

PEARL LEVEL 3

USER'S GUIDE

November, 1980
Revised

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CHAPTER 1. INTRODUCTION

WELCOME TO PEARL LEVEL 3 - FOR PROFESSIONAL PROGRAMMERS

1.1 THE POWER OF PEARL

PEARL, developed by Computer Pathways Unlimited, Inc., is an application generator. You and PEARL interact. You define the specifications of your application (such as complex financial and business applications, multiple file accounting systems). PEARL will generate much or all of the program code needed to implement the application you have defined.

PEARL is "menu" driven -- you define the application and PEARL provides the software solution, in many cases, ready-to-use.

PEARL Level 3 can create the following programs: Menu Selection, File Update/Edit, Report, Edit Control System Data, File Reorganization (indexed files only) and a General Report Writer. These programs will enable you to define and cross-index data elements between multiple files within a single system.

With PEARL Level 3, you can define reports using data from multiple files, extend the standard program menu, and define the interrelationships between data elements in different files. You can also post journal files to a master file, provide extended report generation and supply multiple index keys for a file.

PEARL Level 3 is designed primarily for use by professional programmers and systems development teams. PEARL Level 3 supports development of complex applications. Because PEARL 3 can do everything that PEARL Levels 1 and 2 can do, you do not have to be a programmer to use it. You can use PEARL 3 to generate a very simple application such as an address list, or you can develop a very complex application requiring the skills of a professional programmer.

1.2 WILL PEARL RUN ON YOUR SYSTEM?

Yes, if you have the following capabilities on your microcomputer system:

1. CP/M* Operating System.
2. 56K of memory.
3. CBASIC-2** Compiler, version 2.03 or later.
4. CRUN2.COM**, version 2.05 or later.
5. At least two floppy disk drives with at least 150K capacity per disk.

*CP/M is a trademark of Digital Research.

**CBASIC and CRUN2.COM are trademarks of Software Systems.

CHAPTER 2. SYSTEM OVERVIEW

PEARL has been developed as a support tool for the design, development, and implementation of applications on microcomputers. The operating system used with PEARL is CP/M. CBASIC-2 is used as the compiler and language because the features provided by this language also support the development of business applications on microcomputers.

2.1 MANUAL ORGANIZATION.

This manual has been organized into five sections.

2.1.1 PART 1 - GETTING STARTED

This section shows you how to configure your working diskettes. You are then lead through a step-by-step definition and generation of a sample system. The example system used is a "Customer Contact File". It is an enhanced version of the application outline in the PEARL Level 2 Manual. Although this example may not be of interest to you as a user, it is important to go through it and generate the application because it will give you the necessary understanding of how you can generate your own system.

2.1.2 PART 2 - SYSTEM DEFINITION.

This section describes in detail the menus and the options provided to allow you to define a system. Each entry in the PEARL main menu is expanded into a full chapter of explanation.

2.1.3 PART 3 - LISTING SYSTEM GENERATION CONTROL DATA.

This section describes in detail the listings of the control data to be used to generate the your user defined system.

2.1.4 PART 4 - SYSTEM GENERATION AND EXECUTION.

This section describes the steps needed to generate a system, to compile the system, and to then place the system in a production status.

2.1.5 PART 5 -- APPENDICES.

Each appendix provides you with supporting information to give you a better understanding of the design and structure of the PEARL-generated applications.

2.2 STEPS TO DESIGN AND DEVELOP AN APPLICATION.

PEARL is a tool to support application development. In order to effectively use PEARL, you must carefully consider your needs, or the needs of the end user for whom the application is being developed. These needs can then be

CHAPTER 2. SYSTEM OVERVIEW

expressed in terms of a system design to be used to define the PEARL control data. The effectiveness of the end system will depend on how well each of the following development phases are completed:

Phase I - System Design.

You will decide the nature of the information to be kept in the file for your application (as described in Chapter 4). PEARL-generated applications are centered on a data file containing a series of data records. The format of each data record is identical. Each record contains the data elements you specify when you define the application. Hence, you must decide what the data elements might be. For example: a last name, a street address, date last called, amount owed, invoice number, etc. Each data element has a type, such as date, character string, money amount, etc. During the process of defining an application to PEARL, you will be prompted to enter descriptions of all the data elements the data record will contain.

Phase II - RUN PEARL.

1. You will put your DEFINITION and APPLICATION SYSTEM DISK (drives A and B respectively) into your computer and RUN PEARL (as explained in Chapter 4). You will sequentially select options from the Main Menu.
2. You will define a system. You will be prompted to enter a system name, what to name the Main Menu Program for your new system, the version number, etc.
3. You will define the application file. You will be asked for such things as the name to give your application, which disk drive it will be kept on, etc.
4. You will define the data elements that will make up the records on the application file.
5. For data elements representing an array of finite data possibilities, each data possibility is defined both as a number and by its phrase definition.
6. You will define your reports. A description of entry is discussed in detail in Chapter 4, Step 7. Chapter 10 discusses all of the report options available.
7. You will print out a list of what you have defined to be sure it contains all the data elements you want and that they are properly defined. There is a length limit as to how long a record can be, and you must insure you have not exceeded this limit.

CHAPTER 2. SYSTEM OVERVIEW

8. You may need to go back and edit your definitions if necessary, and then print them out. You may repeat this procedure until you are satisfied with your new system design.

Phase III - Generate Your Programs.

PEARL Main Menu option 15, System Generation, suboption 1 will generate all the programs for the system you have defined.

Phase IV - Compilation.

PEARL Main Menu option 15, submenu Option 10 will set up a submit file so you can then insert your compile disk, submit the compile process and then run your new system.

Phase V - Backups.

You will backup all your disks and store them away in a safe place for protection in case something should happen to the originals.

CHAPTER 3. CONFIGURING YOUR WORKING DISKS

PEARL Level 3 is designed to run on a number of hardware configurations. At least one disk unit is required. However, the PEARL programs, control files, and generated source files are most easily managed when they are distributed over several drives. Approximately 600K of storage is required to maintain the PEARL programs, the run time CBASIC programs, the control files, and the source files for the common subroutines.

This section describes some sample configurations using a variety of computers and disk storage configurations. These include:

1. An ALTOS computer with two double density floppy disk drives and hard disk storage distributed across 6 units (approximately 9 megabytes each).
2. Any system using 8-inch single density floppy diskettes.
3. An ALTOS or TRS-80 Model 2 computer with two double density floppy disk drives.

In addition to the above, special configuration directions are available for configuring PEARL on such systems as Superbrain, North Star Horizon, etc.

3.1 DISTRIBUTION DISKETTES

The distribution diskettes contain three logical sets of files. When distributed on single density, soft sectored 8-inch diskettes, each of three diskettes contain the following files:

1. Definition Programs.

PEARL3.INT	MAIN MENU PROGRAM
A000.INT	SYSTEM INITIALIZATION PROGRAM
A100.INT	FILE DEFINITION PROGRAM
A200.INT	DATA ELEMENT DEFINITION PROGRAM
A300.INT	PHRASE SELECTION DEFINITION PROGRAM
A400.INT	REPORT CONTROL DEFINITION PROGRAM
A400A.INT	REPORT DETAIL DEFINITION PROGRAM
A500.INT	MENU DEFINITION PROGRAM
A600.INT	POST/CLOSE COMPUTATIONS ENTRY PROGRAM
A800.INT	EDIT SYSTEM CONTROL DATA
AP0001.INT	LIST DATA ELEMENT CONTROL
AP0002.INT	LIST REPORT CONTROL
AP0003.INT	LIST MENU CONTROL
AP0004.INT	LIST POST/CLOSE COMPUTATIONS
AP0005.INT	CROSS FILE VALIDATION PROCESSING

CHAPTER 3. CONFIGURING YOUR WORKING DISKS

2. Generation Programs.

A900.INT	GENERATION CONTROL PROGRAM
A900A.INT	GENERATE I/O ROUTINES
A900B.INT	GENERATE DISPLAY/EDIT ROUTINES
A900C.INT	GENERATE REPORT PROGRAMS
A900D.INT	GENERATE UPDATE/EDIT, REORGANIZATION MAINLINE
A900E.INT	GENERATE INITIALIZATION ROUTINES
A900F.INT	GENERATE MAIN MENU PROGRAM
A900G.INT	GENERATE POST/CLOSE ROUTINES
PLT031.NDX	PROGRAM LOGIC TABLES
PLT032.NDX	PROGRAM LOGIC TABLES

3. Common Source Utilities.

C24000E.BAS	POST/CLOSE REPORT WRITER
C82000E.BAS	CONSOLE INPUT ROUTINES
C82400A.BAS	CREATE QSORT CONTROL FILE
C82500A.BAS	CREATE SUBMIT CONTROL FILE
C86900E.BAS	FILE COPY ROUTINES
C90000E.BAS	SCREEN CLEAR, PAUSE, CHAIN UTILITIES
C90400E.BAS	CHAIN LIST PROCESSOR
CENTRYE.BAS	COMMON ENTRY ROUTINE
CHAIN.BAS	SET %CHAIN COMPILER DIRECTIVES
CINTL.BAS	TERMINAL CONFIGURATION INITIALIZATION
COM01E.BAS	COMMON VARIABLES
FNFILEE.BAS	FUNCTIONS FOR FILE STRING PROCESSING
IS73000.BAS	INDEX FILE INITIALIZATION
ISCAN.BAS	INDEX FILE I/O (READ ONLY)
ISUPDATE.BAS	INDEX FILE I/O
ISINTL.BAS	INDEX FILE CONTROL DATA
XSORTEX.BAS	SORT EXIT UTILITY MAINLINE
SR10000.BAS	I/O ROUTINE FOR SORT CONTROL FILE
SR24000.BAS	DISPLAY EDIT FOR SORT CONTROL DATA

3.2 SETTING UP WORKING DISKETTES.

The following is a general description of the diskettes you will probably want to use during definition, generation, compilation, and placing an application into production. Depending upon the size of system being generated and the storage capacity of your diskettes, you may have to alter the configuration somewhat as described in Section 3.3.

1. PEARL DEFINITION DISK

This diskette will be used when defining a system, or anytime the PEARL programs are used.

2. PEARL GENERATION DISK

This diskette will be used during system generation.

CHAPTER 3. CONFIGURING YOUR WORKING DISKS

3. CONTROL DATA DISK

This diskette will contain the PEARL control files. During generation processing, generated code will be stored on this diskette.

4. PEARL COMPILE MASTER DISK

This diskette will be set up once with the programs required in order to compile a PEARL-generated system. Once set up, it will be copied onto the MAIN PROGRAM DISK for each generated system.

5. APPLICATION SYSTEM MAIN PROGRAMS

This diskette will contain the common subroutines and will be used to hold the main program modules during the segment compile process after the system is generated.

6. GENERATED SUBROUTINES

This diskette will contain the generated subroutines for the application being generated after being moved from the control data diskette.

7. APPLICATION SYSTEM DISK

This will be the production diskette for the end system. It will contain only the .INT files for the generated system, and the necessary .COM files required to run the system.

8. APPLICATION DATA FILES

This diskette will contain the data files created and maintained by the system you will generate with PEARL.

3.3 ALTERNATE CONFIGURATIONS

The following configurations may vary somewhat depending upon the version of PEARL Level 3 you are using and the actual storage capacity of your diskettes.

3.3.1 ALTOS System With Hard Disk Storage Capacity.

NOTE:

While this configuration was actually done using an ALTOS system, the same configuration will work for any system with mass storage capability on hard disk.

CHAPTER 3. CONFIGURING YOUR WORKING DISKS

In this case, units A and B are double density floppy diskettes, and units E, F, G, H, I, and J are hard disk units with approximately 8 megabytes each. The following allocation of drives was done:

E: COMMON UTILITY SOURCE
F: GENERATED SOURCE
G: WORKING SYSTEM DISK
H: PEARL CONTROL FILES

In order to configure the system to run PEARL, files were copied to the hard disk units as follows:

- a. All files from distribution diskettes 1 and 2 were placed on drive G::.
- b. All files from distribution diskette 3 was placed on drive G::.
- c. CRUN2.COM (renamed RUN.COM), CBAS2.COM, QSORT.COM, were copied from respective master distribution diskettes to drive G::.

To begin execution of the system, enter the command:

G:RUN G:PEARL3

When the program is loaded, the following message will appear:

**SYSTEM CONIFURATION DATA COULD NOT BE LOCATED
Enter an ESCAPE to create a new file on DRIVE A:, or,
ENTER DEFAULT SYSTEM DISK DRIVE [A]**

At this point, enter a "G" followed by a return. The same message will appear again with "G" in place of "A". At this time, enter an ESCAPE followed by a RETURN. This will indicate to the system that your system disk drive is to be defined as G. Then respond to each of the prompts provided by the program to complete the definition of the system configuration information. (Refer to Appendix B for a description of each of these control variables.)

3.3.2 Using Single Density 8-inch Floppy Diskettes.

This configuration will work for any system with a diskette storage capacity of 241K per diskette.

Place a CP/M operating system, and a PIP.COM file on each of the diskettes described in Section 3.2. Then distribute the PEARL Level 3 files provided on your three

CHAPTER 3. CONFIGURING YOUR WORKING DISKS

MASTER diskettes as described below. Note that QSORT.COM, RUN.COM (CRUN2.COM renamed), and CBAS2.COM will also be required on some of the diskettes as noted below.

<u>Distribution Disk</u>	<u>File</u>	<u>Working Disk</u>
DEFINITION	PEARL3.INT	PEARL DEFINITION DISK
"	A000.INT	"
"	A100.INT	"
"	A200.INT	"
"	A300.INT	"
"	A400.INT	"
"	A400A.INT	"
"	A500.INT	"
"	A600.INT	"
"	A800.INT	"
"	AP0001.INT	"
"	AP0002.INT	"
"	AP0003.INT	"
"	AP0004.INT	"
"	AP0005.INT	"
CBASIC	RUN.COM	"
GENERATION	A900.INT	PEARL GENERATION DISK
"	A900A.INT	"
"	A900B.INT	"
"	A900C.INT	"
"	A900D.INT	"
"	A900E.INT	"
"	A900F.INT	"
"	A900G.INT	"
"	PLT031.NDX	"
"	PLT032.NDX	"
COMPILE	C24000E.BAS	PEARL COMPILE MASTER
"	C82000E.BAS	"
"	C83000E.BAS	"
"	C86900E.BAS	"
"	C90000E.BAS	"
"	C90400E.BAS	"
"	CENTRYE.BAS	"
"	CHAIN.BAS	"
"	CINTL.BAS	"
"	COM01E.BAS	"
"	FNFILEE.BAS	"
"	IS73000.BAS	"
"	ISCAN.BAS	"
"	ISINTL.BAS	"
"	ISUPDATE.BAS	"
CBASIC	CBAS2.COM	"
CP/M	SUBMIT.COM	"
"	ED.COM	"

CHAPTER 3. CONFIGURING YOUR WORKING DISKS

COMPILE	XSORTX.INT	APPLICATION SYSTEM DISK
QSORT	QSORT.COM	"
CBASIC	RUN.COM	

The APPLICATION SYSTEM MAIN PROGRAMS diskette should be a duplicate copy of the PEARL COMPILE MASTER DISK.

NOTES:

The XSORTX.BAS, C82400A.BAS, C82500A.BAS, SR10000.BAS, and SR42000.BAS source files were not distributed from the distribution master diskette. These routines will not be required unless you wish to modify the SORT exit routine. If you wish to do this, copy these routines onto a copy of the PEARL COMPILE MASTER DISK where development work can be done.

The XSORTX.INT file is provided on the distribution diskette in source form (XSORTS.BAS). In order to set up the INT file on the system diskette for the inventory system, the source program must be compiled.

The ED.COM and SUBMIT.COM files are included on the PEARL COMPILE MASTER DISK in order to create submit files to facilitate system compilation. Their use is described later in these procedures.

3.3.3 Configuring a System With Dual Density 8-inch Floppy Drives

For systems with two or more dual density 8-inch floppy drives (440K capacity per diskette), the above configuration will also work quite well. Generation of large systems will generally need less diskette swapping. There will be less need to copy the generated source to separate diskettes to allow room for complete generation of all programs.

3.4 CONFIGURING SYSTEMS WITH MORE THAN TWO DISK DRIVES.

PEARL will run on a system with only two disk units. However, if your system has more than two drives, it is advisable to distribute your working files among as many diskettes as possible during the generation and compile steps. This will allow you to generate large systems with a minimum of diskette swapping. Files can be distributed easily as follows:

DISK UNIT DESCRIPTION	CONTENTS	WHERE DEFINED
SYSTEM DISK	PEARL.INT FILE, PROGRAM LOGIC TABLES, SYSTEM .COM FILES	SYSTEM CONFIGURATION
CONTROL DATA	PEARL.CCT, PEARL.NDX FILES	SYSTEM CONFIGURATION

CHAPTER 3. CONFIGURING YOUR WORKING DISKS

GENERATED SOURCE	.BAS FILES CREATE BY PEARL	PEARL CONTROL DATA
COMMON UTILITIES SOURCE	.BAS SOURCE FILES PROVIDED OF PEARL DISTRIBUTION DISKETTES	PEARL CONTROL DATA
APPLICATION SYSTEM DISK	.INT FILES FOR GENERATED APPLICATION	SUBMIT FILE FOR COMPILE.

NOTES

1. If each of the above sets of files are defined on separate diskettes, the total space requirements on each diskette will be reduced.
2. If you had only a single disk unit on your system, all files could be placed on the same unit if the storage capacity of the drive would permit it.

3.5 SUMMARY

Format 8 diskettes and label them (see 3.2). Then put CP/M and RUN.COM on seven of these disks. Put CP/M and CBAS2.COM on the MASTER COMPILE DISK. You may put PIP.COM on all disks except the GENERATION DISK (see 3.2). (This is because on most systems, there is not enough room for PIP.COM on the generation disk.) Put the rest of the COM files on the APPLICATION SYSTEM DISK.

PIP all of the appropriate files over onto the DEFINITION, GENERATION, MASTER COMPILE and CONTROL DATA disks (see 3.3).

COPY the PEARL MASTER COMPILE disk onto another disk and label it APPLICATION SYSTEM MAIN PROGRAMS. You will use this disk for compiling. Once you have completed compilation, you will PIP RUN.COM, your .COM files and your .INT files from this disk onto your APPLICATION SYSTEM DISK for production.

Then, put the other three disks aside for the time being. Store your three PEARL DISTRIBUTION MASTER DISKS and your PEARL MASTER COMPILE disk away in a safe place.

See Chapter 19 for more detailed information on usage of diskettes and procedures.

Proceed to Chapter 4.

CHAPTER 4. GENERATING A TEST SYSTEM

This chapter presents an example of how you can use PEARL to generate an application to serve your needs.

The example is a enhanced version of the one given in the PEARL Level 1 and 2 manual. You would not necessarily have to be a programmer to generate the example given here. However, you would need to have access to someone with programming knowledge in BASIC code to be able to work on some parts of this example (such as defining reports). XYZ Company is the business desiring a computer application as follows:

THE COMPANY

XYZ Company is a service organization. They currently serve over 200 customers. One of the sections of XYZ Company is Customer Support. Customer Support is heavily involved in public relations and is responsible for ensuring that the products provided their customers are satisfactory. One way of doing this is by maintaining a "customer contact file". Therefore, every Monday they go through their files and get a list of those customers who need to be contacted during the week. They must also add new customers to the file, maintain current customers by address and telephone number, and remove inactive customers from their files, if necessary.

Customer Support also provides Marketing with a list each month of the number of customers in each business group. This gives Marketing an idea of how much business is being done and in which areas it is being done. The list can be used as one type of guideline for planning marketing strategy.

PEARL can maintain all these records for them and list them out in alphabetical order on a line printer. With PEARL Level 3, the company can also get a report of customers on the file by business group, in order by contact date, and business group totals/selected date range.

Customer Support, therefore, has decided to outline the specifications they desire for this type of application, enter these specifications into the terminal using PEARL and let PEARL generate the application for them.

NOTE:

While PEARL Level 3 can generate a system like PEARL Levels 1 and 2 (i.e., without a programmer), it can also do much more. A programmer would need to be involved in the process of generating this example application where additional applications are provided using Level 3.

CHAPTER 4. GENERATING A TEST SYSTEM

"SYSTEM DESIGN"

Requirements:

1. Add customers to the file.
2. Maintain current customer files through editing when necessary, i.e., address changes, phone number changes.
3. List customers on a line printer by name, contact date, business group and total business group within a selected date range.
4. Delete inactive customers.

Records Will Contain:

1. Customer Name (40 characters long)
2. Customer Address (40 characters long)
3. City, State and Zip Code (30 characters long)
4. Phone Number (12 characters long)
5. Contact Date (6 characters long)
6. Business Group: (2 characters long)
 - government
 - education
 - contracting
 - farming
 - retail sales
 - wholesale distribution
 - other

Each record will be 130 characters in length and contain 6 data fields within each record.

Application:

1. Add, edit, delete and list customer records from customer contact file.
2. There will be two reports: a) the first report will list customers currently on the file; and b) the second report will list customers by business group and by contact date. The business group report will give subtotals for each business group and the combined month-to-date total for business groups in a given month. The report will also give a year-to-date total for each business group.

CHAPTER 4. GENERATING A TEST SYSTEM

PRESENT XYZ COMPANY HARDWARE/SOFTWARE

1. CP/M Operating System.
2. Computer with 64K of memory.
3. CBASIC-2 compiler, version 2.03.
4. CRUN2.COM, version 2.06
5. Printer with automatic forms eject.
6. Hazeltine* Video Display Terminal.
7. 8-inch double density disks with 448K capacity.

It is important to be familiar with your operating system and to have followed the procedures in Chapter 3 carefully. The steps for defining the sample application follow. At this time, your working disks should be in hand and your PEARL master disks safely stored away for future use. **PLEASE DO NOT USE YOUR PEARL MASTER DISKS FOR GENERATING A SYSTEM.**

*Hazeltine is a product of Hazeltine Corporation.

