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Development of an Ada Programming Support Environment Database SEAD (Software Engineering and Ada Database)

Administration Manual

Morris Liaw

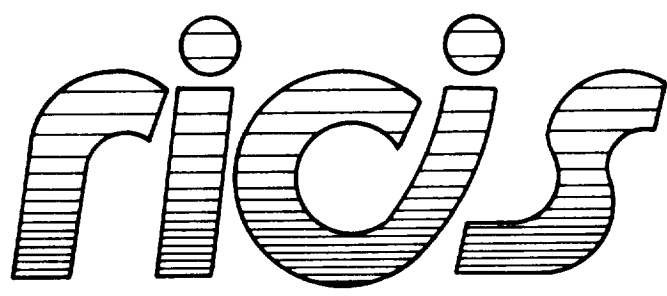
University of Houston-Clear Lake

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GHG Corporation

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University of Houston - Clear Lake*

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(NACA-CR-109,054) DEVELOPMENT OF AN ADA PROGRAMMING SUPPORT ENVIRONMENT DATABASE SEAD (SOFTWARE ENGINEERING AND ADA DATABASE) ADMINISTRATION MANUAL (Houston Univ.)

The RICIS Concept

The University of Houston-Clear Lake established the Research Institute for Computing and Information systems in 1986 to encourage NASA Johnson Space Center and local industry to actively support research in the computing and information sciences. As part of this endeavor, UH-Clear Lake proposed a partnership with JSC to jointly define and manage an integrated program of research in advanced data processing technology needed for JSC's main missions, including administrative, engineering and science responsibilities. JSC agreed and entered into a three-year cooperative agreement with UH-Clear Lake beginning in May, 1986, to jointly plan and execute such research through RICIS. Additionally, under Cooperative Agreement NCC 9-16, computing and educational facilities are shared by the two institutions to conduct the research.

The mission of RICIS is to conduct, coordinate and disseminate research on computing and information systems among researchers, sponsors and users from UH-Clear Lake, NASA/JSC, and other research organizations. Within UH-Clear Lake, the mission is being implemented through interdisciplinary involvement of faculty and students from each of the four schools: Business, Education, Human Sciences and Humanities, and Natural and Applied Sciences.

Other research organizations are involved via the "gateway" concept. UH-Clear Lake establishes relationships with other universities and research organizations, having common research interests, to provide additional sources of expertise to conduct needed research.

A major role of RICIS is to find the best match of sponsors, researchers and research objectives to advance knowledge in the computing and information sciences. Working jointly with NASA/JSC, RICIS advises on research needs, recommends principals for conducting the research, provides technical and administrative support to coordinate the research, and integrates technical results into the cooperative goals of UH-Clear Lake and NASA/JSC.

***The Development of an Ada
Programming Support Environment
Database***

***SEAD (Software Engineering and Ada
Database)***

Administration Manual

Preface

This research was conducted under the auspices of the Research Institute for Computing and Information Systems by Morris Liaw, Assistant Professor of Computer Science at the University of Houston-Clear Lake, and Donna Evesson of GHG Corporation.

Funding has been provided by the Spacecraft Software Division, within the Mission Support Directorate, NASA/JSC through Cooperative Agreement NCC 9-16 between NASA Johnson Space Center and the University of Houston-Clear Lake. The NASA Technical Monitor for this activity was Brad Loveall of the Systems Support Branch, NASA/JSC.

The views and conclusions contained in this report are those of the author and should not be interpreted as representative of the official policies, either express or implied, of NASA or the United States Government.

UNIVERSITY
of HOUSTON

CLEAR LAKE
Houston, Texas

Research Order SE-1

The Development of an
Ada Programming Support Environment Database

S E A D
Software Engineering and Ada Database

ADMINISTRATION MANUAL

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GHG Corporation

December 1, 1988

S E A D
ADMINISTRATION MANUAL

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PART I. OVERVIEW OF SEAD

- Chapter 1. Purpose And Content
- Chapter 2. Database Organizational Outline
- Chapter 3. Hierarchical Maps Of Database

Chapter 1. Purpose And Contents

S E A D
Software Engineering and Ada Database

PURPOSE:

SEAD has been developed to provide an information resource to NASA and NASA contractors with respect to Ada-based resources and activities which are available or underway either in NASA or elsewhere in the worldwide Ada community. The sharing of such information will reduce duplication of effort while improving quality in the development of future software systems.

CONTENT:

SEAD data is organized into five major areas:

- 1) Information regarding education and training resources which are relevant to the life cycle of Ada-based software engineering projects such as those in the Space Station Program.
- 2) Research publications relevant to NASA projects such as the Space Station Program. Conferences relating to Ada technology.
- 3) The latest progress reports on Ada projects completed or in progress both within NASA and throughout the free world.
- 4) Ada compilers and other commercial products that support Ada software development.
- 5) Reusable Ada components generated both within NASA and from elsewhere in the free world. This classified listing of reusable components shall include descriptions of tools, libraries and other components of interest to NASA.

Sources for the data include technical newsletters and periodicals, conference proceedings, the Ada Information Clearinghouse, product vendors, and project sponsors and contractors.

USER INTERFACE:

The SEAD user interface consists of a set of menu-driven interactive panels which allow searches on any field. The user may construct a query using a single value, a range of values, or a logical combination of values. The system will search the database for all records that match the query and retrieve them. The user may "browse" through the retrieved data, viewing the records one at a time.

**SEAD is accessible via NASA/JSC CIN. Interested NASA personnel and contractors may contact the Data Administrator at (713) 488-8806.

Chapter 2. Database Organizational Outline

S E A D
Software Engineering and Ada Database

=====DATABASE ORGANIZATIONAL OUTLINE=====

MAIN MENU

1. EDUCATION AND TRAINING RESOURCES

1. Course Information
 - Each course record has 5 screens: course, sponsor, audience, format, and material.
2. Book Information
 - Each book record has 4 screens: book, location, publisher, and author/author information.

2. PUBLICATIONS AND CONFERENCES

1. Publication Information
 - Each publication record has ten screens: publication, location, author/author information, category and subject, general term, keyword, project cross-reference, product cross-reference, compiler cross-reference and package cross-reference.
2. Conference Information
 - Each Conference record has six screens: conference, conference sponsor, coordinator/coordinator information, conference charge, presentation, presenter/presenter information.

3. PROJECTS

- Each Project record has eight screens: project, contact_person/contact_person information, sub_project, project keyword, publication cross-reference, compiler cross-reference, and package cross-reference.

4. COMPILERS AND OTHER PRODUCTS

1. Compiler Information

- Each Compiler record has eight screens: compiler, vendor, host system, target system, performance/evaluator information, publication cross-reference, project cross-reference, and package cross-reference.

2. Product Information

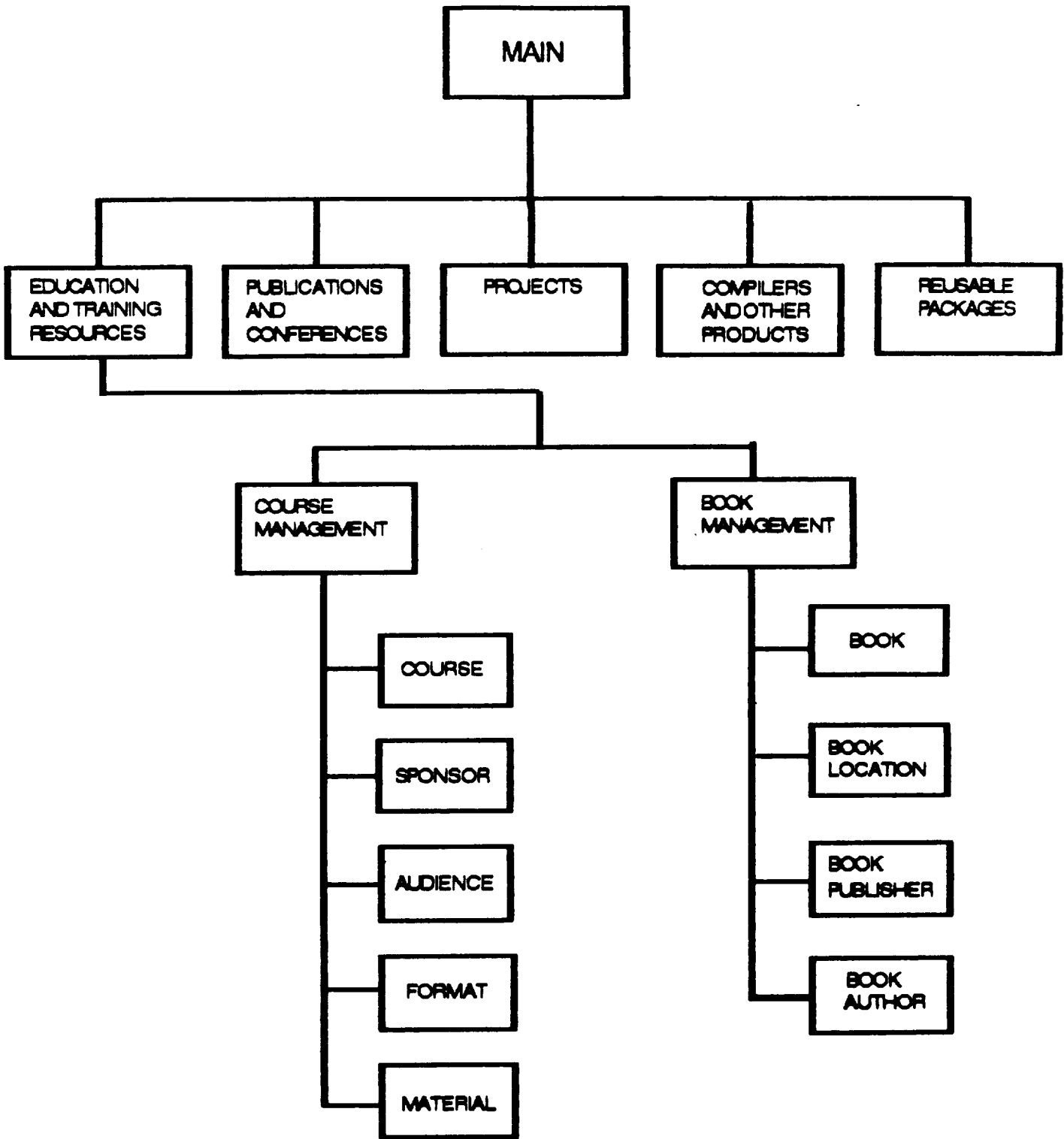
- Each Product record has seven screens: product, vendor, host system, target system, publication cross-reference, project cross-reference, and package cross-reference.

