T and then X to create the X-axis.

8. Type Monthly Expenses and press Enter.

9. Type T and then Y to create the Y-axis title.

10. Type Dollars and press Enter.

11. Type Q to return to the Graph menu.

12. Type V to display the graph. Observe the three titles.

13. Return to the Graph menu; save this file as graph4.

14. Print the graph.

LABORATORY GUIDE EXERCISE 6

Using Graph Options--Format
Creating a Pie Chart

Graph Options Format

Use the Graph Options Format command to select the format for the display of line and xy graphs. The data points are shown with the symbols A, B, C, D, E, and F; these symbols are connected with lines.

When you type the F command, you have the choice of setting the display of all data ranges or selecting a single range to change the format. The Format Range menu includes:

Graph A B C D E F Quit

Once this selection is made, you select Lines, Symbols, Both, or Neither. When all data ranges have been formatted, select Q to return to the Options menu.

Job 1

1. Create the bar graph from Laboratory Guide Exercise 1, steps 1-12.
2. Type L to select a line graph. Stay on the graph menu.
3. Type OF to call the Graph Option Format command.
4. Type G to select all data ranges.
5. Type S to select a format of Symbols.
6. Type V to display the graph. Observe that the sets of data are shown with symbols only.
7. Type any key to redisplay the Graph menu. Repeat steps 3-5, but set the format to Lines.
8. Return the format to display both Lines and Symbols.

Job 2: Creating a Pie Chart

1. Load the graphws file.
2. Type /G
3. Type A to select the A command.
4. Type B3.B6 and press enter to specify the data range.

5. Type P to select a pie chart.

6. Type X to access the Graph X command. The Graph X command contains the labels for the segments of a pie chart.

7. Type A3.A6 and press enter to specify the X range (the Label range; see worksheet).

8. Type OT to select the Graph Options Titles command.

9. Type F to create the first line of the graph title; type Operating Expenses; press enter.

10. Type S to create the second line of the graph title: type 1st and 2nd Quarters; press enter.

11. Type S and store the file as graph5.

12. Print the graph.

UNIT II

LESSON 10

LABORATORY GUIDE EXERCISE 7

Creating An XY Graph

An XY graph is a two-dimensional graph that represents a pair of values, one on the Y-axis, the other on the X-axis. In this graph, the X-axis has a numeric scale like that of the Y-axis. The graph shows a relationship between two variables.

1. Obtain the exercise disk from your instructor and copy worksheet file xygraph to your data disk.

2. Boot Lotus 1-2-3 and retrieve the worksheet "xygraph". This worksheet is sorted so that Cost of Labor increases at each interval.

3. Type /G to display the Graph menu.

4. Type TX to select the XY graph type.

5. Type X to select the X range.

6. Type B2.B13 to and press enter to specify Cost of Labor as the variable plotted on the X-axis.

7. Type A to select the A range.

8. Type C2.C13 to specify Shipments as the variable to plot on the Y-axis.

9. Type OTF to create the first line of the graph title (Options Title First)

10. Type Shipments vs Labor Cost and press enter.

11. Type TY to create the Y-axis title.

12. Type Shipments and press Enter.

13. Type TX to create the X-axis title.

14. Type Cost of Labor and press enter.

15. Type SYF (Scale Y-axis Format) to select the scale number format for the Y-axis.

16. Type C and 0 and press enter to specify the Currency format with no decimal places.

17. Type Q twice to return to the Graph Options menu.

18. Type SXF (Scale X-axis Format) to specify scale number format for the X-axis.

19. Type C and 0 and press enter to specify Currency format with no decimal places.

20. Type Q twice.

21. Type GB to specify both horizontal and vertical grid lines.

22. Type Q to return to the Graph menu.

23. Type view to display the graph.

24. Save the graph as Graph6.

25. Print the Graph.

STUDENT'S LABORATORY GUIDE

UNIT II: ELECTRONIC SPREADSHEETS

LESSON 11: Logical Operators

OBJECTIVES

The student will be able to:

1. Define and use the logical operators:
   =
   <
   >
   <=
   >=
   <>

2. Use the logical operators with if statements.

LEARNING ACTIVITIES

Date	Activity	Grade
_____	1. Read and study the handout Logical Operators.	

Complete the following textbook exercises from Lesson 11.

_____	2. Complete exercise 84.	_____
_____	3. Complete exercise 87.	_____
_____	4. Complete exercise 88.	_____

LOGICAL OPERATORS

Logical operators are used to describe the condition for which you are testing. When you test for a condition, you must furnish

1. the condition or conditions to test,
2. the instruction to perform if the value is true, and
3. the instruction to perform if the value is false.

What IF: Setting a Value Based on a Condition

Example 1:

@IF(A1=B2,20,10)

@IF(A1=B2) defines the condition: If the value in cell A1 is equal to the value in cell B2

,20 defines what value to insert if the condition is true.

,10 defines what value to insert if the condition is false.

Example 2:
We are testing for the condition "If gross is less than 40". Assume that gross is stored in cell B3.

@IF(B3<40,10,D20)

In this example, if B3 is less than 40, 10 is stored in the cell. If B3 is greater than or equal to 40, the contents of D20 are copied into the cell.

What IF: Executing a Formula Based on a Condition

A formula can also be inserted as a result of either a true or false condition.

Example:

@IF(B3<40,A1*B2,C4+10)

If B3 (gross) is less than forty, A1 will be multiplied by B2 and the resulting value placed in the cell; if B3 (gross) is greater than or equal to 40, 10 will be added to the value in cell C4 and the result entered.

STUDENT'S LABORATORY GUIDE

UNIT III: DESKTOP MANAGEMENT SOFTWARE

OBJECTIVES

1. Define desktop management software.
2. Create a note using Sidekick's notepad.
3. Complete calculations using Sidekick's calculator.
4. Complete a schedule using Sidekick's calendar.
5. Create a phone directory for Sidekick's dialer.

LEARNING ACTIVITIES

Date	Activity	Date
_____	1. Read the handout Introduction to Desktop Management.	_____
_____	2. Complete Exercise 1.	_____
_____	3. Complete Exercise 2.	_____
_____	4. Complete Exercise 3.	_____
_____	5. Complete Exercise 4.	_____
_____	6. Complete Exercise 5.	_____

INTRODUCTION TO DESKTOP MANAGEMENT

"Desktop Management" software usually includes an electronic notepad, a calculator, an electronic calendar, and an electronic dialer. It may also include an ASCIE table and an electronic mail system.

This software is loaded each day when you boot your computer. It is there all day as you run other programs such as word processing, database management, electronic spreadsheets, graphics, etc. The desktop manager can be activated immediately while you are running other programs. You do not have to exit the job you are doing to access the desktop manager.

The desktop manager reduces the need for paper notes, calendars, a calculator, or a phone directory because all of these are available on the computer. A printout can be done if needed. Or a note or schedule may be sent using electronic mail if it is available.

The package you will learn to use in this unit is Sidekick. It contains a notepad, a calculator, a calendar, a dialer, and an ASCIE table.

EXERCISE 1
THE NOTEPAD

We will use the following features of sidekick: notepad, calculator, calendar, and dialer. To boot sidekick, boot with DOS. At the A>, type sk and press enter. Sidekick will load. Now, any time you want to use Sidekick, press CTRL + ALT.

Notepad--Sidekick's notepad is a full-screen text editor with special notepad features such as easy data transfer from any other program and automatic date/time stamping.

Complete the following steps to use the notepad:

1. Boot Sidekick.
2. Press CTRL + ALT
3. Cursor to Notepad and press enter or type N.
4. The notepad appears on the screen. Notice the command keys that are available when using notepad. Press F3 to create a new file. Press F2 and name the note tryit.
5. Type the following:
   I am using the notepad feature of Sidekick. It is much like a word processor. Print screen.
6. Press F2 to save the note.
7. Press Esc. to go back to the main menu.

Now that you have used the notepad feature, try accessing the other features. You may select the feature you want in any of three ways:

1) Enter the highlighted capital letter in the window name: N for notepad, C for calculator, L for calendar, d for dialer.
2) Press the functionkey associated with the desired window.
3) Use the arrows to move the horizontal bar to the name of the desired window and press enter.

UNIT III

DESKTOP MANAGEMENT

EXERCISE 2

The Calculator

Complete the following steps to use the calculator:

1. Boot Sidekick.

2. Press CTRL + ALT

3. Cursor to Calculator or type C.

4. The calculator appears on the screen. It is much like an electronic calculator. However, some of the keys are not on the numeric keypad; they are on the keyboard instead. When you activate the Calculator, the Numlock status is automatically set, so you may use the numeric keypad. If the calculator is covering something on the screen that you need to see, press scroll lock and move the calcultor with the cursor movement keys.
   Sidekick's calculator is used like any hand held electronic calculator:

   The mathematical operator keys are:

+	Addition
-	Subtraction
*	Multiplication
/	Division
E	Clear entry
C	Clear the entire calculator

   Enter parentheses exactly as they appear in formulas.

Do the following calculations and write your answers on this page.

```
 12829          48609          250 * 1.29 =
+36182         -39219
```

7.88/4 =

32 + (9 * 116 + 5)/2 =

Press Esc to return to the main menu. Press Esp again to exit Sidekick.

EXERCISE 3

THE CALCULATOR

Type the following report double spaced with the table single spaced using your word processor. Use Sidekick's calendar to figure the total dollars spent on advertising. Remember that you do not exit the word processing program. Just press Alt and C for calculator.

You will need to move the calculator so that you can see the figures on your screen.

ADVERTISING COSTS

In the economic battle of product survival, very large sums are expended annually to convince American consumers to cast their dollar votes for the continuance of certain goods or services.

Companies view effective advertising as an investment that engenders many more dollars than those invested. In 1974, the following five companies spent the most money for advertising.

Proctor and Gamble Co.	$245,186,000
General Foods Corp.	140,930,000
Bristol-Myers Co.	121,618,000
American Home Products Corp.	118,228,000
General Motors Corp	115,256,000

The total amount spent on advertising in 1974 was _____.

UNIT III

DESKTOP MANAGEMENT

EXERCISE 4

THE CALENDAR

Complete the following steps to use the calendar.

1. Boot Sidekick.

2. Press Alt-L. The calendar will appear on the screen.

3. Press the left and right cursor keys to set the correct month; press the up and down cursor keys to set the correct year. Set the date to May of the current year.

4. Type 20 and press enter to set the day. A schedule will appear on the screen.

5. Enter your initials at the top of the schedule.

6. Enter appointments by cursoring to the time, typing the appointment, and pressing enter. Set the following appointments:

May 20

9:30 Budget meeting Conf. rm

12:00 Business Club Lunch.

x out 12:30, 1:00, and 1:30 since these times will be taken up by the Luncheon.

May 27

8:30 Jerry Miller, Micro,Inc.

10:00 Department Meeting

x out 10:30 and 11:00 since you will be in a meeting then

4:00 Budget meeting

May 30

10:00 Work on Budget

x out through noon

2:00 Budget due

June 1:

8:30	Register for class
9:30	Tom Riggs--ABC Co.

Print this schedule

EXERCISE 5
THE DIALER

The automatic dialer takes numbers from its own phone directory or directly from the screen. You may find the number with dBase or any other database that you already have and Sidekick will make the call. You must have a Hayes Smartmodem or a compatible to actually make the call.

In this exercise, we will create a phone directory that could be used by Sidekick if we had a modem.

Complete the following steps to create the phone directory.

We will create the phone directory using the notepad.

1. Access Sidekick. Type N for Notepad.

2. Press F3 to indicate that this is a new file.

3. Press F2 and enter the name phone.dir. This is the file name that the dialer will search for to look up numbers.

4. Enter the following names and numbers:

This file will consist of
1) an identifier (a name) that can contain any combination of numbers and characters, but must not contain spaces or commas

2) the phone number, which may contain digits, parentheses, hyphens and spaces

3) the identifier and the number are separated by either a comma or a space

JamesNelson (888) 622-0007 Micros, Inc.
JudyLyle (907) 788-2828
ComputerWorld (907) 788-2838

4) Print Screen

5) Press F2 to save the updated file.

UNIT IV

LOCAL AREA NETWORKS

STUDENT'S LABORATORY GUIDE

UNIT IV: LOCAL AREA NETWORKS

OBJECTIVES

1. Define local area network.
2. List the two major advantages of networking microcomputers.
3. Define network architecture (also referred to as topology) and list the most common ones.
4. List the advantages and disadvantages of each type of network architecture.
5. List and describe three common types of cable used as connectors for LANs.
6. Describe the differences between broadband and baseband networks.
7. Describe two ways networks keep signals from interfering with each other when they are being sent through a network.
8. Explain network security. Define each level of security including password, file locking, user rights or directory rights.
9. Define each of the following types of network servers: print, file, gateway, routing.
10. Complete an evaluation of local area networks using a database program and a comparison based on cost using a spreadsheet program.

LEARNING ACTIVITIES

Date	Activity	Grade
_____	1. Using references available in the library and in the business department, answer the questions presented in objectives 1-9.	_____
_____	2. Complete Exercise 1.	_____
_____	3. Complete Exercise 2.	_____

EXERCISE 1

Evaluation of Features

1. Following is a list of LAN manufacturers/publishers including a list of features that each LAN includes. Create a database including fields for manufacturer name and for each feature so that you can select records that will indicate whether or not a certain LAN includes certain feature(s). The features and conditions will include: topology, cable, local service, supply all components, password, directory rights, file locking, electronic mail, and gateway to mainframe.

M/P stands for Manufacturer/Publisher

Hints: For topology, Let S = Star, R = ring and B = Bus
For cable type, let f = fiber optic, c = coax, and t = twisted pair.

M/P # 1: Star topology, coax cable, local service, supply all components, password.

M/P # 2: Bus topology, coax cable, local service, supply all components, password, directory rights, file locking, electronic mail, and gateway to mainframe.

M/P # 3: Ring topology, coax cable, password, directory rights, file locking, electronic mail.

M/P # 4: Bus topology, twisted pair, password, local service

M/P # 5: Bus topology, coax cable, local service, supply all components, password, directory rights, file locking, electronic mail, and gateway to mainframe.

M/P # 6: Star topology, coax cable, password, gateway to mainframe

M/P # 7: Ring topology, coax cable, password, directory rights, file locking, electronic mail, gateway.

M/P # 8: Bus topology, twisted pair, password, supply all components.

M/P # 9: Bus topology, coax cable, supply all components, password, directory rights, file locking, electronic mail, and gateway to mainframe.

M/P # 10: Bus topology, coax cable, local service, supply all components, password, directory rights, file locking, electronic mail.

M/P # 11 Bus topology, coax cable, local service, supply all components, password, directory rights, electronic mail, and gateway.

M/P # 12 Bus topology, coax cable, local service, supply all components, password, directory rights, file locking, electronic mail, gateway to mainframe.

2. Your department has decided that a network with a bus topology will best suit its needs. Print a list of all networks with bus topology. Include the M/P, topology, and cable. Name this file Bus.

3. Your manager decides that local service is a must to reduce down time when repairs are needed. From the Bus.dbf print a list of all LANS that have local service. Name it locserv.

4. The other features that will be required are supply all components, password, directory rights, file locking, and electronic mail. From the locserv.dbf, print a list of M/P that supply all components, and have password, directory rights, file locking, and electronic mail.

EXERCISE 2

COMPARISON BASED ON COST

1. Create a worksheet listing only the M/Ps that supply all the features required (See Step 4, Exercise 1). You received bids from all manufacturers listed, but you will consider only those that meet all required features. The following information has been summarized from the bids:

   Design the worksheet so that the total cost of each bid is shown for a purchase of a LAN with 20 micros and a purchase of a LAN with 30 micros. Use appropriate formulas and labels. Print a report showing your results.

   Write a recommendation based on your findings; attach this worksheet and the database report.

   M/P # 2
   Micros = $2,400
   File Servers =$5,500
   Laser Printers = $3,200
   Dot Matrix Printers = $400

   M/P # 5
   Micros = $2,250, if over 20 are purchased, $2,000
   File Servers = $6,000
   Laser Printers = $4,000
   Dot Matrix Printers = $375

   M/P # 9
   Micros = $3,000; if over 20 are purchased, $2,250
   File Servers = $4,500
   Laser Printers = $3,100
   Dot Matrix Printers = $350

   M/P # 10
   Micros = 1,995
   File Servers = $5,500
   Laser Printers = $3,000
   Dot Matrix Printers = $425

UNIT V

ELECTRONIC MAIL

STUDENT'S LABORATORY GUIDE

UNIT V: ELECTRONIC MAIL

OBJECTIVES:

1. Discuss electronic mail including definitions of terms and methods.

2. Send and receive messages using an E-mail system, if available.

3. If E-mail is not available, complete a tutorial disk on E-mail.

LEARNING ACTIVITIES

Date	Activity	Grade
_____	1. Compose a one to two page description of electronic mail using references available in the library or in the business department. Include terms, concepts, and methods.	_____
_____	2. Complete the E-mail tutorial disk.	_____

UNIT VI

TECHNICAL REPORT

STUDENT'S LABORATORY GUIDE

UNIT VI: TECHNICAL REPORT USING DATABASE
AND
ELECTRONIC SPREADSHEET SOFTWARE

OBJECTIVES

1. Given a case and data, the student will compose a technical report including database reports and graphs to support the narrative and the conclusions and recommendations.