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Step 1 - Configuration of Control Data

This is required only once. After this information (data) has been entered and the program generated, it can be changed by selecting Option 16 on the Main Selection Menu (see Step 2 for the first display of the Main Selection Menu). The system will prompt the you to enter the appropriate data.

However, since this section is provided to show you how to generate a system using PEARL Level 3 from beginning to end, this option is covered in detail.

User Action:

Place Definition Disk in Drive A.

Place Control Data Disk in Drive B.

Perform CP/M cold boot.

System Responds:

A>

User Enters:

RUN PEARL3

System Responds:

CRUN VERSION 2.06

SYSTEM CONFIGURATION DATA COULD NOT BE LOCATED
Enter an ESCAPE to create a new file on DRIVE A:, or,
ENTER DEFAULT SYSTEM DISK DRIVE

User Enters:

Depress ESCAPE and RETURN

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System Responds:

SYSTEM CONFIGURATION CONTROL FILE IS BEING INITIALIZED
CONFIGURATION CONTROL DATA

1: TERMINAL TYPE	USER DEFINED CLEAR SCREEN
2: FORMS CONTROL OPTION	USE FORM FEED
3: DISKETTE CAPACITY IN K BYTES	70
4: MESSAGE LEVEL	SUPPRESS ALL MESSAGES
5: REPORT DEPTH IN LINES	0
6: INSTALLATION NAME	
7: DEFAULT SYSTEM DISK DRIVE	A
8: DEFAULT DATE DISK DRIVE	B
9: DATE FORMAT	MM/DD/YY FORMAT
10: PASSWORD	

ENTER TERMINAL TYPE

0 =USER DEFINED CLEAR SCREEN
1 =SOL
2 =HAZELTINE
3 =BEEHIVE
4 =SOROC
5 =INTERTEC
6 =TRS 80 MODEL II
7 =ADM-3(A)
(0)

User Enters:

2

A list of the common terminal types is provided. If your terminal (video display) is one of those listed, then enter the number to make your selection. If your terminal is not included, enter zero as your selection and then enter the character sequence which is required to clear the screen on your terminal. This information can usually be found in the manufacturer's manual for your terminal.

System Responds:

ENTER FORMS CONTROL OPTIONS (0)
ENTER 0 TO USE FORM FEED, OR THE NUMBER OF LINES PER PAGE

User Enters:

0

This option is used to specify the control used to space to top of form on your system printer.

If a zero is specified, the ASCII FF (form feed) character will be used to space to top of form. If your printer does not support forms eject protocol, then you should specify the number of lines from the top of form to the top of the next page. For standard spacing on 11-inch

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paper this value would be 66 (6 lines per inch). Some printers allow the option to print 8 lines per inch in which case the forms length would be 88.

System Responds:

ENTER DISKETTE CAPACITY IN K BYTES (70)

User Enters:

448

System Responds:

ENTER MESSAGE LEVEL
0 =SUPPRESS ALL MESSAGES
1 =OPEN/CLOSE/CHAIN MESSAGES
2 =DISPLAY I/O TRACES
(0)

User Enters:

0

Three options are provided here and give the following levels of messages and diagnostics during processing:

0 SUPPRESS ALL MESSAGES

The only messages returned to you are those resulting in the successful execution of a program; or, if an error is detected, the error code associated with the error. This option is suggested for this test run. Options 1 and 2 are programmers tools and increase the processing time.

(Options 1 and 2 are programmer's tools.)

1 OPEN/CLOSE/CHAIN MESSAGES

If this diagnostic message level is chosen, then a message will be provided to you each time a file is opened, closed, or a chain to another program is being issued. At the time a file is closed, a count of the number of records added to, read from, deleted from, and replaced on the file will be given. In addition, the amount of free space in memory will also be given.

2 DISPLAY I/O TRACE

When this option is used, a display of the records read from, and written to, a file will be displayed on the screen. This option is not available for PEARL programs themselves but is available for programs generated by PEARL.

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System Responds:

ENTER REPORT DEPTH IN LINES (0)

User Enters:

55

This control variable specifies the number of lines in the body of each printed page on a report. This value will always be used on your reports unless you enter a different value when defining your report.

System Responds:

ENTER INSTALLATION NAME

User Enters:

XYZ Company

System Responds:

ENTER DEFAULT SYSTEM DISK DRIVE (A)

User Enters:

Depress RETURN (or choose another drive A-D)

System Responds:

ENTER DEFAULT DISK DRIVE FOR DATA FILES (B)
(or choose another drive A-D)

User Enters:

Depress RETURN

System Responds:

ENTER DATE FORMAT
0 =MM/DD/YY FORMAT (American)
1 =DD/MM/YY FORMAT (European)
(0)

User Enters:

0

System Responds:

ENTER PASSWORD

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User Enters:

You will enter a password of your choice if you desire. If you enter a password, be sure not to forget it or you will not be able to get onto the system. The password, as it is being entered, will be blocked out by the number symbol during keying. For example, if you enter "secret" as your password, the field as entered would display as #####. If you enter your password in lowercase, it must always be keyed that way; likewise, if you enter it in UPPERCASE, it must always be keyed in the same way.

#####

System Responds:

CONFIGURATION CONTROL DATA

1: TERMINAL TYPE	HAZELTINE
2: FORMS CONTROL OPTION	USE FORM FEED
3: DISKETTE CAPACITY IN K BYTES	448
4: MESSAGE LEVEL	SUPPRESS ALL MESSAGES
5: REPORT DEPTH IN LINES	55
6: INSTALLATION NAME	XYZ Company
7: DEFAULT SYSTEM DISK DRIVE	A
8: DEFAULT DATA DISK DRIVE	B
9: DATE FORMAT	MM/DD/YY FORMAT
10: PASSWORD	

ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

NOTE:

Again, the password will not show on this display. However, you may change the password field by entering 10 and entering a new password, to make sure you entered the word you wanted or you may simply terminate the password altogether by depressing RETURN.

User Enters:

You would check the above fields to make sure they are correct and then either edit the incorrect field if needed or depress RETURN.

As discussed in Appendix A, this ability is provided you throughout the entire process. Therefore, if an error has been made during initial entry, you will be given a chance to correct it before going further.

Depress RETURN

GO TO STEP 2

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Step 2 - System Initialization

System Responds:

PEARL LEVEL 3

(C) BY COMPUTER PATHWAYS UNLIMITED, INC.
VERSION N.00
AUGUST 1, 1980

SERIAL # AAA-NNN

ENTER CURRENT DATE:

User Enters:

MMDDYY (with or without slashes, i.e., 010180)

System Responds:

PEARL LEVEL 3 (A:PEARL3) VERSION N.00
MAIN SELECTION MENU-MM/DD/YY
MINIMUM FREE SPACE=(20064)
(FILE=01)*

0. RETURN TO CP/M
1. SYSTEM INITIALIZATION
2. FILE DEFINITION
3. DATA ELEMENT DEFINITION
4. PHRASE SELECTION DEFINITION*
5. MAIN MENU DEFINITION
6. REPORT CONTROL DEFINITION
7. REPORT DETAIL DEFINITION
8. ENTER/EDIT POST/CLOSE COMPUTATIONS
9. LIST DATA ELEMENT CONTROL DATA
10. LIST MENU CONTROL DATA
11. LIST REPORT CONTROL DATA
12. LIST POST/CLOSE COMPUTATION DATA
13. VALIDATION OF CROSS FILE PROCESSES
14. EDIT SYSTEM DEFINITION DATA
15. SYSTEM GENERATION
16. RESET CURRENT SYSTEM DATE
17. EDIT SYSTEM CONFIGURATION DATA

ENTER DESIRED FUNCTION BY NUMBER:

NOTES

1. File>NN lets you know on which file you are currently working. When you initialize a file, 1 is always used. However, if you were using multiple files, and you wanted to work on file 2, you could change the number to 02. See Step C, File Definition, on how you could do this.
2. Option 3, PHRASE SELECTION DEFINITION, is the same as DATA ELEMENT ARRAY VALIDATION MAINTENANCE on Levels 1 and 2 of PEARL. We felt PHRASE SELECTION more descriptive, and

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certainly less cumbersome, so we changed it on Level 3 of PEARL.

User Enters:

1

System Responds:

LOADING PROGRAM TO SYSTEM INITIALIZATION

PEARL LEVEL 3 (A:A000) VERSION N.00
SYSTEM INITIALIZATION-01/01/80
MINIMUM FREE SPACE=(20064)
(FILE=01)

ENTER SYSTEM DESCRIPTION ()

User Enters:

CUSTOMER CONTACT FILE

System Responds:

ENTER MAIN MENU PROGRAM NAME ()

User Enters:

CONTACT

System Responds:

ENTER SYSTEM CODE ()

(See Appendix G for system codes that should not be used.)

User Enters:

BCF (for Business Contact File)

System Responds:

ENTER SYSTEM DEVELOPMENT DATE

User Enters

September, 1980

System Responds:

ENTER SYSTEM VERSION NUMBER

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User Enters:

1.0

System Responds:

ENTER BUFFER ALLOCATION (0)

User Enters:

10 (If you have 48K of memory, enter 0 instead.)

System Responds:

ENTER DRIVE FOR GENERATED SOURCE (B)

User Enters:

Depress RETURN (or desired drive)

System Responds:

ENTER DRIVE FOR INCLUDED COMMON SUBROUTINES (A)

User Enters:

Depress RETURN (or desired drive)

System Responds:

ENTER DRIVE FOR INCLUDED GENERATED SUBROUTINES (B)

User Enters:

Depress RETURN

System Responds:

PEARL SYSTEM CONTROL DATA	
1: SYSTEM DESCRIPTION	CUSTOMER CONTACT FILE
2: MAIN MENU PROGRAM NAME	CONTACT
3: SYSTEM CODE	BCF
4: SYSTEM DEVELOPMENT DATE	September, 1980
5: SYSTEM VERSION NUMBER	1.0
6: BUFFER ALLOCATION	10.
7: DRIVE FOR GENERATED SOURCE	B
8: DRIVE FOR INCLUDED COMMON ROUTINES	A
9: DRIVE FOR INCLUDED GENERATED ROUTINES	B
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE	

User Enters:

Depress RETURN

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System Responds:

SYSTEM INITIALIZATION IS COMPLETED

....RETURNING TO MAIN MENU....

GO TO STEP 3

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Step 3 - File Definition Processing

Once back in the main menu (shown below) you may use Option 14 if you wish to change the data you have just entered. Otherwise, you are now ready to select Option 2.

PEARL LEVEL 3 (A:PEARL3) VERSION N.00
MAIN SELECTION MENU-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)

- 0. RETURN TO CP/M
- 1. SYSTEM INITIALIZATION
- 2. FILE DEFINITION
- 3. DATA ELEMENT DEFINITION
- 4. PHRASE SELECTION DEFINITION
- 5. MAIN MENU DEFINITION
- 6. REPORT CONTROL DEFINITION
- 7. REPORT DETAIL DEFINITION
- 8. ENTER/EDIT POST/CLOSE COMPUTATIONS
- 9. LIST DATA ELEMENT CONTROL DATA
- 10. LIST MENU CONTROL DATA
- 11. LIST REPORT CONTROL DATA
- 12. LIST POST/CLOSE COMPUTATION CONTROL DATA
- 13. VALIDATION OF CROSS FILE PROCESSES
- 14. EDIT SYSTEM DEFINITION DATA
- 15. SYSTEM GENERATION
- 16. RESET CURRENT SYSTEM DATE
- 17. EDIT SYSTEM CONFIGURATION DATA

ENTER DESIRED FUNCTION BY NUMBER:

User Enters:

2

System Responds:

LOADING PROGRAM TO FILE DEFINITION

PEARL LEVEL 3 (A:A100) VERSION N.00
FILE DEFINITION PROCESSING-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)

- 0 TO RETURN TO THE MAIN MENU
 - 1 TO ADD A FILE TO THE SYSTEM
 - 2 TO EDIT FILE DEFINITION CONTROL DATA
 - 3 TO LIST FILE DEFINITION CONTROL DATA
- F=nn TO RESET FILE ID*
- ?

If you wish to change the file number in order to define a file other than 1, you may enter F=NN where NN is the file number you wish to define, i.e., F=02.

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User Enters:

1

System Responds:

ENTER FILE DESCRIPTION ()

User Enters:

CUSTOMER CONTACT

System Responds:

ENTER FILE TYPE
0 =MASTER FILE
1 =MISC. INDEXED FILE
2 =TRANSACTION FILE
3 =HISTORICAL TRANSACTION FILE
4 =MISC. RANDOM FILE

User Enters:

1

For the application outlined in this section of the User's Guide, a miscellaneous indexed file is used. This is because there will be only one file used for this application and so there is no need to select MASTER FILE as opposed to TRANSACTION FILE or HISTORICAL FILE for instance.

System Responds:

ENTER DATA FILE NAME ()

User Enters:

CUSTOMER

System Responds:

ENTER UNIQUE FILE ID ()

User Enters:

CF

System Responds:

ENTER LOGICAL FILE UNIT (2)

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User Enters:

Depress RETURN

(User must use 2 through 20 - 1 is reserved for the index file.)

System Responds:

ENTER DISK DRIVE UNIT ID (B)
ENTER "Z" TO USE DEFAULT DATA DRIVE

User Enters:

Depress RETURN

The CUSTOMER CONTACT FILE system will produce the data file
on Drive B.

System Responds:

ENTER I/O SUBROUTINE BASE (10000)

User Enters:

Depress RETURN

System Responds:

ENTER DATA RECORD EDIT BASE (30000)

User Enters:

Depress RETURN

System Responds:

ENTER CONTROL RECORD EDIT BASE (40000)

User Enters:

Depress RETURN

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System Responds:

FILE DEFINITION DATA
1: RELATIVE FILE ID 1.
2: FILE DESCRIPTION CUSTOMER CONTACT FILE
3: ACCESS METHOD MISC. INDEXED FILE
4: DATA FILE NAME CUSTOMER
5: UNIQUE FILE ID CF.
6: LOGICAL FILE UNIT 2.
7: DISK DRIVE UNIT ID B
8: I/O SUBROUTINE BASE 10000
9: DATA RECORD EDIT BASE 30000
10: CONTROL RECORD EDIT BASE 40000
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

System Responds:

ADDING DATA ELEMENTS FOR FILE HEADER RECORD
CFC.SORT HAS BEEN ADDED
CFC.LAST HAS BEEN ADDED
CF.NEXT.DELETED HAS BEEN ADDED
CF.AVAIL.DELETED HAS BEEN ADDED
CF.UPDATE.FLAG HAS BEEN ADDED
CF.UPDATE.RESET HAS BEEN ADDED
CF.IS.NBUFS% HAS BEEN ADDED

NOTE

The following data elements for the file header record would be added if you had defined your file as MASTER, TRANSACTION or HISTORICAL only:

CF.S.CLOST.COUNT% HAS BEEN ADDED
CF.SH.JE% HAS BEEN ADDED
CF.S.POST.COUNT% HAS BEEN ADDED
CF.S.JE% HAS BEEN ADDED

PEARL LEVEL 3 (A:A100) VERSION N.00
FILE DEFINITION PROCESSING-01/01/80
MINIMUM FREE SPACE=(NNNNN)

0 TO RETURN TO THE MAIN MENU
1 TO ADD A FILE TO THE SYSTEM
2 TO EDIT FILE DEFINITION CONTROL DATA
3 TO LIST FILE DEFINITION CONTROL DATA
F=NN TO RESET FILE ID
?

User Enters:

0

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System Responds:

... RETURNING TO MAIN MENU ...

GO TO STEP 4

Step 4 - Data Element Definition

The next step is to enter the control information for each of the data elements you are going to place on your data file. For this particular application, there are 6 data file names: CUSTOMER NAME, CUSTOMER ADDRESS, LOCATION (City, State, Zip Code), PHONE NUMBER, CONTACT DATE, and BUSINESS GROUP. Each will be defined separately as follows:

System Responds:

... RETURNING TO MAIN MENU ...

PEARL LEVEL 3 (A:PEARL3) VERSION N.00
MAIN SELECTION MENU-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)

- 0. RETURN TO CP/M
 - 1. SYSTEM INITIALIZATION
 - 2. FILE DEFINITION
 - 3. DATA ELEMENT DEFINITION
 - 4. PHRASE SELECTION DEFINITION
 - 5. MAIN MENU DEFINITION
 - 6. REPORT CONTROL DEFINITION
 - 7. REPORT DETAIL DEFINITION
 - 8. ENTER/EDIT POST/CLOSE COMPUTATIONS
 - 9. LIST DATA ELEMENT CONTROL DATA
 - 10. LIST MENU CONTROL DATA
 - 11. LIST REPORT CONTROL DATA
 - 12. LIST POST/CLOSE COMPUTATION CONTROL DATA
 - 13. VALIDATION OF CROSS FILE PROCESSES
 - 14. EDIT SYSTEM DEFINITION DATA
 - 15. SYSTEM GENERATION
 - 16. RESET CURRENT SYSTEM DATE
 - 17. EDIT SYSTEM CONFIGURATION DATA
- ENTER DESIRED FUNCTION BY NUMBER:

User Enters:

3

System Responds:

LOADING PROGRAM TO DATA ELEMENT DEFINITION

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PEARL LEVEL 3 (A:A200) VERSION N.00
FILE DATA ELEMENT DEFINITION-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)

0 RETURN TO MAIN MENU
1 TO ADD NEW DATA ELEMENTS
2 TO EDIT EXISTING DATA ELEMENTS
3 TO DELETE DATA ELEMENTS
F=NN TO RESET FILE ID
?
User Enters:

1

System Responds:

Enter ESCAPE to terminate add processing, OR
ENTER EDIT LINE SEQUENCE (10)

(This is the line number associated with the data element being defined. You may choose a different number for your data element if you wish. See Chapter 6 for more information.)

User Enters:

Depress RETURN

The field you will be defining will be the record key and must be unique because it is the first data element on the file. Records will be accessible from the file in order by CUSTOMER NAME, last name first, i.e., SMITH, MARY E.

System Responds:

ENTER VARIABLE DESCRIPTION ()

User Enters:

CUSTOMER NAME

System Responds:

ENTER VARIABLE CODE NAME ()

User Enters:

CUST.NAME

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System Responds:

```
ENTER STORAGE FORMAT
0 =FLOATING POINT
1 =INTEGER
2 =STRING
3 =DATE
4 =MONEY
5 =COMPUTATIONAL
( 0 )
```

User Enters:

2

System Responds:

```
ENTER LENGTH OF FIELD ( 0 )
```

User Enters:

40

System Responds:

```
ENTER EDIT CONTROL OPTION
0 =NO EDITING RESTRICTIONS
1 =EDIT DURING ADD ONLY
2 =DISPLAY ONLY
3 =SUPPRESS DISPLAY/EDIT
( 0 )
```

User Enters:

Depress RETURN

System Responds:

```
ENTER VALIDATION CONTROL OPTION
0 =NO SELECTION
1 =Y/N SELECTION
2 =ALPHA SINGLE CHARACTER
3 =PHRASE SELECTION
4 =CROSS FILE KEY VALIDATION
( 0 )
```

User Enters:

Depress RETURN

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System Responds:

```
ENTER KEY OPTION  
0 =NOT APPLICABLE  
1 =PRIMARY KEY  
2 =SECONDARY KEY  
( 0 )
```

User Enters:

```
1
```

System Responds:

```
DATA ELEMENT DEFINITION DATA  
CUSTOMER CONTACT FILE--CUSTOMER CONTACT (01)  
1: LINE EDIT NUMBER 10  
2: VARIABLE DESCRIPTION CUSTOMER NAME  
3: VARIABLE CODE NAME CUST.NAME$  
4: NUMBER OF OCCURRENCES 0.  
5: STORAGE FORMAT STRING  
6: LENGTH OF FIELD 40.  
7: LOW RANGE FOR VARIABLE NONE  
8: HIGH RANGE FOR VARIABLE NONE  
9: EDIT MASK  
10: EDIT CONTROL OPTION NO EDITING RESTRICTIONS  
11: VALIDATION CONTROL OPTION NO SELECTION  
12: KEY OPTION PRIMARY KEY  
*: NUMBER OF ARRAY VALIDATION ENTRIES 0.  
*: POSITION IN RECORD 0.  
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE
```

NOTE

Not all of the values were entered for this data element. Lines 4:, 7:, 8: and 9: were defaulted because the other entries were such that these four lines were not required.

User Enters:

```
Depress RETURN
```

The next data element will be CUSTOMER ADDRESS.