5. REUSABLE PACKAGE INFORMATION

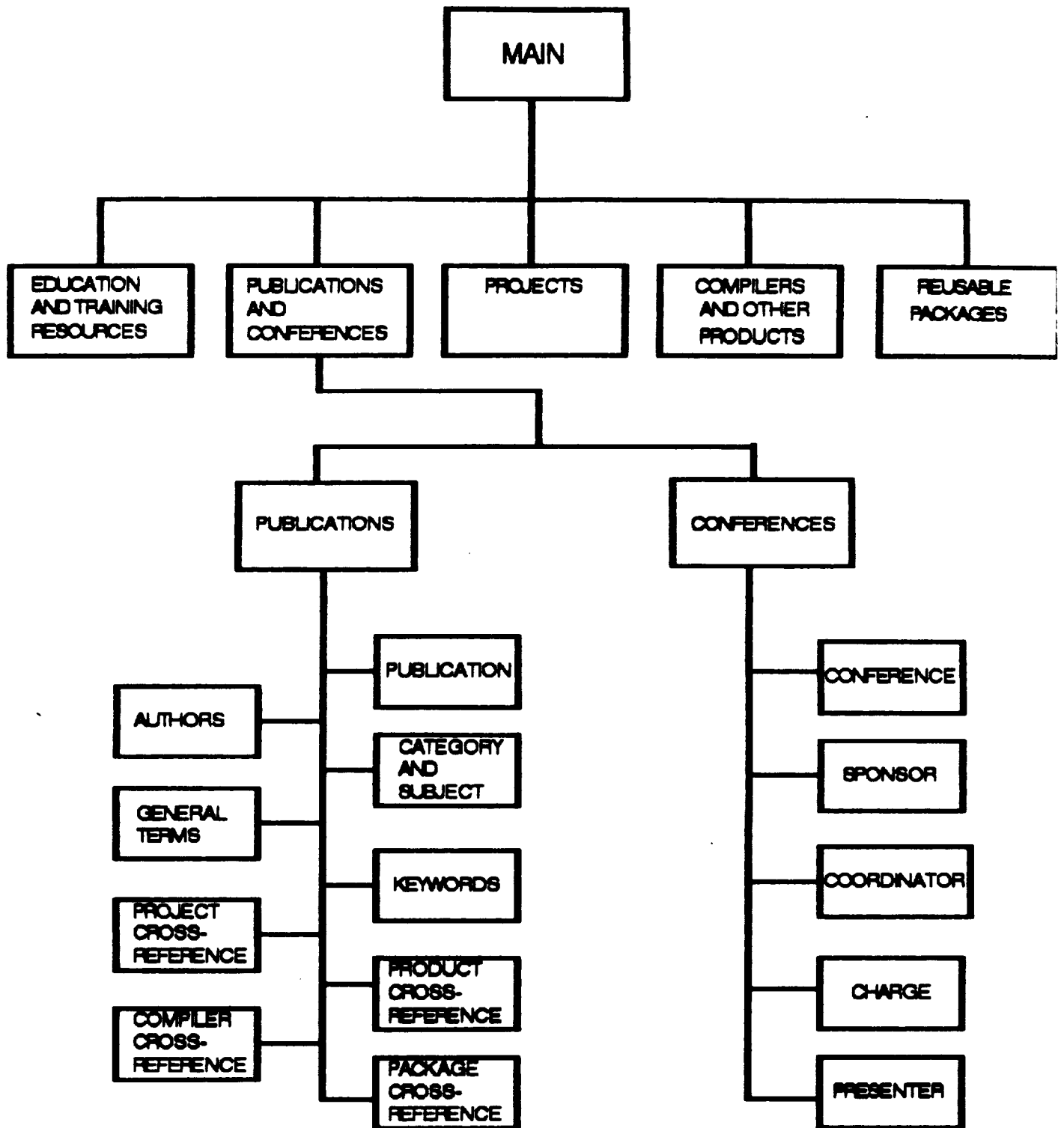
- Each Reusable Package record has twelve screens: reusable package, contact_person/contact_person information, creator/creator information, host system, target system, revise history, performance/performance evaluator information, package keyword(s), publication cross-reference, project cross-reference, product cross-reference, and compiler cross-reference.

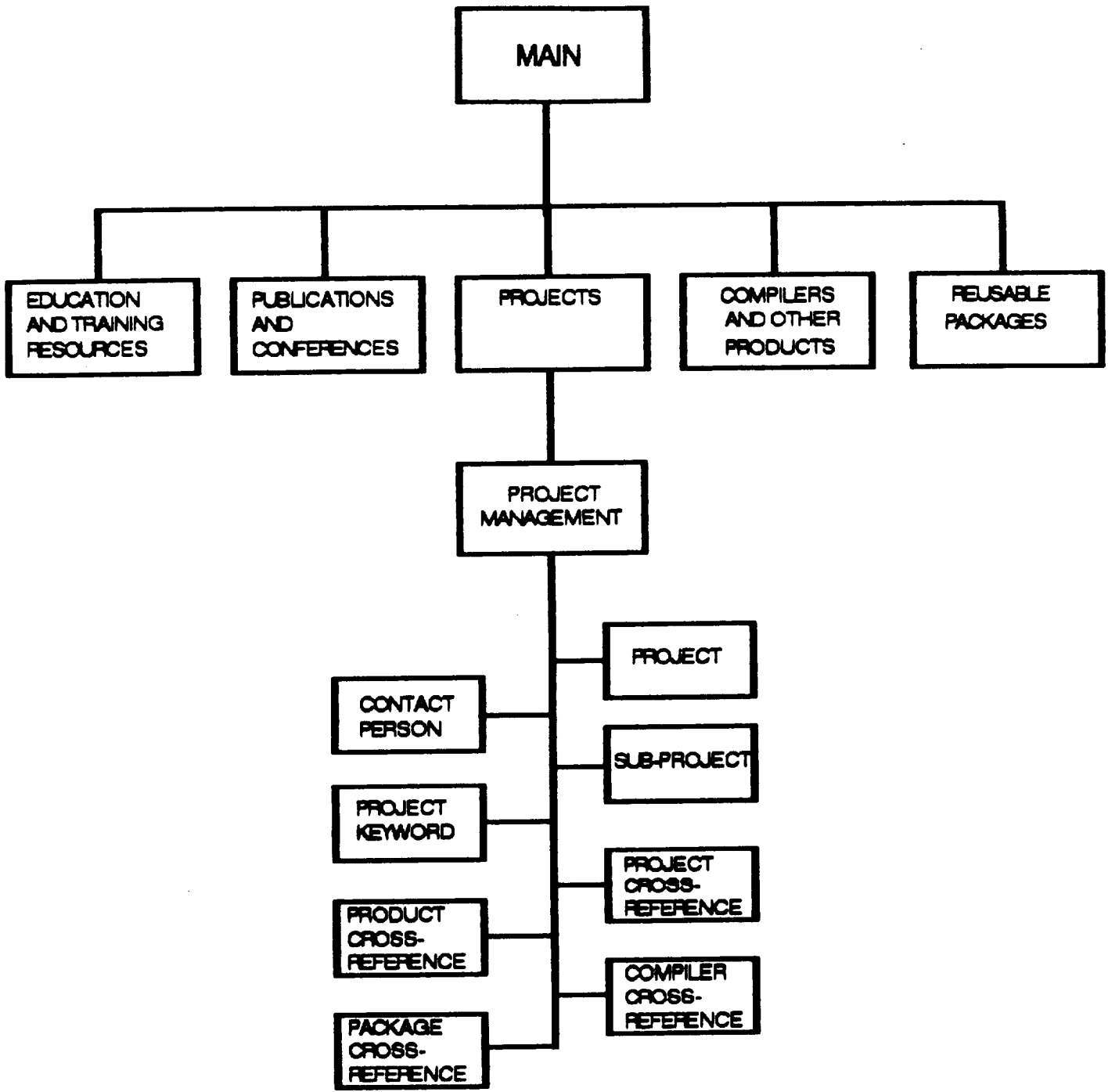
***Note:** Each screen and each data item has on-line help available.