LEARNING ACTIVITIES

Date	Activity	Grade
_____	1. Complete the report assigned on the next page. You must use database and electronic spreadsheet software to produce reports and graphs to support your narrative, conclusions, and recommendations. Include at least one database report and at least three graphs; however, you may include more.	_____

CASE AND DATA FOR TECHNICAL REPORT

Your assignment is to report on the status of women in ABC Company's sales force. Several years ago the executives of ABC Company, a large marketer of industrial goods, decided to bring women into its sales force "as quickly and expeditiously as possible." Now they want a progress report. In general, management wants an overall picture of women in the ABC Company sales force. More specifically, they want the answers to questions such as how many women have been hired, what are their characteristics, and how successful they have been.

As administrative assistant to Jack Miller, Vice President of Sales, you have been assigned the report. You begin by going through personnel records and sales records for each of ABC's sales regions.

With the following information compiled, you begin to compose the report and to produce reports and graphs that will enhance your presentation of the data to top management.

Table 38
Number of men and women employed in sales, by region, current year, and seven years ago

Sales region	Current year		Seven years ago	
	Men	Women	Men	Women
A.....	14	3	11	0
B.....	19	1	16	0
C.....	77	12	70	2
D.....	43	5	39	2
E.....	92	24	87	1
F.....	37	10	33	2

Table 39
Absenteeism and turnover, by sex (preceding year)

	Men	Women
Absenteeism (days):		
None.....	27%	14%
1-5.....	62	48
6-10.....	6	29
11-15.....	4	7
16+.....	1	2
	100%	100%
Turnover:		
Employees.....	11.5%	5.4%

Table 40
Years of industrial sales experience*
(percent of total male and female)

Years of Experience	Men	Women
0-5.....	13	37
6-10.....	26	26
11-15.....	24	17
16-20.....	19	19
21-25.....	11	1
Over 25.....	7	0

Table 41
Years of Education (percent)

Education (year completed, 12=high school:		
12.....	8	0
13.....	13	0
14.....	19	16
15.....	12	12
16.....	48	69
Over 16.....	0	3

Table 42
Sales performance of men and women meeting or exceeding annual quota (percent)

Percent of annual quota met	Men	Women
130 and over.....	9	2
120-129.....	7	9
110-119.....	18	23
100-109.....	47	51

INSTRUCTOR'S COURSE SYLLABUS

OFT 2401: Intermediate Information Processing

INSTRUCTOR'S COURSE SYLLABUS

Course Title: Intermediate Information Processing

Course Number:

OFT	2401	3	2	4
Prefix	No.	Lecture Hrs.	Lab Hrs.	Credit Hrs.

Course Description:

Information processing applications in a networked environment. Students will learn to use advanced word processing applications in addition to learning practical applications of a spreadsheet, data base, and graphics as well as electronic mail and files. Lab fee.

Prerequisites:

OFT 1402 - Principles of Information Processing
This course gives hands-on experience in the basic operation of word processing on microcomputers. Course also covers theory, concepts, word processing system components and business applications necessary to develop proficiency-level skills.

CSC 1402 - Microcomputers and Their Applications
A study of microcomputer systems and their uses. Programming fundamentals of microcomputers, design, operation, and applications.

ACT 1401 - Elementary Accounting
An introductory course to provide the clerical, management and secretarial student with a knowledge of bookkeeping procedures which may be encountered in personal service enterprises, merchandise, notes and interest, the accrual basis of accounting, periodic summaries, and adjusting and closing accounts at the end of an accounting period.

Texts:

A. Spreadsheet

DDC Spreadsheets; Skill Building Exercises and Applications, by Iris Blanc and Cathy Vento, Dictation Disk Company, 1986. (Also Teacher Manual to Accompany)

Quick Reference Guide for Introductory Lotus 1-2-3 and for the IBM PC; correlated to DDC Spreadsheets: Applications and Exercises, by Iris Blanc and Elinore J. Hildebrandt, Dictation Disk Company, 1986.

B. Database

Database Applications, by William O. Drum, South-Western Publishing Company, 1986.

References:

The Illustrated Lotus 1-2-3 Book, by Thomas H. Berlinger and David T. Reeves, Wordware Publishing, Inc., 1985.

Lotus 1-2-3 A Ready Reference Manual, by Catherine Garrison, Mercedes A. McGowen, and Marilyn K. Popyk, Addison-Wesley Publishing Company, Inc., 1987.

Learning To use Supercalc3, dBase III, and Wordstar 3.3: an Introduction, by Gary B. Shelly and Thomas J. Cashman, Boyd & Fraser Publishing Company, 1986.

Microcomputer: Software and Applications, by Dennis P. Curtin and Leslie R. Porter, Prentice-Hall Publishing Company.

Equipment and Materials Required:

A. Software:
   1. DisplayWrite 4 by IBM
   2. Lotus 1-2-3 by Lotus Development Corp.
   3. dBase III by Ashton Tate
   4. SideKick by Borland International, Inc.
   5. Tutorial on E-mail by Applied Data Research.

B. Microcomputers with sufficient memory to run software the school has available. A ratio of one student to each microcomputer is necessary since this course requires hands-on exercises to be completed independently.

C. Keys may be provided for students to check their daily work; however, some form of feedback from instructors should take place routinely. One suggestion is to have instructors initial correct papers before the student turns them in to be recorded. This procedure gives the student immediate feedback and ensures that he will not proceed to another topic until he has mastered the present one.

D. Software documentation should be available for student use in the lab.

E. The instructional materials for this course will include specific exercises for students to use as well as supplemental exercises that instructors can develop as needed.

Instructional Process:

1. Student's Laboratory Guides provide outlines of laboratory assignments and steps to follow to complete each lab assignment. Equipment lists and additional information needed by instructor are in the Instructor's Guides for each unit.

2. Tests and quizzes will be given periodically. Sample tests and keys are attached to this syllabus.

3. Homework will be assigned as necessary.

Competency Statements:

Office Technology Program exit competencies upon which this course is based:

A. Design, create, edit, combine and copy electronic spreadsheet files, and produce graphs using electronic spreadsheet software.

B. Design, create, edit, update, combine and copy database files, and produce labels and reports using a database management system.

C. Define desktop management system, and use a desktop management software package.

D. Transfer database and electronic spreadsheet files to word processing files.

E. Produce a business or technical report, given a collection of data, using word processing, spreadsheet, graphics and database management software.

F. Demonstrate an understanding of decision-support functions by creating database and electronic spreadsheet files to use as decision-support (management) tools.

G. Use an electronic spreadsheet for basic bookkeeping functions.

H. Define and explain the functions and advantages of a local area network.

I. Evaluate factors in selecting a local area network.

J. Define and describe the functions of an electronic mail system.

K. Complete an electronic mail tutorial.

L. Develop and demonstrate responsible work behavior in an automated environment and in a local area network environment.

M. Establish procedures for efficient work flow while working in a shared environment (LAN).

N. Exhibit a professional attitude in completing assigned tasks.

O. Exhibit independence in comprehending and applying written instructions given in software documentation and assigned tasks.

Evaluation of Students:

Examinations:

There will be two unit tests, one progress test, and one final project (Technical Report). No make-up exams will be given without prior approval.

Laboratory/Homework:

Assignments will be due according to lesson schedule. All assignments must be in mailable form. All exercises for one unit will be averaged for one unit grade. Late assignments will not be accepted after one week past the due date.

Work Habits:

Technique makes up 10% of the final grade. The technique grade will evaluate the student's ability to work alone asking questions only when necessary, the ability to make decisions after reading and comparing information, the ability to use the software with a minimum amount of help from the instructor, the ability to use time wisely, the ability to bring all necessary supplies and books to class, and the ability to maintain a positive attitude toward the course and the instructor.

Grades:

Final Grade Determination:
Grading Scale (suggested)

Unit Exams:	
Unit 1	10%
Unit 2	10%
Lab Exercises:	
Units 1, 2, 3, 4, and 5	40%
Final Project:	
Unit 6	15%
Homework:	
(Includes weekly library reports)	15%
Techniques and Work Habits:	
(See attached form)	10%
FINAL SEMESTER GRADE ----------	100%

Course Outline:

Introduction:

1. The Changing Role of the Secretary
2. Professionalism in a Changing Technological Environment

Contents of Unit 1: Database Management

1. Concepts and Terms
2. Functions and Commands
   a. designing the database
   b. creating the database
   c. editing the database
   d. updating the database
   e. combining databases
   f. copying databases

Contents of Unit 2: Electronic Spreadsheets

1. Concepts and Terms
2. Functions and Commands
   a. creating the spreadsheet
   b. editing the spreadsheet
   c. combining spreadsheets
   d. copying spreadsheets
   e. producing graphs

Contents of Unit 3: Desktop Management Software

1. Concepts and Terms
2. Electronic Notepad
3. Calculator
4. Calendar
5. Dialer

Contents of Unit 4: Local Area Networks

1. Concepts and Terms
2. Evaluating and Choosing LAN's

Contents of Unit 5: Electronic Mail

1. Concepts and Terms
2. Methods

Contents of Unit 6:

1. Technical Report Using Database and Electronic Spreadsheet Software

Techniques and Work Habits

Name of student observed _____

Ten percent of your final grade is determined by the technique you practice throughout the semester. Your instructor has observed your display of the following behavior that is commendable or that needs attention.

	Dates Observed	Acceptable	Needs Attention
Ability to read and follow instructions.	_____	_____	_____
Works quietly without wasting time visiting with neighbor.	_____	_____	_____
Does not exhibit frustrations by making verbal protests or complaints.	_____	_____	_____
Remains calm and attentive to work.	_____	_____	_____
Consults with others only when necessary to resolve a problem.	_____	_____	_____
Makes an attempt to make work more efficient.	_____	_____	_____
Brings supplies to class.	_____	_____	_____
Accepts responsibility of completing work on time.	_____	_____	_____
Exhibits pride in documents turned in.	_____	_____	_____
Attendance and tardies.	_____	_____	_____

(This evaluation sheet may be used if you wish to make technique and work habits a part of the grade.)

INSTRUCTOR'S GUIDE

UNIT I

DATABASE MANAGEMENT

OFT 2401: Intermediate Information Processing

INSTRUCTOR'S GUIDE

Unit 1

Unit Title: Database Management

Contents of Unit:

1. Introduction
2. Concepts & Definitions
3. Functions & Commands
   a. Designing the Database
   b. Creating the Database
   c. Editing the Database
   d. Updating the Database
   e. Combining Databases
   f. Copying Databases

Unit Objectives: Upon completion of this unit, the student will be able to:

1. Design, create, edit, update, combine, and copy database files and produce labels and reports using a database management system.
2. Exhibit a professional attitude in completing assigned tasks.
3. Exhibit independence in comprehending and applying written instructions given in software documentation and assigned tasks.

Equipment and Materials Required:

1. dBase III textbook and dBase III software
2. Lab handouts for each lesson in this unit.

Procedures:

1. See the Student's Lab Guides for Unit 1 for instructions concerning individual learning activities.
2. Demonstrations by the instructor when necessary.

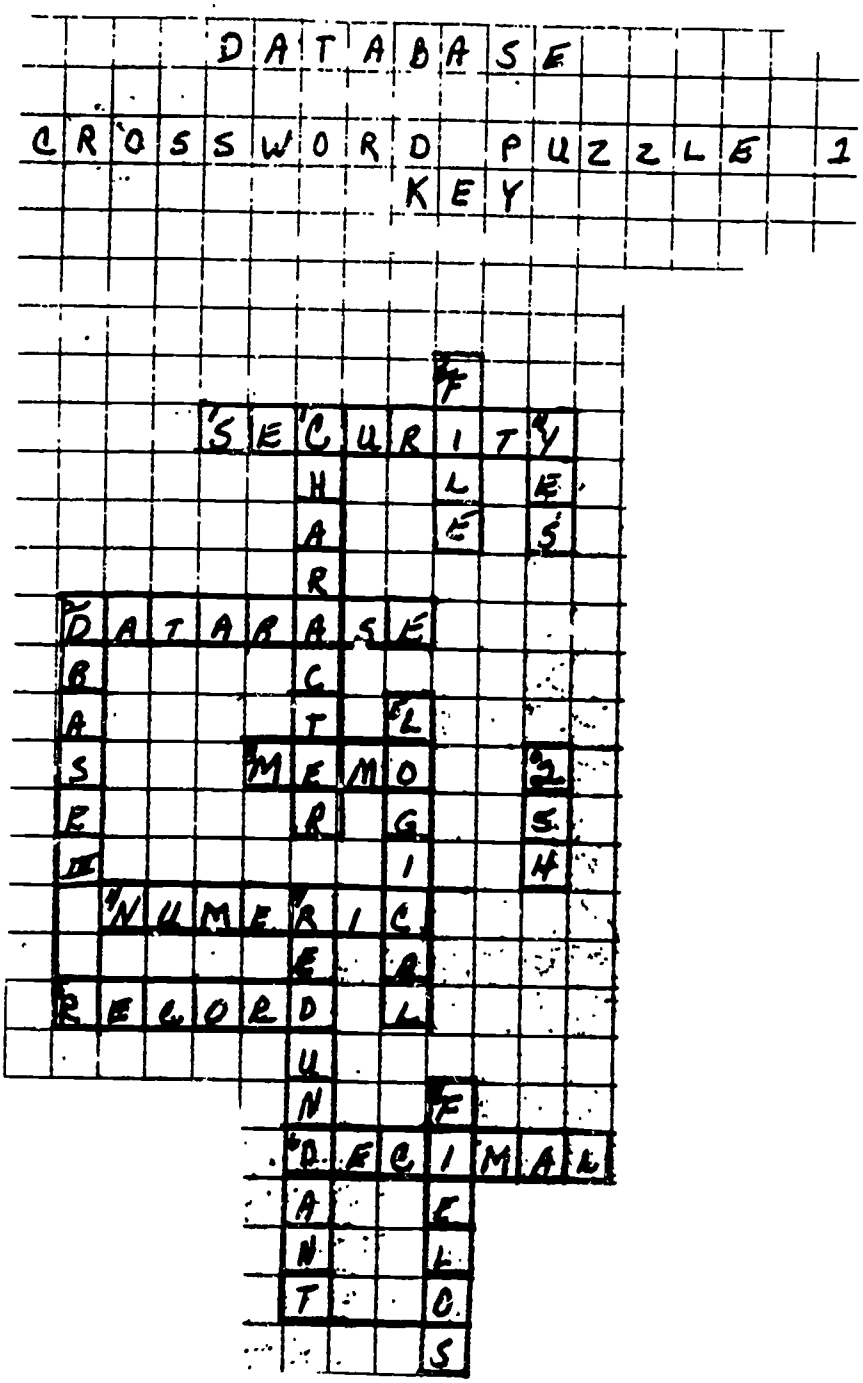
Learning Activities:

1. Students are to complete learning activities for Lessons 1-10. Keys to learning activities 1-6 begin on the next page, and keys to learning activities 8-10 can be found in the Teacher's Manual which accompanies the database texts.

Evaluation:

1. Unit 1 Applications Test and key may be found after the keys to the learning activities for this unit.

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 1



UNIT I: DATABASE MANAGEMENT
KEY
LESSON 2, EXERCISE 1

Record#	NUMBER	NAME	DATE	MAJOR	GPA	ENR
1	6987	SMITH, KAY	01/13/86	IP	3.58	.T.
2	9773	JONES, LEA	06/02/85	ES	3.71	.T.
3	1010	MITCHELL, JIM	01/15/86	IP	3.87	.T.
4	1327	SIMS, JAN	01/15/86	MS	3.15	.T.
5	2867	LASSITER, JANET	01/15/85	MS	3.15	.T.
6	6746	SANTOS, LIZ	01/13/86	IP	3.95	.T.
7	9773	LYNN, CARRIE	01/13/84	MS	2.77	.F.
8	7836	JOHNSON, MIMI	06/02/85	MS	3.60	.T.
9	9833	LOOFER, JAMES	08/21/86	IP	3.80	.T.
10	2773	HILL, ANNNA	08/21/86	IP	3.50	.T.
11	2873	DERRICK, JANICE	08/21/86	IP	2.95	.T.
12	8377	SMITH, KAE	06/02/85	ES	3.01	.T.
13	1787	JONES, WANDA	08/21/85	LS	3.95	.F.
14	2987	NORTH, RENDA	01/13/84	MS	3.25	.F.
15	6736	TRENT, KIMBERLY	06/01/84	LS	2.90	.F.
16	2978	THOMAS, BETTY	06/01/84	LS	3.75	.T.
17	2987	CROWLEY, JUNE	08/21/86	IP	2.00	.T.
18	9837	DAVIS, LANA	08/21/86	IP	2.75	.T.
19	6376	CORWIN, AMY	01/15/86	LS	2.50	.T.
20	7656	FRANCISCO, BETH	01/15/86	LS	4.00	.T.

Press any key to continue...

Record#	NUMBER	NAME	DATE	MAJOR	GPA	ENR
21	6450	HODGE, MOLLY	06/02/85	MS	4.00	.T.
22	5867	RICE, JERRY	06/02/85	LS	3.75	.T.