System Responds:

```
Enter ESCAPE to terminate add processing, OR  
ENTER EDIT LINE SEQUENCE ( 20 )
```

User Enters:

```
Depress RETURN
```

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System Responds:

ENTER VARIABLE DESCRIPTION (CUSTOMER NAME)

User Enters:

CUSTOMER ADDRESS

System Responds:

ENTER VARIABLE CODE NAME (CUST.NAME\$)

User Enters:

CUST.ADDR

System Responds:

ENTER STORAGE FORMAT
0 =FLOATING POINT
1 =INTEGER
2 =STRING
3 =DATE
4 =MONEY
5 =COMPUTATIONAL
(2)

User Enters:

Depress RETURN

System Responds:

ENTER LENGTH OF FIELD (40)

User Enters:

Depress RETURN

System Responds:

ENTER EDIT CONTROL OPTION
0 =NO EDITING RESTRICTIONS
1 =EDIT DURING ADD ONLY
2 =DISPLAY ONLY
3 =SUPPRESS DISPLAY/EDIT
(0)

User Enters:

Depress RETURN

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System Responds:

```
ENTER VALIDATION CONTROL OPTION
0 =NO SELECTION
1 =Y/N SELECTION
2 =ALPHA SINGLE CHARACTER
3 =PHRASE SELECTION
4 =CROSS FILE KEY VALIDATION
( 0 )
```

User Enters:

Depress RETURN

System Responds:

```
ENTER KEY OPTION
0 =NOT APPLICABLE
1 =PRIMARY
2 =SECONDARY
( 1 )
```

User Enters:

0

System Responds:

```
DATA ELEMENT DEFINITION DATA
  CUSTOMER CONTACT FILE--CUSTOMER CONTACT (01)
1: LINE EDIT NUMBER           20
2: VARIABLE DESCRIPTION       CUSTOMER ADDRESS
3: VARIABLE CODE NAME         CUST.ADDR$
4: NUMBER OF OCCURRENCES      0.
5: STORAGE FORMAT            STRING
6: LENGTH OF FIELD           40.
7: LOW RANGE FOR VARIABLE    NONE
8: HIGH RANGE FOR VARIABLE   NONE
9: EDIT MASK
10: EDIT CONTROL OPTION      NO EDITING RESTRICTIONS
11: VALIDATION CONTROL OPTION NO SELECTION
12: KEY OPTION                NOT APPLICABLE
*: NUMBER OF ARRAY VALIDATION ENTRIES   0.
*: POSITION IN RECORD          0.
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE
```

User Enters:

Depress RETURN

System Responds:

```
Enter ESCAPE to terminate add processing, OR
ENTER EDIT LINE SEQUENCE ( 30 )
```

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User Enters:

Depress RETURN

The next data element will be LOCATION (i.e., City, State, Zip)

System Responds:

Depress RETURN

System Responds:

ENTER VARIABLE DESCRIPTION (CUSTOMER ADDRESS)

User Enters:

LOCATION

System Responds:

ENTER VARIABLE CODE NAME (CUST.ADDR\$)

User Enters:

CUST.LOC

System Responds:

ENTER STORAGE FORMAT
0 =FLOATING POINT
1 =INTEGER
2 =STRING
3 =DATE
4 =MONEY
5 =COMPUTATIONAL
(2)

User Enters:

Depress RETURN

System Responds:

ENTER LENGTH OF FIELD (40)

User Enters:

30

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System Responds:

```
ENTER EDIT CONTROL OPTION
0 =NO EDITING RESTRICTIONS
1 =EDIT DURING ADD ONLY
2 =DISPLAY ONLY
3 =SUPPRESS DISPLAY/EDIT
( 0 )
```

User Enters:

Depress RETURN

System Responds:

```
ENTER VALIDATION CONTROL OPTION
0 =NO SELECTION
1 =Y/N SELECTION
2 =ALPHA SINGLE CHARACTER
3 =PHRASE SELECTION
4 =CROSS FILE KEY VALIDATION
( 0 )
```

User Enters:

Depress RETURN

System Responds:

```
ENTER KEY OPTION
0 =NOT APPLICABLE
1 =PRIMARY KEY
2 =SECONDARY KEY
( 0 )
```

User Enters:

Depress RETURN

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System Responds:

DATA ELEMENT DEFINITION DATA	
CUSTOMER CONTACT FILE--CUSTOMER CONTACT (01)	
1: LINE EDIT NUMBER	30
2: VARIABLE DESCRIPTION	CUSTOMER LOCATION
3: VARIABLE CODE NAME	CUST.LOC\$
4: NUMBER OF OCCURRENCES	0.
5: STORAGE FORMAT	STRING
6: LENGTH OF FIELD	30.
7: LOW RANGE FOR VARIABLE	NONE
8: HIGH RANGE FOR VARIABLE	NONE
9: EDIT MASK	
10: EDIT CONTROL OPTION	NO EDITING RESTRICTIONS
11: VALIDATION CONTROL OPTION	NO SELECTION
12: KEY OPTION	NOT APPLICABLE
*: NUMBER OF ARRAY VALIDATION ENTRIES	0.
*: POSITION IN RECORD	0.
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE	

User Enters:

Depress RETURN

The next data element to be defined is the PHONE.

System Responds:

Enter ESCAPE to terminate add processing, OR
ENTER EDIT LINE SEQUENCE (40)

User Enters:

Depress RETURN

System Responds:

ENTER VARIABLE DESCRIPTION (CUSTOMER LOCATION)

User Enters:

PHONE

System Responds:

ENTER VARIABLE CODE NAME (CUST.LOC\$)

User Enters:

CUST.PHONE

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System Responds:

```
ENTER STORAGE FORMAT
0 =FLOATING POINT
1 =INTEGER
2 =STRING
3 =DATE
4 =MONEY
5 =COMPUTATIONAL
( 2 )
```

User Enters:

Depress RETURN

System Responds:

```
ENTER LENGTH OF FIELD ( 30 )
```

User Enters:

12

System Responds:

```
ENTER EDIT CONTROL OPTION
0 =NO EDITING RESTRICTIONS
1 =EDIT DURING ADD ONLY
2 =DISPLAY ONLY
3 =SUPPRESS DISPLAY/EDIT
( 0 )
```

User Enters:

Depress RETURN

System Responds:

```
ENTER VALIDATION CONTROL OPTION
0 =NO SELECTION
1 =Y/N SELECTION
2 =ALPHA SINGLE CHARACTER
3 =PHRASE SELECTION
4 =CROSS FILE KEY VALIDATION
( 0 )
```

User Enters:

Depress RETURN

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System Responds:

```
ENTER KEY OPTION  
0 =NOT APPLICABLE  
1 =PRIMARY KEY  
2 =SECONDARY KEY  
( 0 )
```

User Enters:

Depress RETURN

System Responds:

```
DATA ELEMENT DEFINITION DATA  
  CUSTOMER CONTACT FILE--CUSTOMER CONTACT (01)  
1: LINE EDIT NUMBER           40  
2: VARIABLE DESCRIPTION       PHONE  
3: VARIABLE CODE NAME        CUST.PHONE$  
4: NUMBER OF OCCURRENCES      0.  
5: STORAGE FORMAT            STRING  
6: LENGTH OF FIELD           12.  
7: LOW RANGE FOR VARIABLE    NONE  
8: HIGH RANGE FOR VARIABLE   NONE  
9: EDIT MASK  
10: EDIT CONTROL OPTION      NO EDITING RESTRICTIONS  
11: VALIDATION CONTROL OPTION NO SELECTION  
12: KEY OPTION                NOT APPLICABLE  
*: NUMBER OF ARRAY VALIDATION ENTRIES     0.  
*: POSITION IN RECORD          0.  
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE
```

User Enters:

Depress RETURN

System Responds:

```
Enter ESCAPE to terminate add processing, OR  
ENTER EDIT LINE SEQUENCE ( 50 )
```

User Enters:

Depress RETURN

The next data element will be CONTACT DATE.

System Responds:

```
ENTER VARIABLE DESCRIPTION (PHONE)
```

User Enters:

CONTACT DATE

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System Responds:

ENTER VARIABLE CODE NAME (CUST.PHONES\$)

User Enters:

CUST.DATE

System Responds:

ENTER STORAGE FORMAT
0 =FLOATING POINT
1 =INTEGER
2 =STRING
3 =DATE
4 =MONEY
5 =COMPUTATIONAL
(2)

User Enters:

3

(LENGTH OF FIELD is not asked for because 6 digits is always assumed and is therefore the default.)

System Responds:

ENTER EDIT CONTROL OPTION
0 =NO EDITING RESTRICTIONS
1 =EDIT DURING ADD ONLY
2 =DISPLAY ONLY
3 =SUPPRESS DISPLAY/EDIT
(0)

User Enters:

Depress RETURN

System Responds:

ENTER VALIDATION CONTROL OPTION
0 =NO SELECTION
1 =Y/N SELECTION
2 =ALPHA SINGLE CHARACTER
3 =ARRAY VALIDATION
4 =CROSS FILE KEY VALIDATION
(0)

User Enters:

Depress RETURN

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System Responds:

```
ENTER KEY OPTION  
0 =NOT APPLICABLE  
1 =PRIMARY KEY  
2 =SECONDARY KEY  
( 0 )
```

User Enters:

2

By choosing 2 (Secondary Key) you will be able get reports of the customers on the file by contact date. Step 10, Running Your PEARL Generated System will show you how to do this.

System Responds:

```
DATA ELEMENT DEFINITION DATA  
    CUSTOMER CONTACT FILE--CUSTOMER CONTACT (01)  
1: LINE EDIT NUMBER           50  
2: VARIABLE DESCRIPTION       CONTACT DATE  
3: VARIABLE CODE NAME        CUST.DATE  
4: NUMBER OF OCCURRENCES     0.  
5: STORAGE FORMAT            DATE  
6: LENGTH OF FIELD           6.  
7: LOW RANGE FOR VARIABLE    NONE  
8: HIGH RANGE FOR VARIABLE   NONE  
9: EDIT MASK  
10: EDIT CONTROL OPTION      NO EDITING RESTRICTIONS  
11: VALIDATION CONTROL OPTION NO SELECTION  
12: KEY OPTION                SECONDARY KEY  
*: NUMBER OF ARRAY VALIDATION ENTRIES 0.  
*: POSITION IN RECORD        0.  
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE
```

User Enters:

Depress RETURN

The next data element will be BUSINESS GROUP.

System Responds:

```
Enter ESCAPE to terminate add processing, OR  
ENTER EDIT LINE SEQUENCE (60)
```

User Enters:

Depress RETURN

System Responds:

```
ENTER VARIABLE DESCRIPTION (CONTACT DATE)
```

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User Enters:

BUSINESS GROUP

System Responds:

ENTER VARIABLE CODE NAME (CUST.DATE)

User Enters:

BUS.GP

System Responds:

ENTER STORAGE FORMAT
0 =FLOATING POINT
1 =INTEGER
2 =STRING
3 =DATE
4 =MONEY
5 =COMPUTATIONAL
(3)

User Enters:

1

System Responds:

ENTER LENGTH OF FIELD (6)

User Enters:

2

System Responds:

ENTER LOW RANGE FOR VARIABLE (NONE)*

User Enters:

Depress RETURN

System Responds:

ENTER HIGH RANGE FOR VARIABLE (NONE)*

User Enters:

Depress RETURN

System Responds:

ENTER EDIT MASK (##,###)*

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User Enters:

Depress RETURN

NOTE

*These fields are used for items stored as integer or floating point such as money amounts where a high and low range may be desired, and where special editing (formatting masks) on output may be desired (see CBASIC2 manual for specifications on edit mask). They are not necessary in this example.

System Responds:

```
ENTER EDIT CONTROL OPTION
0 =NO EDITING RESTRICTIONS
1 =EDIT DURING ADD ONLY
2 =DISPLAY ONLY
3 =SUPPRESS DISPLAY/EDIT
( 0 )
```

User Enters:

Depress RETURN

System Responds:

```
ENTER VALIDATION CONTROL OPTION
0 =NO SELECTION
1 =Y/N SELECTION
2 =ALPHA SINGLE CHARACTER
3 =PHRASE SELECTION
4 =CROSS FILE KEY VALIDATION
( 0 )
```

User Enters:

3

System Responds:

```
ENTER KEY OPTION
0 =NOT APPLICABLE
1 =PRIMARY KEY
2 =SECONDARY KEY
( 2 )
```

User Enters:

Depress RETURN

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System Responds:

DATA ELEMENT DEFINITION DATA
CUSTOMER CONTACT FILE--CUSTOMER CONTACT (01)
1: LINE EDIT NUMBER 60
2: VARIABLE DESCRIPTION BUSINESS GROUP
3: VARIABLE CODE NAME BUS.GP%
4: NUMBER OF OCCURRENCES 0.
5: STORAGE FORMAT INTEGER
6: LENGTH OF FIELD 2.
7: LOW RANGE FOR VARIABLE NONE
8: HIGH RANGE FOR VARIABLE NONE
9: EDIT MASK
10: EDIT CONTROL OPTION NO EDITING RESTRICTIONS
11: VALIDATION CONTROL OPTION PHRASE SELECTION
12: REPORT HEADING SECONDARY KEY
*: NUMBER OF ARRAY VALIDATION ENTRIES 0.
*: POSITION IN RECORD 0.
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

System Responds:

Enter ESCAPE to terminate add processing, OR
ENTER EDIT LINE SEQUENCE (70)

User Enters:

Depress ESCAPE and RETURN

System Responds:

PEARL LEVEL 3 (A:A200) VERSION N.00
FILE DATA ELEMENT DEFINITION-01/01/80
MINIMUM FREE SPACE=(NNNNN)

0 RETURN TO MAIN MENU
1 TO ADD NEW DATA ELEMENTS
2 TO EDIT EXISTING DATA ELEMENTS
3 TO DELETE DATA ELEMENTS
F=nn TO RESET FILE ID
?

User Enters:

0

System Responds:

... RETURNING TO MAIN MENU ...

GO TO STEP 5

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Step 5 - Phrase Selection Definition

Since phrase selection has been chosen for BUSINESS GROUP, the variables must now be defined for each distinct group within the BUSINESS GROUP data element.

System Responds:

```
PEARL LEVEL 3 (A:PEARL3) VERSION N.00
MAIN SELECTION MENU-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)
```

0. RETURN TO CP/M
1. SYSTEM INITIALIZATION
2. FILE DEFINITION
3. DATA ELEMENT DEFINITION
4. PHRASE SELECTION DEFINITION
5. MAIN MENU DEFINITION
6. REPORT CONTROL DEFINITION
7. REPORT DETAIL DEFINITION
8. ENTER/EDIT POST/CLOSE COMPUTATIONS
9. LIST DATA ELEMENT CONTROL DATA
10. LIST MENU CONTROL DATA
11. LIST REPORT CONTROL DATA
12. LIST POST/CLOSE COMPUTATION CONTROL DATA
13. VALIDATION OF CROSS FILE PROCESSES
14. EDIT SYSTEM DEFINITION DATA
15. SYSTEM GENERATION
16. RESET CURRENT SYSTEM DATE
17. EDIT SYSTEM CONFIGURATION DATA

ENTER DESIRED FUNCTION BY NUMBER:

User Enters:

4

System Responds:

LOADING PROGRAM TO PHRASE SELECTION DEFINITION

```
PEARL LEVEL 3 (A:A300) VERSION N.00
PHRASE SELECTION DATA ADD/EDIT-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)
```

O =TO RETURN TO MAIN MENU
1 =TO ADD OR EDIT PHRASES
F=nn TO RESET FILE ID
?

User Enters:

1

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System Responds:

ENTER EDIT SEQUENCE NUMBER FOR DATA ELEMENT

User Enters:

60 (Business Group was 60)

System Responds:

CUSTOMER CONTACT FILE--CUSTOMER CONTACT
ARRAY VALIDATION FOR: BUSINESS GROUP
ENTER VALIDATION DATA FOR VALUE = 0

User Enters:

GOVERNMENT

System Responds:

ENTER VALIDATION DATA VALUE = 1

User Enters:

EDUCATION

System Responds:

ENTER VALIDATION DATA VALUE = 2

User Enters:

CONTRACTING

System Responds:

ENTER VALIDATION DATA VALUE = 3

User Enters:

FARMING

System Responds:

ENTER VALIDATION DATA VALUE = 4

User Enters:

RETAIL SALES

System Responds:

ENTER VALIDATION DATA VALUE = 5

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User Enters:

WHOLESALE DIST.

System Responds:

ENTER VALIDATION DATA VALUE = 6

User Enters:

OTHER

System Responds:

ENTER VALIDATION DATA VALUE = 7

User Enters:

Depress RETURN

System Responds:

CUSTOMER CONTACT FILE--CUSTOMER CONTACT
ARRAY VALIDATION FOR: BUSINESS GROUP

- 0: GOVERNMENT
- 1: EDUCATION
- 2: CONTRACTING
- 3: FARMING
- 4: RETAIL SALES
- 5: WHOLESALE DIST.
- 6: OTHER

ENTER LINE NUMBER TO EDIT

User Enters:

Depress RETURN

If you enter a number larger than the highest one shown, you will go into add mode starting with an "nn" value one higher than the last. To delete a phrase, select its line number to edit, then enter an asterisk as the new phrase and depress return. When this is done, all of the entries following the deleted entry will be resequenced to fill in the gap.

System Responds:

ENTER EDIT SEQUENCE NUMBER FOR DATA ELEMENT

User Enters:

Depress RETURN

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System Responds:

```
PEARL LEVEL 3 (A:A300) VERSION N.00
PHRASE SELECTION DATA ADD/EDIT-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)
```

O =TO RETURN TO MAIN MENU
1 =TO ADD OR EDIT PHRASES
F=nn TO RESET FILE ID
?

User Enters:

0

System Responds:

... RETURNING TO MAIN MENU ...

GO TO STEP 6

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Step 6 - Main Menu Definition

System Responds:

PEARL LEVEL 3 (A:PEARL3) VERSION N.00
MAIN SELECTION MENU-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)

0. RETURN TO CP/M
1. SYSTEM INITIALIZATION
2. FILE DEFINITION
3. DATA ELEMENT DEFINITION
4. PHRASE SELECTION DEFINITION
5. MAIN MENU DEFINITION
6. REPORT CONTROL DEFINITION
7. REPORT DETAIL DEFINITION
8. ENTER/EDIT POST/CLOSE COMPUTATIONS
9. LIST DATA ELEMENT CONTROL DATA
10. LIST MENU CONTROL DATA
11. LIST REPORT CONTROL DATA
12. LIST POST/CLOSE COMPUTATION DATA
13. VALIDATION OF CROSS FILE PROCESSES
14. EDIT SYSTEM DEFINITION DATA
15. SYSTEM GENERATION
16. RESET CURRENT SYSTEM DATE
17. EDIT SYSTEM CONFIGURATION DATA

ENTER DESIRED FUNCTION BY NUMBER:

User Enters:

5

System Responds:

LOADING PROGRAM TO MAIN MENU DEFINITION

PEARL LEVEL 3 (A:A500) VERSION N.00
MENU DEFINITION PROCESSING-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)

- 0 TO RETURN TO MAIN MENU
- 1 TO ADD MENU ENTRIES
- 2 TO EDIT EXISING MENU ENTRIES
- 3 TO DELETE A MENU ENTRY
- 4 TO CREATE DEFAULT MENU CONTROL
- ?

User Enters:

4

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System Responds:

PEARL will now define the default main menu. When this is done, PEARL will respond with the menu listed above:

```
PEARL LEVEL 3 (A:A500) VERSION N.00
MENU DEFINITION PROCESSING-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)
```

- 0 TO RETURN TO MAIN MENU
- 1 TO ADD MENU ENTRIES
- 2 TO EDIT EXISING MENU ENTRIES
- 3 TO DELETE A MENU ENTRY
- 4 TO CREATE DEFAULT MENU CONTROL
- ?

User Enters:

0

System Responds:

... RETURNING TO MAIN MENU ...

NOTE:

If you wished to define you own main menu, you would choose Option 1. PEARL would then give you a series of prompts that would allow you to describe the options needed on your PEARL-generated application Main Selection Menu.

Briefly, the prompts would be:

```
ENTER MENU SEQUENCE KEY NN
ENTER PROGRAM DESCRIPTION
ENTER PROGRAM
ENTER DISK IDENTIFICATION
```

You would answer each prompt, the MENU CONTROL DATA would be displayed for editing, and then you would name the next selection option you desired.

GO TO STEP 7

Step 7 - Report Control Definition

To get a printed report of the records on your file once your system it is up and running, you must now define the parameters (tab positions, headings, etc) for the placement of the text as you wish it to look when your report prints out. To do this, you must figure out the width of your page and the longest line in each column so that the text will fit across the page. You must know the PEARL Generated Variable Codes for report definition (Refer to Appendix G for the variable names you must use) as well as the variable code names you assigned during Data Element Definition, Step 4.

There will be two reports. The following layouts were derived before the data was entered into PEARL.

1. The page will hold 80 characters of text across it. Therefore, you have 80-characters of space to work with horizontally.
2. Variable names to be used on Report 1 are: CC.REPORT.ID\$, CC.INSTALL\$, CC.PAGE%, CC.DATE\$, CUST.NAME\$, CUST.ADDR\$, CUST.LOC\$, CUST.PHONE\$, FN.DATE\$(CUST.DATE), and BUS.GP.VAL\$(BUS.GP%).
3. Variable names to be used on Report 2 are: CC.REPORT.ID\$, CC.INSTALL\$, CC.PAGE%, CC.DATE\$, BUS.GROUP.MTDT, BUS.GP%, BUS.GP.X%, BUS.GP.VAL\$(BUS.GP.X%), CONTROL.DATE, STOT.BUS.GROUP.MTDT, STOT.BUS.GROUP.YTDT, TOT.BUS.GROUP.MTDT, TOT.BUS.GROUP.YTDT.
4. You will need to know the tab positions for the layout of the text on each report.
5. You will want to know how many spaces should be left after each line.

Report 1 will look like this:

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Customer Name	Phone	Contact Date	Business Group
Name Address City and State	NNN-NNN-NNNN	MM/DD/YY	nnnnnnnnnnnnnnnn
Name Address City and State	NNN-NNN-NNNN	MM/DD/YY	nnnnnnnnnnnnnnnn
Inc.			

1. The string of dashes and the text above the dashes is HEADER information (SEQUENCE KEY 1000-1999).
2. The text below the dashes is DETAIL information (SEQUENCE KEY 5000-5999).
3. The longest word in column 1 will be 40.
4. The longest word in column 2 will be 12.
5. The longest word in column 3 will be 8.
6. The longest word in column 4 will be 15.
7. Column 1 = 1 through 40 character spaces.
 Column 2 = 42 through 54 character spaces.
 Column 3 = 56 through 64 character spaces.
 Column 4 = 66 through 80 character spaces.