Chapter 3. Hierarchical Maps Of Menus

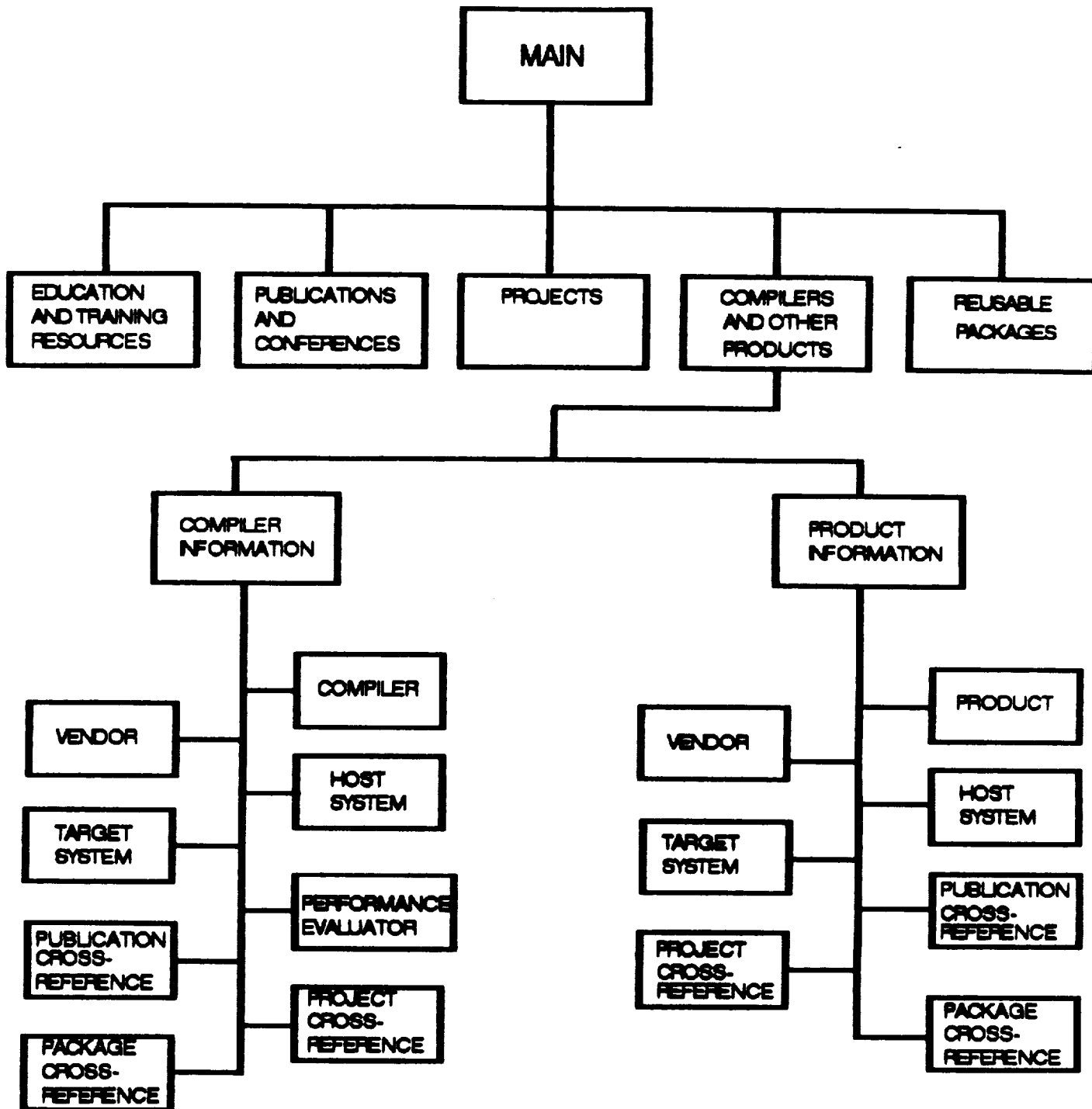


**HERARCHICAL MAP OF MENUS FOR
EDUCATION AND TRAINING RESOURCES**

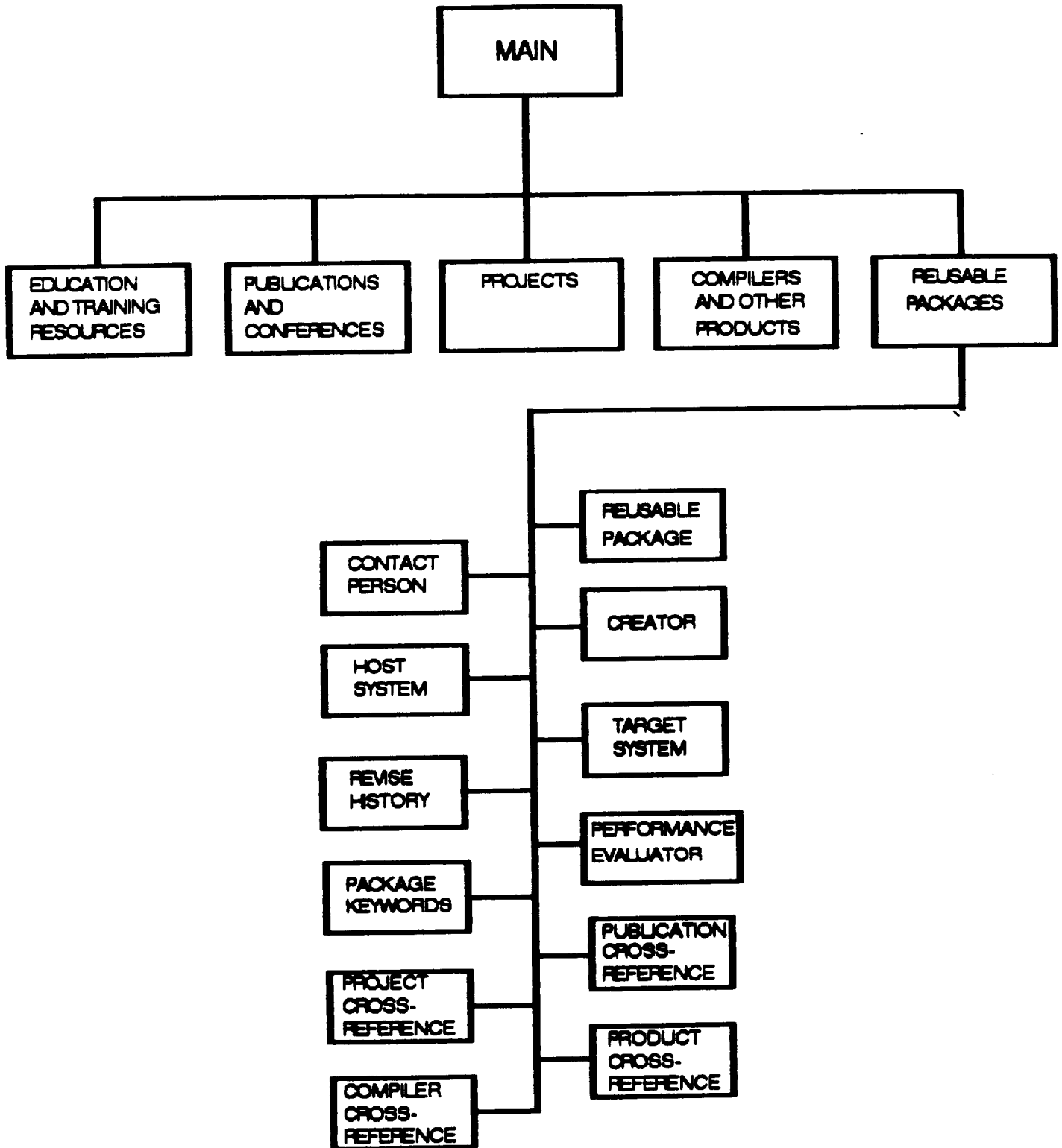




HEBARCHICAL MAP OF MENUS FOR PROJECTS



**HERARCHICAL MAP OF MENUS FOR
COMPILERS AND OTHER PRODUCTS**



**HERARCHICAL MAP OF MENUS FOR
REUSABLE PACKAGES**

PART II. GETTING STARTED

- Chapter 1. Logging In And Logging Out
- Chapter 2. Description Of The Open Main Menu
- Chapter 3. Function Key Descriptions For The IBM3270 And The VT100.
- Chapter 4. Function Keymaps For The IBM3270 And The VT100.
- Chapter 5. Procedures For Display

Chapter 1. Logging In And Logging Out

S E A D

SOFTWARE ENGINEERING AND ADA* DATABASE UNIVERSITY OF HOUSTON, CLEAR LAKE--NASA JOHNSON SPACE CENTER GHG CORPORATION

Chapter 1. Logging In And Logging Out

You must have access to a user account in the NASA/JSC Center Information Network (CIN) Environment in order to log in with a userid. You are identified to the Environment through a userid and a password. If you do not have a valid userid and password, see your systems manager or call the SEAD DBA at the users help desk at (713) 488-8806.

You can log into the (CIN) account from an IBM 3270, or an emulated VT100 terminal. Logging in follows the same steps, regardless of the terminal type.

The Basic Login Process:

To log in, you must respond to a series of login prompts. Note that:

- You will need to learn how to use a communications software program to dial into the (CIN) account to invoke SEAD.
- You can enter login information in uppercase or lowercase letters.
- You must press **[Return]** to complete each response and display the next prompt.
- If you discover an error before you press Return, you can press <-- (backspace) to delete your entry.

To Log in:

1. Make sure your terminal is on.
2. **Press Return twice** when terminal connects.
3. The system responds with a prompt that requests that a data line be entered.

ENTER NUMBER:

4. **Enter CIN1 and press Return.**

ENTER NUMBER:
CIN1
[PRESS RETURN]

5. If the data line is busy, the system will respond with the following message:

ENTER NUMBER:
CIN1
[PRESS RETURN]
ALL DATA LINES ARE BUSY

ENTER NUMBER:

6. **Enter CIN2 and press Return.**

```
ENTER NUMBER:  
CIN1[PRESS RETURN]  
ALL DATA LINES ARE BUSY  
  
ENTER NUMBER:  
CIN2  
[PRESS RETURN]
```

7. If the incorrect number has been entered, the system will respond with the following message:

```
ENTER NUMBER:  
CIN1H  
[PRESS RETURN]  
CIN1H IS NOT A DATA LINE  
  
ENTER NUMBER:
```

8. **Enter CIN1 or CIN2 again and press Return.** It is a possibility that you might have misspelled or entered the wrong keys.
9. The system responds with a prompt that request a terminal type.

```
enter terminal type:
```

10. **Press the Return key**, this will give you a listing of the available terminal types to choose from. **Enter the terminal type vt100.**

```
enter terminal type:  
[PRESS RETURN]  
VALID TYPES ARE:  
DM1520          DM3045  
IBM3101         IBM31ALT  
IBMPC           VT100           GIGI  
TV1912         TV1950           TV1950R  
ADM3A          ADM31  
enter terminal type: VT100
```

11. The system will connect to the Johnson Space Center/Center Information Network Dial-in Facility.

```
W E L C O M E   T O   J O H N S O N   S P A C E  
C E N T E R   H O U S T O N   T E X A S  
C E N T E R   I N F O R M A T I O N   N E T W O R K  
C I N - B   D I A L - I N   F A C I L I T Y
```

```
FOR NASA AUTHORIZED USERS ONLY-UNAUTHORIZED USE IS A  
VIOLATION OF FEDERAL LAW
```

```
CALL (713) 280-4800 IF YOU NEED HELP
```

```
PRESS ENTER THEN CLEAR KEY TO PROCEED
```

12. **Press the Enter key.** At this point, the screen is blank.