UNIT I: DATABASE MANAGEMENT
UNIT I, LESSON 2, EXERCISE 2 - KEY

Record#	NUMBER	NAME	TITLE	DATE	FA:
1	27270	ADURHOLD, ANN	PROOFREADER	09/09/85	8.50
2	43636	COPELAND, MARY	SECRETARY	07/29/84	7.50
3	58909	THOMPSON, WILLIAM	PROCESSOR 2	01/22/86	12.25
4	87654	THOMASSON, JAMIE	PROCESSOR 1	06/15/86	10.00
5	38390	BREMER, JANIE	PROOFREADER	09/20/86	10.00
6	39389	MIDDLETSON, JOAN	PROCESSOR 2	06/11/85	14.00
7	76455	RUSTON, MIKE	PROCESSOR 1	08/15/85	11.60
8	98878	SIPES, DONNA	PROCESSOR 1	08/15/85	11.75
9	98277	ZANER, LAURA	PROCESSOR 1	07/01/85	11.75
10	77387	PLAYER, LINDA	MANAGER	07/01/85	21.25
11	99399	MITCHELL, RHONDA	PROCESSOR 2	07/01/86	13.50
12	38288	HOLDEN, WANDA	PROOFREADER	07/01/86	9.50
13	38983	LEMONS, DEBORAH	PROCESSOR 2	07/01/86	13.75
14	39387	CROSS, JANA	PROCESSOR 1	08/22/85	11.75
15	29987	BEACH, JERILYN	PROCESSOR 1	07/01/85	12.00

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 2, EXERCISE 3

Record #	NUMBER	TYPE	MODEL	PURDATE	CONTRACT	RATE	RATE DATE	VALUE
1	28288	C	VICTOR	07/22/85	.F.	20.00	/ /	
2	28289	C	VICOTR	07/22/85	.F.	20.00	09/[illegible]	
3	28290	C	VICOTR	07/22/85	.F.	20.00	04/01/8[illegible]	
4	28291	C	VICTOR	07/22/85	.F.	20.00	/ /	
7	28292	C	VICTOR	07/22/85	.F.	20.00	/ /	
6	28293	C	VICTOR	07/22/85	.F.	[illegible]		
7	28294	C	SANTRON	07/22/85	.T.	0.00	/ /	
8	28295	C	SANTRON	07/22/85	.T.	0.00	DE[illegible]	
9	28296	C	SANTRON	07/22/85	.T.	0.00	/ /	
10	28297	C	SANTRON	07/22/85	.T.	0.00	04/14/85	

Press any key to continue...

Record #	NUMBER	TYPE	MODEL	PURDATE	CONTRACT	RATE	RATE DATE	VALUE
11	28298	C	SANTRON	07/22/85	.T.	[illegible]		
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 3, EXERCISE 1, STEP 3

```
. display structure
Structure for database : B:student.dbf
Number of data records :      22
Date of last update    : 01/01/80
Field  Field name  Type       Width     Dec
    1  NUMBER      Character      4
    2  NAME        Character     20
    3  DATE        Date           8
    4  MAJOR       Character      2
    5  GPA         Numeric        4       2
    6  ENR         Logical        1
** Total **                      40
```

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 3, EXERCISE 1, STEP 4

. list

Record#	NUMBER	NAME	DATE	MAJOR	GPA	ENR
1	6987	SMITH, KAY	01/13/86	IP	3.59	.T.
2	8773	JONES, LEA	06/02/85	ES	2.71	.T.
3	1010	MITCHELL, JIM	01/15/86	IP	3.25	.T.
4	1327	SIMS, JAN	01/15/86	MS	3.15	.T.
5	2897	LASSITER, JANET	01/15/85	MS	3.15	.T.
6	8746	SANTOS, LIZ	01/05/86	IP	3.95	.T.
7	9773	LYNN, CARRIE	01/13/84	MS	2.77	.F.
8	7886	JOHNSON, MIMI	06/02/85	MS	3.60	.T.
9	9833	LOOPER, JAMES	08/21/86	IP	3.80	.T.
10	2773	HILL, ANNNA	08/21/86	IP	3.50	.T.
11	2873	DERRICK, JANICE	08/21/86	IP	2.95	.T.
12	8377	SMITH, KAE	06/02/85	ES	3.01	.T.
13	1787	JONES, WANDA	08/21/85	LS	2.95	.F.
14	2987	NORTH, RENDA	01/13/84	MS	3.25	.F.
15	9736	TRENT, KIMBERLY	06/01/84	LS	2.90	.F.
16	2978	THOMAS, BETTY	06/01/84	LS	3.75	.T.
17	2997	CROWLEY, JUNE	08/21/86	IP	2.90	.T.
18	9837	DAVIS, LANA	08/21/86	IP	2.75	.T.
19	6376	CORWIN, AMY	01/15/86	LS	2.50	.T.
20	7656	FRANCISCO, BETH	01/15/86	LS	4.00	.T.
21	6450	HODGE, MOLLY	06/02/85	MS	4.00	.T.
22	5867	RICE, JERRY	06/02/85	LS	3.75	.T.

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 3, EXERCISE 1, STEP 6

1	SMITH, KAY	IP
2	JONES, LEA	ES
3	MITCHELL, JIM	IP
4	SIMS, JAN	MS
5	LASSITER, JANET	MS
6	SANTOS, LIZ	IP
7	LYNN, CARRIE	MS
8	JOHNSON, MIMI	MS
9	LOOPER, JAMES	IP
10	HILL, ANNNA	IP
11	DERRICK, JANICE	IP
12	SMITH, KAE	ES
13	JONES, WANDA	LS
14	NORTH, RENDA	MS
15	TRENT, KIMBERLY	LS
16	THOMAS, BETTY	LS
17	CROWLEY, JUNE	IP
18	DAVIS, LANA	IP
19	CORWIN, AMY	LS
20	FRANCISCO, BETH	LS

Press any key to continue...

Record#	name	major
21	HODGE, MOLLY	MS
22	RICE, JERRY	LS

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 3, EXERCISE 1, STEP 7

```
       1   IP     3.58
       2   ES     2.71
       3   IP     3.25
       4   MS     3.15
       5   MS     3.15
       6   IP     3.95
       7   MS     2.77
       8   MS     3.60
       9   IP     3.80
      10   IP     3.50
      11   IP     2.95
      12   ES     3.01
      13   LS     3.95
      14   MS     3.25
      15   LS     2.90
      16   LS     3.75
      17   IP     2.90
      18   IP     2.75
      19   LS     2.50
      20   LS     4.00
Press any key to continue...
Record#  major  gpa
      21   MS     4.00
      22   LS     3.75
```

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 3, EXERCISE 1, STEP 8

1	01/13/86	SMITH, KAY
2	06/02/85	JONES, LEA
3	01/15/86	MITCHELL, JIM
4	01/15/86	SIMS, JAN
5	01/15/85	LASSITER, JANET
6	01/05/86	SANTOS, LIZ
7	01/13/84	LYNN, CARRIE
8	06/02/85	JOHNSON, MIMI
9	08/21/86	LOOPER, JAMES
10	08/21/86	HILL, ANNNA
11	08/21/86	DERRICK, JANICE
12	06/02/85	SMITH, KAE
13	08/21/85	JONES, WANDA
14	01/13/84	NORTH, RENDA
15	06/01/84	TRENT, KIMBERLY
16	06/01/84	THOMAS, BETTY
17	08/21/86	CROWLEY, JUNE
18	08/21/86	DAVIS, LANA
19	01/15/86	CORWIN, AMY
20	01/15/86	FRANCISCO, BETH

Press any key to continue...

Record#	date	name
21	06/02/85	HODGE, MOLLY
22	06/02/85	RICE, JERRY

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 3, EXERCISE 1, STEP 9

Record#	name	gpa
1	SMITH, KAY	3.58
2	JONES, LEA	2.71
3	MITCHELL, JIM	3.25
4	SIMS, JAN	3.15
5	LASSITER, JANET	3.15
6	SANTOS, LIZ	3.95
7	LYNN, CARRIE	2.77
8	JOHNSON, MIMI	3.60
9	LOOPER, JAMES	3.90
10	HILL, ANNNA	3.50
11	DERRICK, JANICE	2.95
12	SMITH, KAE	3.01
13	JONES, WANDA	3.95
14	NORTH, RENDA	3.25
15	TRENT, KIMBERLY	2.90
16	THOMAS, BETTY	3.75
17	CROWLEY, JUNE	2.90
18	DAVIS, LANA	2.75
19	CORWIN, AMY	2.50
20	FRANCISCO, BETH	4.00

Press any key to continue...

Record#	name	gpa
21	HODGE, MOLLY	4.00
22	RICE, JERRY	3.75

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 3, EXERCISE 1, STEPS 10 & 11

STEP 10

```
. display record 7
Record#  NUMBER NAME                DATE      MAJOR  GPA  ENR
      7  9773   LYNN, CARRIE        01/13/84  MS     2.77 .F.
.
```

STEP 11

```
. display record 7
Record#  NUMBER NAME                DATE      MAJOR  GPA  ENR
      7  9773   LYNN, CARRIE        01/13/84  MS     2.77 .F.
. display next 5
Record#  NUMBER NAME                DATE      MAJOR  GPA  ENR
      7  9773   LYNN, CARRIE        01/13/84  MS     2.77 .F.
      8  7836   JOHNSON, MIMI       06/02/85  MS     3.60 .T.
      9  9833   LOOPER, JAMES       08/21/86  IP     3.80 .T.
     10  2773   HILL, ANNNA         08/21/86  IP     3.50 .T.
     11  2873   DERRICK, JANICE     08/21/86  IP     2.95 .T.
.
```

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 3, EXERCISE 1, STEP 16 & 17

STEP 16

Record#	NUMBER	NAME	DATE	MAJOR	GPA	ENR
1	6987	SMITH, KAY	01/13/86	IP	3.58	.T.
3	1010	MITCHELL, JIM	01/15/86	IP	3.25	.T.
6	8746	SANTOS, LIZ	01/05/86	IP	3.95	.T.
9	9833	LOOPER, JAMES	08/21/86	IP	3.80	.T.
10	2773	HILL, ANNNA	08/21/86	IP	3.50	.T.
11	2873	DERRICK, JANICE	08/21/86	IP	2.95	.T.
17	2987	CROWLEY, JUNE	08/21/86	IP	2.90	.T.
18	9837	DAVIS, LANA	08/21/86	IP	2.75	.T.

STEP 17

. DISPLAY FOR GPA > 3.5

Record#	NUMBER	NAME	DATE	MAJOR	GPA	ENR
1	6987	SMITH, KAY	01/13/86	IP	3.58	.T.
6	8746	SANTOS, LIZ	01/05/86	IP	3.95	.T.
8	7836	JOHNSON, MIMI	06/02/85	MS	3.60	.T.
9	9833	LOOPER, JAMES	08/21/86	IP	3.80	.T.
13	1787	JONES, WANDA	08/21/85	LS	3.95	.F.
16	2978	THOMAS, BETTY	06/01/64	LS	3.75	.T.
20	7656	FRANCISCO, BETH	01/15/86	LS	4.00	.T.
21	6450	HODGE, MOLLY	06/02/85	MS	4.00	.T.
22	5867	RICE, JERRY	06/02/85	LS	3.75	.T.

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 3, EXERCISE 1, STEP 20

Record#	NUMBER	NAME	DATE	MAJOR	GPA	ENR
1	6987	SMITH, KAY	01/13/86	IP	3.58	.T.
2	8773	JONES, LEA	06/02/85	ES	2.71	.T.
3	1010	MITCHELL, JIM	01/15/86	IP	3.25	.T.
4	1327	SIMS, JAN	01/15/86	MS	3.15	.T.
5	2887	LASSITER, JANET	01/15/85	MS	3.15	.T.
6	8746	SANTOS, LIZ	01/05/86	IP	3.95	.T.
8	7836	JOHNSON, MIMI	06/02/85	MS	3.60	.T.
9	9833	LOOPER, JAMES	08/21/86	IP	3.80	.T.
10	2773	HILL, ANNNA	08/21/86	IP	3.50	.T.
11	2873	DERRICK, JANICE	08/21/86	IP	2.95	.T.
12	8377	SMITH, KAE	06/02/85	ES	3.01	.T.
16	2978	THOMAS, BETTY	06/01/84	LS	3.75	.T.
17	2987	CROWLEY, JUNE	08/21/86	IP	2.90	.T.
18	9837	DAVIS, LANA	08/21/86	IP	2.75	.T.
19	6376	CORWIN, AMY	01/15/86	LS	2.50	.T.
20	7656	FRANCISCO, BETH	01/15/86	LS	4.00	.T.
21	6450	HODGE, MOLLY	06/02/85	MS	4.00	.T.
22	5867	RICE, JERRY	06/02/85	LS	3.75	.T.

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 3, EXERCISE 1, STEP 22, 23, 24

STEP 22

Record#	NUMBER	NAME	DATE	MAJOR	GPA	ENR
7	9773	LYNN, CARRIE	01/13/84	MS	2.77	.F.
13	1787	JONES, WANDA	08/21/85	LS	3.95	.F.
14	2987	NORTH, RENDA	01/13/84	MS	3.25	.F.
15	8736	TRENT, KIMBERLY	06/01/84	LS	2.90	.F.

STEP 23

Record#	NUMBER	NAME	DATE	MAJOR	GPA	ENR
1	6987	SMITH, KAY	01/13/86	IP	3.58	.T.
3	1010	MITCHELL, JIM	01/15/86	IP	3.25	.T.
6	8746	SANTOS, LIZ	01/05/86	IP	3.95	.T.
9	9833	LOOPER, JAMES	08/21/86	IP	3.80	.T.
10	2773	HILL, ANNNA	08/21/86	IP	3.50	.T.

STEP 24

Record#	NUMBER	NAME	DATE	MAJOR	GPA	ENR
1	6987	SMITH, KAY	01/13/86	IP	3.56	.T.
3	1010	MITCHELL, JIM	01/15/86	IP	3.25	.T.
6	8746	SANTOS, LIZ	01/05/86	IP	3.95	.T.
8	7836	JOHNSON, MIMI	06/02/85	MS	3.60	.T.
9	9833	LOOPER, JAMES	08/21/86	IP	3.80	.T.
10	2773	HILL, ANNNA	08/21/86	IP	3.50	.T.
11	2873	DERRICK, JANICE	08/21/86	IP	2.95	.T.
13	1787	JONES, WANDA	08/21/85	LS	3.95	.F.
16	2978	THOMAS, BETTY	06/01/84	LS	3.75	.T.
17	2987	CROWLEY, JUNE	08/21/86	IP	3.60	.T.
18	9837	DAVIS, LANA	08/21/86	IP	3.75	.T.
20	7654	FRANCISCO, BETH	01/15/85	LS	4.00	.T.
21	6450	HOGGE, MOLLY	06/05/85	MS	4.00	.T.
22	5687	RICE, JERRY	08/12/85	LS	3.75	.T.

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 3, EXERCISE 2

1. Display the information processing personnel database and print it.

2. What is the average salary of the title processor 2? $13.38
processor 1? $11.48

3. What is the exact command you gave in each case in question 2 to determine the averages in dBase?

AVERAGE PAY FOR TITLE = "PROCESSOR 1"
AVERAGE PAY FOR TITLE = "PROCESSOR 2"

4. What is the total pay hourly for all personnel in proofreading? $28.00

5. What command did you use to determine this total?

SUM PAY FOR TITLE = "PROOFREADER"

6. Print a list of the employees that make $13.00/hr. or more.

7. What is the exact command used to determine this.

DISPLAY FOR PAY >= 13.00 TO PRINT

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 3, EXERCISE 2, STEP 1

Record#	NUMBER	NAME	TITLE	DATE	PAY
1	27270	ADLRHOLD, ANN	PROOFREADER	09/09/85	8.50
2	63636	COPELAND, MARY	SECRETARY	07/29/84	7.50
3	58909	THOMPSON, WILLIAM	PROCESSOR 2	01/22/86	12.25
4	87654	THOMASSON, JAMIE	PROCESSOR 1	06/16/86	10.00
5	38390	BREMER, JANIE	PROOFREADER	09/20/85	10.00
6	39389	MIDDLETSON, JOAN	PROCESSOR 2	06/11/85	14.00
7	76455	RUSTON, MIKE	PROCESSOR 1	08/15/85	11.60
8	98878	SIPES, DONNA	PROCESSOR 1	09/15/85	11.75
9	98277	ZANER, LAURA	PROCESSOR 1	07/01/85	11.75
10	77387	PLAYER, LINDA	MANAGER	07/01/85	21.25
11	98399	MITCHELL, RHONDA	PROCESSOR 2	07/01/86	13.50
12	38388	HOLDEN, WANDA	PROOFREADER	07/01/86	9.50
13	38883	LEMONS, DEBORAH	PROCESSOR 2	07/01/86	13.75
14	39387	CROSS, JANA	PROCESSOR 1	08/22/85	11.75
15	29987	BEACH, JERILYN	PROCESSOR 1	07/01/85	12.00

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 3, EXERCISE 2, STEP 6

Record#	NUMBER	NAME	TITLE	DATE	PAY
6	39389	MIDDLETSON, JOAN	PROCESSOR 2	06/11/85	14.00
10	77387	PLAYER, LINDA	MANAGER	07/01/85	21.25
11	98399	MITCHELL, RHONDA	PROCESSOR 2	07/01/85	13.50
13	38883	LEMONS, DEBORAH	PROCESSOR 2	07/01/86	13.75