To get your report to look like this, the following variables will be entered in the order shown:

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Variable	Tab Position	Lines To Skip
CC.REPORT.ID\$	1	0
CC.INSTALL\$	0 (Center)	0
CC.PAGE% (Page ###)	73	1 (After)
Customer Contact List	0 (Center)	1 (After)
CC.DATE\$	0 (Center)	2 (After)
Contact	56	0
Business	69	1 (After)
Customer Name	1	0
Phone	42	0
Date	57	0
Group	70	1 (After)
Line of Dashes (1 - 40, etc.)	1	0
Line of Dashes (41 - 80, etc.)	40	1 (After)
CUST.NAME\$	1	0
CUST.PHONE\$	42	0
FN.DATE\$(CUST.DATE)	56	0
BUS.GP.VAL\$(BUS.GP%)	66	1 (After)
CUST.ADDR\$	1	0
CUST.LOC\$	1	2 (After)

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Report 2 will have subtotals, totals and grand totals:

Subtitle

Company Name
List by Business Group
Current Date

Page #**

Business Group	Date Range	Contact Totals
0 Government	MM/DD/YY	Month-to-Date: Year-to-Date:
1 Education	MM/DD/YY	Month-to-Date: Year-to-Date:
2 Contracting	MM/DD/YY	Month-to-Date: Year-to-Date:
3 Farming	MM/DD/YY	Month-to-Date: Year-to-Date:
4 Retail Sales	MM/DD/YY	Month-to-Date: Year-to-Date:
5 Wholesale Dist.	MM/DD/YY	Month-to-Date: Year-to-Date:
6 Other	MM/DD/YY	Month-to-Date: Year-to-Date:

TOTAL MONTH-TO-DATE:

TOTAL YEAR-TO-DATE:

1. Initialization computations will be entered for this report (SEQUENCE KEY 0001-0009).
2. The string of dashes and the text above the dashes is HEADER information (SEQUENCE KEY 1000-1999).
3. You will need to enter ACCUMULATION information (SEQUENCE KEYS 2000-2999).
4. You will need to enter CONTROL BREAKS information (SEQUENCE KEYS 3000-3999).
5. You will need to enter DETAIL COMPUTATION information (SEQUENCE KEYS 4000-4499).
6. You will need to enter SUBTOTAL and TOTAL information (SEQUENCE KEYS 6000-6999 and 7000-7999).

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NOTE:

There is no DETAIL on this report, so sequence keys 5000-5999 are not used.

1. The longest word in column 1 will be 2.
2. The longest word in column 2 will be 15.
3. The longest word in column 2 will be 14.
4. The longest word in column 3 will be 18.

To get your report to look like this, the following variables will be entered in the order shown:

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COMPUTATION CODES ARE:

```

REM
REM ENTER DATE RANGE
REM
GO SUP 90000
PRINT "ENTER THE STARTING DATE FOR MONTH-TO-DATE TOTALS"
GO SUB 82174      REM GET DATE
CONTROL.DATE=V
REM SET THE INITIAL COUNTER VALUES
BUS.GROUP.MTDT=1:BUS.GROUP.YTDT=1
REM

```

Variables/Computations	Tab Position	Lines To Skip
CC.REPORT.ID\$	1	1 (After)
CC.INSTALL\$	0 (Center)	0
CC.PAGE% (Page ###)	70	1 (After)
Contact List by Business Group	0 (Center)	1 (After)
CC.DATE\$	0 (Center)	2 (After)
Business Group	5	0
Date Range	29	0
Contact Totals	60	1 (After)
Line of Dashes (5 - 40 etc.)	5	0
Line of Dashes (41 - 80, etc.)	40	1 (After)
BUS.GROUP.MTDT (ACCUMULATION)		
BUS.GP% (CONTROL BREAK)		
BUS.GP.X%=BUS.GP% (DETAIL COMPUTATION)		
IF CUST.DATE < CONTROL.DATE THEN\		
BUS.GROUP.MTDT=0 ELSE BUS.GROUP.MTDT=1 (SUBTOTAL COMP.)		
BUS.GP.X%	5	1 (Before)
BUS.GP.VAL\$(BUS.GP.X%)	10	0
CONTROL.DATE	30	0
STOT.BUS.GROUP.MTDT	45	1 (After)
STOT.BUS.GROUP.YTDT	46	2 (After)
TOT.BUS.GROUP.MTDT	5	2 (After)
TOT.BUS.GROUP.YTDT	6	0 (After)

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Step 7 - Report Control Definition

System Responds:

PEARL LEVEL 3 (A:PEARL3) VERSION N.00
MAIN SELECTION MENU-MM/DD/YY
MINIMUM FREE SPACE=(20064)
(FILE=01)

0. RETURN TO CP/M
1. SYSTEM INITIALIZATION
2. FILE DEFINITION
3. DATA ELEMENT DEFINITION
4. PHRASE SELECTION DEFINITION
5. MAIN MENU DEFINITION
6. REPORT CONTROL DEFINITION
7. REPORT DETAIL DEFINITION
8. ENTER/EDIT POST/CLOSE COMPUTATIONS
9. LIST DATA ELEMENT CONTROL DATA
10. LIST MENU CONTROL DATA
11. LIST REPORT CONTROL DATA
12. LIST POST/CLOSE COMPUTATION DATA
13. VALIDATION OF CROSS FILE PROCESSES
14. EDIT SYSTEM DEFINITION DATA
15. SYSTEM GENERATION
16. RESET CURRENT SYSTEM DATE
17. EDIT SYSTEM CONFIGURATION DATA

ENTER DESIRED FUNCTION BY NUMBER:

User Enters:

6

System Responds:

LOADING PROGRAM TO REPORT CONTROL DEFINITION

PEARL LEVEL 3 (A:A400) VERSION N.00
REPORT CONTROL DEFINITION-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)

- 0 TO RETURN TO MAIN MENU
 - 1 TO DEFINE A NEW REPORT
 - 2 TO EDIT REPORT CONTROL DATA
 - 3 TO CHANGE REPORT ID (CURRENT REPORT =01)
 - 4 TO DELETE REPORT CONTROL FOR SPECIFIED REPORT
 - 5 TO ENTER/EDIT REPORT DETAIL
- ?

User Enters:

1

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System Responds:

ENTER YOUR REPORT IDENTIFICATION (01)

User Enters:

Depress RETURN

System Responds:

ENTER PRIMARY FILE NUMBER (0)

User Enters:

1

System Responds:

ENTER SECONDARY FILE NUMBER (0)

User Enters:

Depress RETURN

This option is may be used if you have multiple files. For example, if you have a MASTER FILE and a HISTORICAL TRANSACTION FILE.

System Responds:

ENTER REPORT WIDTH (0)

User Enters:

80

System Responds:

ENTER REPORT DEPTH (0)

User Enters:

Depress RETURN (Default is 55 as defined in the System Configuration Control Data.)

System Responds:

ENTER PROCESS SORTED FILE (Y/N) (N)

User Enters:

Depress RETURN

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System Responds

ENTER REPORT SUBROUTINE LABEL (50000)

User Enters:

Depress RETURN

System Responds:

ENTER REPORT DESCRIPTION

User Enters:

Customer Contact List

System Responds:

REPORT CONTROL DATA

1: REPORT ID	01
2: PRIMARY FILE NUMBER	1
3: SECONDARY FILE NUMBER	0
4: REPORT WIDTH	80
5: REPORT DEPTH	0
6: PROCESS SORTED FILE (Y/N)	N
7: REPORT SUBROUTINE LABEL	50000
8: REPORT DESCRIPTION	Customer Contact List

ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

System Responds:

PEARL LEVEL 3 (A:A400) VERSION N.00
REPORT CONROL DEFINITION-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)

- 0 RETURN TO MAIN MENU
- 1 TO DEFINE A NEW REPORT
- 2 TO EDIT REPORT CONTROL DATA
- 3 TO CHANGE REPORT ID (CURRENT REPORT =01)
- 4 TO DELETE REPORT CONTROL FOR SPECIFIED REPORT
- 5 TO ENTER/EDIT REPORT DETAIL
- ?

User Enters:

5

(You may also select Option 7 on the Main Menu to enter this data.)

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Step 7 - Report Control Definition

System Responds:

LOADING PROGRAM TO REPORT DETAIL DEFINITION

PEARL LEVEL 3 (A:A400A) VERSION N.00
REPORT DETAIL DEFINITION-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)

- 0 RETURN TO MAIN MENU
- 1 TO ADD ITEMS TO THE REPORT
- 2 TO EDIT REPORT ITEMS
- 3 TO DELETE ITEMS FROM THE REPORT
- 4 TO CHANGE THE REPORT ID (CURRENT REPORT =01)
- 5 TO PROCESS REPORT CONTROL DATA
- ?

User Enters:

1

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (11)

User Enters:

1010

System Responds:

ENTER VARIABLE CODE NAME ()

User Enters:

CC.REPORT.ID\$

System Responds:

ENTER TAB POSITION (0)

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User Enters:

1

System Responds:

ENTER FORMATTING CONTROL MASK ()

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP AFTER PRINT (0)

User Enters:

Depress RETURN

System Responds:

HEADING/PRINT LINE CONTROL DATA
1: SEQUENCE KEY 1010
2: VARIABLE CODE NAME CC.REPORT.ID\$
3: TAB POSITION 1
4: FORMATTING CONTROL MASK
5: LINES TO SKIP BEFORE PRINT 0
6: LINES TO SKIP AFTER PRINT 0
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL

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ENTER SEQUENCE KEY (1020)

User Enters:

Depress RETURN

System Responds:

ENTER VARIABLE CODE NAME (CC.REPORT.ID\$)

User Enters:

CC.INSTALL\$

System Responds:

ENTER TAB POSITION (1)

User Enters:

0

System Responds:

ENTER FORMATTING CONTROL MASK ()

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP AFTER PRINT (0)

User Enters:

Depress RETURN

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System Responds:

```
HEADING/PRINT LINE CONTROL DATA
1: SEQUENCE KEY          1020
2: VARIABLE CODE NAME    CC.INSTALL$
3: TAB POSITION           0
4: FORMATTING CONTROL MASK
5: LINES TO SKIP BEFORE PRINT   0
6: LINES TO SKIP AFTER PRINT    0
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE
```

User Enters:

Depress RETURN

System Responds:

```
0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (1030)
```

User Enters:

Depress RETURN

System Responds:

ENTER VARIABLE CODE NAME (CC.INSTALL\$)

User Enters:

CC.PAGE%

System Reponds:

ENTER TAB POSITION (0)

User Enters:

73

System Responds:

ENTER FORMATTING CONTROL MASK ()

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User Enters:

Page ###

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP AFTER PRINT (0)

User Enters:

1

System Responds:

HEADING/PRINT LINE CONTROL DATA

1: SEQUENCE KEY	1030
2: VARIABLE CODE NAME	CC.PAGE%
3: TAB POSITION	73
4: FORMATTING CONTROL MASK	Page ###
5: LINES TO SKIP BEFORE PRINT	0
6: LINES TO SKIP AFTER PRINT	1

ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (1040)

User Enters:

1110

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

ENTER VARIABLE CODE NAME (CC.PAGE%)

User Enters:

Depress SPACE and RETURN

System Responds:

ENTER TAB POSITION (73)

User Enters:

0

System Responds:

ENTER FORMATTING CONTROL MASK (Page ###)

User Enters:

Customer Master List

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP AFTER PRINT (1)

User Enters:

Depress RETURN

System Responds:

HEADING/PRINT LINE CONTROL DATA	
1: SEQUENCE KEY	1110
2: VARIABLE CODE NAME	
3: TAB POSITION	0
4: FORMATTING CONTROL MASK	Customer Master List
5: LINES TO SKIP BEFORE PRINT	0
6: LINES TO SKIP AFTER PRINT	1
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE	

User Enters:

Depress RETURN

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (1120)

User Enters:

1210

System Responds:

ENTER VARIABLE CODE NAME ()

User Enters:

CC.DATE\$

System Reponds:

ENTER TAB POSITION (0)

User Enters:

Depress RETURN

System Responds:

ENTER FORMATTING CONTROL MASK (Customer Master List)

User Enters:

Enter SPACE and RETURN

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP AFTER PRINT (1)

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

User Enters:

2

System Responds:

```
HEADING/PRINT LINE CONTROL DATA
1: SEQUENCE KEY          1210
2: VARIABLE CODE NAME    CC.DATE$ 
3: TAB POSITION           0
4: FORMATTING CONTROL MASK
5: LINES TO SKIP BEFORE PRINT   0
6: LINES TO SKIP AFTER PRINT    2
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE
```

User Enters:

Depress RETURN

System Responds:

```
0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (1220)
```

User Enters:

1310

System Responds:

ENTER VARIABLE CODE NAME (CC.DATE\$)

User Enters:

Depress SPACE and RETURN

System Reponds:

ENTER TAB POSITION (0)

User Enters:

56

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

ENTER FORMATTING CONTROL MASK ()

User Enters:

Contact

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP AFTER PRINT (2)

User Enters:

0

System Responds:

HEADING/PRINT LINE CONTROL DATA

1: SEQUENCE KEY	1310
2: VARIABLE CODE NAME	
3: TAB POSITION	56
4: FORMATTING CONTROL MASK	Contact
5: LINES TO SKIP BEFORE PRINT	0
6: LINES TO SKIP AFTER PRINT	1

ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)

1000-1999 HEADER

2000-2999 ACCUMULATION

3000-3999 CONTROL BREAKS

4000-4499 DETAIL COMPUTATION (rb300-rb349)

4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)

4800-4999 TOTAL COMPUTATION (rb380-rb399)

5000-5999 DETAIL

6000-6999 SUBTOTAL

7000-7999 TOTAL

ENTER SEQUENCE KEY (1320)

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

User Enters:

Depress RETURN

System Responds:

ENTER VARIABLE CODE NAME ()

User Enters:

Depress RETURN

System Reponds:

ENTER TAB POSITION (56)

User Enters:

69

System Responds:

ENTER FORMATTING CONTROL MASK (Contact)

User Enters:

Business

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP AFTER PRINT (0)

User Enters:

1

System Responds:

HEADING/PRINT LINE CONTROL DATA

1: SEQUENCE KEY	1320
2: VARIABLE CODE NAME	
3: TAB POSITION	69
4: FORMATTING CONTROL MASK	Business
5: LINES TO SKIP BEFORE PRINT	0
6: LINES TO SKIP AFTER PRINT	1
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE	

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

User Enters:

Depress RETURN

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (1330)

User Enters:

1410

System Responds:

ENTER VARIABLE CODE NAME

User Enters:

Depress RETURN

System Responds:

ENTER TAB POSITION (69)

User Enters:

1

System Responds:

ENTER FORMATTING CONTROL MASK (Business)

User Enters:

Customer Name

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

ENTER LINES TO SKIP AFTER PRINT (1)

User Enters:

0

System Responds:

HEADING/PRINT LINE CONTROL DATA
1: SEQUENCE KEY 1410
2: VARIABLE CODE NAME
3: TAB POSITION 1
4: FORMATTING CONTROL MASK Customer Name
5: LINES TO SKIP BEFORE PRINT 0
6: LINES TO SKIP AFTER PRINT 0
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (1420)

User Enters:

Depress RETURN

System Responds:

ENTER VARIABLE CODE NAME ()

User Enters:

Depress RETURN

System Reponds:

ENTER TAB POSITION (1)

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

User Enters:

42

System Responds:

ENTER FORMATTING CONTROL MASK (Customer Name)

User Enters:

Phone

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP AFTER PRINT (0)

User Enters:

Depress RETURN

System Responds:

HEADING/PRINT LINE CONTROL DATA
1: SEQUENCE KEY 1420
2: VARIABLE CODE NAME
3: TAB POSITION 42
4: FORMATTING CONTROL MASK Phone
5: LINES TO SKIP BEFORE PRINT 0
6: LINES TO SKIP AFTER PRINT 0
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

ENTER SEQUENCE KEY (1430)

User Enters:

Depress RETURN

System Responds:

ENTER VARIABLE CODE NAME ()

User Enters:

Depress RETURN

System Responds:

ENTER TAB POSITION (42)

User Enters:

57

System Responds:

ENTER FORMATTING CONTROL MASK (Phone)

User Enters:

Date

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP AFTER PRINT (0)

User Enters:

Depress RETURN

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

```
HEADING/PRINT LINE CONTROL DATA
1: SEQUENCE KEY           1430
2: VARIABLE CODE NAME
3: TAB POSITION            57
4: FORMATTING CONTROL MASK Date
5: LINES TO SKIP BEFORE PRINT   0
6: LINES TO SKIP AFTER PRINT    0
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE
```

User Enters:

Depress RETURN

System Responds:

```
0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (1440)
```

User Enters:

Depress RETURN

System Responds:

ENTER VARIABLE CODE NAME ()

User Enters:

Depress RETURN

System Reponds:

ENTER TAB POSITION (57)

User Enters:

70

System Responds:

ENTER FORMATTING CONTROL MASK (Date)

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

User Enters:

Group

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP AFTER PRINT (0)

User Enters:

1

System Responds:

HEADING/PRINT LINE CONTROL DATA
1: SEQUENCE KEY 1440
2: VARIABLE CODE NAME
3: TAB POSITION 70
4: FORMATTING CONTROL MASK Group
5: LINES TO SKIP BEFORE PRINT 0
6: LINES TO SKIP AFTER PRINT 1
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (1450)

User Enters:

1510

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

ENTER VARIABLE CODE NAME ()

User Enters:

Depress RETURN

System Responds:

ENTER TAB POSITION (70)

User Enters:

1

System Responds:

ENTER FORMATTING CONTROL MASK (Group)

User Enters:

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP AFTER PRINT (1)

User Enters:

0

System Responds:

HEADING/PRINT LINE CONTROL DATA	
1: SEQUENCE KEY	1510
2: VARIABLE CODE NAME	
3: TAB POSITION	1
4: FORMATTING CONTROL MASK	
5: LINES TO SKIP BEFORE PRINT	0
6: LINES TO SKIP AFTER PRINT	0
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE	

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

User Enters:

Depress RETURN

System Responds

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (1520)

User Enters:

Depress RETURN

System Responds:

ENTER VARIABLE CODE NAME ()

User Enters:

Depress RETURN

System Responds:

ENTER TAB POSITION (1)

User Enters:

41

System Responds:

ENTER FORMATTING CONTROL MASK (-----)

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

ENTER LINES TO SKIP AFTER PRINT (0)

User Enters:

1

System Responds:

HEADING/PRINT LINE CONTROL DATA
1: SEQUENCE KEY 1520
2: VARIABLE CODE NAME
3: TAB POSITION 41
4: FORMATTING CONTROL MASK -----
5: LINES TO SKIP BEFORE PRINT 0
6: LINES TO SKIP AFTER PRINT 1
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (1530)

You will now begin entry of DETAIL information.

User Enters:

5010

System Responds:

ENTER VARIABLE CODE NAME ()

User Enters:

CUST.NAME\$

System Responds:

ENTER TAB POSITION (41)

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

User Enters:

1

System Responds:

ENTER FORMATTING CONTROL MASK (-----)

User Enters:

Depress SPACE and RETURN

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP AFTER PRINT (1)

User Enters:

0

System Responds:

```
DETAIL/PRINT LINE CONTROL DATA
1: SEQUENCE KEY          5010
2: VARIABLE CODE NAME    CUST.NAME$
3: TAB POSITION           1
4: FORMATTING CONTROL MASK
5: LINES TO SKIP BEFORE PRINT   0
6: LINES TO SKIP AFTER PRINT    0
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE
```

User Enters:

Depress RETURN

System Responds:

```
0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
```

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

ENTER SEQUENCE KEY (5020)

User Enters:

Depress RETURN

System Responds:

ENTER VARIABLE CODE NAME (CUST.NAME\$)

User Enters:

CUST.PHONES\$

System Responds:

ENTER TAB POSITION (1)

User Enters:

42

System Responds:

ENTER FORMATTING CONTROL MASK ()

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP AFTER PRINT (0)

User Enters:

Depress RETURN

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

```
DETAIL/PRINT LINE CONTROL DATA
1: SEQUENCE KEY          5020
2: VARIABLE CODE NAME    CUST.PHONES$
3: TAB POSITION           42
4: FORMATTING CONTROL MASK
5: LINES TO SKIP BEFORE PRINT   0
6: LINES TO SKIP AFTER PRINT    0
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE
```

User Enters:

Depress RETURN

System Responds:

```
0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (5030)
```

User Enters:

Depress RETURN

System Responds:

ENTER VARIABLE CODE NAME (CUST.PHONES\$)

User Enters:

FN.DATE\$(CUST.DATE)

System Reponds:

ENTER TAB POSITION (42)

User Enters:

56

System Responds:

ENTER FORMATTING CONTROL MASK ()

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP AFTER PRINT (0)

User Enters:

Depress RETURN

System Responds:

DETAIL/PRINT LINE CONTROL DATA

1: SEQUENCE KEY	5030
2: VARIABLE CODE NAME	FN.DATE\$(CUST.DATE)
3: TAB POSITION	56
4: FORMATTING CONTROL MASK	
5: LINES TO SKIP BEFORE PRINT	0
6: LINES TO SKIP AFTER PRINT	0

ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (5040)

User Enters:

Depress RETURN

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

ENTER VARIABLE CODE NAME (FN.DATE\$(CUST.DATE))

User Enters:

BUS.GP.VAL\$(BUS.GP%)

System Responds:

ENTER TAB POSITION (56)

User Enters:

66

System Responds:

ENTER FORMATTING CONTROL MASK ()

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP AFTER PRINT (0)

User Enters:

1

System Responds:

DETAIL/PRINT LINE CONTROL DATA
1: SEQUENCE KEY 5040
2: VARIABLE CODE NAME BUS.GP.VAL\$(BUS.GP%)
3: TAB POSITION 66
4: FORMATTING CONTROL MASK
5: LINES TO SKIP BEFORE PRINT 0
6: LINES TO SKIP AFTER PRINT 1
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

```
0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (5050)
```

User Enters:

```
5110
```

System Responds:

```
ENTER VARIABLE CODE NAME (BUS.GP.VAL$(BUS.GP%))
```

User Enters:

```
CUST.ADDR$
```

System Responds:

```
ENTER TAB POSITION ( 66 )
```

User Enters:

```
1
```

System Responds:

```
ENTER FORMATTING CONTROL MASK ()
```

User Enters:

```
Depress RETURN
```

System Responds:

```
ENTER LINES TO SKIP BEFORE PRINT ( 0 )
```

User Enters:

```
Depress RETURN
```

System Responds:

```
ENTER LINES TO SKIP AFTER PRINT ( 1 )
```

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

User Enters:

Depress RETURN

System Responds:

```
DETAIL/PRINT LINE CONTROL DATA
1: SEQUENCE KEY          5110
2: VARIABLE CODE NAME    CUST.ADDR$
3: TAB POSITION           1
4: FORMATTING CONTROL MASK
5: LINES TO SKIP BEFORE PRINT   0
6: LINES TO SKIP AFTER PRINT    1
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE
```

User Enters:

Depress RETURN

System Responds:

```
0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (5110)
```

User Enters:

5210

System Responds:

ENTER VARIABLE CODE NAME (CUST.ADDR\$)

User Enters:

CUST.LOC\$

System Reponds:

ENTER TAB POSITION (1)

User Enters:

Depress RETURN

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

ENTER FORMATTING CONTROL MASK ()

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP AFTER PRINT (1)

User Enters:

2

System Responds:

DETAIL/PRINT LINE CONTROL DATA

1: SEQUENCE KEY	5210
2: VARIABLE CODE NAME	CUST.LOC\$
3: TAB POSITION	1
4: FORMATTING CONTROL MASK	
5: LINES TO SKIP BEFORE PRINT	0
6: LINES TO SKIP AFTER PRINT	2

ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

You are now done defining the report parameters. If you made an error while entering the report definition and you did not correct it when the fields were displayed for editing, you must go to Option 3 of the REPORT DETAIL DEFINITION menu, TO DELETE ITEMS FROM THE REPORT, and delete these entries by their sequence number. You will then return to Option 1, TO ADD ITEMS TO THE REPORT, and enter the items correctly.