13. Enter CISA and your userid and press Return.

```
CISA USERID  
[PRESS RETURN]
```

14. The system will respond with a prompt that request a logon password:

```
LOGON      USERID  
VMXACI104R Enter logon password:
```

15. Enter your password at the prompt and press Return.

```
LOGON      UHCLORC  
VMXACI104R Enter logon password: airplane **  
[PRESS ENTER]
```

****You will not be able to see your password as you enter it. This is only an example.**

16. If your user id and password are accepted, the system responds with a Ready; prompt meaning that the system is Ready and waiting for the next command.

Notice that the system does not display your password. This is security for the user so that your account can only be accessed by you.

```
LOGON      USER ID
VMXACI104R Enter logon password:
VMXACI108I Last logon at 23:52:47 CDT Sunday 09/25/88
from LK7755E.
LOGON AT 14:38:27 CDT WEDNESDAY 09/28/88
VM/SP 5.0 8801 CMS
DMSACC724I 319 replaces P (319)
DMSACP723I P (319) R/O
DMSACP723I B (291) R/O
DMSACP723I C (391) R/O
Ready;
```

17. If your userid or user password are not accepted, the system responds with the following messages:

```
LOGON      USER ID
VMXACI104R Enter logon password: aitplane **
[PRESS ENTER]
DMKLOG050E LOGON unsuccessful--incorrect password

Enter one of the following commands:

LOGON userid          (Example: LOGON VMUSER1)
DIAL userid           (Example: DIAL VMUSER2)
MSG userid message    (Example: MSG VMUSER2 GOOD MORNING
LOGOFF
```

18. To continue, enter your userid as follows: **LOGON userid,**
press Return.

Enter one of the following commands:

LOGON userid (Example: LOGON VMUSER1)
DIAL userid (Example: DIAL VMUSER2)
MSG userid message (Example: MSG VMUSER2 GOOD MORNING)
LOGOFF

LOGON userid
[Press Return]

19. The systems responds with a prompt that request a password.
Enter your password and press Return.

VMXACI104R Enter logon password: **airplane** **
[PRESS RETURN]

20. The system responds with the logon time and date, and also tells the user if there was an invalid logon attempt since the last logon. The system is now at the Ready; prompt waiting for the next command.

23. **[PRESS RETURN]** at the SEAD logo, and the Open Main Menu of SEAD will appear.

NASA / JSC

S E A D

Software Engineering and ADA Database System

- B. Bulletin Board
- I. Beginner Information
- K. Function Keymap
- C. Continue with SEAD**
- P. Change VM Password
- E. Exit SEAD

Please enter your selection ==>

24. For instructions on selecting from the Open Main Menu, please see PART II - Chapter 2 of this users manual.

Logging Out:

1. At the Open Main Menu, **enter the letter <E>Exit to exit the SEAD program.** This will return the system back to the Ready; prompt.

```
NASA / JSC

                          S E A D

Software Engineering and ADA Database System

      B.   Bulletin Board
      I.   Beginner Information
      K.   Function Keymap
      C.   Continue with SEAD
      P.   Change VM Password
      E.   Exit SEAD

Please enter your selection ==> E   [PRESS RETURN]
```

2. The system exits out of SEAD and is at the Ready; prompt waiting for a command. **Enter LOGOFF at the Ready; prompt and press Return.**

Ready; **LOGOFF**

3. The system will logoff your userid and password from the SEAD account and return to the Center Information Network.
4. At this point you will need to follow the instructions on your communications software to hang-up from the system.

Chapter 2. Description Of The Open Main
Menu

Chapter 2. Description of the Open Main Menu.

B. Bulletin Board -

Enables the user to browse the following Ada information: Conferences, Workshops, Meetings, etc.

I. Beginner Information -

Enables the first time user to browse instructions explaining about the structure of the database and how to retrieve information from the database.

K. Function Keymap -

Enables the user to browse the function keys available to use while in the database.

C. Continue with SEAD -

Enables the user to continue research by browsing through the database for the following information: Education and Training Resources, Publications and Conferences, Project, Compilers and Other Products, and Reusable Packages.

P. Change VM Password -

Enables the user to change his/her password within SEAD without logging out of the VM System. This function is only temporarily available.

E. Exit -

Enables the user to exit out of SEAD.

Chapter 3.

Function Key Descriptions For
The IBM3270 And The VT100.

Chapter 3. Function Key Descriptions for the IBM 3270 and the VT100.

TERMS AND CONCEPTS

RECORD A representation of a single row from the database table.

FIELD A portion of a form used for entering and/or displaying a single item of information. Fields most often represent columns from database tables, but may also represent other information.

FUNCTION KEYS

The following function keys are available while running a form; they are grouped here by function type.

You can display the function key assignments for your terminal by pressing PF1 (SHOW FUNCTION KEYS). A key map of the VT100 keys corresponding to the IBM 3270 keys is included at the end of this section.

Ask your Database Administrator for the exact keystrokes required by your particular terminal type.

NOTES: The function-key descriptions listed below are based on the default function key assignments. Since any of these functions can be redefined by the DBA, some of these functions may work differently, or may not be available to you at all.

A. Cursor Movement

<u>IBM3270</u>	<u>VT100</u>		
<==	<==	LEFT	Moves the cursor one character to the left.
PF23	ESC [SCROLL LEFT	Moves the cursor left through the block you are currently in until there is no more data to browse.

IBM3270

VT100

PF2	ESC 2	MENU	Displays a list of blocks in the current form.
PF11	ESC -	NEXT BLOCK	Moves the cursor to the next block in the current form.
<ENTER>	<ENTER>	NEXT FIELD	Tabs forward to the next field in the current record, based on an order established by the forms designer. Fields designated by the designer as "non-enterable" are skipped by the NEXT FIELD function.
PF20	ESC I	NEXT PRIMARY KEY FIELD	Tabs forward to the next field in the block that has been designated as part of the "primary key"--those fields that uniquely identify a particular row of a database table.
PF8	ESC 8	NEXT RECORD	If a query has been executed in a block displaying only one record, displays the next record that satisfies the query. In a block displaying multiple records, moves the cursor to the next record in the block. If the current record is the last record displayed in a multiple record block, moves other records up to make room for a new one.
PF9	ESC 9	NEXT SET OF RECORDS	If a query is active in a block displaying multiple records, displays the next set of retrieved records.
PF10	ESC 0	PREVIOUS BLOCK	Moves the cursor to the previous block of the current form.
PF19	ESC U	PREVIOUS FIELD	Tabs back to the previous field of the current record, skipping those fields designated as "non-enterable" by the designer.
PF7	ESC 7	PREVIOUS RECORD	Displays the previous record in the current block.

IBM3270**VT100**

==>	==>	RIGHT	Moves the cursor one character to the right.
PF22	ESC P	SCROLL RIGHT	Moves the cursor right through the block until there is no more data to browse.

B. Editing Data**IBM3270****VT100**

Del	Del	CHARACTER DELETE	Deletes the character at the current cursor position.
Insert		CHAR INSERT/REPLACE	Toggles between Insert Character mode and Replace mode.
PF17	ESC T	CLEAR BLOCK	Erases all records from the current block and initializes the fields with default values. Undoes all uncommitted update inserts, and deletes from the current block.
PF12+PF19	ESC = + ESC U	CLEAR FIELD	Erases the contents of a field from the current form, beginning at the current cursor position.
PF18	ESC Y	CLEAR FORM/ROLLBACK	Erases data from all blocks of the current form. Undoes all uncommitted updates, inserts and deletes from all blocks of the form.
PF12+PF20	ESC = + ESC Y	CLEAR RECORD	Erases all fields of the current record from the form. If an uncommitted record has been updated, undoes the updated and erases the record from the screen. If a query is active, erases the current record and displays the next retrieved record.

C. Query Processing

<u>IBM3270</u>	<u>VT100</u>		
PF16	ESC R	ABORT QUERY	Terminates the current query or stops the LIST OF FIELD VALUES function.
PF12+PF13	ESC = + ESC Q	COUNT QUERY	Displays the number of records satisfying the current query. To see the actual retrieved records, use the EXECUTE QUERY function.
PF4	ESC 4	ENTER QUERY	Notifies SQL*Forms that query criteria are about to be entered.
PF5	ESC 5	EXECUTE QUERY	Used alone, retrieves all records for the current block. Used in conjunction with ENTER QUERY, retrieves all records satisfying the query.

D. Maintaining the Database

(These are to be used only by the SEAD DBA)

<u>IBM3270</u>	<u>VT100</u>		
PF6	ESC 6	COMMIT	Permanently enters all changes into the database as a unit of work.
PF12+PF14	ESC = + ESC W	CREATE RECORD	Initializes a record for insertion.
PF12+PF17	ESC = + ESC T	DELETE RECORD	Deletes a retrieved record.
PF12+PF16	ESC = + ESC R	DUPLICATE RECORD	Duplicates the previous record.
PF12 + PF18	ESC = + ESC Y	ENABLE RECORD UPDATE	Enables you to update a retrieved record.

E. User Aids

IBM3270

VT100

PF13	ESC Q	DISPLAY ERROR	Displays an error message and help information for the field where the last error occurred.
PF12+PF15	ESC = + ESC E	DUPLICATE FIELD	Copies the field value from the same field of the previous record into the current field.
PF3	ESC 3	EXIT	Exits the current form and returns to the SQL*Forms main prompt.
PF14	ESC W	HELP	Displays information about the current field. If the HELP function is issued a second time, displays complete attributes for the field.
PF15	ESC E	LIST OF FIELD VALUES	Displays the possible values for the current field. To see subsequent values, press NEXT FIELD; to stop, press ABORT QUERY.
(*DISABLED)		PRINT FORM	Creates a file of the current screen page, all the pages of the form, the key sequences for the functions, or the entire help information for a specified field.
<CLEAR>	CTRL +	REDISPLAY PAGE	Restores the screen image.
PF1	ESC 1	SHOW FUNCTION KEYS	Displays the function key assignments for the current terminal type.