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 3, EXERCISE 3, STEP 3

Record# ATE3	NUMBER DATE4	TYPE	MODEL	PURDATE	CONTRACT	RATE	DATE1	DATE2
1	28298	C	VICTOR	07/22/85	.F.	20.00	/ /	/ /
2	28299	C	VICOTR	07/22/85	.F.	30.00	08/27/85	
3	28290	C	VICOTR	07/22/85	.F.	20.00	01/04/87	
4	28291	C	VICTOR	07/22/85	.F.	20.00	/ /	
5	28292	C	VICTOR	07/22/85	.F.	20.00	/ /	
6	28293	C	VICTOR	07/22/85	.F.	20.00	01/28/86	
27	73000	D	IBM	08/21/83	.F.	100.00	09/30/85	
28	73010	D	IBM	08/21/83	.F.	100.00	/ /	

BEST COPY AVAILABLE

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 4, EXERCISE 1, STEPS 3 & 5

STEP 3

Record#	NUMBER	NAME	TITLE	DATE	PAY
1	27270	ADURHOLD, ANN	PROOFREADER	09/09/85	8.50
2	29987	BEACH, JERILYN	PROCESSOR 1	07/01/85	12.00
3	38390	BREMER, JANIE	PROOFREADER	09/20/86	10.00
4	63636	COPELAND, MARY	SECRETARY	07/29/84	7.50
5	39387	CROSS, JANA	PROCESSOR 1	08/22/83	11.75
6	38388	HOLDEN, WANDA	PROOFREADER	07/01/86	9.50
7	36883	LEMONS, DEBORAH	PROCESSOR 2	07/01/86	13.75
8	39389	MIDDLETSON, JOAN	PROCESSOR 2	06/11/85	14.00
9	98399	MITCHELL, RHONDA	PROCESSOR 2	07/01/86	13.50
10	77387	PLAYER, LINDA	MANAGER	07/01/85	21.25
11	76455	RUSTON, MIKE	PROCESSOR 1	08/15/85	11.60
12	98878	SIPES, DONNA	PROCESSOR 1	08/15/85	11.75
13	87654	THOMASSON, JAMIE	PROCESSOR 1	06/16/86	10.00
14	58909	THOMPSON, WILLIAM	PROCESSOR 2	01/22/86	12.25
15	99277	ZANER, LAURA	PROCESSOR 1	07/01/85	11.75

STEP 5

Record#	NUMBER	NAME	TITLE	DATE	PAY
1	77387	PLAYER, LINDA	MANAGER	07/01/85	21.25
2	39389	MIDDLETSON, JOAN	PROCESSOR 2	06/11/85	14.00
3	36883	LEMONS, DEBORAH	PROCESSOR 2	07/01/86	13.75
4	98399	MITCHELL, RHONDA	PROCESSOR 2	07/01/86	13.50
5	58909	THOMPSON, WILLIAM	PROCESSOR 2	01/22/86	12.25
6	29987	BEACH, JERILYN	PROCESSOR 1	07/01/85	12.00
7	98878	SIPES, DONNA	PROCESSOR 1	08/15/85	11.75
8	98277	ZANER, LAURA	PROCESSOR 1	07/01/85	11.75
9	39387	CROSS, JANA	PROCESSOR 1	08/22/85	11.75
10	76455	RUSTON, MIKE	PROCESSOR 1	08/15/85	11.60
11	38390	BREMER, JANIE	PROOFREADER	09/20/86	10.00
12	87654	THOMASSON, JAMIE	PROCESSOR 1	06/16/86	10.00
13	38388	HOLDEN, WANDA	PROOFREADER	07/01/86	9.50
14	27270	ADURHOLD, ANN	PROOFREADER	09/09/85	8.50
15	63636	COPELAND, MARY	SECRETARY	07/29/84	7.50

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 4, EXERCISE 1, STEPS 6 & 7

STEP 6

Record#	NUMBER	NAME	TITLE	DATE	PAY
1	77387	PLAYER, LINDA	MANAGER	07/01/85	21.25
2	29987	BEACH, JERILYN	PROCESSOR 1	07/01/85	12.00
3	39387	CROSS, JANA	PROCESSOR 1	08/22/85	11.75
4	76455	RUSTON, MIKE	PROCESSOR 1	08/15/85	11.50
5	98978	SIPES, DONNA	PROCESSOR 1	08/15/85	11.75
6	87654	THOMASSON, JAMIE	PROCESSOR 1	06/16/86	10.00
7	98277	ZANER, LAURA	PROCESSOR 1	07/01/85	11.75
8	38883	LEMONS, DEBORAH	PROCESSOR 2	07/01/86	13.75
9	39389	MIDDLETSON, JOAN	PROCESSOR 2	06/11/85	14.00
10	99399	MITCHELL, RHONDA	PROCESSOR 2	07/01/85	13.50
11	53909	THOMPSON, WILLIAM	PROCESSOR 2	01/02/86	12.25
12	27270	ADERHOLD, ANN	PROOFREADER	09/09/85	8.50
13	38390	BREMER, JANIE	PROOFREADER	09/20/86	10.00
14	38388	HOLDEN, WANDA	PROOFREADER	07/01/86	9.50
15	63636	COPELAND, MARY	SECRETARY	07/29/84	7.50

STEP 7

Record#	NUMBER	NAME	DATE	MAJOR	GPA	ENR
1	6376	CORWIN, AMY	01/15/86	LS	2.50	.T.
2	2987	CROWLEY, JUNE	08/21/86	IP	2.90	.T.
3	9837	DAVIS, LANA	08/21/86	IP	2.75	.T.
4	2873	DERRICK, JANICE	08/21/86	IP	2.95	.T.
5	7656	FRANCISCO, BETH	01/15/86	LS	4.00	.T.
6	2773	HILL, ANNNA	08/21/86	IP	3.50	.T.
7	6450	HODGE, MOLLY	06/02/85	MS	4.00	.T.
8	7836	JOHNSON, MIMI	06/02/85	MS	3.80	.T.
9	8773	JONES, LEA	06/02/85	ES	2.75	.T.
10	3387	LASSITER, JANET	01/15/86	MS	3.00	.T.
11	9833	LOOPER, JAMES	08/21/86	IP	2.75	.T.
12	1010	MITCHELL, JIM	01/15/86	LS	2.50	.T.
13	3807	RICE, JEFF	08/21/86	IP	3.00	.T.
14	9746	SANTOS, LIZ	01/05/86	IP	3.50	.T.
15	1327	SIMS, JAN	01/15/86	MS	3.75	.T.
16	8377	SMITH, KAE	06/02/85	ES	3.01	.T.
17	6987	SMITH, KAY	01/13/86	IP	3.50	.T.
18	2978	THOMAS, BETTY	06/01/84	LS	3.75	.T.

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 4, EXERCISE 1, STEP 8

Record#	NUMBER	NAME	DATE	MAJOR	GPA	ENR
1	8377	SMITH, KAE	06/02/85	ES	3.01	.T.
2	8773	JONES, LEA	06/02/85	ES	2.71	.T.
3	1010	MITCHELL, JIM	01/15/86	IP	3.25	.T.
4	2773	HILL, ANNNA	08/21/86	IP	3.50	.T.
5	2873	DERRICK, JANICE	08/21/86	IP	2.95	.T.
6	9837	DAVIS, LANA	08/21/86	IP	2.75	.T.
7	2987	CROWLEY, JUNE	08/21/86	IP	2.90	.T.
8	9833	LOOPER, JAMES	08/21/86	IP	3.80	.T.
9	6987	SMITH, KAY	01/13/86	IP	3.58	.T.
10	8746	SANTOS, LIZ	01/05/86	IP	3.95	.T.
11	5867	RICE, JERRY	06/02/85	LS	3.75	.T.
12	2978	THOMAS, BETTY	06/01/84	LS	3.75	.T.
13	7656	FRANCISCO, BETH	01/15/86	LS	4.00	.T.
14	6376	CORWIN, AMY	01/15/86	LS	2.50	.T.
15	7836	JOHNSON, MIMI	06/02/85	MS	3.60	.T.
16	2887	LASSITER, JANET	01/15/85	MS	3.15	.T.
17	6450	HODGE, MOLLY	06/02/85	MS	4.00	.T.
18	1327	SIMS, JAN	01/15/86	MS	3.15	.T.

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 4, EXERCISE 2

Use the commands you learned in lesson 4 to sort the student file as indicated. Record the commands used for each and print a copy of each new file.

1. Sort the student file starting with the most recent date. Name the new file stusort.1.

```
USE STUDENT
SORT ON DATE DESCENDING
USE STUSORT.1
DISPLAY ALL TO PRINT
```

2. Sort the student file with GPA in ascending order. Name the new file stusort.2

```
USE STUDENT
SORT ON GPA
USE STUSORT.2
DISPLAY ALL TO PRINT
```

3. Sort the student file to obtain a list of all information processing and legal secretary majors. Name the file stusort.3

```
USE STUDENT
SORT TO STUSORT.3 ON MAJOR
DISPLAY FOR MAJOR = "IP" TO PRINT
DISPLAY FOR MAJOR = "LS" TO PRINT
```

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 4, EXERCISE 2, STEP 1

Record#	NUMBER	NAME	DATE	MAJOR	GPA	ENR
1	2873	DERRICK, JANICE	08/21/86	IP	2.95	.T.
2	9837	DAVIS, LANA	08/21/86	IP	2.75	.T.
3	2773	HILL, ANNNA	08/21/86	IP	3.50	.T.
4	9833	LOOPER, JAMES	08/21/86	IP	3.80	.T.
5	2987	CROWLEY, JUNE	08/21/86	IP	2.90	.T.
6	1327	SIMS, JAN	01/15/86	MS	3.15	.T.
7	6376	CORWIN, AMY	01/15/86	LS	2.50	.T.
8	1010	MITCHELL, JIM	01/15/86	IP	3.25	.T.
9	7656	FRANCISCO, BETH	01/15/86	LS	4.00	.T.
10	6987	SMITH, KAY	01/13/86	IP	3.58	.T.
11	8746	SANTOS, LIZ	01/05/86	IP	3.95	.T.
12	1787	JONES, WANDA	08/21/85	LS	3.95	.F.
13	8773	JONES, LEA	06/02/85	ES	2.71	.T.
14	7836	JOHNSON. MIMI	06/02/85	MS	3.60	.T.
15	8377	SMITH, KAE	06/02/85	ES	3.01	.T.
16	6450	HODGE, MOLLY	06/02/85	MS	4.00	.T.
17	5867	RICE, JERRY	06/02/85	LS	3.75	.T.
18	2887	LASSITER, JANET	01/15/85	MS	3.15	.T.
19	2978	THOMAS, BETTY	06/01/84	LS	3.75	.T.
20	8736	TRENT, KIMBERLY	06/01/84	LS	2.90	.F.

Press any key to continue...

Record#	NUMBER	NAME	DATE	MAJOR	GPA	ENR
21	2987	NORTH, RENDA	01/13/84	MS	3.25	.F.
22	9773	LYNN, CARRIE	01/13/84	MS	2.77	.F.

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 4, EXERCISE 2, STEP 2

Record#	NUMBER	NAME	DATE	MAJOR	GPA	ENR
1	6376	CORWIN, AMY	01/15/86	LS	2.50	.T.
2	8773	JONES, LEA	06/02/85	ES	2.71	.T.
3	9837	DAVIS, LANA	08/21/86	IP	2.75	.T.
4	9773	LYNN, CARRIE	01/13/84	MS	2.77	.F.
5	2987	CROWLEY, JUNE	08/21/86	IP	2.90	.T.
6	8736	TRENT, KIMBERLY	06/01/84	LS	2.90	.F.
7	2873	DERRICK, JANICE	08/21/86	IP	2.95	.T.
8	9377	SMITH, KAE	06/02/85	ES	3.01	.T.
9	1327	SIMS, JAN	01/15/86	MS	3.15	.T.
10	2887	LASSITER, JANET	01/15/85	MS	3.15	.T.
11	1010	MITCHELL, JIM	01/15/86	IP	3.25	.T.
12	2987	NORTH, RENDA	01/13/84	MS	3.25	.F.
13	2773	HILL, ANNA	06/21/86	IP	3.50	.T.
14	6987	SMITH, KAY	01/13/86	IP	3.58	.T.
15	7836	JOHNSON, MIMI	06/02/85	MS	3.60	.T.
16	2978	THOMAS, BETTY	06/01/84	LS	3.75	.T.
17	5967	RICE, JERRY	06/02/85	LS	3.75	.T.
18	9833	LOOPER, JAMES	08/21/86	IP	3.80	.T.
19	1787	JONES, WANDA	08/21/85	LS	3.95	.F.
20	8746	SANTOS, LIZ	01/05/86	IP	3.95	.T.

Press any key to continue...

Record#	NUMBER	NAME	DATE	MAJOR	GPA	ENR
21	6450	HODGE, MOLLY	06/02/85	MS	4.00	.T.
22	7656	FRANCISCO, BETH	01/15/86	LS	4.00	.T.

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 4, EXERCISE 2, STEP 3

Record#	NUMBER	NAME	DATE	MAJOR	GPA	ENR
3	1010	MITCHELL, JIM	01/15/86	IP	3.25	.T.
4	2873	DERRICK, JANICE	08/21/86	IP	2.95	.T.
5	9837	DAVIS, LANA	08/21/86	IP	2.75	.T.
6	8746	SANTOS, LIZ	01/05/86	IP	3.95	.T.
7	2987	CROWLEY, JUNE	08/21/86	IP	2.90	.T.
8	6987	SMITH, KAY	01/13/86	IP	3.58	.T.
9	9833	LOOPER, JAMES	08/21/86	IP	3.80	.T.
10	2773	HILL, ANNNA	08/21/86	IP	3.50	.T.

Record#	NUMBER	NAME	DATE	MAJOR	GPA	ENR
11	1787	JONES, WANDA	08/21/85	LS	3.95	.F.
12	2978	THOMAS, BETTY	06/01/84	LS	3.75	.T.
13	8736	TRENT, KIMBERLY	06/01/84	LS	2.90	.F.
14	5867	RICE, JERRY	05/02/85	LS	3.75	.T.
15	6376	CORWIN, AMY	01/15/86	LS	3.50	.T.
16	7656	FRANCISCO, BETH	01/15/86	LS	4.00	.T.

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 4, EXERCISE 3
KEY

Use the commands you have learned in to add to and sort the information processing personnel file as indicated. Record the commands used for each and print a copy of each new file.

1. a. Add the following records to the ipperson.dbf.

```
USE IPPERSON
APPEND
USE IPPERSON
```

b. Sort the updated file by name.

```
USE IPPERSON
SORT TO IPSORT1 ON NAME
USE IPSORT1
DISPLAY ALL TO PRINT
```

2. Sort this file in order of data hired starting with 1984.
Name the file persort.1

```
USE IPPERSON
SORT TO PERSORT1 ON DATE
USE PERSORT1
DISPLAY ALL TO PRINT
```

3. Sort the file by pay rate with the
a. lowest pay listed first. Name this one paysorta

```
USE IPPERSON
SORT TO PAYSORTA ON PAY
USE PAYSORTA
DISPLAY ALL TO PRINT
```

b. highest pay listed first. Name this one paysortd

```
USE IPPERSON
SORT TO PAYSORTD ON PAY DESCENDING
USE PAYSORTD
DISPLAY ALL TO PRINT
```

4. Sort the file by title and name with title being the most important sort. Name the file titleper.

```
USE IPPERSON
SORT TO TITLEPER ON TITLE, NAME
USE TITLEPER
DISPLAY ALL TO PRINT
```

5. What is the average salary of the position

USE IPPERSON
AVERAGE PAY FOR TITLE = "PROOFREADER"

a. proofreader $9.30

AVERAGE PAY FOR TITLE = "PROCESSOR 1"
b. processor 1 $11.58

AVERAGE PAY FOR TITLE = "PROCESSOR 2"
c. processor 2 $13.29

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 4, EXERCISE 3, STEP 1b

Record#	NUMBER	NAME	TITLE	DATE	PAY
1	77387	ABBOT, LILA	PROCESSOR 2	10/21/85	12.75
2	27270	ADLRHOLD, ANN	PROOFREADER	09/09/85	8.50
3	29987	BEACH, JERILYN	PROCESSOR 1	07/01/85	12.00
4	36390	BREMER, JANIE	PROOFREADER	09/20/86	10.00
5	63636	CCPELAND, MARY	SECRETARY	07/29/84	7.50
6	39387	CROSS, JANA	PROCESSOR 1	08/22/85	11.75
7	38399	HOLDEN, WANDA	PROOFREADER	07/01/86	9.50
8	98827	KRAMER, PHYSSIS	PROCESSOR 2	11/11/85	13.00
9	93837	LANDON, REBECCA	PROOFREADER	09/06/85	9.50
10	38983	LEMONS, DEBORAH	PROCESSOR 2	07/01/86	13.75
11	39389	MIDDLETSON, JOAN	PROCESSOR 2	06/11/85	14.00
12	98399	MITCHELL, RHONDA	PROCESSOR 2	07/01/86	13.50
13	77387	PLAYER, LINDA	MANAGER	07/01/85	21.25
14	76455	RUSTON, MIKE	PROCESSOR 1	08/15/85	11.50
15	45834	SIMS, MONICA	PROCESSOR 1	08/16/85	11.75
16	87337	SIMSON, KALA	PROCESSOR 2	08/26/85	13.75
17	34452	SINGH, GEORGIA	PROOFREADER	09/12/86	9.00
18	98878	SIPES, DONNA	PROCESSOR 1	08/15/85	11.75
19	87654	THOMASSON, JAMIE	PROCESSOR 1	06/16/86	10.00
20	58909	THOMPSON, WILLIAM	PROCESSOR 2	01/28/85	12.25

Press any key to continue...