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (5220)

User Enters:

Depress ESCAPE and RETURN

System Responds:

PEARL LEVEL 3 (A:A400A) VERSION N.00
REPORT DETAIL DEFINITION-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)

- 0 RETURN TO MAIN MENU
- 1 TO ADD ITEMS TO THE REPORT
- 2 TO EDIT REPORT ITEMS
- 3 TO DELETE ITEMS FROM THE REPORT
- 4 TO CHANGE THE REPORT ID (CURRENT REPORT =01)
- 5 TO PROCESS REPORT CONTROL DATA
- ?

You will now define Report 2.

User Enters:

5

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

Step 7 - Report Control Definition

System Responds:

LOADING PROGRAM TO REPORT CONTROL DEFINITION

PEARL LEVEL 3 (A:A400) VERSION N.00
REPORT CONTROL DEFINITION-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)

- 0 TO RETURN TO MAIN MENU
- 1 TO DEFINE A NEW REPORT
- 2 TO EDIT REPORT CONTROL DATA
- 3 TO CHANGE REPORT ID (CURRENT REPORT =01)
- 4 TO DELETE REPORT CONTROL FOR SPECIFIED REPORT
- 5 TO ENTER/EDIT REPORT DETAIL
- ?

User Enters:

1

System Responds:

ENTER YOUR REPORT IDENTIFICATION (01)

User Enters:

2

System Responds:

ENTER PRIMARY FILE NUMBER (0)

User Enters:

1

System Responds:

ENTER SECONDARY FILE NUMBER (0)

User Enters:

Depress RETURN

System Responds:

ENTER REPORT WIDTH (0)

User Enters:

80

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

ENTER REPORT DEPTH (0)

User Enters:

Depress RETURN

System Responds:

ENTER PROCESS SORTED FILE (Y/N) (N)

User Enters:

Depress RETURN

System Responds

ENTER REPORT SUBROUTINE LABEL (50000)

User Enters:

51000

System Responds:

ENTER REPORT DESCRIPTION

User Enters:

List by Business Group (2K2)

System Responds:

REPORT CONTROL DATA

1: REPORT ID	02
2: PRIMARY FILE NUMBER	1
3: SECONDARY FILE NUMBER	0
4: REPORT WIDTH	80
5: REPORT DEPTH	0
6: PROCESS SORTED FILE (Y/N)	N
7: REPORT SUBROUTINE LABEL	51000
8: REPORT DESCRIPTION	List By Business Group

ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

PEARL LEVEL 3 (A:A400) VERSION N.00
REPORT CONROL DEFINITION-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)

- 0 RETURN TO MAIN MENU
 - 1 TO DEFINE A NEW REPORT
 - 2 TO EDIT REPORT CONTROL DATA
 - 3 TO CHANGE REPORT ID (CURRENT REPORT =01)
 - 4 TO DELETE REPORT CONTROL FOR SPECIFIED REPORT
 - 5 TO ENTER/EDIT REPORT DETAIL
- ?

User Enters:

5

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

Step 7 - Report Control Definition

System Responds:

LOADING PROGRAM FOR REPORT DETAIL DEFINITION

PEARL LEVEL 3 (A:A400A) VERSION N.00
REPORT DETAIL DEFINITION-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)

- 0 RETURN TO MAIN MENU
 - 1 TO ADD ITEMS TO THE REPORT
 - 2 TO EDIT REPORT ITEMS
 - 3 TO DELETE ITEMS FROM THE REPORT
 - 4 TO CHANGE THE REPORT ID (CURRENT REPORT =01)
 - 5 TO PROCESS REPORT CONTROL DATA
- ?

User Enters:

4

System Responds:

ENTER YOUR REPORT IDENTIFICATION (01)

User Enters:

2

System Responds:

PEARL LEVEL 3 (A:A400A) VERSION N.00
REPORT DETAIL DEFINITION-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)

- 0 RETURN TO MAIN MENU
 - 1 TO ADD ITEMS TO THE REPORT
 - 2 TO EDIT REPORT ITEMS
 - 3 TO DELETE ITEMS FROM THE REPORT
 - 4 TO CHANGE THE REPORT ID (CURRENT REPORT =02)
 - 5 TO PROCESS REPORT CONTROL DATA
- ?

User Enters:

1

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

```
0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY ( 11 )
```

User Enters:

1

System Responds:

```
ENTER COMPUTATION CODE ?
```

User Enters:

REM

System Responds:

```
COMPUTATION CONTROL DATA
1: SEQUENCE KEY      1
2: COMPUTATION CODE   REM
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE
```

User Enters:

Depress RETURN

System Responds:

```
0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY ( 11 )
```

User Enters:

10

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

ENTER COMPUTATION CODE ?

User Enters:

REM ENTER DATE RANGE

System Responds:

COMPUTATION CONTROL DATA
1: SEQUENCE KEY 10
2: COMPUTATION CODE REM ENTER DATE RANGE
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (0020)

User Enters:

Depress RETURN

System Responds:

ENTER COMPUTATION CODE ?

User Enters:

REM

System Responds:

COMPUTATION CONTROL DATA
1: SEQUENCE KEY 20
2: COMPUTATION CODE REM
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

```
0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (0030)
```

User Enters:

Depress RETURN

System Responds:

ENTER COMPUTATION CODE ?

User Enters:

GOSUB 90000

System Responds:

```
COMPUTATION CONTROL DATA
1: SEQUENCE KEY      30
2: COMPUTATION CODE   GOSUB 90000
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE
```

User Enters:

Depress RETURN

System Responds:

```
0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (0040)
```

User Enters:

Depress RETURN

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

ENTER COMPUTATION CODE ?

User Enters:

PRINT "ENTER THE STARTING DATE FOR MONTH-TO-DATE TOTALS"

System Responds:

COMPUTATION CONTROL DATA
1: SEQUENCE KEY 40

2: COMPUTATION CODE PRINT "ENTER THE STARTING DATE FOR MONTH-TO-DATE TOTALS"
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
C000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (0050)

User Enters:

Depress RETURN

System Responds:

ENTER COMPUTATION CODE ?

User Enters:

GOSUB 82174 REM GET DATE

System Responds:

COMPUTATION CONTROL DATA
1: SEQUENCE KEY 50
2: COMPUTATION CODE GOSUB 82174 REM GET DATE
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

```
0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (0060)
```

User Enters:

Depress RETURN

System Responds:

```
ENTER COMPUTATION CODE ?
```

User Enters:

CONTROL.DATE=V

System Responds:

```
COMPUTATION CONTROL DATA
1: SEQUENCE KEY      60
2: COMPUTATION CODE   CONTROL.DATE=V
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE
```

User Enters:

Depress RETURN

System Responds:

```
0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (0070)
```

User Enters:

Depress RETURN

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

ENTER COMPUTATION CODE ?

User Enters:

REM SET THE INITIAL COUNTER VALUES

System Responds:

COMPUTATION CONTROL DATA
1: SEQUENCE KEY 70

2: COMPUTATION CODE REM SET THE INITIAL COUNTER VALUES
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (0080)

User Enters:

Depress RETURN

System Responds:

ENTER COMPUTATION CODE ?

User Enters:

BUS.GROUP.MTDT=1:BUS.GROUP.YTDT=1

System Responds:

COMPUTATION CONTROL DATA
1: SEQUENCE KEY 80
2: COMPUTATION CODE BUS.GROUP.MTDT=1:BUS.GROUP.YTDT=1
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

```
0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (0090)
```

User Enters:

Depress RETURN

System Responds:

ENTER COMPUTATION CODE ?

User Enters:

REM

System Responds:

```
COMPUTATION CONTROL DATA
1: SEQUENCE KEY      90
2: COMPUTATION CODE   REM
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE
```

User Enters:

Depress RETURN

System Responds:

```
0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY ( 100 )
```

User Enters:

1010

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

ENTER VARIABLE CODE NAME ()

User Enters:

CC.REPORT.ID\$

System Responds:

ENTER TAB POSITION (0)

User Enters:

5

System Responds:

ENTER FORMATTING CONTROL MASK (REM)

User Enters:

Depress SPACE and RETURN

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

1

System Responds:

ENTER LINES TO SKIP AFTER PRINT (0)

User Enters:

1

System Responds:

HEADING/PRINT LINE CONTROL DATA
1: SEQUENCE KEY 1010
2: VARIABLE CODE NAME CC.REPORT.ID\$
3: TAB POSITION 5
4: FORMATTING CONTROL MASK
5: LINES TO SKIP BEFORE PRINT 1
6: LINES TO SKIP AFTER PRINT 1
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (1020)

User Enters:

1110

System Responds:

ENTER VARIABLE CODE NAME (CC.REPORT.ID\$)

User Enters:

CC.INSTALL\$

System Responds:

ENTER TAB POSITION (5)

User Enters:

0

System Responds:

ENTER FORMATTING CONTROL MASK ()

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (1)

User Enters:

0

System Responds:

ENTER LINES TO SKIP AFTER PRINT (1)

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

User Enters:

0

System Responds:

HEADING/PRINT LINE CONTROL DATA
1: SEQUENCE KEY 1110
2: VARIABLE CODE NAME CC.INSTALL\$
3: TAB POSITION 0
4: FORMATTING CONTROL MASK
5: LINES TO SKIP BEFORE PRINT 0
6: LINES TO SKIP AFTER PRINT 0
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (1120)

User Enters:

Depress RETURN

System Responds:

ENTER VARIABLE CODE NAME (CC.INSTALL\$)

User Enters:

CC.PAGE%

System Reponds:

ENTER TAB POSITION (0)

User Enters:

70

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

ENTER FORMATTING CONTROL MASK ()

User Enters:

Page ###

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP AFTER PRINT (0)

User Enters:

1

System Responds:

HEADING/PRINT LINE CONTROL DATA

1: SEQUENCE KEY	1120
2: VARIABLE CODE NAME	CC.PAGE%
3: TAB POSITION	70
4: FORMATTING CONTROL MASK	Page ###
5: LINES TO SKIP BEFORE PRINT	0
6: LINES TO SKIP AFTER PRINT	1

ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)

1000-1999 HEADER

2000-2999 ACCUMULATION

3000-3999 CONTROL BREAKS

4000-4499 DETAIL COMPUTATION (rb300-rb349)

4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)

4800-4999 TOTAL COMPUTATION (rb380-rb399)

5000-5999 DETAIL

6000-6999 SUBTOTAL

7000-7999 TOTAL

ENTER SEQUENCE KEY (1130)

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User Enters:

1210

System Responds:

ENTER VARIABLE CODE NAME (CC.PAGE%)

User Enters:

Depress SPACE and RETURN

System Responds:

ENTER TAB POSITION (70)

User Enters:

0

System Responds:

ENTER FORMATTING CONTROL MASK (Page ###)

User Enters:

Contact List by Business Group

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP AFTER PRINT (1)

User Enters:

Depress RETURN

System Responds:

HEADING/PRINT LINE CONTROL DATA

1: SEQUENCE KEY	1210
2: VARIABLE CODE NAME	
3: TAB POSITION	0
4: FORMATTING CONTROL MASK	Contact List by Business Group
5: LINES TO SKIP BEFORE PRINT	0
6: LINES TO SKIP AFTER PRINT	1
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE	

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

User Enters:

Depress RETURN

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (1220)

User Enters:

1310

System Responds:

ENTER VARIABLE CODE NAME ()

User Enters:

CC.DATE\$

System Reponds:

ENTER TAB POSITION (0)

User Enters:

Depress RETURN

System Responds:

ENTER FORMATTING CONTROL MASK (Contact List by Business Group)

User Enters:

Enter SPACE and RETURN

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

ENTER LINES TO SKIP AFTER PRINT (1)

User Enters:

2

System Responds:

HEADING/PRINT LINE CONTROL DATA
1: SEQUENCE KEY 1310
2: VARIABLE CODE NAME CC.DATE\$
3: TAB POSITION 0
4: FORMATTING CONTROL MASK
5: LINES TO SKIP BEFORE PRINT 0
6: LINES TO SKIP AFTER PRINT 2
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (1320)

User Enters:

1410

System Responds:

ENTER VARIABLE CODE NAME (CC.DATE\$)

User Enters:

Depress SPACE and RETURN

System Responds:

ENTER TAB POSITION (0)

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

User Enters:

5

System Responds:

ENTER FORMATTING CONTROL MASK ()

User Enters:

Business Group

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP AFTER PRINT (2)

User Enters:

0

System Responds:

HEADING/PRINT LINE CONTROL DATA
1: SEQUENCE KEY 1410
2: VARIABLE CODE NAME
3: TAB POSITION 5
4: FORMATTING CONTROL MASK Business Group
5: LINES TO SKIP BEFORE PRINT 0
6: LINES TO SKIP AFTER PRINT 0
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

ENTER SEQUENCE KEY (1420)

User Enters:

Depress RETURN

System Responds:

ENTER VARIABLE CODE NAME ()

User Enters:

Depress RETURN

System Responds:

ENTER TAB POSITION (5)

User Enters:

29

System Responds:

ENTER FORMATTING CONTROL MASK (Business Group)

User Enters:

Date Range

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP AFTER PRINT (0)

User Enters:

Depress RETURN

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

```
HEADING/PRINT LINE CONTROL DATA
1: SEQUENCE KEY           1420
2: VARIABLE CODE NAME
3: TAB POSITION            29
4: FORMATTING CONTROL MASK Date Range
5: LINES TO SKIP BEFORE PRINT  0
6: LINES TO SKIP AFTER PRINT   0
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE
```

User Enters:

Depress RETURN

System Responds:

```
0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (1430)
```

User Enters:

Depress RETURN

System Responds:

ENTER VARIABLE CODE NAME

User Enters:

Depress RETURN

System Reponds:

ENTER TAB POSITION (29)

User Enters:

60

System Responds:

ENTER FORMATTING CONTROL MASK (Date Range)

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

User Enters:

Contact Totals

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP AFTER PRINT (0)

User Enters:

1

System Responds:

HEADING/PRINT LINE CONTROL DATA
1: SEQUENCE KEY 1430
2: VARIABLE CODE NAME
3: TAB POSITION 60
4: FORMATTING CONTROL MASK Contact Totals
5: LINES TO SKIP BEFORE PRINT 0
6: LINES TO SKIP AFTER PRINT 1
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (1440)

User Enters:

1510

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

ENTER VARIABLE CODE NAME ()

User Enters:

Depress RETURN

System Responds:

ENTER TAB POSITION (60)

User Enters:

5

System Responds:

ENTER FORMATTING CONTROL MASK (Contact Totals)

User Enters:

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP AFTER PRINT (1)

User Enters:

0

System Responds:

HEADING/PRINT LINE CONTROL DATA

1: SEQUENCE KEY 1510

2: VARIABLE CODE NAME

3: TAB POSITION 5

4: FORMATTING CONTROL MASK -----

5: LINES TO SKIP BEFORE PRINT 0

6: LINES TO SKIP AFTER PRINT 0

ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

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System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (1520)

User Enters:

Depress RETURN

System Responds:

ENTER VARIABLE CODE NAME ()

User Enters:

Depress RETURN

System Reponds:

ENTER TAB POSITION (5)

User Enters:

41

System Responds:

ENTER FORMATTING CONTROL MASK (-----)

User Enters:

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP AFTER PRINT (0)

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User Enters:

1

System Responds:

```
HEADING/PRINT LINE CONTROL DATA
1: SEQUENCE KEY          1520
2: VARIABLE CODE NAME
3: TAB POSITION           41
4: FORMATTING CONTROL MASK
5: LINES TO SKIP BEFORE PRINT   0
6: LINES TO SKIP AFTER PRINT    1
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE
```

User Enters:

Depress RETURN

System Responds:

```
0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (1530)
```

User Enters:

2000

System Responds:

ENTER VARIABLE TO BE TOTALED ()

User Enters:

BUS.GROUP.MTDT

System Reponds:

ENTER ACCUMULATE SUBTOTAL (Y/N) (N)

User Enters:

Y

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

ENTER ACCUMULATE GRAND TOTAL (Y)

User Enters:

Depress RETURN

System Responds:

TOTAL ACCUMULATION CONTROL DATA
1: SEQUENCE CONTROL 2000
2: VARIABLE TO BE TOTALED BUS.GROUP.MTDT
3: ACCUMULATE SUBTOTAL (Y/N) Y
4: ACCUMULATE GRAND TOTAL (Y/N) Y
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (2010)

User Enters:

Depress RETURN

System Responds:

ENTER VARIABLE TO BE TOTALED (BUS.GROUP.MTDT)

User Enters:

BUS.GROUP.YTDT

System Responds:

ENTER ACCUMULATE SUBTOTAL (Y/N) (Y)

User Enters:

Depress RETURN

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

ENTER ACCUMULATE GRAND TOTAL (Y)

User Enters:

Depress RETURN

System Responds:

TOTAL ACCUMULATION CONTROL DATA
1: SEQUENCE CONTROL 2010
2: VARIABLE TO BE TOTALED BUS.GROUP.YTDT
3: ACCUMULATE SUBTOTAL (Y/N) Y
4: ACCUMULATE GRAND TOTAL (Y/N) Y
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (2020)

User Enters:

3000

System Responds:

ENTER VARIABLE NAME FOR CONTROL BREAK (BUS.GROUP.YTDT)

User Enters:

BUS.GP%

System Responds:

ENTER RECORD POSITION FOR CONTROL BREAK

User Enters:

0

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System Responds:

ENTER LENGTH OF CONTROL FIELD (41)

User Enters:

0

System Responds:

CONTROL BREAK CONTROL DATA
1: SEQUENCE 3000
2: VARIABLE NAME FOR CONTROL BREAK BUS.GP%
3: RECORD POSITION FOR CONTROL BREAK 0
4: LENGTH OF CONTROL FIELD 0
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (3010)

User Enters:

4000

System Responds:

ENTER COMPUTATION CODE ?

User Enters:

BUS.GP.X%=BUS.GP%

System Responds:

COMPUTATION CONTROL DATA
1: SEQUENCE KEY 4000
2: COMPUTATION CODE BUS.GP.X%=BUS.GP%
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

User Enters:

Depress RETURN

System Responds:

```
0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (4010)
```

User Enters:

Depress RETURN

System Responds:

ENTER COMPUTATION CODE ?

User Enters:

IF CUST.DATE < CONTROL.DATE THEN\

System Responds:

```
COMPUTATION CONTROL DATA
1: SEQUENCE KEY 4010
2: COMPUTATION CODE IF CUST.DATE < CONTROL.DATE THEN\ 
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE
```

User Enters:

Depress RETURN

System Responds:

```
0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (4020)
```

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

User Enters:

Depress RETURN

System Responds:

ENTER COMPUTATION CODE ?