Chapter 4. Function Keymaps For The
IBM3270 And The VT100.

Chapter 4. Function Keymaps for the IBM3270 and the VT100.

KEYMAP FOR THE IBM 3270

FUNCTION	KEYSTROKE (S)	FUNCTION	KEYSTROKE (S)
Transmit	PF21	Execute Query	PF5
Scroll Right	PF22	Block Menu	PF2
Next Field	PF20	Enter	ENTER
Next Record	PF8	Commit Transaction	PF6
Next Set of Records	PF9	Exit/Cancel	PF3
Next Block	PF11	No Operation	PF16
Scroll Left	PF23	Redisplay Page	CLEAR for VM PA2 for MVS
Previous Field	PF19	Help	PF14
Previous Record	PF7	List Field Values	PF15
Previous Block	PF10	Display Error	PF13
Clear Field	PF12+PF19	Enable Record Update	PF12+PF18
Clear Record	PF12+PF20	Show Function Keys	PF1
Clear Block	PF17		
Clear Form/Rollback	PF18		
Delete Record	PF12+PF17		
Create Record	PF12+PF14		
Duplicate Field	PF12+PF15		
Duplicate Record	PF12+PF16		
Enter Query	PF4		
Count Query Hits	PF12+PF13		

KEYMAP FOR THE VT100 TERMINAL

FUNCTION	KEYSTROKE (S)	FUNCTION	KEYSTROKE (S)
Transmit	ESC O	Execute Query	ESC 5
Scroll Right	ESC P	Block Menu	ESC 2
Next Field	ESC I	Enter	ENTER
Next Record	ESC 8	Commit Transaction	ESC 6
Next Set of Records	ESC 9	Exit/Cancel	ESC 3
Next Block	ESC -	No Operation	PF16
Scroll Left	PF23	Redisplay Page	CLEAR for VM PA2 for MVS
Previous Field	ESC U	Help	ESC 14
Previous Record	ESC 7	List Field Values	ESC E
Previous Block	ESC 0	Display Error	ESC Q
Clear Field	ESC = + ESC U	Enable Record Update	ESC = + ESC Y
Clear Record	ESC = + ESC Y	Show Function Keys	ESC 1
Clear Block	ESC T		
Clear Form/Rollback	ESC Y		
Delete Record	ESC = + ESC T		
Create Record	ESC = + ESC W		
Duplicate Field	ESC = + ESC E		
Duplicate Record	ESC = + ESC R		
Enter Query	ESC 4		
Count Query Hits	ESC = + ESC Q		

Note: All function keys on the VT100 correspond to the function keys on the IBM 3270. Example: PF12 on the IBM 3270 is ESC 12 or ESC = on the VT100 keyboard.

Chapter 5. Procedures For Display

Chapter 5. Procedures For Display

=====PROCEDURES FOR DISPLAY=====

To display all records in a table:

Press **EXECUTE QUERY <PF5>**.

Press **NEXT RECORD <PF8>** to display each subsequent record.

To retrieve records by matching values:

Press **ENTER QUERY <PF4>**;

enter the values you want to match into the appropriate fields

(a value can be exactly as JONES, or, _ON%, where " " represents any character and "%" represents any string);

press **COUNT QUERY HITS <PF12+PF13>** to find the number of records matched;

press **ENTER QUERY <PF5>**.

Press **NEXT RECORD <PF8>** to view subsequent records retrieved by the query.

To retrieve records by entering a **WHERE** condition:

Press **ENTER QUERY <PF4>**;

move the cursor to the field where you want to enter a variable; type &, followed by a variable name (for example, &SAL);

press **EXECUTE QUERY <PF5>**;

When prompted with "Query where ... ?", enter any **WHERE** condition.

(for example: &FEE > 1000; &DATE < 31-NOV-87;

&SAL = 45000 or &NAME like "KERRY") then press **ENTER**.

Return to **Menu <PF2>**

PART III.

DATABASE ADMINISTRATION

Chapter 1.

Procedures For Using SQL Menus

Chapter 2.

Content And Layout Of Menus

Chapter 1. Procedures For Using SQL Menus

Chapter 1. Procedures For Using SQL Menus

There are several procedures that are common for all SQL menus. They are as follows:

ENTERING DATA:

- To enter data into a field, press <NEXT FIELD> after typing in the information. The cursor will then be positioned at the next field to be entered.
- Some fields on the SQL menu may be skipped if data is not required or available by the user. This may be done by pressing <ENTER>. If data must be entered, then the message "Field must be entered" will appear at the bottom of the screen.
- If you are not sure of the type of data that needs to be entered for a particular field, pressing the <HELP> key while the cursor is at the field will display a brief help message at the bottom of the screen. Pressing the <HELP> key a second time will display a more detailed help screen for the field
- Because the screen can only display 80 characters per line, some of the fields cannot display its entire contents at once. To view the contents, each field can be scrolled horizontally by using the <SCROLL LEFT> and <SCROLL RIGHT> keys.
- To access a different SQL menu other than the one that is currently being used, pressing <NEXT BLOCK> will display the next SQL menu. An alternative way is by pressing the <MENU> key. This will display a submenu listing of the SQL menus that are available. From there you can select the menu you need.
- To display the function key map, press <SHOW FUNCTION KEYS>.

RETRIEVING, INSERTING, UPDATING, AND DELETING RECORDS:

- To display all records in a table:
Press <EXECUTE QUERY>. Press <NEXT RECORD> to display each subsequent record. If there is no data in the database for the particular SQL menu, then the message "Query caused no records to be retrieved" will appear at the bottom of the screen. Data can be cleared from the SQL menu by pressing the <CLEAR RECORD> key.
- To retrieve records by matching exact values:
Press <ENTER QUERY>; enter the values you want to match into the appropriate fields; press <EXECUTE QUERY>. Press <NEXT RECORD> to view subsequent records retrieved by the query.
- To retrieve records by entering a WHERE condition:
Press <ENTER QUERY>; move the cursor to the field where you want to enter a variable; type & followed by a variable name (for example, &SAL); press <EXECUTE QUERY>; when prompted with Query where...? enter any WHERE condition, (for example, &SAL > 10000.
- To insert a new record:
Press <CREATE RECORD>; enter the field values; press <COMMIT>. The message "Transaction completed - 1 records processed" will appear at the bottom of the screen. To insert additional records, repeat the sequence.
- To update a record:
Retrieve the desired record; move the cursor to the field(s) to be updated, press <ENABLE RECORD UPDATE>, change the necessary values; press <COMMIT>. To update additional records, repeat the sequence.
- To delete a record:
Retrieve the record to be deleted; press <DELETE RECORD>, press <COMMIT>. To delete additional records, repeat the sequence.

Chapter 2. Content And Layout Of Menus

Chapter 2.

Contents And Layout Of Menu

To invoke the SEAD program, at the systems Ready; prompt type XSEAD1. The SEAD logo will appear on the screen. Follow the instructions in PART II, Chapter 1 on Logging In and Logging Out.

```
NASA / JSC

ee  e   e   eeeee   e   e eeeeee eeeeee  eeee
e e  e   e e   e   e e   e   e   e   e   e
e e e  eeeee  eeeee  eeeee   e   e   eeeee  e
e  ee e   e   e   e e   e   e   e   e   e   e
e   e e   e  eeeee  e   e e   eeee  eeeee  eeee

oooooooooooo  ooooooooooooo  ooooo  ooooooooooooo
oooooooooooo  ooooooooooooo  ooo ooo  ooooooooooooo
ooo          ooo          ooo  ooo  ooo  ooo  ooo  ooo
ooo          ooo          ooo  ooo  ooo  ooo  ooo  ooo
oooooooooooo  ooooooo  ooooooooooooooooooooo  ooo  ooo
oooooooooooo  ooooooo  ooooooooooooooooooooo  ooo  ooo
          ooo ooo          ooo          ooo  ooo  ooo
          ooo ooo          ooo          ooo  ooo  ooo
oooooooooooo  ooooooooooooo  ooo          ooo  ooooooooooooo
oooooooooooo  ooooooooooooo  ooo          ooo  ooooooooooooo

Please Enter Username ==>
Please Enter Password ==>
```

Once the username and password have been entered, the open main menu will appear. See PART II, Chapter 2 for detailed descriptions of the open main menu.

```
NASA / JSC

                S E A D

Software Engineering and Ada Database System

    B.  Bulletin Board
    I.  Beginner Information
    K.  Function Keymap
    C.  Continue with SEAD
    P.  Change VM Password
    E.  Exit SEAD

Please enter your selection ==>
```

[Enter C] Continue with SEAD. The main menu will appear.

```
                S E A D

Software Engineering and Ada Database System

    1.  Education and Training Resources
    2.  Publications and Conferences
    3.  Projects
    4.  Compilers and Other Products
    5.  Reusable Packages

    R.  Return

Please Enter Selection ==>
```


This menu consists of six main selections:

- Selection 1, "**Education and Training Resources**", allows you to obtain detailed information concerning courses and books.
- Selection 2, "**Publications and Conferences**", allows you to obtain detailed information concerning publications and various conferences.
- Selection 3, "**Projects**", allows you to obtain detailed information concerning projects.
- Selection 4, "**Compilers and Other Products**", allows you to obtain detailed information concerning compilers and other products.
- Selection 5, "**Reusable Packages**", allows you to obtain detailed information concerning packages.
- Selection R, "**Return**", allows you to return to the main menu.

At this point, we will go through the attributes of each field in each SQL Menu.

At the main menu, select 1 , the SQL Menu "**Education and Training Resources**" will appear on the screen.