Record#	NUMBER	NAME	TITLE	DATE	PAY
21	87379	TRENT, MICHAEL	PROCESSOR 1	12/01/85	12.00
22	98277	ZANER, LAURA	PROCESSOR 1	07/01/85	11.75

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 4, EXERCISE 3, STEP 2

Record#	NUMBER	NAME	TITLE	DATE	PAY
1	63636	COPELAND, MARY	SECRETARY	07/29/84	7.50
2	39389	MIDDLETSON, JOAN	PROCESSOR 2	06/11/85	14.00
3	77387	PLAYER, LINDA	MANAGER	07/01/85	21.25
4	29987	BEACH, JERILYN	PROCESSOR 1	07/01/85	12.00
5	98277	ZANER, LAURA	PROCESSOR 1	07/01/85	11.75
6	76455	RUSTON, MIKE	PROCESSOR 1	08/15/85	11.60
7	98878	SIPES, DONNA	PROCESSOR 1	08/15/85	11.75
8	39387	CROSS, JANA	PROCESSOR 1	08/22/85	11.75
9	87837	SIMSON, KALA	PROCESSOR 2	08/26/85	13.75
10	93837	LANDON, REBECCA	PROOFREADER	09/06/85	9.50
11	27270	ADURHOLD, ANN	PROOFREADER	09/09/85	8.50
12	45834	SIMS, MONICA	PROCESSOR 1	09/18/85	11.75
13	77387	ABBOT, LILA	PROCESSOR 2	10/21/85	12.75
14	98837	KRAMER, PHYSSIS	PROCESSOR 2	11/11/83	13.00
15	87379	TRENT, MICHAEL	PROCESSOR 1	12/01/85	12.00
16	56909	THOMPSON, WILLIAM	PROCESSOR 2	01/22/86	12.25
17	87654	THOMASSON, JAMIE	PROCESSOR 1	03/15/86	12.00
18	38388	HOLDEN, WANDA	PROOFREADER	07/01/66	9.50
19	38883	LEMONS, DEBORAH	PROCESSOR 2	07/01/86	13.75
20	98399	MITCHELL, RHONDA	PROCESSOR 2	07/01/86	13.50

Press any key to continue...

Record#	NUMBER	NAME	TITLE	DATE	PAY
21	34452	SINGH, GEORGIA	PROOFREADER	09/12/86	9.00
22	38390	BREMER, JANIE	PROOFREADER	09/20/86	10.00

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 4, EXERCISE 3, STEPS 3a & 3b

STEP 3a

Record#	NUMBER	NAME	TITLE	DATE	PAY
1	63636	COPELAND, MARY	SECRETARY	07/29/84	7.50
2	27270	ADUPHOLD, ANN	PROOFREADER	09/09/85	8.50
3	34452	SINGH, GEORGIA	PROOFREADER	09/12/86	9.00
4	38388	HOLDEN, WANDA	PROOFREADER	07/01/86	9.50
5	93827	LANDON, REBECCA	PROOFREADER	09/06/85	9.50
6	87654	THOMASSON, JAMIE	PROCESSOR 1	06/15/86	10.00
7	38390	BREMER, JANIE	PROOFREADER	09/20/86	10.00
8	76455	RUSTON, MIKE	PROCESSOR 1	06/15/85	11.50
9	98878	SIPES, DONNA	PROCESSOR 1	08/15/85	11.75
10	45834	SIMS, MONICA	PROCESSOR 1	09/19/85	11.75
11	98277	ZANER, LAURA	PROCESSOR 1	07/01/85	11.75
12	39387	CROSS, JANA	PROCESSOR 1	08/22/85	11.75
13	87379	TRENT, MICHAEL	PROCESSOR 1	12/01/85	12.00
14	29987	BEACH, JERILYN	PROCESSOR 1	07/01/85	12.00
15	58909	THOMPSON, WILLIAM	PROCESSOR 2	01/22/86	12.25
16	77387	ABBOT, LILA	PROCESSOR 2	10/21/85	12.75
17	98227	KRAMER, PHYSSIS	PROCESSOR 2	11/11/85	13.00
18	98399	MITCHELL, RHONDA	PROCESSOR 2	07/01/86	13.50
19	38683	LEMONS, DEBORAH	PROCESSOR 2	07/01/86	13.75
20	87837	SIMSON, KALA	PROCESSOR 2	08/26/85	13.75

Press any key to continue...

Record#	NUMBER	NAME	TITLE	DATE	PAY
21	39389	MIDDLETSON, JOAN	PROCESSOR 2	06/11/85	14.00
22	77387	PLAYER, LINDA	MANAGER	07/01/85	21.25

STEP 3b

Record#	NUMBER	NAME	TITLE	DATE	PAY
1	77387	PLAYER, LINDA	MANAGER	07/01/85	21.25
2	39399	MIDDLETSON, JOAN	PROCESSOR 2	06/11/85	14.00
3	87837	SIMSON, KALA	PROCESSOR 2	08/26/85	13.75
4	38683	LEMONS, DEBORAH	PROCESSOR 2	07/01/86	13.75
5	98399	MITCHELL, RHONDA	PROCESSOR 2	07/01/86	13.50
6	98227	KRAMER, PHYSSIS	PROCESSOR 2	11/11/85	13.00
7	77387	ABBOT, LILA	PROCESSOR 2	10/21/85	12.75
8	58909	THOMPSON, WILLIAM	PROCESSOR 2	01/22/86	12.25
9	87379	TRENT, MICHAEL	PROCESSOR 1	12/01/85	12.00
10	29987	BEACH, JERILYN	PROCESSOR 1	07/01/85	12.00
11	98878	SIPES, DONNA	PROCESSOR 1	08/15/85	11.75
12	98277	ZANER, LAURA	PROCESSOR 1	07/01/85	11.75
13	39387	CROSS, JANA	PROCESSOR 1	08/22/85	11.75
14	45834	SIMS, MONICA	PROCESSOR 1	09/19/85	11.75
15	76455	RUSTON, MIKE	PROCESSOR 1	09/15/85	11.50
16	38390	BREMER, JANIE	PROOFREADER	09/20/86	10.00
17	87654	THOMASSON, JAMIE	PROCESSOR 1	06/15/86	10.00
18	38388	HOLDEN, WANDA	PROOFREADER	07/01/86	9.50
19	93827	LANDON, REBECCA	PROOFREADER	09/06/85	9.50
20	34452	SINGH, GEORGIA	PROOFREADER	09/12/86	9.00

Press any key to continue...

Record#	NUMBER	NAME	TITLE	DATE	PAY
21	27270	ADUPHOLD, ANN	PROOFREADER	09/09/85	8.50
22	63636	COPELAND, MARY	SECRETARY	07/29/84	7.50

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 4, EXERCISE 3, STEP 4

Record#	NUMBER	NAME	TITLE	DATE	PAY
1	77387	PLAYER, LINDA	MANAGER	07/01/85	21.25
2	29987	BEACH, JERILYN	PROCESSOR 1	07/01/85	12.00
3	39387	CROSS, JANA	PROCESSOR 1	08/22/85	11.75
4	76455	RUSTON, MIKE	PROCESSOR 1	02/15/85	11.60
5	45834	SIMS, MONICA	PROCESSOR 1	09/18/85	11.75
6	98878	SIPES, DONNA	PROCESSOR 1	08/15/85	11.75
7	87654	THOMASSON, JAMIE	PROCESSOR 1	06/16/86	10.00
8	87379	TRENT, MICHAEL	PROCESSOR 1	12/01/85	12.00
9	98277	ZANER, LAURA	PROCESSOR 1	07/01/85	11.75
10	77387	ABBOT, LILA	PROCESSOR 2	10/21/85	12.75
11	98837	KRAMER, PHYSSIS	PROCESSOR 2	11/11/85	13.00
12	38883	LEMONS, DEBORAH	PROCESSOR 2	07/01/86	13.75
13	39389	MIDDLETSON, JOAN	PROCESSOR 2	06/11/85	14.00
14	98399	MITCHELL, RHONDA	PROCESSOR 2	07/01/86	13.50
15	87837	SIMSON, KALA	PROCESSOR 2	08/26/85	13.75
16	58909	THOMPSON, WILLIAM	PROCESSOR 2	01/22/86	12.25
17	27270	ADURHOLD, ANN	PROOFREADER	09/09/85	8.50
18	38390	BREMER, JANIE	PROOFREADER	09/20/86	10.00
19	38388	HOLDEN, WANDA	PROOFREADER	07/01/86	9.50
20	93837	LANDON, REBECCA	PROOFREADER	09/06/85	9.50

Press any key to continue...

Record#	NUMBER	NAME	TITLE	DATE	PAY
21	34452	SINGH, GEORGIA	PROOFREADER	09/12/86	9.00
22	63636	COPELAND, MARY	SECRETARY	07/29/84	7.50

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 5, EXERCISE 2

Page No. 1
01/01/80

INFORMATION PROCESSING PAYROLL

EMPLOYEE NAME	TITLE	PAY RATE	WEEKLY PAY
ADURHOLD, ANN	PROOFREADER	8.50	340.00
COPELAND, MARY	SECRETARY	7.50	300.00
THOMPSON, WILLIAM	PROCESSOR 2	12.25	490.00
THOMASSON, JAMIE	PROCESSOR 1	10.00	400.00
BREMER, JANIE	PROOFREADER	10.00	400.00
MIDDLETSON, JOAN	PROCESSOR 2	14.00	560.00
RUSTON, MIKE	PROCESSOR 1	11.60	464.00
SIPES, DONNA	PROCESSOR 1	11.75	470.00
ZANER, LAURA	PROCESSOR 1	11.75	470.00
PLAYER, LINDA	MANAGER	21.25	850.00
MITCHELL, RHONDA	PROCESSOR 2	13.50	540.00
HOLDEN, WANDA	PROOFREADER	9.50	380.00
LEMONS, DEBORAH	PROCESSOR 2	13.75	550.00
CROSS, JANA	PROCESSOR 1	11.75	470.00
BEACH, JERILYN	PROCESSOR 1	12.00	480.00
SINGH, GEORGIA	PROOFREADER	9.00	360.00
ABBOT, LILA	PROCESSOR 2	12.75	510.00
KRAMER, PHYSSIS	PROCESSOR 2	13.00	520.00
TRENT, MICHAEL	PROCESSOR 1	12.00	480.00
SIMS, MONICA	PROCESSOR 1	11.75	470.00
SIMSON, KALA	PROCESSOR 2	13.75	550.00
LANDON, REBECCA	PROOFREADER	9.50	380.00
*** Total ***			[illegible]

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 5, EXERCISE 3, STEP 2

PAGE NO. 1
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INFORMATION PROCESSING PAYROLL

EMPLOYEE NAME	TITLE		[illegible] RATE	[illegible] PAY
BEACH, JERILYN	PROCESSOR	1	10.00	400.00
CROSS, JANA	PROCESSOR	1	11.75	470.00
RUSTON, MIKE	PROCESSOR	1	11.50	460.00
SIMS, MONICA	PROCESSOR	1	11.75	470.00
SIPES, DONNA	PROCESSOR	1	11.75	470.00
THOMASSON, JAMIE	PROCESSOR	1	10.00	400.00
TRENT, MICHAEL	PROCESSOR	1	10.00	400.00
ZAHER, LAURA	PROCESSOR	1	11.75	470.00
*** Total ***				3704.00

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 5, EXERCISE 3, STEP 5

Page No. 1
05/19/87

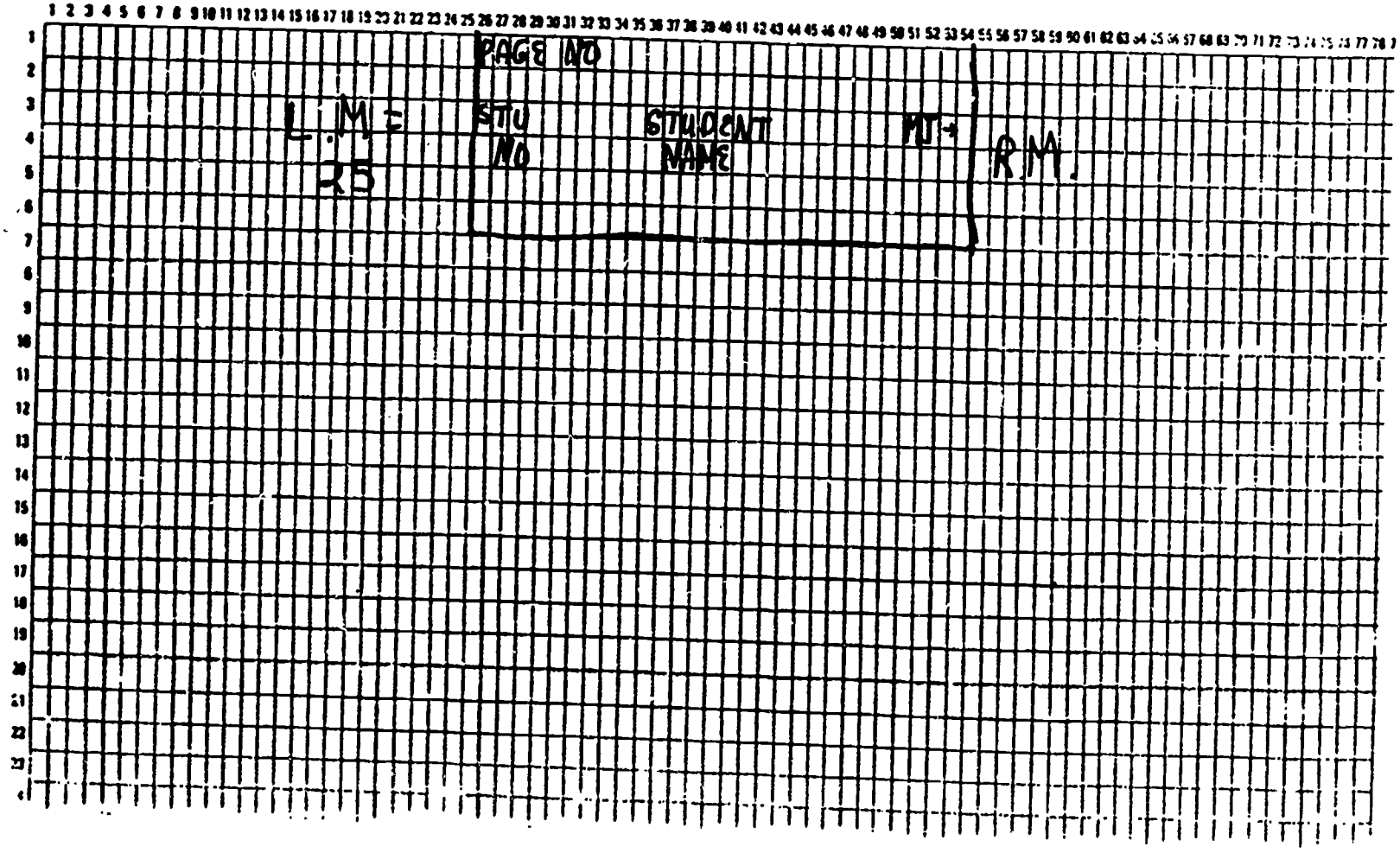
INFORMATION PROCESSING PAYROLL

EMPLOYEE NAME	TITLE	DAY RATE	WEEKLY PAY
** MANAGER			
PLAYER, LINDA	MANAGER	21.25	850.00
** Subtotal **			850.00
** PROCESSOR 1			
BEACH, JERILYN	PROCESSOR 1	12.00	480.00
CROSS, JANA	PROCESSOR 1	11.75	470.00
RUSTON, MIKE	PROCESSOR 1	11.50	460.00
SIMS, MONICA	PROCESSOR 1	11.75	470.00
SIPES, DONNA	PROCESSOR 1	11.75	470.00
THOMASSON, JAMIE	PROCESSOR 1	12.00	480.00
TRENT, MICHAEL	PROCESSOR 1	12.00	480.00
ZANER, LAURA	PROCESSOR 1	11.75	470.00
** Subtotal **			3704.00
** PROCESSOR 2			
ABBOT, LILA	PROCESSOR 2	12.75	510.00
KRAMER, PHYSSIS	PROCESSOR 2	13.00	520.00
LEMONS, DEBORAH	PROCESSOR 2	13.75	550.00
MIDDLETON, JOAN	PROCESSOR 2	14.00	560.00
MITCHELL, RHONDA	PROCESSOR 2	13.50	540.00
SIMSON, KALA	PROCESSOR 2	13.75	550.00
THOMPSON, WILLIAM	PROCESSOR 2	12.25	490.00
** Subtotal **			3720.00
** PROOFREADER			
ADURHOLD, ANN	PROOFREADER	8.50	340.00
BREMER, JANIE	PROOFREADER	10.00	400.00
HOLDEN, WANDA	PROOFREADER	9.50	380.00
LANDON, REBECCA	PROOFREADER	9.50	380.00
SINGH, GEORGIA	PROOFREADER	9.00	360.00
** Subtotal **			[illegible]
** SECRETARY			
CORELAND, MARY	SECRETARY	[illegible]	[illegible]
** Subtotal **			300.00
*** Total ***			10434.00