User Enters:

BUS.GROUP.MTDT=0 ELSE BUS.GROUP.MTDT=1

System Reponds:

COMPUTATION CONTROL DATA

1: SEQUENCE KEY 4020

2: COMPUTATION CODE BUS.GROUP.MTDT=0 ELSE BUS.GROUP.MTDT=1

ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)

1000-1999 HEADER

2000-2999 ACCUMULATION

3000-3999 CONTROL BREAKS

4000-4499 DETAIL COMPUTATION (rb300-rb349)

4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)

4800-4999 TOTAL COMPUTATION (rb380-rb399)

5000-5999 DETAIL

6000-6999 SUBTOTAL

7000-7999 TOTAL

ENTER SEQUENCE KEY (4030)

User Enters:

6000

System Responds:

ENTER VARIABLE CODE NAME (BUS.GP%)

User Enters:

BUS.GP.X%

System Reponds:

ENTER TAB POSITION (0)

User Enters:

5

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

(BUS.GROUP.MTDT=0 ELSE BUS.GROUP.MTDT=1)

User Enters:

##

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

1

System Responds:

ENTER LINES TO SKIP AFTER PRINT (0)

User Enters:

Depress RETURN

SUBTOTAL/PRINT LINE CONTROL DATA
1: SEQUENCE KEY 6000
2: VARIABLE CODE NAME BUS.GP.X%
3: TAB POSITION 5
4: FORMATTING CONTROL MASK ##
5: LINES TO SKIP BEFORE PRINT 1
6: LINES TO SKIP AFTER PRINT 0
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (6010)

User Enters:

Depress RETURN

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

ENTER VARIABLE CODE NAME (BUS.GP.X%)

User Enters:

BUS.GP.VAL\$(BUS.GP.X%)

System Responds:

ENTER TAB POSITION (5)

User Enters:

10

System Responds:

ENTER FORMATTING CONTROL MASK (##)

User Enters:

Depress SPACE and RETURN

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (1)

User Enters:

0

System Responds:

ENTER LINES TO SKIP AFTER PRINT (0)

User Enters:

Depress RETURN

System Responds:

SUBTOTAL/PRINT LINE CONTROL DATA
1: SEQUENCE KEY 6010
2: VARIABLE CODE NAME BUS.GP.VAL\$(BUS.GP.X%)
3: TAB POSITION 10
4: FORMATTING CONTROL MASK
5: LINES TO SKIP BEFORE PRINT 0
6: LINES TO SKIP AFTER PRINT 0
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (6020)

User Enters:

Depress RETURN

System Responds:

ENTER VARIABLE CODE NAME (BUS.GP.VAL\$(BUS.GP.X%))

User Enters:

CONTROL.DATE

System Responds:

ENTER TAB POSITION (10)

User Enters:

30

System Responds:

ENTER FORMATTING CONTROL MASK ()

User Enters:

##/#/#

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP AFTER PRINT (0)

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

User Enters:

Depress RETURN

System Responds:

```
SUBTOTAL/PRINT LINE CONTROL DATA
1: SEQUENCE KEY           6020
2: VARIABLE CODE NAME     CONTACT.DATE
3: TAB POSITION            30
4: FORMATTING CONTROL MASK ##/##/##
5: LINES TO SKIP BEFORE PRINT 0
6: LINES TO SKIP AFTER PRINT 0
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE
```

User Enters:

Depress RETURN

System Responds:

```
0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (6030)
```

User Enters:

Depress RETURN

System Responds:

ENTER VARIABLE CODE NAME (CONTROL.DATE)

User Enters:

STOT.BUS.GROUP.MTDT

System Reponds:

ENTER TAB POSITION (30)

User Enters:

45

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

ENTER FORMATTING CONTROL MASK (##/##/##)

User Enters:

Month-to-Date: ####

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP AFTER PRINT (0)

User Enters:

1

System Responds:

SUBTOTAL/PRINT LINE CONTROL DATA
1: SEQUENCE KEY 6030
2: VARIABLE CODE NAME STOT.BUS.GROUP.MTDT
3: TAB POSITION 1
4: FORMATTING CONTROL MASK Month-to-Date: ####
5: LINES TO SKIP BEFORE PRINT 0
6: LINES TO SKIP AFTER PRINT 1
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (6040)

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User Enters:

6110

System Responds:

ENTER VARIABLE CODE NAME (STOT.BUS.GROUP.MTDT)

User Enters:

STOT.BUS.GROUP.YTDT

System Responds:

ENTER TAB POSITION (45)

User Enters:

46

System Responds:

ENTER FORMATTING CONTROL MASK (Month-to-Date: #####)

User Enters:

Year-to-Date:#####

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

Depress RETURN

System Responds:

ENTER LINES TO SKIP AFTER PRINT (1)

User Enters:

2

System Responds:

SUBTOTAL/PRINT LINE CONTROL DATA

1: SEQUENCE KEY	6110
2: VARIABLE CODE NAME	STOT.BUS.GROUP.YTDT
3: TAB POSITION	46
4: FORMATTING CONTROL MASK	Year-to-Date:#####
5: LINES TO SKIP BEFORE PRINT	0
6: LINES TO SKIP AFTER PRINT	2
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE	

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

User Enters:

Depress RETURN

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (6120)

User Enters:

7000

System Responds:

ENTER VARIABLE CODE NAME (STOT.BUS.GROUP.YTDT)

User Enters:

TOT.BUS.GROUP.MTDT

System Responds:

ENTER TAB POSITION (46)

User Enters:

5

System Responds:

ENTER FORMATTING CONTROL MASK (Year-to-Date:#####)

User Enters:

TOTAL MONTH-TO-DATE: ####

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

0

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System Responds:

ENTER LINES TO SKIP AFTER PRINT (2)

User Enters:

Depress RETURN

System Responds:

TOTAL/PRINT LINE CONTROL DATA
1: SEQUENCE KEY 7000
2: VARIABLE CODE NAME TOT.BUS.GROUP.MTDT
3: TAB POSITION 5
4: FORMATTING CONTROL MASK TOTAL MONTH-TO-DATE: ####
5: LINES TO SKIP BEFORE PRINT 0
6: LINES TO SKIP AFTER PRINT 2
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

System Responds:

0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (7010)

User Enters:

Depress RETURN

System Responds:

ENTER VARIABLE CODE NAME (TOT.BUS.GROUP.MTDT)

User Enters:

TOT.BUS.GROUP.YTDT

System Responds:

ENTER TAB POSITION (5)

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

User Enters:

6

System Responds:

ENTER FORMATTING CONTROL MASK (TOTAL MONTH-TO-DATE: #####)

User Enters:

TOTAL YEAR-TO-DATE:#####

System Responds:

ENTER LINES TO SKIP BEFORE PRINT (0)

User Enters:

0

System Responds:

ENTER LINES TO SKIP AFTER PRINT (2)

User Enters:

Depress RETURN

System Responds:

TOTAL/PRINT LINE CONTROL DATA
1: SEQUENCE KEY 7010
2: VARIABLE CODE NAME TOT.BUS.GROUP.YTDT
3: TAB POSITION 6
4: FORMATTING CONTROL MASK TOTAL YEAR-TO-DATE:#####
5: LINES TO SKIP BEFORE PRINT 0
6: LINES TO SKIP AFTER PRINT 0
ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

You are now done defining the report parameters for report 2. If you made any errors while entering the report definitions and you did not correct them when the fields were displayed for editing, you must go to Option 3 of the REPORT DETAIL DEFINITION menu, to DELETE ITEMS FROM THE REPORT, and delete these entries by their sequence number. You will then return to Option 1, TO ADD ITEMS TO THE REPORT, and enter the items correctly.

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System Responds:

```
0001-0999 INITIALIZATION COMPUTATIONS (rb000-rb020)
1000-1999 HEADER
2000-2999 ACCUMULATION
3000-3999 CONTROL BREAKS
4000-4499 DETAIL COMPUTATION (rb300-rb349)
4500-4799 SUBTOTAL COMPUTATION (rb350-rb379)
4800-4999 TOTAL COMPUTATION (rb380-rb399)
5000-5999 DETAIL
6000-6999 SUBTOTAL
7000-7999 TOTAL
ENTER SEQUENCE KEY (7020)
```

User Enters:

Depress ESCAPE RETURN

System Responds:

```
PEARL LEVEL 3 (A:1400A) VERSION N.00
REPORT DETAIL DEFINITION-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)
```

- 0 RETURN TO MAIN MENU
- 1 TO ADD ITEMS TO THE REPORT
- 2 TO EDIT REPORT ITEMS
- 3 TO DELETE ITEMS FROM THE REPORT
- 4 TO CHANGE THE REPORT ID (CURRENT REPORT =01)
- 5 TO PROCESS REPORT CONTROL DATA
- ?

User Enters:

Depress RETURN

System Responds:

... RETURNING TO MAIN MENU ...

GO TO STEP 8

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

Step 8 - Listing Control Information

Before generating, compiling and running your application, it is a good idea to list the control data you have defined -- Options 9, 10, and 11 (and 12 if necessary). Once these listings are printed, you can then check them for possible errors. If you find any errors, you can correct them now instead of after you have tried to generate, compile and/or run your application. This will save time in the long run because, for one thing, generation and compilation can take quite awhile.

NOTE:

You must have a printer that will support 11 by 14 wide-form paper as some of these listings will print over 120 characters per line. If you have a printer that can reduce the line length, then this is also acceptable.

System Responds:

```
PEARL LEVEL 3 (A:PEARL3) VERSION N.00
MAIN SELECTION MENU-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)
```

0. RETURN TO CP/M
1. SYSTEM INITIALIZATION
2. FILE DEFINITION
3. DATA ELEMENT DEFINITION
4. PHRASE SELECTION DEFINITION
5. MAIN MENU DEFINITION
6. REPORT CONTROL DEFINITION
7. REPORT DETAIL DEFINITION
8. ENTER/EDIT POST/CLOSE COMPUTATIONS
9. LIST DATA ELEMENT CONTROL DATA
10. LIST MENU CONTROL DATA
11. LIST REPORT CONTROL DATA
12. LIST POST/CLOSE COMPUTATION DATA
13. VALIDATION OF CROSS FILE PROCESSES
14. EDIT SYSTEM DEFINITION DATA
15. SYSTEM GENERATION
16. RESET CURRENT SYSTEM DATE
17. EDIT SYSTEM CONFIGURATION DATA

ENTER DESIRED FUNCTION BY NUMBER:

User Enters:

9

System Responds:

LOADING PROGRAM TO LIST DATA ELEMENT CONTROL DATA

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PEARL LEVEL 3 (A:AP0001) VERSION N.00
DATA ELEMENT DEFINITION REPORTING-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)

- 0 TO RETURN TO MAIN MENU
 - 1 DETAIL LIST OF DATA ELEMENTS BY RECORD/EDIT POSITION
 - 2 SUMMARY LIST OF DATA ELEMENTS BY VARIABLE NAME
 - 3 GENERATE REPORT FOR ALL FILES
- F=NN TO RESET FILE ID
?

User Enters:

3

System Responds:

The followings listings will be printed:

PEARL LEVEL 3 (VERSION 3.00.25, SN ABC12345) PAGE 1
RECORD DATA ELEMENT DEFINITION
CUSTOMER CONTACT FILE--CUSTOMER CONTACT (01)
09/30/80

SEQUENCE EDIT LINE DESCRIPTION

10	1	CUSTOMER NAME	STRING
Occurs:	0	Code Name: CUST.NAME\$	EDIT: NO EDITING RESTRICTI
Pos:	3	Edit Mask:	RANGES-LOW: NONE
Length:	40	Validation: NO SELECTION	HIGH: NONE
			KEY OPTION:PRIMARY KEY
20	2	CUSTOMER ADDRESS	STRING
Occurs:	0	Code Name: CUST.ADDR\$	EDIT: NO EDITING RESTRICTI
Pos:	43	Edit Mask:	RANGES-LOW: NONE
Length:	40	Validation: NO SELECTION	HIGH: NONE
30	3	LOCATION	STRING
Occurs:	0	Code Name: CUST.LOC\$	EDIT: NO EDITING RESTRICTI
Pos:	83	Edit Mask:	RANGES-LOW: NONE
Length:	30	Validation: NO SELECTION	HIGH: NONE
40	4	PHONE	STRING
Occurs:	0	Code Name: CUST.PHONE\$	EDIT: NO EDITING RESTRICTI
Pos:	113	Edit Mask:	RANGES-LOW: NONE
Length:	12	Validation: NO SELECTION	HIGH: NONE
50	5	CONTACT DATE	DATE
Occurs:	0	Code Name: CUST.DATE	EDIT: NO EDITING RESTRICTI
Pos:	125	Edit Mask:	RANGES-LOW: NONE
Length:	6	Validation: NO SELECTION	HIGH: NONE
			KEY OPTION:SECONDARY KEY
60	6	BUSINESS GROUP	INTEGER
Occurs:	0	Code Name: BUS.GP%	EDIT: NO EDITING RESTRICTI
Pos:	131	Edit Mask:	RANGES-LOW: NONE
Length:	2	Validation: PHRASE SELECTION	HIGH: NONE
			KEY OPTION:SECONDARY KEY
		VALIDATE ON 0 = GOVERNMENT	
		VALIDATE ON 1 = EDUCATION	
		VALIDATE ON 2 = CONTRACTING	
		VALIDATE ON 3 = FARMING	
		VALIDATE ON 4 = RETAIL SALES	
		VALIDATE ON 5 = WHOLESALE DIST.	
		VALIDATE ON 6 = OTHER	

RECORD DATA ELEMENT DEFINITION

RECORD DESCRIPTION: FILE CONTROL

CUSTOMER CONTACT FILE--CUSTOMER CONTACT (01) CONTROL RECORD 1

09/30/80

SEQUENCE EDIT LINE DESCRIPTION

1001	1	SORT FLAG	FLOATING P
OCCURS:	0	CODE NAME: CFC.SORT	EDIT: DISPLAY ONLY
POS:	0	EDIT MASK:	RANGES-LOW: NONE
LENGTH:	3	VALIDATION: NO SELECTION	HIGH: NONE
1003	1	LAST RECORD	FLOATING P
OCCURS:	0	CODE NAME: CFC.LAST	EDIT: DISPLAY ONLY
POS:	0	EDIT MASK:	RANGES-LOW: NONE
LENGTH:	5	VALIDATION: NO SELECTION	HIGH: NONE
1004	1	LAST RECORD DELETED	FLOATING P
OCCURS:	0	CODE NAME: CF.NEXT.DELETED	EDIT: DISPLAY ONLY
POS:	0	EDIT MASK:	RANGES-LOW: NONE
LENGTH:	5	VALIDATION: NO SELECTION	HIGH: NONE
1005	1	DELETED REC. COUNT	FLOATING P
OCCURS:	0	CODE NAME: CF.AVAIL.DELETED	EDIT: DISPLAY ONLY
POS:	0	EDIT MASK:	RANGES-LOW: NONE
LENGTH:	3	VALIDATION: NO SELECTION	HIGH: NONE
1006	1	UPDATE IN PROCESS FLAG	FLOATING P
OCCURS:	0	CODE NAME: CF.UPDATE.FLAG	EDIT: DISPLAY ONLY
POS:	0	EDIT MASK:	RANGES-LOW: NONE
LENGTH:	1	VALIDATION: NO SELECTION	HIGH: NONE
1007	1	OPEN ERROR RESET COUNTER	FLOATING P
OCCURS:	0	CODE NAME: CF.UPDATE.RESET	EDIT: DISPLAY ONLY
POS:	0	EDIT MASK:	RANGES-LOW: NONE
LENGTH:	2	VALIDATION: NO SELECTION	HIGH: NONE
1008	1	INDEX BUFFERS	INTEGER
OCCURS:	0	CODE NAME: CF.IS.NBUFS%	EDIT: NO EDITING RESTRICTI
POS:	0	EDIT MASK:	RANGES-LOW: NONE
LENGTH:	2	VALIDATION: NO SELECTION	HIGH: NONE

PEARL LEVEL 3 (VERSION 3.00.25, SN ABC12345) PAGE 3
RECORD DATA ELEMENT DEFINITION
CUSTOMER CONTACT FILE--CUSTOMER CONTACT (01)
09/30/80

SEQUENCE EDIT LINE DESCRIPTION

FILE DEFINITION DATA

1: RELATIVE FILE ID	1.	
2: FILE DESCRIPTION	CUSTOMER CONTACT	
3: ACCESS METHOD	INDEXED	
4: FILE TYPE	MISC. INDEXED FILE	
5: DATA FILE NAME	CUSTOMER	
6: UNIQUE FILE ID	CF.	
7: LOGICAL FILE UNIT	2.	
8: DISK DRIVE UNIT ID	B	
9: I/O SUBROUTINE BASE	10000	
10: DATA RECORD EDIT BASE	30000	
11: CONTROL RECORD EDIT BASE	40000	
** KEY FIELD DESCRIPTION	CUSTOMER NAME	
** VARIABLE NAME FOR KEY FIELD	CUST.NAME\$	
** KEY FIELD LENGTH	40.	
** RECORD LENGTH	136.	
** CONTROL RECORD COUNT	1.	
** TOTAL DATA ELEMENT COUNT	14.	

CONTROL RECORD 1 LENGTH = 49

0 ERRORS DETECTED

DATA ELEMENT LIST BY FILE

CUSTOMER CONTACT FILE

09/30/80

VARIABLE NAME	DESCRIPTION	FILE	TYPE	LEN	SEQUENCE	EDIT CONTROL
BUS.GP%	BUSINESS GROUP	01	INTEGER	2	0060	NO EDITING RESTRICTIONS
CF.AVAIL.DELETED	DELETED REC. COUNT	01	FLOATING	3	1005	DISPLAY ONLY
CF.IS.NBUFS%	INDEX BUFFERS	01	INTEGER	2	1008	NO EDITING RESTRICTIONS
CF.NEXT.DELETED	LAST RECORD DELETED	01	FLOATING	5	1004	DISPLAY ONLY
CF.UPDATE.FLAG	UPDATE IN PROCESS FLAG	01	FLOATING	1	1006	DISPLAY ONLY
CF.UPDATE.RESET	OPEN ERROR RESET COUNTER	01	FLOATING	2	1007	DISPLAY ONLY
CFC.LAST	LAST RECORD	01	FLOATING	5	1003	DISPLAY ONLY
CFC.SORT	SORT FLAG	01	FLOATING	3	1001	DISPLAY ONLY
CUST.ADDR\$	CUSTOMER ADDRESS	01	STRING	40	0020	NO EDITING RESTRICTIONS
CUST.DATE	CONTACT DATE	01	DATE	6	0050	NO EDITING RESTRICTIONS
CUST.LOC\$	LOCATION	01	STRING	30	0030	NO EDITING RESTRICTIONS
CUST.NAME\$	CUSTOMER NAME	01	STRING	40	0010	NO EDITING RESTRICTIONS
CUST.PHONE\$	PHONE	01	STRING	12	0040	NO EDITING RESTRICTIONS

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

Once the listings are done printing, the submenu will again be displayed, and you may choose another option from this menu, or return to the Main Selection Menu:

System Responds:

```
PEARL LEVEL 3 (A:PEARL3) VERSION N.00
MAIN SELECTION MENU-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)
```

- 0. RETURN TO CP/M
- 1. SYSTEM INITIALIZATION
- 2. FILE DEFINITION
- 3. DATA ELEMENT DEFINITION
- 4. PHRASE SELECTION DEFINITION
- 5. MAIN MENU DEFINITION
- 6. REPORT CONTROL DEFINITION
- 7. REPORT DETAIL DEFINITION
- 8. ENTER/EDIT POST/CLOSE COMPUTATIONS
- 9. LIST DATA ELEMENT CONTROL DATA
- 10. LIST MENU CONTROL DATA
- 11. LIST REPORT CONTROL DATA
- 12. LIST POST/CLOSE COMPUTATION DATA
- 13. VALIDATION OF CROSS FILE PROCESSES
- 14. EDIT SYSTEM DEFINITION DATA
- 15. SYSTEM GENERATION
- 16. RESET CURRENT SYSTEM DATE
- 17. EDIT SYSTEM CONFIGURATION DATA

ENTER DESIRED FUNCTION BY NUMBER:

User Enters:

10

System Responds:

```
LOADING PROGRAM FOR LIST MENU CONTROL DATA
PEARL LEVEL 3 (A:AP0003) VERSION N.00
MENU CONTROL REPORTING-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)
```

- 0 TO RETURN TO THE MAIN MENU
- 1 LIST MENU CONTROL INFORMATION
- 2 CREATE DEFAULT MENU CONTROL INFORMATION
- ?

User Enters:

1

System Responds:

The following listing will be printed on your printer:

MENU CONTROL DATA

MAIN MENU

09/30/80

SEQ.	PROMPT DESCRIPTION	PROGRAM	DISKETTE
1.	0-110 INITIALIZE CUSTOMER CONTACT FILE	CF000	2
2.	0-120 EDIT CUSTOMER CONTACT CONTROL DATA	CF000A	2
3.	0-130 UPDATE CUSTOMER CONTACT FILE	CF100	1
4.	0-140 GENERATE CUSTOMER CONTACT REPORTS	CFP0001	4
5.	0-640 COMPRESS CUSTOMER CONTACT FILE	CF000R	2
6.	0-980 CHANGE SYSTEM DATE	DATE	0
7.	0-995 EDIT SYSTEM CONFIGURATION DATA	CON	0

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

Once the listing is done printing, the submenu will again be displayed, choose another option from this menu, or return to the Main Selection Menu:

System Responds:

```
PEARL LEVEL 3 (A:PEARL3) VERSION N.00
MAIN SELECTION MENU-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)
```

0. RETURN TO CP/M
1. SYSTEM INITIALIZATION
2. FILE DEFINITION
3. DATA ELEMENT DEFINITION
4. PHRASE SELECTION DEFINITION
5. MAIN MENU DEFINITION
6. REPORT CONTROL DEFINITION
7. REPORT DETAIL DEFINITION
8. ENTER/EDIT POST/CLOSE COMPUTATIONS
9. LIST DATA ELEMENT CONTROL DATA
10. LIST MENU CONTROL DATA
11. LIST REPORT CONTROL DATA
12. LIST POST/CLOSE COMPUTATION DATA
13. VALIDATION OF CROSS FILE PROCESSES
14. EDIT SYSTEM DEFINITION DATA
15. SYSTEM GENERATION
16. RESET CURRENT SYSTEM DATE
17. EDIT SYSTEM CONFIGURATION DATA

ENTER DESIRED FUNCTION BY NUMBER:

User Enters:

11

System Responds:

```
PEARL LEVEL 3 (A:AP0002) VERSION N.00
REPORT FORMAT CONTROL REPORT PROCESSING-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)
```

- 0 TO RETURN TO THE MAIN MENU
 - 1 TO LIST REPORT CONTROL DATA FOR CURRENT REPORT
 - 2 SELECT NEW REPORT ID (CURRENT REPORT =00)
 - 3 TO LIST CONTROL FOR ALL REPORTS
- F=nn TO RESET FILE ID
?