S E A D

Education and Training Resources

1. Course Information

2. Book Information

R. Return

Please Enter Selection ==>

This menu allows you to select from two areas of information, "**Course Information and Book Information**". From the "**Education and Training Resources**" menu, select option 1, "**Course Information**", and the "**COURSE INFORMATION**" submenu will appear on the screen.

COURSE INFORMATION

- 1 COURSE
- 2 COURSE SPONSOR
- 3 COURSE AUDIENCE
- 4 COURSE FORMAT
- 5 COURSE MATERIAL
- 6 HELP
- 7 PROCEDURES FOR DISPLAY
- 8 KEY MAP FOR VT100 TERMINAL
- 9 ----
- 10 ----

Enter selection # ____

When we selected option 1, "Course Information", from the "Education and Training Resources" menu, the SQL menu, submenu "COURSE INFORMATION" automatically appeared on the screen. This will hold true for all cases, that is, the SQL menus submenu will always appear on the screen.

At the "COURSE INFORMATION" submenu, select option 2, "COURSE SPONSOR", and this menu will appear on the screen.

----- COURSE SPONSOR -----

Course Sponsor Id _____
Sponsor Name _____
Address _____
City _____ State _____ ZIP _____
Contact Person _____
Phone _____

This particular menu must be selected first so that the Course Sponsor Id can be entered, this is necessary for the first menu "Course".

When this menu appears, the cursor will always be positioned at the first field (in this case it is at "Course Sponsor Id"). The first field of every SQL menu **must be entered** while some of the proceeding fields give you the option of entering or not entering data.

This particular SQL menu contains detailed information concerning a particular course sponsor. For the procedures to enter data and retrieve, insert, update, and delete records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The course sponsor id consists of the first 2 letters of the first 4 words of the sponsor name. This field may be a maximum of 8 characters.
2. The sponsor name may be a maximum of 64 characters but only 60 characters will be displayed at a time.
3. The street address may be a maximum of 48 characters.
4. The city name may be a maximum of 15 characters.
5. The state name may be a maximum of 16 characters.
6. The zip code may be a maximum of 10 characters.
7. The name of the sponsor's contact person may be a maximum of 32 characters.
8. The sponsor's phone number may be a maximum of 24 characters.

Press PF2 to display the "COURSE INFORMATION" submenu and select option 1, "COURSE". The SQL menu for "COURSE" looks like this.

----- COURSE -----	
Course Id	_____
Title	_____
Abstract	_____
Objective	_____
Level	_____
Fee	_____
Frequency	_____
Series	_____
Prerequisite	_____
Instructor	_____
Comments	_____
Sponsor Id	_____
Name	_____
Type	_____
Duration	_____
Location	_____
Credit	_____

This particular SQL menu contains detailed information concerning a particular course. For the procedures to enter data and retrieve, insert, update, and delete records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The course id consists of the first 2 letters of the first 4 words of the course title. This field may be a maximum of 8 characters.
2. The title of the course may be a maximum of 64 characters but only 55 characters will be displayed at a time.
3. The abstract of the course may be a maximum of 240 characters but only 66 characters will be displayed at a time.
4. The objective of the course may be a maximum of 240 characters but only 66 characters will be displayed at a time.
5. The level of the course (e.g. Introductory, Intermediate, or Advanced, etc.) may be a maximum of 24 characters.
6. The course type (e.g. Software Engineering, Ada, etc.) may be a maximum of 24 characters.
7. The registration fee of the course may be a real number with a maximum length of 10.
8. The duration of the course (e.g. 1 day, 5 days, 2 weeks, etc.) may be a maximum of 24 characters.
9. The frequency of the course (e.g. semester, 1 time/year, 2-5 times/year, etc.) may be a maximum of 24 characters.

10. The location where the course is held (e.g. Audience site, campus, trainer's site, etc.) may be a maximum of 24 characters.
11. The course series (e.g. University degree, CEU, company sequence, etc.) may be a maximum of 24 characters.
12. The course credit (e.g. participation, corporate, university, etc.) may be a maximum of 24 characters.
13. The prerequisite for the course may be a maximum of 62 characters.
14. The course instructor's name may be a maximum of 32 characters.
15. Comments for the course may be a maximum of 240 characters but only 66 characters will be displayed at a time.
16. The sponsor id consists of the first 2 letters of the first 4 words of the course sponsor's name. This id must have been stored in the database using the "COURSE SPONSOR" menu. This field may be a maximum of 8 characters.
17. The sponsor name may be a maximum of 64 characters but only 60 characters will be displayed at a time.

To go to the next block **Press PF11**, or **Press PF2** to display the "COURSE INFORMATION" submenu and **select option 3, "COURSE AUDIENCE"**. To return to the "Education and Training Resources" menu, **Press PF3**.

The SQL menu for "COURSE AUDIENCE" looks like this.

----- AUDIENCE -----	
Course Id	_____
Course Title	_____
Sponsor Id	_____
Sponsor Name	_____
Audience Type	_____

This particular SQL menu contains detailed information concerning the audience of a particular course. For the procedures to enter data and retrieve, insert, update, and delete records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The course id consists of the first 2 letters of the first 4 words of the course title. This id must have previously been stored in the database using the "COURSE" menu. This field may be a maximum of 8 characters.
2. The course title may be a maximum of 64 characters but only 55 characters will be displayed.
3. The sponsor id consists of the first 2 letters of the first 4 words of the sponsor's name. This id must have previously been stored in the database using the "COURSE SPONSOR" menu. This field may be a maximum of 8 characters.
4. The sponsor name may be a maximum of 64 characters but only 60 characters will be displayed at a time.
5. The course audience type (e.g. Manager, System Programmer, etc.) may be a maximum of 24 characters.

To go to the next block Press PF11, or Press PF2 to display the "COURSE INFORMATION" submenu and select option 4, "COURSE FORMAT". To return to the "Education and Training Resources" menu, Press PF3.

The SQL menu for "COURSE FORMAT" looks like this.

```
----- FORMAT -----  
  
Course Id _____  
Course Title _____  
Sponsor Id _____  
Sponsor Name _____  
Format _____
```

This particular SQL menu contains detailed information concerning the format for a particular course. For the procedures to enter data and retrieve, insert, update, and delete records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The course id consists of the first 2 letters of the first 4 words of the course title. This id must have previously been stored in the database using the "COURSE" menu. This field may be a maximum of 8 characters.
2. The course title may be a maximum of 64 characters but only 55 characters will be displayed.
3. The sponsor id consists of the first 2 letters of the first 4 words of the sponsor's name. This id must have previously been stored in the database using the "COURSE SPONSOR" menu. This field may be a maximum of 8 characters.
4. The sponsor name may be a maximum of 64 characters but only 60 characters will be displayed at a time.
5. The course format (e.g. lecture, lab, simulation, etc.) may be a maximum of 24 characters.

To go to the next block Press PF11, or Press PF2 to display the "COURSE INFORMATION" submenu and select option 5, "COURSE MATERIAL". To return to the "Education and Training Resources" menu, Press PF3.

----- MATERIAL -----	
Course Id	_____
Course Title	_____
Sponsor Id	_____
Sponsor Name	_____
Material	_____

This particular SQL menu contains detailed information concerning the material(s) required for a particular course. For the procedures to enter data and retrieve, insert, update, and delete records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The course id consists of the first 2 letters of the first 4 words of the course title. This id must have previously been stored in the database using the "COURSE" menu. This field may be a maximum of 8 characters.
2. The course title may be a maximum of 64 characters but only 55 characters will be displayed.
3. The sponsor id consists of the first 2 letters of the first 4 words of the sponsor's name. This id must have previously been stored in the database using the "COURSE SPONSOR" menu. This field may be a maximum of 8 characters.
4. The sponsor name may be a maximum of 64 characters but only 60 characters will be displayed at a time.
5. The course material(s) required (e.g. textbook, manual, etc.) may be a maximum of 24 characters.

We have looked at all of the SQL menus available for selection 1, "Course Information", of the "Education and Training Resources" menu. Use submenu "COURSE INFORMATION" options 6)for help and 7)for procedures for display 8)Keymap for a VT100 Terminal. For instructions on the procedures to insert, update and delete records in the database refer to PART II - PART IV of this manual.

Press PF3 to return to the "Education and Training Resources" menu.

From the "Education and Training Resources" menu, select option 2, "Book Information", and the "BOOK INFORMATION" submenu will appear.

```
                                BOOK INFORMATION

1  BOOK
2  BOOK LOCATION
3  BOOK PUBLISHER
4  BOOK AUTHOR
5  BOOK AUTHOR INFORMATION
6  HELP
7  PROCEDURES FOR DISPLAY
8  KEY MAP FOR VT100 TERMINAL
9  ----

Enter selection # ____
```

This submenu is very similar to the "COURSE INFORMATION" submenu seen earlier except that now we can select SQL menus that contain information on **books**.

From the "BOOK INFORMATION" submenu, select option 1, "BOOK", and this SQL menu will appear.

```
                ----- BOOK -----

Book Id _____

Title _____

Abstract _____

Publisher _____

Edition ____      Year ____      Price _____
```

This SQL menu contains detailed information concerning a particular book. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The book id is the ISBN number for the book. This field may be a maximum of 13 characters.
2. The book title may be a maximum of 64 characters but only 63 characters will be displayed at a time.
3. The abstract of the book may be a maximum of 240 characters but only 63 characters will be displayed at a time.
4. The name of the publisher may be a maximum of 64 characters but only 63 characters will be displayed at a time.
5. The edition of the book may be a maximum of 2 characters.
6. The year of publication may be a maximum of 4 characters.
7. The price of the book may be a real number with a maximum length of 10.

To go to the next block Press **PF11**, or Press **PF2** to display the "BOOK INFORMATION" submenu and select option 2, "BOOK LOCATION".

The SQL menu for "BOOK LOCATION" looks like this.

----- BOOK LOCATION -----	
Book Id	_____
Title	_____
Location	_____

This SQL menu contains detailed information concerning a particular location of a book. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The book id is the ISBN number for the book. This id must have previously been stored in the database using the "BOOK" menu. This field may be a maximum of 13 characters.
2. The book title may be a maximum of 64 characters but only 63 characters will be displayed at a time.
3. The book location may be a maximum of 64 characters but only 63 characters will be displayed at a time.