PRINTER SPACING CHART

PROGRAM TITLE Major.frm Lesson 5, Ex5 Key

CHART TITLE Student Major Report by Name



UNIT I: DATABASE MANAGEMENT
KEY
LESSON 5, EXERCISE 5, STEP 1

Page No. 1
05/19/87
STUDENT MAJOR REPORT
BY NAME

STU. NO.	STUDENT NAME	MJ
6987	SMITH, KAY	ID
8773	JONES, LEA	ES
1010	MITCHELL, JIM	IP
1327	SIMS, JAN	MS
2987	LASSITER, JANET	MS
8746	SANTOS, LIZ	ID
9773	LYNN, CARRIE	MS
7836	JOHNSON, MIMI	MS
9833	LOOPER, JAMES	IP
2773	HILL, ANNNA	ID
2873	DERRICK, JANICE	ID
8377	SMITH, KAE	ES
1787	JONES, WANDA	LS
2987	NORTH, RENDA	MS
8736	TRENT, KIMBERLY	LS
2978	THOMAS, BETTY	LS
2987	CROWLEY, JUNE	IP
9837	DAVIS, LANA	ID
6375	CORWIN, AMY	LS
7535	FRANCISCO, BE[illegible]	[illegible]
6452	[illegible]	[illegible]
2987	RICE, JERRY	[illegible]

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 5, EXERCISE 5, STEP 2

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STUDENT GPA BY NAME

STUDENT NAME	MAJOR	GPA
CORWIN, AMY	LS	3.50
CROWLEY, JUNE	IP	2.90
DAVIS, LANA	IP	2.75
DERRICK, JANICE	IP	2.95
FRANCISCO, BETH	LS	4.00
HILL, ANNNA	IP	3.50
HODGE, MOLLY	MS	4.00
JOHNSON, MIMI	MS	3.50
JONES, LEA	ES	2.71
JONES, WANDA	LS	3.95
LASSITER, JANET	MS	3.15
LOOPER, JAMES	IP	3.80
LYNN, CARRIE	MS	2.77
MITCHELL, JIM	IP	3.25
NORTH, RENDA	MS	3.25
RICE, JERRY	LS	3.75
SANTOS, LIZ	IP	3.95
SIMS, JAN	MS	3.15
SMITH, KAE	ES	3.01
SMITH, KAY	IP	3.59
THOMAS, BETTY	LS	3.75
TRENT, KIMBERLY	LS	3.51

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 5, EXERCISE 5, STEP 3

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05/19/87

STUDENT GPA BY MAJOR
GPA IN ASCENDING ORDER

STUDENT NAME	MAJOR	GPA
** ES		
JONES, LEA	ES	2.71
SMITH, KAE	ES	3.01
** IP		
DAVIS, LANA	IP	2.75
CROWLEY, JUNE	IP	2.90
DERRICK, JANICE	IP	2.95
MITCHELL, JIM	IP	3.25
HILL, ANNNA	IP	3.50
SMITH, KAY	IP	3.58
LOOPER, JAMES	IP	3.80
SANTOS, LIZ	IP	3.95
** LS		
CORWIN, AMY	LS	2.50
TRENT, KIMBERLY	LS	2.90
THOMAS, BETTY	LS	3.75
RICE, JERRY	LS	3.75
JONES, WANDA	LS	3.95
FRANCISCO, BETH	LS	4.00
** MS		
LYNN, CARRIE	MS	2.77
SIMS, JAN	MS	3.15
LASSITER, JANET	MS	3.15
[illegible], RENDA	MS	3.[illegible]
JOHNSON, MIMI	MS	3.50
HODGE, MOLLY	MS	4.00

UNIT I: DATABASE MANAGEMENT

KEY

LESSON 6, EXERCISE 1, STEP 3 (APPEND EXERCISE)

Record#	NUMBER	NAME	DATE	MAJOR	GPA	ENR
1	6987	SMITH, KAY	01/13/85	IP	3.58	.T.
2	8773	JONES, LEA	06/02/85	ES	2.71	.T.
3	1010	MITCHELL, JIM	01/15/86	IP	3.25	.T.
4	1327	SIMS, JAN	01/15/86	MS	3.15	.T.
5	2887	LASSITER, JANET	01/15/85	MS	3.15	.T.
6	8746	SANTOS, LIZ	01/05/86	IP	3.95	.T.
7	9773	LYNN, CARRIE	01/13/84	MS	2.77	.F.
8	7836	JOHNSON, MIMI	06/02/85	MS	3.60	.T.
9	9833	LOOPER, JAMES	08/21/86	IP	3.80	.T.
10	2773	HILL, ANNNA	08/21/86	IP	3.50	.T.
11	2873	DERRICK, JANICE	08/21/86	IP	2.95	.T.
12	8377	SMITH, KAE	06/02/85	ES	3.01	.T.
13	1787	JONES, WANDA	08/21/85	LS	3.95	.F.
14	2987	NORTH, RENDA	01/13/84	MS	3.25	.F.
15	8736	TRENT, KIMBERLY	06/01/84	LS	2.90	.F.
16	2978	THOMAS, BETTY	06/01/84	LS	3.75	.T.
17	2987	CROWLEY, JUNE	08/21/86	IP	2.90	.T.
18	9837	DAVIS, LANA	08/21/85	IP	2.75	.T.
19	6376	CORWIN, AMY	01/15/86	LS	2.50	.T.
20	7656	FRANCISCO, BETH	01/15/86	LS	4.00	.T.

Press any key to continue...

Record#	NUMBER	NAME	DATE	MAJOR	GPA	ENR
21	6450	HODGE, MOLLY	06/02/85	MS	4.00	.T.
22	5867	RICE, JERRY	06/02/85	LS	3.75	.T.
23	8989	HANLEY, MEG	06/02/85	IP	3.85	.F.
24	7823	BROWN, MARJORIE	01/13/84	LS	2.78	.T.
25	8902	SPALDING, JENNIFER	01/15/86	MS	3.50	.T.
26	9229	NIXON, ANA	08/21/86	IP	3.25	.T.
27	2020	RANDALL, SARAH	08/21/86	IP	3.80	.T.

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 6, EXERCISE 2, STEP 3 (ON PAGE 6)

Record#	NUMBER	NAME	TITLE	DATE	PAY
1	27270	ADURHOLD, ANN	PROOFREADER	09/09/85	9.12
2	63636	COPELAND, MARY	SECRETARY	07/29/84	8.03
3	58909	THOMPSON, WILLIAM	PROCESSOR 2	11/22/86	13.33
4	87654	THOMASSON, JAMIE	PROCESSOR 1	06/15/86	10.70
5	38390	BREMER, JANIE	PROOFREADER	09/20/85	10.72
6	39389	MIDDLETSON, JOAN	PROCESSOR 2	06/11/85	14.58
7	76455	RUSTON, MIKE	PROCESSOR 2	08/15/85	12.41
8	98878	SIPES, DONNA	PROCESSOR 1	08/15/85	12.84
9	98277	ZANER, LAURA	PROCESSOR 1	07/01/85	12.57
10	77387	PLAYER, LINDA	MANAGER	07/01/85	20.74
11	98399	MITCHELL, RHONDA	PROCESSOR 2	07/01/86	14.45
12	38388	HOLDEN, WANDA	PROOFREADER	07/01/86	10.17
13	16281	JONES, RAY	PROOFREADER	03/25/87	9.36
14	38883	LEMONS, DEBORAH	PROCESSOR 2	07/01/86	14.71
15	39387	CROSS, JANA	PROCESSOR 1	08/22/85	12.57
16	29987	BEACH, JERILYN	PROCESSOR 1	07/01/85	12.84
17	34452	SINGH, GEORGIA	PROOFREADER	09/12/86	9.63
18	77387	ABBOT, LILA	PROCESSOR 2	10/21/85	13.64
19	98837	KRAMER, PHYSSIS	PROCESSOR 2	11/11/85	13.91
20	87379	TRENT, MICHAEL	PROCESSOR 1	12/01/85	12.84

Press any key to continue...

Record#	NUMBER	NAME	TITLE	DATE	PAY
21	45834	SIMS, MONICA	PROCESSOR 1	09/18/85	12.57
22	87837	SIMSON, KALA	PROCESSOR 2	08/26/85	14.71
23	93837	LANDON, REBECCA	PROOFREADER	09/05/85	10.17

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 6, EXERCISE 2, STEP 12

Record#	NUMBER	NAME	TITLE	DATE	PA
1	27270	ADURHOLD, ANN	PROOFREADER	09/09/85	8.5
2	63636	COPELAND, MARY	SECRETARY	07/29/84	7.5
3	58909	THOMPSON, WILLIAM	PROCESSOR 2	01/22/86	12.5
4	87654	THOMASSON, JAMIE	PROCESSOR 1	06/16/86	10.2
5	38390	BREMER, JANIE	PROOFREADER	09/20/86	10.0
6	39389	MIDDLETSON, JOAN	PROCESSOR 2	06/11/85	14.2
7	76455	RUSTON, MIKE	PROCESSOR 2	08/15/85	11.6
8	98878	SIPES, DONNA	PROCESSOR 1	08/15/85	12.0
9	98277	ZANER, LAURA	PROCESSOR 1	07/01/85	11.7
10	77387	PLAYER, LINDA	MANAGER	07/01/85	21.3
11	98399	MITCHELL, RHONDA	PROCESSOR 2	07/01/86	13.5
12	38388	HOLDEN, WANDA	PROOFREADER	07/01/86	9.5
13	16281	JONES, RAY	PROOFREADER	03/25/87	8.7
14	38883	LEMONS, DEBORAH	PROCESSOR 2	07/01/86	13.7
15	39387	CROSS, JANA	PROCESSOR 1	06/22/85	11.7
16	29987	BEACH, JERILYN	PROCESSOR 1	07/01/85	12.2
17	34452	SINGH, GEORGIA	PROOFREADER	09/12/86	9.0
18	77387	ABBOT, LILA	PROCESSOR 2	10/21/85	12.7
19	98837	KRAMER, PHYSSIS	PROCESSOR 2	11/11/85	13.0
20	87379	TRENT, MICHAEL	PROCESSOR 1	12/01/85	12.2

Press any key to continue...

Record#	NUMBER	NAME	TITLE	DATE	PA
21	45834	SIMS, MONICA	PROCESSOR 1	09/18/85	11.7
22	87837	SIMSON, KALA	PROCESSOR 2	08/26/85	13.7
23	93837	LANDON, REBECCA	PROOFREADER	09/06/85	9.5

UNIT I: DATABASE MANAGEMENT
KEY
LESSON 7, EXERCISE 1

Lynn Clardy
[illegible] Burgis
Dallas TX 75232

JANE BECKER
3378 LAKE HAVEN
WACO TX 76710

LINDY WALTS
[illegible] LAKE ACRES
WACO TX 76710

[illegible] DUGGER
[illegible] DIVE
WACO TX 76705

MARYANN SIDERS
[illegible] LASKER
WACO TX 76707

UNIT I TEST
DATABASE MANAGEMENT

1. Create the following database. Name it Customer. Create fields for last name, first name, city, state, zip, amount, and member.

D'Amico, Juan, Miami, FL, 12562, 12.00, Y

Walton, Jana, Arlington, VA, 28877, 75.00, Y

Ghorbani, Reza, Chicago, IL, 60723, 250.00, N

Ghorbani, Mari, Chicago, IL, 60723, 325.00, Y

Ackers, Douglas, Dallas, TX, 77021, 35.00, N

Adams, Jeffrey, San Diego, CA, 94307, 15.00, N

Davis, Mary, Dallas, TX, 77022, 75.00, Y

Rejcek, Larry, Bloomington, IL, 61701, 150.00, Y

Polland, Raymond, San Antonio, TX 78009, 230.00, N

Sanchez, Frank, San Antonio, TX, 78009, 250.00, Y

2. Create and store the following files. Use the file names given. Print each.

by Last Name	LN
by City	City
by amount,descending	Amount

3. Print a report to include last name, first name, city, state, and amount. Subtotal the amount after each city. Name the report City. Use the title Amount by City.

4. Display and print a list customers who are not members.

5. Produce labels for each customer. On the first line include the name in normal order; on the second line include the city, state, and zip. Name the labels customer.

6. Copy the customer file to a new file named Cust2. Add the following records to Cust2.

Johnson, Olli, San Antonio, TX, 78009, 236.00, Y
Smith, Alan, Dallas, TX, 77021, 432.00, Y

7. Change the amount for Reza Ghorbani to 350.00.

8. Change all amounts to to 2% more than that shown.

9. Print a new list in order by last name.

#1 UNIT I TEST

B:customer.dbf

Bytes remaining: 3948
Fields defined: 7

	field name	type	width	dec
1	LAST	Char/text	15	
2	FIRST	Char/text	10	
3	CITY	Char/text	12	
4	STATE	Char/text	2	
5	ZIP	Char/text	5	
6	AMOUNT	Numeric	7	2
7	MEMBER	Logical	1	
8		Char/text		

field name	type	width	dec

Names start with a letter; the remainder may be letters, digits, or underscore

The student is not asked to print this screen, but the structure of the db should be similar to this. The spaces allowed for each field may vary.

2 on UNIT I TEST.

BY LAST NAME:

Record#	LAST	FIRST	CITY	STATE	ZIP	AMOUNT	MEMBER
1	ACKERS	DOUGLAS	DALLAS	TX	77021	35.00	.F.
2	ADAMS	JEFFREY	SAN DIEGO	CA	94307	15.00	.F.
3	D'AMICO	JUAN	MIAMI	FL	12562	12.00	.T.
4	DAVIS	MARY	DALLAS	TX	77022	75.00	.T.
5	GHORBANI	REZA	CHICAGO	IL	60723	250.00	.F.
6	GHORBANI	MARI	CHICAGO	IL	60723	325.00	.T.
7	POLLAND	RAYMOND	SAN ANTONIO	TX	78009	230.00	.F.
8	REJCEK	LARRY	BLOOMINGTON	IL	61701	150.00	.T.
9	SANCHEZ	FRANK	SAN ANTONIO	TX	78009	250.00	.T.
10	WALTON	JANA	ARLINGTON	VA	28877	75.00	.T.

BY CITY:

Record#	LAST	FIRST	CITY	STATE	ZIP	AMOUNT	MEMBER
1	WALTON	JANA	ARLINGTON	VA	28877	75.00	.T.
2	REJCEK	LARRY	BLOOMINGTON	IL	61701	150.00	.T.
3	GHORBANI	REZA	CHICAGO	IL	60723	250.00	.F.
4	GHORBANI	MARI	CHICAGO	IL	60723	325.00	.T.
5	ACKERS	DOUGLAS	DALLAS	TX	77021	35.00	.F.
6	DAVIS	MARY	DALLAS	TX	77022	75.00	.T.
7	D'AMICO	JUAN	MIAMI	FL	12562	12.00	.T.
8	POLLAND	RAYMOND	SAN ANTONIO	TX	78009	230.00	.F.
9	SANCHEZ	FRANK	SAN ANTONIO	TX	78009	250.00	.T.
10	ADAMS	JEFFREY	SAN DIEGO	CA	94307	15.00	.F.

BY AMOUNT/DESCENDING:

Record#	LAST	FIRST	CITY	STATE	ZIP	AMOUNT	MEMBER
1	GHORBANI	MARI	CHICAGO	IL	60723	325.00	.T.
2	SANCHEZ	FRANK	SAN ANTONIO	TX	78009	250.00	.T.
3	GHORBANI	REZA	CHICAGO	IL	60723	250.00	.F.
4	POLLAND	RAYMOND	SAN ANTONIO	TX	78009	230.00	.F.
5	REJCEK	LARRY	BLOOMINGTON	IL	61701	150.00	.T.
6	WALTON	JANA	ARLINGTON	VA	28877	75.00	.T.
7	DAVIS	MARY	DALLAS	TX	77022	75.00	.T.
8	ACKERS	DOUGLAS	DALLAS	TX	77021	35.00	.F.
9	ADAMS	JEFFREY	SAN DIEGO	CA	94307	15.00	.F.
10	D'AMICO	JUAN	MIAMI	FL	12562	12.00	.T.

#3 UNIT I TEST: The student's solution should be similar to this.

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01/01/80

AMOUNT BY CITY

LAST NAME	FIRST NAME	CITY	ST	AMOUNT
** ARLINGTON				
WALTON	JANA	ARLINGTON	VA	75.00
** Subtotal **				75.00
** BLOOMINGTON				
REJCEK	LARRY	BLOOMINGTON	IL	150.00
** Subtotal **				150.00
** CHICAGO				
GHORBANI	REZA	CHICAGO	IL	250.00
GHORBANI	MARI	CHICAGO	IL	325.00
** Subtotal **				575.00
** DALLAS				
ACKERS	DOUGLAS	DALLAS	TX	35.00
DAVIS	MARY	DALLAS	TX	75.00
** Subtotal **				110.00
** MIAMI				
D'AMICO	JUAN	MIAMI	FL	12.00
** Subtotal **				12.00
** SAN ANTONIO				
POLLAND	RAYMOND	SAN ANTONIO	TX	230.00
SANCHEZ	FRANK	SAN ANTONIO	TX	250.00
** Subtotal **				480.00
** SAN DIEGO				
ADAMS	JEFFREY	SAN DIEGO	CA	15.00
** Subtotal **				15.00
*** Total ***				1417.00

3 on UNIT I TEST

Structure of file B:CITY.dbf

LAST	C	15	ZIP	C	5			
FIRST	C	10	AMOUNT	N	7	2		
CITY	C	12	MEMBER	L	1			
STATE	C	2						

Page heading:

AMOUNT BY CITY

Page width (# chars):	80
Left margin (# chars):	15
Right margin (# chars):	14
# lines/page:	58
Double space report? (Y/N):	N

The student is not asked to print this screen, but this will give you an idea of the report form needed.