User Enters:

3

System Responds:

The following reports will be printed on your printer:

PEARL LEVEL 3 (VERSION 3.00.25, SN ABC12345)
CONTROL FOR REPORT NUMBER 01
09/30/80

PAGE 1

SEQ. VARIABLE NAME	TAB FORMATTING MASK	PRE SKIP	POST SKIP
1010 CC.REPORT.ID\$	1	0	0
1020 CC.INSTALL\$	0	0	0
1030 CC.PAGE%	73 Page ###	0	1
1110	0 Customer Master List	0	1
1210 CC.DATE\$	0	0	2
1310	56 Contact	0	0
1320	69 Business	0	1
1410	1 Customer Name	0	0
1420	42 Phone	0	0
1430	57 Date	0	0
1440	70 Group	0	1
1510	1	0	0
1520	41	0	1

SEQ. VARIABLE NAME	TAB FORMATTING MASK	PRE SKIP	POST SKIP
5010 CUST.NAME\$	1	0	0
5020 CUST.PHONE\$	42	0	0
5030 FN.DATE\$(CUST.DATE)	56	0	0
5040 BUS.GP.VAL\$(BUS.GP%)	66	0	1
5110 CUST.ADDR\$	1	0	1
5210 CUST.LOC\$	1	0	2

SEQ.	COMPUTATION	TYPE
0001	REM	INITIALIZATION
0010	REM ENTER DATE RANGE	INITIALIZATION
0020	REM	INITIALIZATION
0030	GOSUB 90000	INITIALIZATION
0040	PRINT "ENTER THE STARTING DATE FOR MONTH-TO-DATE TOTALS"	INITIALIZATION
0050	GOSUB 82174 REM GET DATE	INITIALIZATION
0060	CONTROL.DATE=V	INITIALIZATION
0070	REM SET THE INITIAL COUNTER VALUES	INITIALIZATION
0080	BUS.GROUP.MTDT=1:BUS.GROUP.YTDT=1	INITIALIZATION
0090	REM	INITIALIZATION
SEQ. VARIABLE NAME	TAB FORMATTING MASK	PRE SKIP POST SKIP
1010 CC.REPORT.ID\$	5	1 1
1110 CC.INSTALL\$	0	0 0
1120 CC.PAGE%	70 Page ###	0 1
1210	0 Contact List by Business Group	0 1
1310 CC.DATE\$	0	0 2
1410	5 Business Group	0 0
1420	29 Date Range	0 0
1430	60 Contact Totals	0 1
1510	5 -----	0 0
1520	41 -----	0 1
SEQ.	VARIABLE TO TOTAL	SUB GRAND
2000	BUS.GROUP.MTDT	Y Y
2010	BUS.GROUP.YTDT	Y Y
SEQ.	VARIABLE FOR BREAK	POS LEN
3000	BUS.GP%	0 0
SEQ.	COMPUTATION	TYPE
4000	BUS.GP.X% = BUS.GP%	DETAIL
4010	IF CUST.DATE < CONTROL.DATE THEN\	DETAIL
4020	BUS.GROUP.MTDT=0 ELSE BUS.GROUP.MTDT=1	DETAIL
SEQ. VARIABLE NAME	TAB FORMATTING MASK	PRE SKIP POST SKIP
6000 BUS.GP.X%	5 ##	1 0
6010 BUS.GP.VAL\$(BUS.GP.X%)	10	0 0
6020 CONTROL.DATE	30 ##/##/##	0 0
6030 STOT.BUS.GROUP.MTDT	45 Month-to-Date: ####	0 1
6110 STOT.BUS.GROUP.YTDT	46 Year-to-Date:#####	0 2
SEQ. VARIABLE NAME	TAB FORMATTING MASK	PRE SKIP POST SKIP
700 TOT.BUS.GROUP.MTDT	5 TOTAL MONTH-TO-DATE: ####	0 2

CONTROL FOR REPORT NUMBER 01

09/30/80

REPORT CONTROL DATA

1: REPORT ID	01
2: PRIMARY FILE NUMBER	1
3: SECONDARY FILE NUMBER	0
4: REPORT WIDTH	80
5: REPORT DEPTH	0
6: PROCESS SORTED FILE (Y/N)	N
7: REPORT SUBROUTINE LABEL	50000
8: REPORT DESCRIPTION	Customer Contact File

PEARL LEVEL 3 (VERSION 3.00.25, SN ABC12345)
CONTROL FOR REPORT NUMBER 02
09/30/80

PAGE 2

SEQ. VARIABLE NAME	TAB FORMATTING MASK	PRE SKIP	POST SKIP
7010 TOT.BUS.GROUP.YTDT	6 TOTAL YEAR-TO-DATE:#####	0	0

CONTROL FOR REPORT NUMBER 02

09/30/80

REPORT CONTROL DATA

1: REPORT ID	02
2: PRIMARY FILE NUMBER	1
3: SECONDARY FILE NUMBER	0
4: REPORT WIDTH	80
5: REPORT DEPTH	0
6: PROCESS SORTED FILE (Y/N)	N
7: REPORT SUBROUTINE LABEL	51000
8: REPORT DESCRIPTION	List by Business Group (2K2)

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

Once the listings are done printing, the submenu will again be displayed. Choose another option from this menu, or return to the Main Selection Menu:

System Responds:

```
PEARL LEVEL 3 (A:PEARL3) VERSION N.00
MAIN SELECTION MENU-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)
```

- 0. RETURN TO CP/M
- 1. SYSTEM INITIALIZATION
- 2. FILE DEFINITION
- 3. DATA ELEMENT DEFINITION
- 4. PHRASE SELECTION DEFINITION
- 5. MAIN MENU DEFINITION
- 6. REPORT CONTROL DEFINITION
- 7. REPORT DETAIL DEFINITION
- 8. ENTER/EDIT POST/CLOSE COMPUTATIONS
- 9. LIST DATA ELEMENT CONTROL DATA
- 10. LIST MENU CONTROL DATA
- 11. LIST REPORT CONTROL DATA
- 12. LIST POST/CLOSE COMPUTATION DATA
- 13. VALIDATION OF CROSS FILE PROCESSES
- 14. EDIT SYSTEM DEFINITION DATA
- 15. SYSTEM GENERATION
- 16. RESET CURRENT SYSTEM DATE
- 17. EDIT SYSTEM CONFIGURATION DATA

ENTER DESIRED FUNCTION BY NUMBER:

You should review your listings at this time to make sure there are no entry errors. If all the listings are as you wish, you may now generate and compile your application.

GO TO STEP 9

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

Step 9 - Generate and Compile

You are now ready to begin generation and compilation of the application you have defined.

System Responds:

```
PEARL LEVEL 3 (A:PEARL3) VERSION N.00
MAIN SELECTION MENU-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)
```

0. RETURN TO CP/M
1. SYSTEM INITIALIZATION
2. FILE DEFINITION
3. DATA ELEMENT DEFINITION
4. PHRASE SELECTION DEFINITION
5. MAIN MENU DEFINITION
6. REPORT CONTROL DEFINITION
7. REPORT DETAIL DEFINITION
8. ENTER/EDIT POST/CLOSE COMPUTATIONS
9. LIST DATA ELEMENT CONTROL DATA
10. LIST MENU CONTROL DATA
11. LIST REPORT CONTROL DATA
12. LIST POST/CLOSE COMPUTATION DATA
13. VALIDATION OF CROSS FILE PROCESSES
14. EDIT SYSTEM DEFINITION DATA
15. SYSTEM GENERATION
16. RESET CURRENT SYSTEM DATE
17. EDIT SYSTEM CONFIGURATION DATA

ENTER DESIRED FUNCTION BY NUMBER:

User Enters:

Take out Definition Disk from Drive A.

Insert Generation Disk in Drive A.

Enter: 15

If you do not put the Generation Disk in Drive A before depressing 15, you will get the following message telling you to do so:

```
A:A900 CANNOT BE LOCATED
Place SYSTEM GENERATION DISKETTE on DRIVE A and
Press RETURN to continue, or
Press ESCAPE to return to main menu, or
Enter NAME of PROGRAM to be loaded
```

You would then place the Generation Disk in Drive A and depress RETURN.

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

LOADING PROGRAM FOR SYSTEM GENERATION

PEARL LEVEL 3 (A:A900) VERSION N.00
SYSTEM GENERATION CONTROL-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)

- 0 TO RETURN TO MAIN MENU
 - 1 GENERATE ENTIRE SYSTEM (ALL FILES)
 - 2 GENERATE ENTIRE SYSTEM (CURRENT FILE ONLY)
 - 3 GENERATE I/O ROUTINES
 - 4 GENERATE DISPLAY/EDIT SUBROUTINES
 - 5 GENERATE REPORT ROUTINES
 - 6 GENERATE SYSTEM INITIALIZATION CONTROL UPDATE PROGRAM
 - 7 GENERATE FILE UPDATE/EDIT AND REPORT MAINLINE PROGRAMS
 - 8 GENERATE MENU SELECTION PROGRAM
 - 9 GENERATE POSTING & CLOSING ROUTINES
 - 10 TO SET UP COMPILE SUBMIT FILE
- F=NN TO RESET FILE ID
?

User Enters:

1

System Responds:

The following responses will be displayed on the video screen one line at a time. The process will take some time, so do not be concerned if your response is not immediate.

SETTING CONTROL FOR FILE 01

B:CF10000.BAS HAS BEEN PROCESSED
B:CFCREC1.BAS HAS BEEN PROCESSED
B:CF10000S.BAS HAS BEEN PROCESSED
B:CF30100.BAS HAS BEEN PROCESSED
B:CF40100.BAS HAS BEEN PROCESSED
B:CF30000.BAS HAS BEEN PROCESSED
B:CF40000.BAS HAS BEEN PROCESSED
B:CF50000.BAS HAS BEEN PROCESSED
B:CF51000.BAS HAS BEEN PROCESSED
B:CFINTL.BAS HAS BEEN PROCESSED
B:COMBCF.BAS HAS BEEN PROCESSED
B:CF10900.BAS HAS BEEN PROCESSED
B:CF000.BAS HAS BEEN PROCESSED
B:CF000A.BAS HAS BEEN PROCESSED
B:CF100.BAS HAS BEEN PROCESSED
B:CF000R.BAS HAS BEEN PROCESSED
B:CF29000.BAS HAS BEEN PROCESSED
B:CFP0001.BAS HAS BEEN PROCESSED
B:CONTACT.BAS HAS BEEN PROCESSED
2730 LINES OF CBASIC SOURCE CODE HAVE BEEN GENERATED.

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

Once generation has successfully completed, you may now compile your PEARL-generated system:

```
PEARL LEVEL 3 (A:A900) VERSION N.00
SYSTEM GENERATION CONTROL-MM/DD/YY
    MINIMUM FREE SPACE=(NNNNN)
        (FILE=01)

0 TO RETURN TO MAIN MENU
1 GENERATE ENTIRE SYSTEM (ALL FILES)
2 GENERATE ENTIRE SYSTEM (CURRENT FILE ONLY)
3 GENERATE I/O ROUTINES
4 GENERATE DISPLAY/EDIT SUBROUTINES
5 GENERATE REPORT ROUTINES
6 GENERATE SYSTEM INITIALIZATION CONTROL UPDATE PROGRAM
7 GENERATE FILE UPDATE/EDIT AND REPORT MAINLINE PROGRAMS
8 GENERATE MENU SELECTION PROGRAM
9 GENERATE POSTING & CLOSING ROUTINES
10 TO SET UP COMPILE SUBMIT FILE
F=NN TO RESET FILE ID
?
```

User Enters:

10

System Responds:

```
COMPILE/SUBMIT SETUP CONTROL
1 MAIN PROGRAM SOURCE DISK      B
2 INTERMEDIATE FILE OUTPUT DISK  B
3 CBASIC COMPILE DIRECTIVES     $$B
4 SUBMIT FILE TYPE              SUB
5 FILE COPY COMMAND FILE NAME   PIP
6 FILE COPY DIRECTIVE           [V]
7 FILE COPY DIRECTIVE POSITION  PIP X.BAS=Y.BAS[V]
ENTER LINE NUMBER TO EDIT OR RETURN TO CREATE SUBMIT FILE
```

User Enters:

2

System Responds:

```
ENTER INTERMEDIATE FILE OUTPUT DISK
```

User Enters:

A

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

```
COMPILE/SUBMIT SETUP CONTROL
1 MAIN PROGRAM SOURCE DISK      B
2 INTERMEDIATE FILE OUTPUT DISK  A
3 CBASIC COMPILE DIRECTIVES     $$B
4 SUBMIT FILE TYPE              SUB
5 FILE COPY COMMAND FILE NAME   PIP
6 FILE COPY DIRECTIVE           [V]
7 FILE COPY DIRECTIVE POSITION  PIP X.BAS=Y.BAS[V]
ENTER LINE NUMBER TO EDIT OR RETURN TO CREATE SUBMIT FILE
```

User Enters:

Depress RETURN

System Responds:

```
B:COMPILE.SUB HAS BEEN CREATED
EXIT TO CPM. THEN ENTER
      SUBMIT B:COMPILE
TO COMPILE YOUR GENERATED SYSTEM
```

Press RETURN to continue

User Enters:

Depress RETURN

System Responds:

```
PEARL LEVEL 3 (A:A900) VERSION N.00
SYSTEM GENERATION CONTROL-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)

0 TO RETURN TO MAIN MENU
1 GENERATE ENTIRE SYSTEM (ALL FILES)
2 GENERATE ENTIRE SYSTEM (CURRENT FILE ONLY)
3 GENERATE I/O ROUTINES
4 GENERATE DISPLAY/EDIT SUBROUTINES
5 GENERATE REPORT ROUTINES
6 GENERATE SYSTEM INITIALIZATION CONTROL UPDATE PROGRAM
7 GENERATE FILE UPDATE/EDIT AND REPORT MAINLINE PROGRAMS
8 GENERATE MENU SELECTION PROGRAM
9 GENERATE POSTING & CLOSING ROUTINES
10 TO SET UP COMPILE SUBMIT FILE
F=NN TO RESET FILE ID
?
```

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

User Enters:

Take Generation Disk from Drive A.

Insert Definition Disk in Drive A.

Enter: 0

System Responds:

... RETURNING TO MAIN MENU ...

PEARL LEVEL 3 (A:PEARL3) VERSION N.00
MAIN SELECTION MENU-MM/DD/YY
MINIMUM FREE SPACE=(NNNNN)
(FILE=01)

0. RETURN TO CP/M
1. SYSTEM INITIALIZATION
2. FILE DEFINITION
3. DATA ELEMENT DEFINITION
4. PHRASE SELECTION DEFINITION
5. MAIN MENU DEFINITION
6. REPORT CONTROL DEFINITION
7. REPORT DETAIL DEFINITION
8. ENTER/EDIT POST/CLOSE COMPUTATIONS
9. LIST DATA ELEMENT CONTROL DATA
10. LIST MENU CONTROL DATA
11. LIST REPORT CONTROL DATA
12. LIST POST/CLOSE COMPUTATION DATA
13. VALIDATION OF CROSS FILE PROCESSES
14. EDIT SYSTEM DEFINITION DATA
15. SYSTEM GENERATION
16. RESET CURRENT SYSTEM DATE
17. EDIT SYSTEM CONFIGURATION DATA

ENTER DESIRED FUNCTION BY NUMBER:

User Enters:

0

System Responds:

PEARL LEVEL 3 PROCESSING COMPLETED

A>

User Enters:

Take out Definition Disk from Drive A.

Insert Application System Main Programs Disk in Drive A.

SUBMIT B:COMPILE

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

System Responds:

This process also takes some time. Each program generated will now be compiled. If you notice any errors, be sure to note the program and the line number at which the error occurred. Once compilation is completed, you may go then programs which are in error, find the line number and determine what is wrong. You may be able to correct the error in the generated source and simply recompile the program, or you may have to redefine, regenerate and recompile your application.

```
A>CBAS2 B:CONTACT A: $B
CBASIC COMPILER VER 2.06
NO ERRORS DETECTED
CONSTANT AREA:      150
CODE SIZE:          20000
DATA STMT AREA:    0
VARIABLE AREA:     3000
```

```
A>CBAS2 B:CF000 A: $B
CBASIC COMPILER VER 2.06
NO ERRORS DETECTED
CONSTANT AREA:      56
CODE SIZE:          4971
DATA STMT AREA:    0
VARIABLE AREA:     1152
```

```
A>CBAS2 B:CF000A A: $B
CBASIC COMPILER VER 2.06
NO ERRORS DETECTED
CONSTANT AREA:      40
CODE SIZE:          4474
DATA STMT AREA:    0
VARIABLE AREA:     896
```

```
A>CBAS2 B:CF100 A: $B
CBASIC COMPILER VER 2.06
NO ERRORS DETECTED
CONSTANT AREA:      80
CODE SIZE:          12233
DATA STMT AREA:    0
VARIABLE AREA:     1728
```

```
A>CBAS2 B:CFP0001 A: $B
CBASIC COMPILER VER 2.06
NO ERRORS DETECTED
CONSTANT AREA:      96
CODE SIZE:          13568
DATA STMT AREA:    0
VARIABLE AREA:     1800
```

CHAPTER 4. GENERATING A TEST SYSTEM - USER'S GUIDE

A>CBAS2 B:CF000R A: \$B
CBASIC COMPILER VER 2.06
NO ERRORS DETECTED
CONSTANT AREA: 96
CODE SIZE: 10959
DATA STMT AREA: 0
VARIABLE AREA 1760
A>

The compilation process is now complete.

GO TO STEP 10

CHAPTER 4. RUNNING YOUR PEARL-GENERATED SYSTEM

Setting Up Disks

You are now ready to run your PEARL-generated system. To do this, you should put the Application System Main Program Disk you used during compilation in Drive A and PIP your .INT files onto the Application System Disk in Drive B. Also, you should have RUN.COM and other .COM files on your Application System Disk. (You no longer need your Control Data Disk). Then you will put your Application System Disk in Drive A, and you will use this disk as your system disk. Put your Application Data Disk in Drive B. Your data files will go on Drive B.

NOTE:

For larger systems with multiple files, you may want to use different procedures in order to keep SOURCE and the .INT files separate. See Chapter 19 for some suggested procedures.

You may now enter data for your application.

User Enters:

Insert Application System Main Programs Disk in Drive A.

Insert Application Data Disk in Drive B.

Boot up your computer.

Configuration

System Responds:

A>

User Enters:

RUN CONTACT

System Responds:

CRUN VER 2.06

SYSTEM CONFIGURATION DATA COULD NOT BE LOCATED
Enter an ESCAPE to create a new file on DRIVE A:, or,
ENTER DEFAULT SYSTEM DISK DRIVE A

User Enters:

Depress ESCAPE and RETURN

CHAPTER 4. RUNNING YOUR PEARL-GENERATED SYSTEM

System Responds:

SYSTEM CONFIGURATION CONTROL FILE IS BEING INITIALIZED
CONFIGURATION CONTROL DATA

1: TERMINAL TYPE	USER DEFINED CLEAR SCREEN
2: FORMS CONTROL OPTION	USE FORM FEED
3: DISKETTE CAPACITY IN K BYTES	70
4: MESSAGE LEVEL	SUPPRESS ALL MESSAGES
5: REPORT DEPTH IN LINES	0
6: INSTALLATION NAME	
7: DEFAULT SYSTEM DISK DRIVE	A
8: DEFAULT DATE DISK DRIVE	B
9: DATE FORMAT	MM/DD/YY FORMAT
10: PASSWORD	

ENTER TERMINAL TYPE

0 =USER DEFINED CLEAR SCREEN
1 =SOL
2 =HAZELTINE
3 =BEEHIVE
4 =SOROC
5 =INTERTEC
6 =TRS 80 MODEL II
7 =ADM-3(A)
(0)

User Enters:

2

System Responds:

ENTER FORMS CONTROL OPTIONS (0)
ENTER 0 TO USE FORM FEED, OR THE NUMBER OF LINES PER PAGE

User Enters:

0

System Responds:

ENTER DISKETTE CAPACITY IN K BYTES (70)

User Enters:

448

System Responds:

ENTER MESSAGE LEVEL

0 =SUPPRESS ALL MESSAGES
1 =OPEN/CLOSE/CHAIN MESSAGES
2 =DISPLAY I/O TRACES
(0)

CHAPTER 4. RUNNING YOUR PEARL-GENERATED SYSTEM

User Enters:

0

System Responds:

ENTER REPORT DEPTH IN LINES (0)

User Enters:

55

System Responds:

ENTER INSTALLATION NAME

User Enters:

XYZ Company

System Responds:

ENTER DEFAULT SYSTEM DISK DRIVE A

User Enters:

Depress RETURN (or choose another drive A-D)

System Responds:

ENTER DEFAULT DISK DRIVE FOR DATA FILES B
(or choose another drive A-D)

User Enters:

Depress RETURN

System Responds:

ENTER DATE FORMAT
0 =MM/DD/YY FORMAT (American)
1 =DD/MM/YY FORMAT (European)
(0)

User Enters:

0

System Responds:

ENTER PASSWORD

User Enters:

#####

CHAPTER 4. RUNNING YOUR PEARL-GENERATED SYSTEM

System Responds:

CONFIGURATION CONTROL DATA

1: TERMINAL TYPE	HAZELTINE
2: FORMS CONTROL OPTION	USE FORM FEED
3: DISKETTE CAPACITY IN K BYTES	448
4: MESSAGE LEVEL	SUPPRESS ALL MESSAGES
5: REPORT DEPTH IN LINES	55
6: INSTALLATION NAME	XYZ Company
7: DEFAULT SYSTEM DISK DRIVE	A
8: DEFAULT DATA DISK DRIVE	B
9: DATE FORMAT	MM/DD/YY FORMAT
10: PASSWORD	

ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

CHAPTER 4. RUNNING YOUR PEARL-GENERATED SYSTEM

Initialize Customer Contact File

NOTE

When you boot up the system once the configuration data has been entered, you will have to enter the PASSWORD before you can go on if one was defined.