To go to the next block Press **PF11**, or Press **PF2** to display the "BOOK INFORMATION" submenu and select option 3, "BOOK PUBLISHER".

The SQL menu for "BOOK PUBLISHER" looks like this.

```

----- BOOK PUBLISHER -----
Publisher Name _____
      Address _____
            City _____
            State _____ Zip _____
Contact Person _____
            Phone _____

```

This SQL menu contains detailed information concerning a particular publisher. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The name of the publisher may be a maximum of 64 characters.
2. The street address may be a maximum of 48 characters.
3. The city name may be a maximum of 24 characters.
4. The state name may be a maximum of 15 characters.
5. The zip code may be a maximum of 10 characters.
6. The name of the contact person may be a maximum of 32 characters.
7. The phone number may be a maximum of 24 characters.

To go to the next block Press **PF11**, or Press **PF2** to display the "BOOK INFORMATION" submenu and select option 4, "BOOK AUTHOR". To return to the "Education and Training Resources" menu, Press **PF3**.

The SQL menu for "AUTHOR" and "AUTHOR INFORMATION" looks like this.

```

----- BOOK AUTHOR -----
Book Id _____
Title _____
Last Name _____ First Name _____
----- AUTHOR INFORMATION -----
Last Name _____ First Name _____
Position _____
Division _____
Organization _____
Address _____
City _____ State _____ ZIP _____
Phone _____ Electronic Mail Code _____
```

The AUTHOR menu may be used if you select option 4 from the "BOOK INFORMATION" submenu, or by Pressing PF11 while in the previous SQL menu. This SQL menu contains the author's name for a particular book. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The book id is the ISBN number for the book. This id must have previously been stored in the database using the "BOOK" menu. This field may be a maximum of 13 characters.
2. The book title may be a maximum of 64 characters but only 63 characters will be displayed at a time.
3. Both the last and first name of the author may be a maximum of 16 characters each.

The "AUTHOR INFORMATION" menu may be used if you select option 5 from the "BOOK INFORMATION" submenu, or by Pressing PF11 while in the previous SQL menu. This SQL menu contains detailed information on a particular author. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. Both the last and first name of the author may be a maximum of 16 characters each.
2. The author's position (e.g. Director, Manager, Professor, etc.) may be a maximum of 48 characters.

3. The division (e.g. Software Engineering, Technical Support, etc.) may be a maximum of 64 characters but only 60 characters will be displayed at a time.
4. The company or organization name the author is associated with may be a maximum of 64 characters but only 60 characters will be displayed at a time.
5. The street address may be a maximum of 48 characters but only 32 characters will be displayed at a time.
6. The city name may be a maximum of 24 characters.
7. The state name may be a maximum of 15 characters.
8. The zip code may be a maximum of 10 characters.
9. The phone number may be a maximum of 24 characters but only 20 characters will be displayed at a time.

We have looked at all of the SQL menus available for selection 2, "Book Information", of the "Education and Training Resources" menu. Use submenu "BOOK INFORMATION" options 6)Help, 7)Procedures For Display and 8)Key Map For VT100 Terminal to display instructions for each particular SQL menu. For instructions to insert, update and delete records in the database refer to PART II - PART IV of this manual.

We have now completed main menu selection 1, "Education and Training Resources". Press PF3 to return to the "Education and Training Resources" menu and then Press <R>Return to return to the "main" menu.

From the main menu, select option 2, "PUBLICATIONS AND CONFERENCES", and this SQL menu will appear.

<p style="text-align: center;">S E A D</p> <p style="text-align: center;">Publications and Conferences</p> <p style="text-align: center;">1. Publication Information</p> <p style="text-align: center;">2. Conference Information</p> <p style="text-align: center;">R. Return</p> <p>Enter Selection ==>:</p>

This menu allows you to select from three areas of information, "Publication Information", "Conference Information" and a command to Return to the "main" menu.

From the "Publications and Conferences" menu, select option 1, "Publication Information" and the "BIBLIOGRAPHY" submenu will appear on the screen.

BIBLIOGRAPHY	
1	PUBLICATION
2	LOCATION
3	AUTHOR
4	AUTHOR INFORMATION
5	CATEGORY AND SUBJECT
6	GENERAL TERM
7	KEYWORD
8	PROJECT CROSS-REFERENCE
9	PRODUCT CROSS-REFERENCE
10	COMPILER CROSS-REFERENCE
11	PACKAGE CROSS-REFERENCE
12	HELP
13	PROCEDURES FOR DISPLAY
14	KEY MAP FOR VT100 TERMINAL
15	----
Enter selection # <u> </u>	

From the "BIBLIOGRAPHY" submenu, select option 1, "PUBLICATION", and this SQL menu will appear.

----- PUBLICATION -----	
Publication Id	_____
Article Title	_____
Abstract	_____
Publisher	_____
Publication Title	_____
Volume Number	_____
Issue Number	_____
Month	_____
Year	_____
Page Range	_____

This SQL menu contains detailed information concerning a particular publication. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The publication id consists of the first 4 letters of the author's name (or first author if there are more than one), plus the last 2 digits of the year of publication, plus a letter (e.g. DATE86a). This field may be a maximum of 7 characters.
2. The title of the article may be a maximum of 128 characters but only 58 characters will be displayed at a time.
3. The abstract of the article may be a maximum of 240 characters but only 58 characters will be displayed at a time.
4. The publisher of the publication (e.g. ACM, IEEE, etc.) may be a maximum of 48 characters.
5. The type of publication (e.g. Computer Surveys or Communication, etc.) may be a maximum of 48 characters.
6. The volume number of the publication may be an integer with a maximum length of 7 but only 5 numbers will be displayed at a time.
7. The issue number of the publication may be an integer with a maximum length of 7 but only 4 numbers will be displayed at a time.
8. The month the publication was published may be a maximum of 9 characters.
9. The year of publication may be a maximum of 4 characters.
10. The page range of the publication (e.g. 237-298) may be a maximum of 9 characters.

To go to the next block, Press PF11 or Press PF2 to display the "BIBLIOGRAPHY" submenu and select option 3, "AUTHOR".

The SQL menu for "AUTHOR" and "AUTHOR INFORMATION" looks like this.

```

----- AUTHOR -----
Publication Id _____
Title _____
Last Name _____ First Name _____
----- AUTHOR INFORMATION -----
Last Name _____ First Name _____
Position _____
Organization _____
Division _____
Address _____
City _____ State _____ ZIP _____
Phone _____ Electronic Mail Code _____
```

The AUTHOR menu may be used if you select option 3 from the "BIBLIOGRAPHY" submenu, or by Pressing PF11 while in the previous SQL menu. This SQL menu contains the author's name for a particular book. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The publication id consists of the first 4 letters of the author's name (or first author if there are more than one), plus the last 2 digits of the year of publication, plus a letter (e.g. DATA86a). This id must have previously been stored in the database using the "PUBLICATION" menu. This field may be a maximum of 7 characters.
2. The article title may be a maximum of 128 characters but only 58 characters will be displayed at a time.
3. Both the last and first name of the author may be a maximum of 16 characters each.

The "AUTHOR INFORMATION" menu may be used if you select option 4 of the "BIBLIOGRAPHY" submenu, or by Pressing PF11 while in the previous SQL menu. This SQL menu contains detailed information concerning a particular author. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. Both the last and first name of the author may be a maximum of 16 characters each.
2. The author's position (e.g. Director, Manager, Professor, etc.) may be a maximum of 48 characters.

3. The division (e.g. Software Engineering, Technical Support, etc.) may be a maximum of 64 characters but only 60 characters will be displayed at a time.
4. The company or organization name the author is associated with may be a maximum of 64 characters but only 60 characters will be displayed at a time.
5. The street address may be a maximum of 48 characters but only 32 characters will be displayed at a time.
6. The city name may be a maximum of 24 characters.
7. The state name may be a maximum of 15 characters.
8. The zip code may be a maximum of 10 characters.
9. The phone number may be a maximum of 24 characters but only 20 characters will be displayed at a time.

To go to the next block Press PF11, or Press PF2 to display the "BIBLIOGRAPHY" submenu and select option 5, "CATEGORY AND SUBJECT". To return to the "main" menu, Press PF3.

The SQL menu for "CATEGORY AND SUBJECT" looks like this.

```

----- CATEGORY and SUBJECT -----

Publication Id _____
Article Title _____

Category Id _
Category _____

Sub_Category1 Id _
Sub_Category1 _____

Sub_Category2 Id ___
Sub_Category2 _____

Subject _____

```

This SQL menu contains detailed information concerning the category and subject of a particular publication. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The publication id consists of the first 4 letters of the author's name (or first author if there are more than one), plus the last 2 digits of the year of publication, plus a letter (e.g. DATA86a). This id must have previously been stored in the database using the "PUBLICATION" menu. This field may be a maximum of 7 characters.
2. The article title may be a maximum of 128 characters but only 58 characters will be displayed.
3. The category id may be a maximum of 1 character (any letter from A to Z).
4. The category name may be a maximum of 64 characters but only 60 characters will be displayed at a time.
5. The sub_category1 id may be a maximum of 1 digit number.
6. The sub_category1 title may be a maximum of 64 characters but only 60 characters will be displayed at a time.
7. The sub_category2 id may be a maximum of 2 characters (any number or M for misc.).
8. The sub_category2 title may be a maximum of 80 characters but only 61 characters will be displayed at a time.
9. The subject description of the publication may be a maximum of 48 characters.

To go to the next block Press PF11, or Press PF2 to display the "BIBLIOGRAPHY" submenu and select option 6, "GENERAL TERM". To return to the "main" menu, Press PF3.

The SQL menu for "GENERAL TERM" looks like this.