#4 on UNIT I TEST

Record#	LAST	FIRST	CITY	STATE	ZIP	AMOUNT	MEMBER
3	GHORBANI	REZA	CHICAGO	IL	60723	250.00	.F.
5	ACKERS	DOUGLAS	DALLAS	TX	77021	35.00	.F.
6	ADAMS	JEFFREY	SAN DIEGO	CA	94307	15.00	.F.
9	POLLAND	RAYMOND	SAN ANTONIO	TX	78009	230.00	.F.

5 on UNIT I TEST

JUAN D'AMICO
MIAMI FL 12562

JANA WALTON
ARLINGTON VA 28877

REZA GHORBANI
CHICAGO IL 60723

MARI GHORBANI
CHICAGO IL 60723

DOUGLAS ACKERS
DALLAS TX 77021

JEFFREY ADAMS
SAN DIEGO CA 94307

MARY DAVIS
DALLAS TX 77022

LARRY REJCEK
BLOOMINGTON IL 61701

RAYMOND POLLAND
SAN ANTONIO TX 78009

FRANK SANCHEZ
SAN ANTONIO TX 78009

9 on UNIT I TEST: Check this for completion of steps 6-8.

Record#	LAST	FIRST	CITY	STATE	ZIP	AMOUNT	MEMBER
1						0.00	.F.
2	ACKERS	DOUGLAS	DALLAS	TX	77021	35.70	.F.
3	ADAMS	JEFFREY	SAN DIEGO	CA	94307	15.30	.F.
4	D'AMICO	JUAN	MIAMI	FL	12562	12.24	.T.
5	DAVIS	MARY	DALLAS	TX	77022	76.50	.T.
6	GHORBANI	MARI	CHICAGO	IL	60723	331.50	.T.
7	GHORBANI	REZA	CHICAGO	IL	60723	357.00	.F.
8	JOHNSON	OLLI	SAN ANTONIO	TX	78009	240.72	.T.
9	POLLAND	RAYMOND	SAN ANTONIO	TX	78009	234.60	.F.
10	REJCEK	LARRY	BLOOMINGTON	IL	61701	153.00	.T.
11	SANCHEZ	FRANK	SAN ANTONIO	TX	78009	255.00	.T.
12	SMITH	ALAN	DALLAS	TX	77021	440.64	.T.
13	WALTON	JANA	ARLINGTON	VA	28877	76.50	.T.

UNIT II

ELECTRONIC SPREADSHEETS

OFT 2401: Intermediate Information Processing

INSTRUCTOR'S GUIDE

Unit 2

Unit Title: Electronic Spreadsheets

Contents of Unit:

1. Concepts & Terms
2. Functions & Commands
   a. Creating the Spreadsheet
   b. Editing the Spreadsheet
   e. Combining Spreadsheets
   f. Copying Spreadsheets
   e. Producing Graphs
3. Simulation

Unit Objectives: Upon completion of this unit, the student will be able to:

1. Key data into an electronic spreadsheet.
2. Create an electronic spreadsheet.
3. Enter formulas into an electronic spreadsheet.
4. Retrieve an electronic spreadsheet file.
5. Copy an electronic spreadsheet file.
6. Edit and combine electronic spreadsheet files.
7. Create, print, and edit graphs using an electronic spreadsheet.
8. Exhibit a professional attitude in completing assigned tasks.
9. Exhibit independence in comprehending and applying written instructions given in software documentation and assigned tasks.

Equipment and Materials Required:

1. Lotus 1-2-3 textbooks and software
2. Lab handouts for each lesson

Procedures:

1. See the Student's Lab Guides for Unit 2 for instructions concerning individual learning activities.
2. Demonstrations by the instructor when necessary.

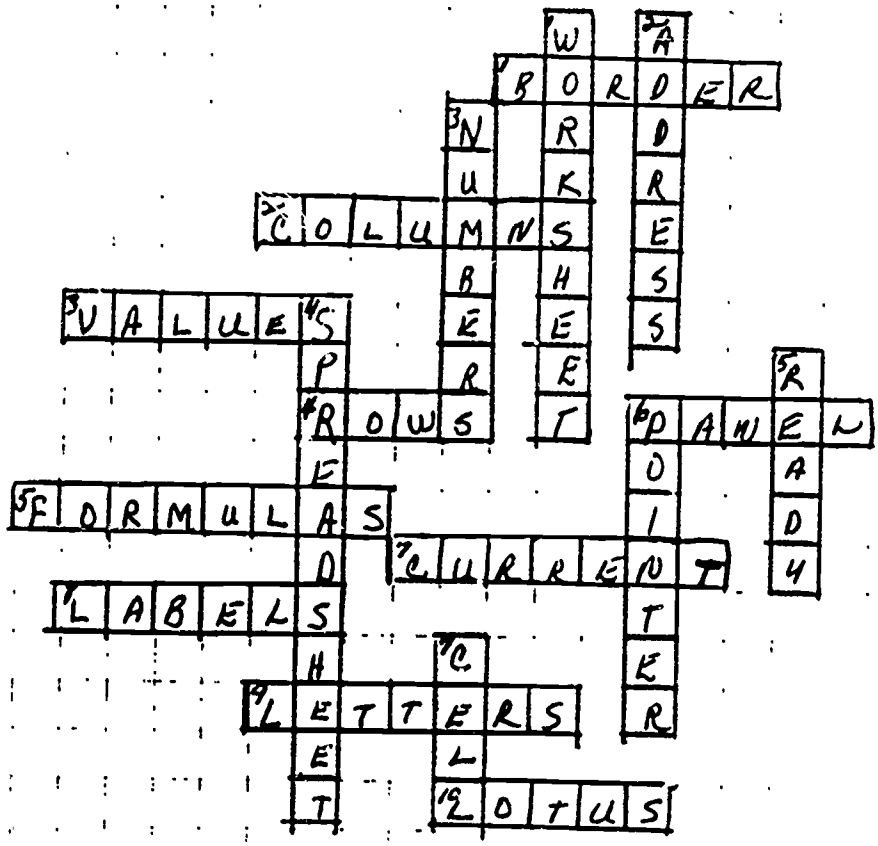
Learning Activities:

1. Students are to complete learning activities for Lessons 1-10. Keys to learning activities can be found in the Teacher's Manual which accompanies the spreadsheet texts.

Evaluation:

1. Progress Test 1 (Unit 2 - Objective)
2. Unit 2 Applications Test
3. Tests and keys may be found after keys to the learning activities for this unit.

PUZZLE 2
SPREADSHEETS
KEY



UNIT II: ELECTRONIC SPREADSHEET
KEY
LESSON 2, EXERCISE 1

	A	B	C	D	E
1	CATEGORIES	JANUARY	FEBRUARY	MARCH	TOT EX/ITEM
2					
3	BEGINNING BALANCE				
4					
5	EXPENDITURES				
6	SUPPLIES				
7	MAINTENANCE				
8	LEASE				
9	MAINTEN. CONTRACTS				
10					
11					
12	TOTAL EXP./MO.				
13					
14					
15					
16					
17					
18					
19					
20					

UNIT II: ELECTRONIC SPREADSHEET
KEY
LESSON 2, EXERCISE 2

A14:

REAL

	A	B	C	D	E
1	CATEGORIES	JANUARY	FEBRUARY	MARCH	TOT EX/ITEM
2					
3	BEGINNING BALANCE	$118,000.00			
4					
5	EXPENDITURES				
6	SUPPLIES	$1,500.75	$1,625.80	$1,495.60	
7	MAINTENANCE	$600.75	$235.90	$781.21	
8	LEASE	$8,333.33	$8,333.33	$8,333.33	
9	MAINTEN. CONTRACTS	$3,500.00	$2,187.80	$4,687.11	
10					
11					
12	TOTAL EXP./MO.				
13					
14					
15					
16					
17					
18					
19					
20					

UNIT II: ELECTRONIC SPREADSHEET
KEY
LESSON 2, EXERCISE 3

	A	B	C	D	E
1	CATEGORIES	JANUARY	FEBRUARY	MARCH	TOT EX/ITEM
2					
3	BEGINNING BALANCE	$118,000.00	$104,065.17	$91,682.34	
4					
5	EXPENDITURES				
6	SUPPLIES	$1,500.75	$1,625.80	$1,495.60	$4,622.15
7	MAINTENANCE	$600.75	$235.90	$781.21	$1,617.86
8	LEASE	$8,333.33	$8,333.33	$8,333.33	$24,999.99
9	MAINTEN. CONTRACTS	$3,500.00	$2,187.80	$4,687.11	$10,374.91
10					
11					
12	TOTAL EXP./MO.	$13,934.83	$12,382.83	$15,297.25	
13					
14					
15					
16					
17					
18					
19					
20					

UNIT II: ELECTRONIC SPREADSHEET
KEY
LESSON 2, EXERCISE 4

INFORMATION PROCESSING BUDGET

CATEGORIES	JANUARY	FEBRUARY	MARCH	TOT EX/ITEM
BEGINNING BALANCE	$118,000.00	$104,065.17	$91,682.34	
EXPENDITURES				
SUPPLIES	$1,500.75	$1,625.80	$1,495.60	$4,622.15
MAINTENANCE	$600.75	$235.90	$781.21	$1,617.86
LEASE	$8,333.33	$8,333.33	$8,333.33	$24,999.99
MAINTEN. CONTRACTS	$3,500.00	$2,187.80	$4,687.11	$10,374.91
TOTAL EXP./MO.	$13,934.83	$12,382.83	$15,297.25	

UNIT II: ELECTRONIC SPREADSHEET
KEY
LESSON 10

THIS WORKSHEET IS ON DISK AS GRAPHWS: STUDENTS WILL COPY IT TO THEIR DISKS FOR AN EXERCISE.

WORKSHEET FOR GRAPH EXAMPLES

Expenses	JAN	FEB	MAR	APR	MAY	JUNE
Material	30000	26000	21000	36000	34000	41000
Labor	22000	24000	18000	27000	23000	28000
Supplies	4000	3500	4500	3000	3500	5000
G&A	23000	23000	26000	24000	24000	25000
Total	79000	76500	69500	90000	84500	99000

UNIT II: ELECTRONIC SPREADSHEET
KEY
LESSON 10

THIS WORKSHEET IS ON DISK AN XYGRAPH: STUDENTS WILL COPY IT FOR AN EXERCISE.

EXAMPLE FOR XY GRAPH

MONTH	COST OF LABOR	SHIPMENTS
DEC	18,000	60,000
FEB	19,000	55,000
OCT	21,000	70,000
MAY	22,000	70,000
JAN	24,000	80,000
SEP	24,000	80,000
NOV	25,000	80,000
APR	26,000	75,000
AUG	28,000	95,000
JUN	29,000	90,000
MAR	30,000	95,000
JUL	33,000	90,000

UNIT 2

LESSON 10

PROGRESS TEST 1

Graph Commands and PrintGraph Commands

1-5. List and describe the five types of graphs available on Lotus 1-2-3.

6-27. Match the following commands with their description below. Write letter of the command in the space provided.

a.	grid	b.	scale	c.	create	d.	xabcdef
e.	type	f.	save	g.	view	h.	legenc
i.	options	j.	format	k.	titles	l.	name
m.	b&w	n.	quit	o.	color	p.	data labels
q.	graph reset			r.	B	s.	go
t.	page	u.	select	v.	X		

____ 6. --selects one of five graph types (line, bar, xy, stacked bar, pie)

____ 7. --specifies the range of the one to six sets of data that can be represented by a graph

____ 8. --specifies the second set of data for bar, stacked-bar, and line graphs

____ 9. --used to specify labels for the segments in a pie chart.

____ 10. --erases all graph settings

____ 11. --displays the graph on the monitor (must have a graphics monitor)

____ 12. --stores the graph in a special file that can be printed with the PrintGraph program

____ 13. --a set of commands which select the options for constructing a particular graph:

____ 14. --adds legends that identify the patterns, colors, or symbols used for the various sets of data

____ 15. --specifies the type of display for line and xy graphs

____ 16. --writes the titles for each axis and for the graph itself

____ 17. --adds horizontal and/or vertical grid lines to the graph

____ 18. --offers automatic or manual setting of the scales for the axes of the graph and various formats for the display of the scale numbers

____ 19. --displays the graph in several colors rather than patterns of a single color

____ 20. --displays the graph in contrasting cross-hatch patterns in a single color

____ 21. --specifies a range of labels for the first data points of the sets of data

____ 22. --takes you out of the options menu

____ 23. --a set of commands which give a name to a particular graph so that you can recall the specifications to display the graph again

____ 24. --gives a name to the current graph specifications

____ 25. --chooses the graph or graphs to be printed

____ 26. --starts the printer for GraphPrint job

____ 27. --advances the printer to the top of the next page

PROGRESS TEST 1--KEY

Graph Commands and PrintGraph Commands

1-5. List and describe the five types of graphs available on Lotus 1-2-3.

Grade subjectively:

A bar graph shows the change in a variable (a data set) or variables with a change in some other variable (such as time).

A pie chart shows the contribution of the various components to the whole.

A stacked-bar graph is a combination of a bar graph and a pie chart. It shows the contribution of the components of some variable as another variable changes.

An XY graph shows the relationship between two variables.

A line graph uses lines to display up to six data sets.

6-27. Match the following commands with their description below. Write letter of the command in the space provided.

a.	grid	b.	scale	c.	create	d.	xabcdef
e.	type	f.	save	g.	view	h.	legend
i.	options	j.	format	k.	titles	l.	name
m.	b&w	n.	quit	o.	color	p.	data labels
q.	graph reset			r.	B	s.	go
t.	page	u.	select	v.	X		

__e__ 6. --selects one of five graph types (line, bar, xy, stacked bar, pie)

__d__ 7. --specifies the range of the one to six sets of data that can be represented by a graph

__r__ 8. --specifies the second set of data for bar, stacked-bar, and line graphs

__v__ 9. --used to specify labels for the segments in a pie chart.

__q__ 10. --erases all graph settings

__g__ 11. --displays the graph on the monitor (must have a graphics monitor)

__f__ 12. --stores the graph in a special file that can be printed with the PrintGraph program

i 13. --a set of commands which select the options for constructing a particular graph:

h 14. --adds legends that identify the patterns, colors, or symbols used for the various sets of data

j 15. --specifies the type of display for line and xy graphs

k 16. --writes the titles for each axis and for the graph itself

a 17. --adds horizontal and/or vertical grid lines to the graph

b 18. --offers automatic or manual setting of the scales for the axes of the graph and various formats for the display of the scale numbers

o 19. --displays the graph in several colors rather than patterns of a single color

m 20. --displays the graph in contrasting cross-hatch patterns in a single color

p 21. --specifies a range of labels for the first data points of the sets of data

n 22. --takes you out of the options menu

l 23. --a set of commands which give a name to a particular graph sot that you can recall the specifications to display the graph again

c 24. --gives a name to the current graph specifications

u 25. --chooses the graph or graphs to be printed

s 26. --starts the printer for GraphPrint job

t 27. --advances the printer tp the top of the next page

UNIT II TEST

ELECTRONIC SPREADSHEET

The ABC Office Supply Company needs a WEEKLY SALES AND COMMISSION REPORT to analyze weekly sales and to calculate salesmen's total earnings.

Each salesman receives a base salary. In addition, they receive a 5% commission on net sales of $5,000 or less and 6% on net sales over $5,000.

1. Create a worksheet using the following data:

Salesman	CASH SALES	CHARGE SALES	TOTAL SALES	RETURN SALES	NET SALES	BASE SALARY	COMM. EARNED	TOTAL EARNIN
Smith	2643.19	4116.90		287.00		100.00		
Jones	4062.75	3863.06		359.12		75.00		
Miller	964.18	1560.88		81.75		100.00		
Young	3436.25	2745.69		363.49		120.00		
Scott	1183.49	3672.55		188.37		100.00		

2. Find:
   Total sales
   Net sales
   Commission earned (Enter an if statement)
   Total Earnings
   Totals for all money columns

3. Create the following graphs:

   -bar graph illustrating cash and charge sales for each salesman
   -stacked bar graph illustrating cash and charge sales for each salesman
   -pie chart illustrating total sales for each salesman

4. Store the file; name it supplies.

5. Print one copy of the spreadsheet.

6. Print one copy of each graph.

UNIT II TEST KEY - SPREADSHEETS

Allow one hour for this test.

The solution for this test is in your instructor's manual for DDC on page 150, Exercise 97. The student's solutions will have the following differences: the worksheet will not be sorted by name, the name of the company is ABC Office Supplies. The names of the salesmen are Smith, Jones, Miller, and Scott.

All of the figures for the test remained the same.

UNIT III

DESKTOP MANAGEMENT SOFTWARE

OFT 2401: Intermediate Information Processing

INSTRUCTOR'S GUIDE

Unit 3

Unit Title: Desktop Management Software

Contents of Unit:

1. Concepts & Definitions
2. Electronic Notepad
3. Calculator
4. Calendar
5. Dialer

Unit Objectives: Upon completion of this unit, the student will be able to:

1. Define desktop management system and use a desktop management software package.
2. Create notes, schedules, and a telephone directory using desktop software.
3. Compute business mathematics problems using desktop software.
4. Exhibit a professional attitude in completing assigned tasks.
5. Exhibit independence in comprehending and applying written instructions given in software documentation and assigned tasks.