System Responds:

CUSTOMER CONTACT FILE

GENERATED BY PEARL (TM)
FOR
XYZ Company
VERSION 1.0
September, 1980

ENTER CURRENT DATE: 091580

CUSTOMER CONTACT FILE(A:CONTACT) VERSION 1.0
MAIN SELECTION MENU-09/15/80
MINIMUM FREE SPACE=(NNNNN)

0. RETURN TO CP/M
 1. INITIALIZE CUSTOMER CONTACT FILE
 2. EDIT CUSTOMER CONTACT CONTROL DATA
 3. UPDATE CUSTOMER CONTACT FILE
 4. GENERATE CUSTOMER CONTACT REPORTS
 5. COMPRESS CUSTOMER CONTACT FILE
 6. CHANGE SYSTEM DATE
 7. EDIT SYSTEM CONFIGURATION DATA
- ENTER DESIRED FUNCTION BY NUMBER:

User Enters:

1

System Responds:

LOADING PROGRAM TO INITIALIZE CUSTOMER CONTACT FILE

CUSTOMER CONTACT FILE(A:CF000) VERSION 1.0
CUSTOMER CONTACT INITIALIZATION-09/15/80
MINIMUM FREE SPACE=(NNNNN)

PROCESSING FILE CONTROL DATA

ENTER INDEX BUFFERS (0)

User Enters:

1

CHAPTER 4. RUNNING YOUR PEARL-GENERATED SYSTEM

System Responds:

```
FILE CONTROL DATA
*: SORT FLAG          0
*: LAST RECORD        1
*: LAST RECORD DELETED 0
*: DELETED REC. COUNT 0
*: UPDATE IN PROCESS FLAG 0
*: OPEN ERROR RESET COUNTER 0
1: INDEX BUFFERS      1
*: CLOSING COUNT      0
*: LAST JE CLOSED     0
*: POSTING COUNT      0
*: LAST JE POSTED     0
```

ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

System Responds

CUSTOMER CONTACT INITIALIZATION COMPLETED

....GOOD BYE....

System Responds:

```
CUSTOMER CONTACT FILE(A:CONTACT) VERSION 1.0
MAIN SELECTION MENU-09/15/80
MINIMUM FREE SPACE=(NNNNN)
```

0. RETURN TO CP/M
 1. INITIALIZE CUSTOMER CONTACT FILE
 2. EDIT CUSTOMER CONTACT CONTROL DATA
 3. UPDATE CUSTOMER CONTACT FILE
 4. GENERATE CUSTOMER CONTACT REPORTS
 5. COMPRESS CUSTOMER CONTACT FILE
 6. CHANGE SYSTEM DATE
 7. EDIT SYSTEM CONFIGURATION DATA
- ENTER DESIRED FUNCTION BY NUMBER:

Update Customer Contact File

User Enters:

3

CHAPTER 4. RUNNING YOUR PEARL-GENERATED SYSTEM

System Responds:

LOADING PROGRAM TO UPDATE CUSTOMER CONTACT FILE
CUSTOMER CONTACT FILE(A:CF100) VERSION 1.0
CUSTOMER CONTACT UPDATE MAINTENANCE-09/15/80
MINIMUM FREE SPACE=(NNNNN)

- 0 TO RETURN TO MAIN MENU
- 1 TO ADD RECORDS TO THE FILE
- 2 TO EDIT OR DISPLAY EXISTING RECORDS
- 3 TO DELETE RECORDS
- ?

User Enters:

1

System Responds:

ENTER CUSTOMER NAME ()

User Enters:

DOE, JOHN

System Responds:

ENTER CUSTOMER ADDRESS ()

User Enters:

1099 THIRD STREET

System Responds:

LOCATION ()

User Enters:

SALEM, OR 97301

System Responds:

PHONE ()

User Enters:

392-6299

System Responds:

ENTER CONTACT DATE (-)

CHAPTER 4. RUNNING YOUR PEARL-GENERATED SYSTEM

User Enters:

040580

System Responds:

ENTER BUSINESS GROUP

0 =Government
1 =Education
2 =Contracting
3 =Farming
4 =Retail Sales
5 =Wholesale Dist.
6 =Other
(6)

User Enters:

1

System Responds

CUSTOMER CONTACT DATA

1: CUSTOMER NAME	DOE, JOHN
2: CUSTOMER ADDRESS	1099 THIRD STREET
3: LOCATION	SALEM, OR 97301
4: PHONE	392-6299
5: CONTACT DATE	04/05/80
6: BUSINESS GROUP	Education

ENTER FIELD NUMBER TO EDIT OR RETURN TO TERMINATE

User Enters:

Depress RETURN

System Responds:

ENTER CUSTOMER NAME (DOE, JOHN)

User Enters:

Continue to enter the customer names, etc. You may enter them in any order and they will come out on your report in alphabetical order. This is true for INDEXED files only. This is why you enter the last name first and then first Name and Middle initial. However, if you had specified the RANDOM access method, you would have to SORT your file in order to get it to print out in alphabetical order.

NOTE

If you make a mistake during entry of the key field (CUSTOMER NAME) and you do not correct it when your answers are first displayed, you must select Option 3 (TO DELETE RECORDS) in order

CHAPTER 4. RUNNING YOUR PEARL-GENERATED SYSTEM

to correct the name. This is true only for the key field. You may choose Option 2 (TO EDIT OR DISPLAY EXISTING RECORDS) to correct errors in any of the other fields.

When you are done entering customer names, you may exit from this program as follows:

System Responds:

ENTER CUSTOMER NAME (ADAMS, MARIE)

User Enters:

Depress ESCAPE and RETURN

System Responds:

CUSTOMER CONTACT FILE(A:CF100) VERSION 1.0
CUSTOMER CONTACT UPDATE MAINTENANCE-09/15/80
MINIMUM FREE SPACE=(NNNNN)

- 0 TO RETURN TO MAIN MENU
- 1 TO ADD RECORDS TO THE FILE
- 2 TO EDIT OR DISPLAY EXISTING RECORDS
- 3 TO DELETE RECORDS
- ?

User Enters:

0

System Responds:

....GOOD BYE....

Generate Customer Contact Reports

To Generate A Report by Primary Key

System Responds:

LOADING PROGRAM TO GENERATE CUSTOMER CONTACT REPORTS
CUSTOMER CONTACT FILE(A:CONTACT) VERSION 1.0
MAIN SELECTION MENU-09/15/80
MINIMUM FREE SPACE=(NNNNN)

- 0. RETURN TO CP/M
 - 1. INITIALIZE CUSTOMER CONTACT FILE
 - 2. EDIT CUSTOMER CONTACT CONTROL DATA
 - 3. UPDATE CUSTOMER CONTACT FILE
 - 4. GENERATE CUSTOMER CONTACT REPORTS
 - 5. COMPRESS CUSTOMER CONTACT FILE
 - 6. CHANGE SYSTEM DATE
 - 7. EDIT SYSTEM CONFIGURATION DATA
- ENTER DESIRED FUNCTION BY NUMBER:

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User Enters:

4

Make sure you have 8 1/2 by 11-inch paper in your printer and that your printer is on before you proceed.

System Responds:

CUSTOMER CONTACT FILE(A:CFP0001) VERSION 1.0
CUSTOMER CONTACT REPORT PROCESSING-09/15/80
MINIMUM FREE SPACE=(NNNNN)

0 TO RETURN TO MAIN MENU
1 GENERATE Customer Contact List REPORT
2 GENERATE List by Business Group (2K2) REPORT
?

User Enters:

1

System Responds:

ENTER REPORT.ID,
(P=#,) FOR PAGE NUMBER
(PAUSE) TO PAUSE AT EACH PAGE

User Enters:

Depress RETURN

You could enter a Report Id, page number or pause here if you wanted. For example: By Name,P=10,(PAUSE). This would mean you wanted your report to print with a subtitle of "By Name, to start printing on Page 10, and to Pause at each new page.

System Responds:

The following is an example of what the report would look like:

XYZ Company
Customer Master List
09/30/10

Page

Customer Name	Phone	Contact Date	Business Group
ADAMS, MARIE 7899 EAST STATE SALEM, OR 97303	392-8793	04/07/80	OTHER
DOE, JOHN 1099 THIRD STREET SALEM, OR 97301	392-6299	04/05/80	EDUCATION
JOHNSON, RICHARD 6540 EAST PEARL STREET SALEM, OR 97304	988-2780	04/07/80	WHOLESALE DIST
JONES, SAMUEL 3369 OVERTON DR. SALEM, OR 97302	399-8923	04/28/80	RETAIL SALES
MILLER, DANIEL 2333 CONOVER DRIVE, NE PORTLAND, OR 97222	992-2034	04/14/80	WHOLESALE DIST
SMITH, MARY 4329 WESTHAVEN RD. SALEM, OR 97302	322-6320	04/14/80	EDUCATION
THOMAS, MICHAEL 3250 97TH AVE., SE ALBANY, OR 97322	872-2300	04/21/80	FARMING

CHAPTER 4. RUNNING YOUR PEARL-GENERATED SYSTEM

To Generate a Report by Contact Date - Secondary Key

System Responds:

CUSTOMER CONTACT FILE(A:CFP0001) VERSION 1.0
CUSTOMER CONTACT REPORT PROCESSING-09/15/80
MINIMUM FREE SPACE=(NNNNN)

0 TO RETURN TO MAIN MENU
1 GENERATE Customer Contact List REPORT
2 GENERATE List by Business Group (2K2) REPORT
?

User Enters:

1K*

System Responds:

0 - PRIMARY KEY
1 - CONTACT DATE
2 - BUSINESS GROUP

ENTER REPORT SEQUENCE KEY

User Enters:

1

*You could also enter 1K1 if you already knew the sequence.

NOTE

The report option differs if you have defined RANDOM access files. See Chapter 10, Section 10.4.2 and Appendix I for a more detailed study of Report Processing for both Indexed and Random Access files.

System Responds:

ENTER REPORT.ID
(P=#,) FOR PAGE NUMBER
(PAUSE) TO PAUSE AT EACH PAGE

User Enters:

Contact Date

System Responds:

The following report will print out on your printer:

Contact Date

XYZ Company
Customer Master List
09/30/80

Page

Customer Name	Phone	Contact Date	Business Group
DOE, JOHN 1099 THIRD STREET SALEM, OR 97301	392-6299	04/05/80	EDUCATION
ADAMS, MARIE 7899 EAST STATE SALEM, OR 97303	392-8793	04/07/80	OTHER
JOHNSON, RICHARD 6540 EAST PEARL STREET SALEM, OR 97304	988-2780	04/07/80	WHOLESALE DIS
SMITH, MARY 4329 WESTHAVEN RD. SALEM, OR 97302	322-6390	04/14/80	EDUCATION
MILLER, DANIEL 2333 CONOVER DRIVE, NE PORTLAND, OR 97222	992-2034	04/14/80	WHOLESALE DIS
THOMAS, MICHAEL 3250 97TH AVE., SE LBANY, OR 97322	872-2300	04/21/80	FARMING
JONES, SAMUEL 3369 OVERTON DR. SALEM, OR 97302	399-8923	04/28/80	RETAIL SALES

CHAPTER 4. RUNNING YOUR PEARL-GENERATED SYSTEM

To Generate a Report by Business Group - Secondary Key

System Responds:

CUSTOMER CONTACT FILE(A:CFP0001) VERSION 1.0
CUSTOMER CONTACT REPORT PROCESSING-09/15/80
MINIMUM FREE SPACE=(NNNNN)

- 0 TO RETURN TO MAIN MENU
- 1 GENERATE Customer Contact List REPORT
- 2 GENERATE List by Business Group (2K2) REPORT
- ?

User Enters:

1K*

System Responds:

0 - PRIMARY KEY
1 - CONTACT DATE
2 - BUSINESS GROUP

ENTER REPORT SEQUENCE KEY

User Enters:

2

*You could also enter 1K2 if you already knew the sequence.

System Responds:

ENTER REPORT.ID
(P=#,) FOR PAGE NUMBER
(PAUSE) TO PAUSE AT EACH PAGE

User Enters:

By Business Group

System Responds:

The following report will print out on your printer:

By Business Group

XYZ Company
Customer Master List
09/30/80

Page

Customer Name	Phone	Contact Date	Business Group
SMITH, MARY 4329 WESTHAVEN RD. SALEM, OR 97302	322-6390	04/14/80	EDUCATION
DOE, JOHN 1099 THIRD STREET SALEM, OR 97301	392-6299	04/05/80	EDUCATION
THOMAS, MICHAEL 3250 97TH AVE., SE ALBANY, OR 97322	872-2300	04/21/80	FARMING
JONES, SAMUEL 3369 OVERTON DR. SALEM, OR 97302	399-8923	04/28/80	RETAIL SALES
MILLER, DANIEL 2333 CONOVER DRIVE, NE PORTLAND, OR 97222	992-2084	04/14/80	WHOLESALE DIS
JOHNSON, RICHARD 6540 EAST PEARL STREET SALEM, OR 97304	988-2780	04/07/80	WHOLESALE DIS
ADAMS, MARIE 7899 EAST STATE SALEM, OR 97303	392-8793	04/07/80	OTHER

CHAPTER 4. RUNNING YOUR PEARL-GENERATED SYSTEM

To List by Business Group (2K2)

System Responds:

CUSTOMER CONTACT FILE(A:CFP0001) VERSION 1.0
CUSTOMER CONTACT REPORT PROCESSING-09/15/80
MINIMUM FREE SPACE=(NNNNN)

- 0 TO RETURN TO MAIN MENU
- 1 GENERATE Customer Contact List REPORT
- 2 GENERATE List by Business Group (2K2) REPORT
- ?

User Enters:

2K2

System Responds:

ENTER REPORT.ID
(P=#,) FOR PAGE NUMBER
(PAUSE) TO PAUSE AT EACH PAGE

User Enters:

Depress RETURN

System Responds:

ENTER THE STARTING DATE FOR MONTH-TO-DATE TOTALS

User Enters:

41780

System Responds:

The following report will print out on the printer:

XYZ Company
Contact List by Business Group
09/30/80

Page 1

Business Group	Date Range	Contact Totals
1 EDUCATION	04/17/80	Month-to-Date: 0 Year-to-Date: 2
3 FARMING	04/17/80	Month-to-Date: 1 Year-to-Date: 1
4 RETAIL SALES	04/17/80	Month-to-Date: 1 Year-to-Date: 1
5 WHOLESALE DIST.	04/17/80	Month-to-Date: 0 Year-to-Date: 2
6 OTHER	04/17/80	Month-to-Date: 0 Year-to-Date: 1
TOTAL MONTH-TO-DATE:	2	
TOTAL YEAR-TO-DATE:	7	

CHAPTER 4. RUNNING YOUR PEARL-GENERATED SYSTEM

System Responds:

CUSTOMER CONTACT FILE(A:CFP0001) VERSION 1.0
CUSTOMER CONTACT REPORT PROCESSING-09/15/80
MINIMUM FREE SPACE=(NNNNN)

- 0 TO RETURN TO MAIN MENU
- 1 GENERATE Customer Contact List REPORT
- 2 GENERATE List by Business Group (2K2) REPORT
- ?

User Enters:

0

System Responds:

...RETURNING TO MAIN MENU...

YOU HAVE COMPLETED THE EXAMPLE APPLICATION.

After testing your system, you would PIP over your .INT files (and your .COM files if not done) from your Application System Main Program disk to your Application System disk for production.

For procedures on file reorganization, Option 5 of Main Menu, see Appendix L of this manual.

CHAPTER 5. PEARL MAIN SELECTION MENU

When PEARL Level 3 is executed, the selection menu for all PEARL processing options will be displayed. The processing associated with each option is described in detail in the remainder of the manual. The following is a quick cross reference to a discussion of each menu option.

0. RETURN TO CP/M	
1. SYSTEM INITIALIZATION	(Chapter 6)
2. FILE DEFINITION	(Chapter 7)
3. DATA ELEMENT DEFINITION	(Chapter 7)
4. PHRASE SELECTION DEFINITION	(Chapter 7)
5. MAIN MENU DEFINITION	(Chapter 8)
6. REPORT CONTROL DEFINITION	(Chapter 9)
7. REPORT DETAIL DEFINITION	(Chapter 10)
8. ENTER/EDIT POST/CLOSE COMPUTATIONS	(Chapter 11)
9. LIST DATA ELEMENT CONTROL DATA	(Chapter 13)
10. LIST MENU CONTROL DATA	(Chapter 14)
11. LIST REPORT CONTROL DATA	(Chapter 15)
12. LIST POST/CLOSE COMPUTATION CONTROL DATA	(Chapter 16)
13. VALIDATION OF CROSS FILE PROCESSES	(Chapter 11)
14. EDIT SYSTEM DEFINITION DATA	(Chapter 6)
15. SYSTEM GENERATION	(Chapter 17)
16. RESET CURRENT SYSTEM DATE	
17. EDIT SYSTEM CONFIGURATION DATA	(Appendix B)

CHAPTER 6. PEARL SYSTEM INITIALIZATION

The A000.INT program is used to initialize system definition control files (PEARL.CCT and PEARL.NDX). These files are placed on the default data drive as defined in the SYSTEM CONFIGURATION CONTROL data. This program first tests for the presence of PEARL.CCT and PEARL.NDX on the default data drive disk. If these files already exist, an error message is issued and control is returned to the Main Menu. PEARL.CCT will contain all of the definition data entered by you when defining a system, including system description data, and file and data element definitions. PEARL.NDX is an index into PEARL.CCT. In addition to creating PEARL.CCT, this step also prompts for the system description data and writes it to PEARL.CCT. These prompts are:

6.1 SYSTEM DESCRIPTION:

The string that is entered here will appear on all menus in the generated system. It will also appear as part of the title on every page of the data element detail and summary listings produced under Main Menu Selection 6 below.

6.2 MAIN MENU PROGRAM NAME:

The 1-8 character CP/M primary file name you enter here will be the name of the generated source file containing the main menu program and hence, after compilation, the name of the .INT file used to begin execution of the generated system. You should only enter the file name. A file type of .BAS will be appended automatically.

6.3 SYSTEM CODE:

This 1-3 character code becomes part of the name of the generated COMsss.BAS (sss=system code) file. This file will contain variable initialization statements for items relevant to the whole system, such as SYSTEM DESCRIPTION (as entered above), SYSTEM DEVELOPMENT DATE and SYSTEM VERSION NUMBER.

6.4 SYSTEM DEVELOPMENT DATE:

The string entered here will appear as a string constant in COMsss.BAS as the value of VER.DATE\$, and will be displayed when the generated main menu program is initially loaded.

6.5 SYSTEM VERSION NUMBER:

The string entered here, prefixed by "VERSION N.N", will appear as a string constant in COMsss.BAS as the value of VER.NOS, will be displayed when the generated main menu program is initially loaded. It will appear together with SYSTEM DESCRIPTION at the top of all menus in the generated system.

CHAPTER 6. PEARL SYSTEM INITIALIZATION

PROGRAMMING NOTE:

The date and the version number are placed in an included file with the name COMuuu (where uuu is the SYSTEM CODE entered above) with the variable names VER.NO\$ and VER.DATE\$. Because these variables are not included in the COMMON area, the version number and date displayed in each program reflect the variable values the last time each program was compiled rather than at the time the main menu program was last compiled.

6.6 BUFFER ALLOCATION:

This determines the number of disk sectors on a given file to be maintained in memory at one time. Example:

```
CREATE filename AS filenum BUFF nn RECS 128
```

where nn is the buffer allocation you specify. Larger values for nn result in faster generation, but require more memory space. On a system with 48K of memory there is only room for nn = 1; with 50K or more, use 10.

This value is also the number of index buffers which will be allocated for processing the PEARL.NDX file. Refer to Appendix D for a description of the IS.NBUFS% variable.

NOTE:

Tuning of this value may be done by watching the MINIMUM FREE SPACE=(xxxxx) displayed at the top of each PEARL display screen. If the value indicated by xxxx is less than 1000, you should decrease the number of buffers to minimize the chance of running out of working memory during the execution of PEARL. (If this occurs, an ERROR OM will result during execution and may cause the files to become unusable.)

6.7 DRIVE FOR GENERATED SOURCE:

This is a single character indicating the drive on which the BASIC source files generated by PEARL should be placed. This drive is independent of the DEFAULT DATA DISK DRIVE on which the PEARL control files are placed. Both specifications, however, may be the same drive. In this case, the PEARL control files and the generated source code will be placed on the same unit.

6.8 DRIVE FOR COMMON ROUTINES:

This is a single character indicating the drive to contain the common routines (COMPILE DISKETTE) during the compile processing.

CHAPTER 6. PEARL SYSTEM INITIALIZATION

6.9 DRIVE FOR GENERATED ROUTINES:

This is a single character indicating the drive to contain the generated subroutines during the compile process. This will probably be the same drive specified above in "DRIVE FOR GENERATED SOURCE", but does not necessarily have to be the same.

NOTES:

1. Once the PEARL.CCT and PEARL.NDX files have been created on a PEARL system data disk using the SYSTEM INITIALIZATION menu selection, another system cannot be initialized on the same disk. To re-use a system data disk, these two files must first be erased.
2. Once a system has been defined, selection 1 cannot be used to change any of the definitions listed above. In order to edit this information, select main menu option 14. You are presented with a menu allowing you to edit the definitions, or list them out on your printer.