Equipment and Materials Required:

1. SideKick software
2. Lab handouts for each lesson in this unit

Procedures:

1. See the Student's Lab Guides for Unit 3 for instructions concerning individual learning activities.
2. Demonstrations by the instructor when necessary.

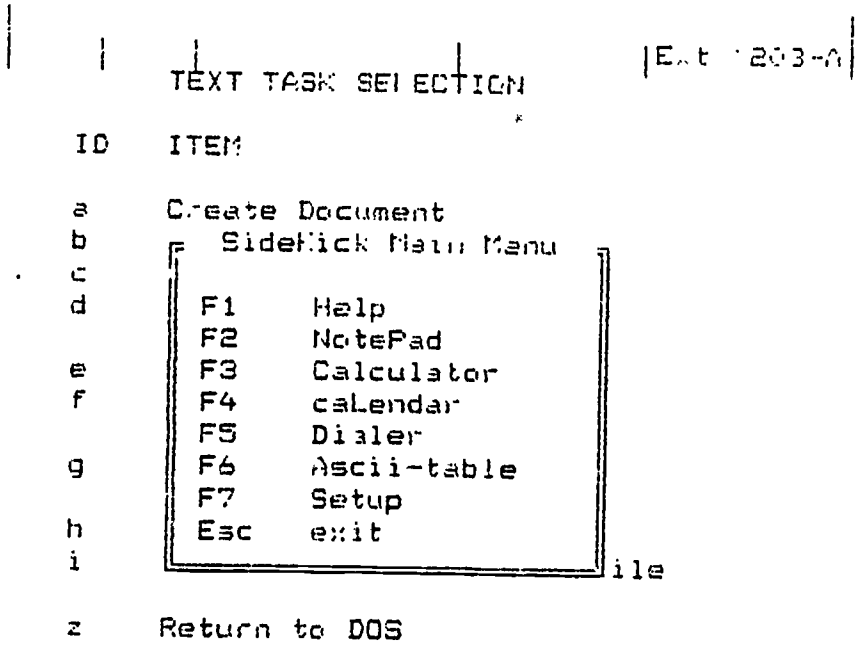
Learning Activities:

1. Students are to complete learning activities for this unit. Keys to the learning activities begin on the next page.

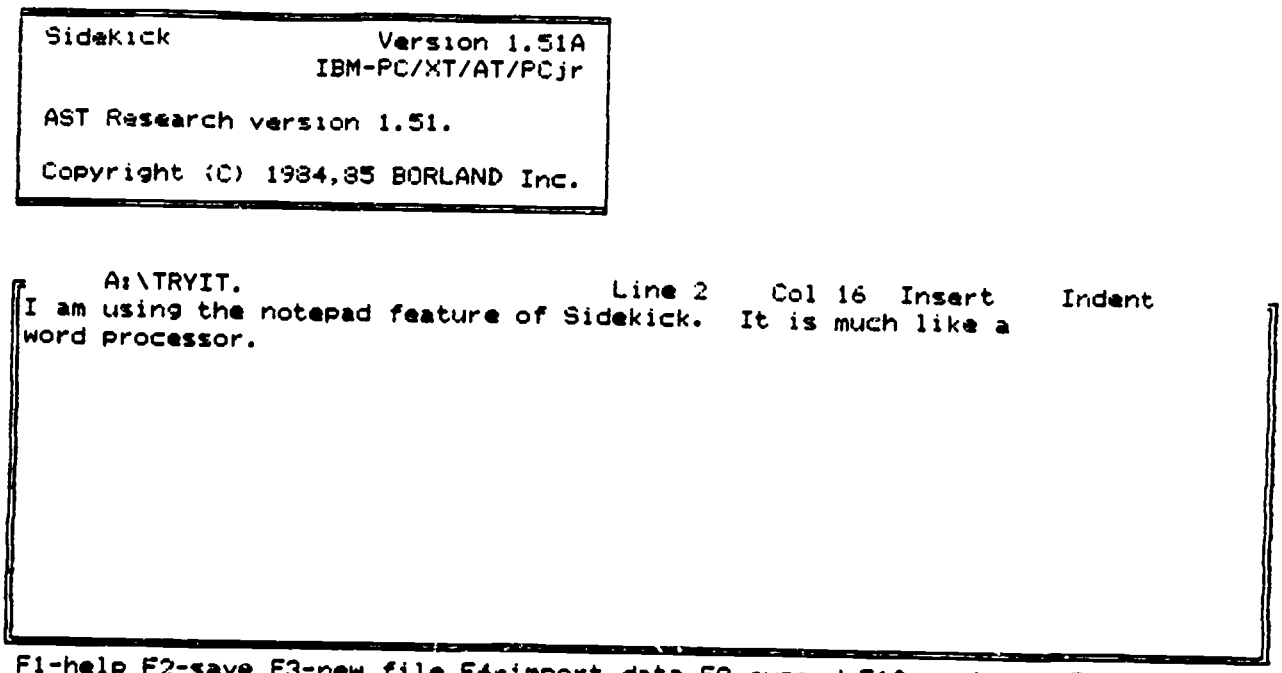
Evaluation:

1. Completion of lab exercises.

UNIT III: DESKTOP MANAGEMENT
KEY
EXERCISE 1 - STEP 2



PRINTOUT OF THE SCREEN AFTER CREATING A NOTE



Phone directory exercise

```
SideKick                    Version 1.51A
                            IBM-PC/XT/AT/PCjr

AST Research version 1.51.

Copyright (C) 1984,85 BORLAND Inc.
```

```
    B:\PHONE.DIR                    Line 3    Col 1    Insert    Indent
Fred (888) 623-1234 Computer Cleaners, Inc.
George Fraser (902) 477-1493
```

F1-help F2-save F3-new file F4-import data F9-expand F10-contract Esc-exit

UNIT III: DESKTOP MANAGEMENT
KEY
EXERCISE 3

ADVERTISING DOLLARS

In the economic battle of product survival, very large sums are expended annually to convince American consumers to cast their dollar votes for the continuance of certain goods or services.

Companies view effective advertising as an investment that engenders many more dollars than those invested. In 1974, the following five companies spent the most money for advertising:

Proctor and Gamble Co.	$245,186,000
General Foods Corp.	140,930,000
Bristol-Myers Co.	121,618,000
American Home Products Corp.	118,228,000
General Motors Corp.	115,256,000

The total amount spent on advertising in 1974 was $741,218,000.

Calendar Exercise Key

May	20	1987
Title	your initials	
09:30a	Budget meeting	Conf. rm.
10:00a	xxxxxxxxxxx	
10:30a	xxxxxxxxxxx	
12:00p	Business Club Lunch	
12:30p	xxxx	
01:00p	xxxx	
01:30p	xxxxx	

ADVERTISING DOLLARS

In the economic battle of product [illegible] very large [illegible] expended annually to [illegible] American consumers [illegible] es for the [illegible] of certain

F1	Help
F2	NotePad
F3	Calculator
F4	Calendar
F5	Dialer
F6	Ascii-Table
F7	Setup
Esc	exit

[illegible] tive advertising as an investment [illegible] dollars than those invested. In [illegible] companies spent the most money for

[illegible] mble Co.	$245,[illegible]
[illegible] Corp.	[illegible] ,920,000
[illegible] Co.	131,615,000
[illegible] Producers Corp.	118,223,000
[illegible] Corp.	115,256,000

The total amount spent on advertising in 1974 was ---------- ----.

--move bar. Select by pressing a highlighted letter, a function k ScrollLock

This is an example of how the screen will look after you move the calculator in Exercise 3.

Calendar Exercise Key, page 2

May 27 1987

Title	your initials
08:30a	Jerry Miller, Micro, Inc.
10:00a	Department Meeting
10:30a	xxxxxx
04:00p	Budget meeting

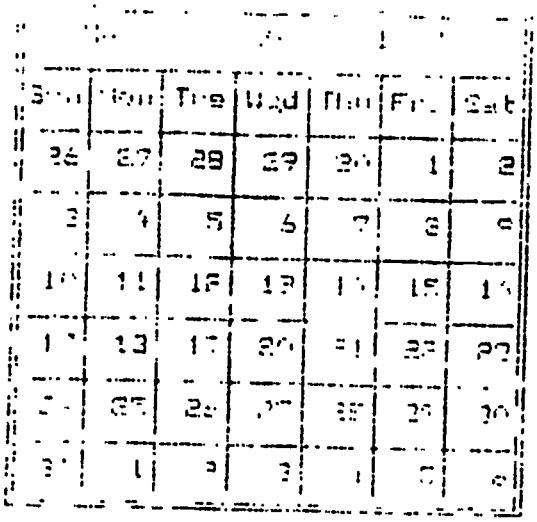
Calendar Exercise Key, page 3

May	30	1987
Title	your initials	
10:00a	work on budget	
12:00p	xxxxx	
02:00p	budget due	

Calendar Exercise Key, page 4

Jun	1	1987
Title	you	initials
08:30a	Register for class	
09:30a	Tom Riggs--ABC Co.	

UNIT III: DESKTOP MANAGEMENT
KEY
EXERCISE 4, STEP 4



THIS IS A PRINTOUT OF THE SCREEN AFTER SETTING THE DATE TO MAY 20, Exercise 4, Step 4.

UNIT IV

LOCAL AREA NETWORKS

OFT 2401: Intermediate Information Processing

INSTRUCTOR'S GUIDE

Unit 4

Unit Title: Local Area Networks

Contents of Unit:

1. Concepts & Terms
2. Evaluating & Choosing LAN's

Unit Objectives: Upon completion of this unit, the student will be able to:

1. Define Local Area Network.
2. List the two major advantages of networking microcomputers.
3. Define network architecture (also referred to as topology) and list the most common ones.
4. List the advantages and disadvantages of each type of network architecture.
5. List and describe three common types of cables used as connectors for LAN's.
6. Describe the differences between broadband and baseband networks.
7. Describe the two ways networks keep signals from interfering with each other when they are being sent through a network.
8. Explain network security. Define each level of security including password, file locking, and user rights or directory rights
9. Define each of the following types of networks: servers print, file, gateway, and routing.
10. Complete an evaluation of Local Area Networks using a database program and a comparison based on cost using a spreadsheet program.
11. Exhibit a professional attitude in completing assigned tasks.
12. Exhibit independence in comprehending and applying written instructions given in software documentation and assigned tasks.

Equipment and Materials Required:

1. Lotus 1-2-3 and dBase III textbooks
2. Lab handouts for each lesson in this unit

Procedures:

1. Discussion and demonstration by the instructor when necessary.
2. See the Student's Lab Guides for Unit 4 for instructions concerning individual learning activities.

Learning Activities:

1. Students are to complete all exercises for this unit. Keys to the objectives are attached. Keys to Exercises 1 and 2 are not provided because students' responses will vary.

Evaluation:

1. Completion of lab exercises in mailable form.

UNIT IV

LOCAL AREA NETWORKS

STUDY QUESTIONS - KEY

The answers for these questions were taken from MICROCOMPUTERS; SOFTWARE AND APPLICATIONS BY Dennis P. Curtin and Leslie R. Porter; Prentice Hall. However, any source that has a chapter devoted to LANs should contain the answers to the following questions.

1. Define local area network.
   A method of connecting computers and peripherals in a relatively small area, so they can communicate with each other and exchange data. Also called LAN's.

2. List the two major advantages of networking microcomputers.
   1) The micros can share expensive peripherals like plotters, laser printers, and hard disk drives.

   2) They can communicate with each other and exchange information.

3. Define network architecture (also referred to as topology) and list the most common ones.
   Network architecture refers to the layout or the arrangement of micros to facilitate data flow between the nodes of the network; it is not the physical arrangement of micros.
   All network architectures include hardware, called nodes, and wires or cables over which data is sent between the nodes.

   Ring, bus, and star are the most common topologies.

4. List the advantages and disadvantages of each type of network architecture.

   An advantage of the bust topology is that any node can break down without affecting other nodes.

   In the ring topology, each node examines and retransmits any signal that is not addressed to it; therefore, if one node breaks down the network is also down.

NOTE: THE STUDENTS WILL FIND THE ABOVE DISADVANTAGE OF NETWORK IN MANY REFERENCES; THIS MATERIAL IS SOMEWHAT OUT OF DATE, SINCE IBM AND PROBABLY OTHERS HAVE SINCE OVERCOME THIS PROBLEM.

Also, to insert a new node the connection between two existing nodes must be broken, the new node inserted and rewired to include the new node.

In the star topology, nodes are connected to a single host or central computer. When one of the micros sends a signal, it goes to the host first and then the host sends it to the node to which it is addressed. When the host breaks down, so does the network.

5. List and describe three common types of cable used as connectors for LANs.

Twisted pair wires are just like telephone wires. They are the least expensive way to connect computers because the wire is cheap and easy to install. With twisted pair, transmission is slow and tends to contain errors because the wire picks up electrical interference.

Coaxial cables are layered. An inner wire is surrounded by an insulating material that is in turn, surrounded by a braded wire. Transmission is fast and the quality of transmission is good.

Fiber optics--a very expensive alternative; highest speed and accuracy or transmission

6. Describe the differences between broadband and baseband networks.

Broadband networks send the signals at different frequencies; they can carry many signals at a time; they can also tranmit different types of signals.

Baseband networks send the signals at different times on the network. It merges the signals, so the signals from two computers are sent along the network one at a time, separated from each other by time.

7. Describe two ways networks keep signals from interfering with each other when they are being sent through a network.

Collision Detection--None of the nodes are aware of the other's presence. Each node transmits data whenever it wishes. If no other computer is sending data, the message is received by the device to which it was addressed and acknowledgment is sent back to the sending node. If two computers transmit at the same time, however, their messages collide and neither one gets through. Both computers have to retransmit at a randomly determined time; chances are small that they will collide again.

Token Passing is a more sophisticated way to time signals so that they do not collide with each other. A single encoded signal, called the token, goes around the network. Any node can let it pass or can grab it. The node holding the token is the only one allowed to transmit data on the network. The node holding the token sends data addressed to another node; each of the other nodes looks at the message as it goes around the network to see if the message is addressed to it. If it is, it grabs the token to receive the data and puts the token back into circulation. All of this happens very rapidly. Only one signal can be sent at a time since only one node can grab the token at a time, thus eliminating collisions.

8. Explain network security. Define each level of security including password, file locking, user rights or directory rights.

Network security includes methods to prevent unauthorized users from getting access to use of the network, files and commands. Passwords permit users to use the network. Anyone not having a valid password cannot use the network. File locking allows the network manager to specify which files can be read, and which can be written to. User rights and directory rights determine which files can be used by which users and to what extent. For example, some users may have the right to call up a database the read data from it, but they cannot write changes into it or delete from or add to it.

9. Define each of the following types of network servers: print, file, gateway, routing.

Print servers allow all computers on the network to use the same printer.

File servers allow all computers on the network to use the same hard disk drive.

Gateway servers connect two or more different types of networks or connect the network to a mainframe.

Routing servers connect two or more networks with the same architecture.

UNIT V

ELECTRONIC MAIL

OFT 2401: Intermediate Information Processing

INSTRUCTOR'S GUIDE

Unit 5

Unit Title: Electronic Mail

Contents of Unit:

1. Concepts & Terms
2. Methods

Unit Objectives: Upon completion of this unit, the student will be able to:

1. Discuss electronic mail including definitions of terms and methods.
2. Send and receive messages using an electronic mail system, if available.
3. If an electronic mail package is not available, complete a tutorial disk on E-Mail.
4. Exhibit a professional attitude in completing assigned tasks.
5. Exhibit independence in comprehending and applying written instructions given in software documentation and assigned tasks.

Equipment and Materials Required:

1. E-Mail system if available
2. Lab handouts for each lesson in this unit.
3. E-Mail tutorial if E-Mail package is not available.

Procedures:

1. See the Student's Lab Guides for Unit 5 for instructions concerning individual learning activities.
2. Demonstrations by the instructor when necessary.

Learning Activities:

1. Complete E-Mai8l tutorial.

Evaluation:

1. None

UNIT VI

TECHNICAL REPORT

OFT 2401: Intermediate Information Processing

INSTRUCTOR'S GUIDE

Unit 6

Unit Title: Technical Report Using Database and Electronic Spreadsheet Software

Contents of Unit:

1. Concepts and Terms
2. Functions and Commands
3. Methods, Materials and Equipment

Unit Objectives: Upon completion of this unit, the student will be able to:

1. Given a case and data, student will compose a technical report including database reports and graphs to support the narrative and conclusions and recommendations.
2. Exhibit a professional attitude in completing assigned tasks.
3. Exhibit independence in comprehending and applying written instructions given in software documentation and assigned tasks.

Procedures:

Student's Laboratory Guide provides outlines of laboratory assignments and equipment required.

Learning Activities:

Students are to complete the report assigned in class during the semester if all equipment and software packages are available.

Evaluation:

This assignment is included to allow the students to be creative in their use of the software packages learned in this class.

One way that it could be graded is:

1) All components completed. -- C
2) All components completed; some added features (such as more than the minimum number of graphs and databases). -- B
3) All components completed; extra graphs and databases; report well-written and presented creatively. -- A

Some suggestions for graphs follow:

Table:	38	Bar
	39	Pie
	40	Line or Pie or both
	41	Bar or Pie
	42	Bar