----- GENERAL TERM -----	
Publication Id	_____
Article Title	_____
General Term	_____

This SQL menu contains detailed information concerning the general term of a particular publication. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The publication id consists of the first 4 letters of the author's name (or first author if there are more than one), plus the last 2 digits of the year of publication, plus a letter (e.g. DATA86a). This id must have previously been stored in the database using the "PUBLICATION" menu. This field may be a maximum of 7 characters.
2. The article title may be a maximum of 128 characters but only 58 characters will be displayed at a time.
3. The general term(s) for the publication may be a maximum of 48 characters.

To go to the next block Press PF11, or Press PF2 to display the "BIBLIOGRAPHY" submenu and select option 7, "PUBLICATION KEYWORD". To return to the "main" menu, Press PF3.

The SQL menu for "PUBLICATION KEYWORD" looks like this.

----- KEYWORD -----	
Publication Id	_____
Article Title	_____
Keyword	_____

This SQL menu contains detailed information concerning the keyword(s) of a particular publication. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The publication id consists of the first 4 letters of the author's name (or first author if there are more than one), plus the last 2 digits of the year of publication, plus a letter (e.g. DATA86a). This id must have previously been stored in the database using the "PUBLICATION" menu. This field may be a maximum of 7 characters.
2. The article title may be a maximum of 128 characters but only 58 characters will be displayed at a time.
3. The keyword(s) for the publication may be a maximum of 48 characters.

To go to the next block Press PF11, or Press PF2 to display the "BIBLIOGRAPHY" submenu and select option 8, "PROJECT CROSS-REFERENCE". To return to the "main" menu, Press PF3.

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The SQL menu for "PROJECT CROSS-REFERENCE" looks like this.

----- PROJECT CROSS-REFERENCE -----	
Publication Id	_____
Title	_____
Project Id	_____
Name	_____

This SQL menu contains detailed information concerning the project cross-reference of a particular publication. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The publication id consists of the first 4 letters of the author's name (or first author if there are more than one), plus the last 2 digits of the year of publication, plus a letter (e.g. DATA86a). This id must have previously been stored in the database using the "PUBLICATION" menu. This field may be a maximum of 7 characters.
2. The article title may be a maximum of 128 characters but only 58 characters will be displayed at a time.
3. The project id consists of the first 2 letters of the first 4 words of the project name. This id must have previously been stored in the database using the "PROJECT" menu. This field may be a maximum of 8 characters.
4. The project name may be a maximum of 72 characters but only 49 characters will be displayed at a time.

To go to the next block Press PF11, or Press PF2 to display the "BIBLIOGRAPHY" submenu and select option 9, "PRODUCT CROSS-REFERENCE". To return to the "main" menu, Press PF3.

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The SQL menu for "PRODUCT CROSS-REFERENCE" looks like this.

```
----- PRODUCT CROSS-REFERENCE -----  
  
Publication Id _____  
  
Title _____  
  
Product Id _____  
  
Name _____
```

This SQL menu contains detailed information concerning the product cross-reference of a particular publication. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The publication id consists of the first 4 letters of the author's name (or first author if there are more than one), plus the last 2 digits of the year of publication, plus a letter (e.g. DATA86a). This id must have previously been stored in the database using the "PUBLICATION" menu. This field may be a maximum of 7 characters.
2. The article title may be a maximum of 128 characters but only 58 characters will be displayed at a time.
3. The product id consists of the first 2 letters of the first 4 words of the product name. This field may be a maximum of 8 characters.
4. The name of the product may be a real number with a maximum length of 10.

To go to the next block Press PF11, or Press PF2 to display the "BIBLIOGRAPHY" submenu and select option 10, "COMPILER CROSS-REFERENCE". To return to the "main" menu, Press PF3.

The SQL menu for "COMPILER CROSS-REFERENCE" looks like this.

```

----- COMPILER CROSS-REFERENCE -----
Publication Id _____
      Title _____
Compiler Id   _____
      Name   _____
```

This SQL menu contains detailed information concerning the compiler cross-reference of a particular publication. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The publication id consists of the first 4 letters of the author's name (or first author if there are more than one), plus the last 2 digits of the year of publication, plus a letter (e.g. DATA86a). This id must have previously been stored in the database using the "PUBLICATION" menu. This field may be a maximum of 7 characters.
2. The article title may be a maximum of 128 characters but only 58 characters will be displayed at a time.
3. The compiler id consists of the first 2 letters of the first 4 words of the compiler name. This id must have previously been stored in the database using the "COMPILER" menu. This field may be a maximum of 8 characters.
4. The name of the compiler may be a maximum of 48 characters.

To go to the next block Press PF11, or Press PF2 to display the "BIBLIOGRAPHY" submenu and select option 11, "PACKAGE CROSS-REFERENCE". To return to the "main" menu, Press PF3.

The SQL menu for "PACKAGE CROSS-REFERENCE" looks like this.

```
----- PACKAGE CROSS-REFERENCE -----  
Publication Id _____  
Title _____  
Package Id _____  
Name _____
```

This SQL menu contains detailed information concerning the package cross-reference of a particular publication. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The publication id consists of the first 4 letters of the author's name (or first author if there are more than one), plus the last 2 digits of the year of publication, plus a letter (e.g. DATA86a). This id must have previously been stored in the database using the "PUBLICATION" menu. This field may be a maximum of 7 characters.
2. The article title may be a maximum of 128 characters but only 58 characters will be displayed at a time.
3. The package id consists of the first 2 letters of the first 4 words of the package name. This id must have previously been stored in the database using the "REUSABLE PACKAGE" menu. This field may be a maximum of 8 characters.
4. The package name may be a maximum of 48 characters.

We have now completed main menu selection 2, "Publications and Conferences". Use submenu BIBLIOGRAPHY options 12)Help, 13)Procedures For Display and 14)Key Map For VT100 Terminal for information corresponding to each particular SQL menu. For instructions to insert, update and delete records in the database, refer to PART II - PART IV of this manual.

Press PF3 to return to the "Publications and Conferences" menu.

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From the "Publications and Conferences" menu, select option 2, "Conference Information", and the "CONFERENCE INFORMATION" submenu will appear.

```

                                CONFERENCE INFORMATION

1  CONFERENCE
2  CONFERENCE SPONSOR
3  COORDINATOR
4  COORDINATOR INFORMATION
5  CONFERENCE CHARGE
6  PRESENTATION
7  PRESENTER
8  PRESENTER INFORMATION
9  HELP
10 PROCEDURES FOR DISPLAY
11 KEY MAP FOR VT100 TERMINAL
12 ----
13 ----

Enter selection #  _

```

From the "CONFERENCE INFORMATION" submenu, select option 1, "CONFERENCE", and this SQL menu will appear.

```

                ----- CONFERENCE -----

Conference Id _____

      Name _____

Location _____

      Date _____ Duration _____ Frequency _____

Abstract _____

      Type _____

```

This SQL menu contains detailed information concerning a particular conference. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The conference id consists of the first 2 letters of the first 4 words of the conference name. This field may be a maximum of 8 characters.
2. The conference name may be a maximum of 64 characters but only 60 characters will be displayed at a time.
3. The location of the conference may be a maximum of 64 characters but only 60 characters will be displayed at a time.
4. The beginning date of the conference, in the DD-MON-YY format, may be a maximum of 9 characters.
5. The duration of the conference (e.g. 3 day, 5 days, etc.) may be a maximum of 9 characters.
6. The frequency of the conference (e.g. 2 times/year, 3-4 times/year, etc.) may be a maximum of 16 characters.
7. The sponsor name of the conference (e.g. University of Houston, etc.) may be a maximum of 64 characters but only 60 characters will be displayed at a time.
8. The abstract of the conference may be a maximum of 240 characters but only 60 characters will be displayed at a time.
9. The type of the conference (e.g. Artificial Intelligence, etc.) may be a maximum of 24 characters.

To go to the next block Press PF11, or Press PF2 to display the "CONFERENCE INFORMATION" submenu and select option 2, "CONFERENCE SPONSOR". To return to the "main" menu, Press PF3.

The SQL menu for "CONFERENCE SPONSOR" looks like this.

```

----- CONFERENCE SPONSOR -----
Conference Id _____
      Name _____
Sponsor Name _____
      Address _____
      City _____ State _____ ZIP _____
Contact Person _____
      Phone _____
```

This SQL menu contains detailed information concerning a sponsor of a particular conference. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The conference id consists of the first 2 letters of the first 4 words of the conference name. This id must have previously been stored in the database using the "CONFERENCE" menu. This field may be a maximum of 8 characters.
2. The conference name may be a maximum of 64 characters but only 60 characters will be displayed at a time.
3. The sponsor name may be a maximum of 64 characters
4. The street address may be a maximum of 48 characters but only 32 characters will be displayed at a time.
5. The city name may be a maximum of 24 characters.
6. The state name may be a maximum of 15 characters.
7. The zip code may be a maximum of 10 characters.
8. The contact person may be a maximum of 32 characters.
9. The phone number may be a maximum of 24 characters but only 20 characters will be displayed at a time.

To go to the next block Press PF11, or Press PF2 to display the "CONFERENCE INFORMATION" submenu and select option 3, "COORDINATOR". To return to the "main" menu, Press PF3.

The SQL menu for "COORDINATOR" and "COORDINATOR INFORMATION" looks like this.

```

                ***** COORDINATOR *****

Conference Id _____
                Name _____
Last Name _____ First Name _____

                ***** COORDINATOR INFORMATION*****

Last Name _____ First Name _____
Position _____
Organization _____
Division _____
Address _____
City _____ State _____ ZIP _____
Phone _____ Electronic Mail Code _____

```

This SQL menu contains detailed information concerning a coordinator of a particular conference. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The conference id consists of the first 2 letters of the first 4 words of the conference name. This id must have previously been stored in the database using the "CONFERENCE" menu. This field may be a maximum of 8 characters.
2. The conference name may be a maximum of 64 characters but only 60 characters will be displayed at a time.
3. Both the last and first name of the coordinator may be a maximum of 16 characters each.

The "COORDINATOR INFORMATION" menu may be used if you select option 4, from the "CONFERENCE INFORMATION" submenu, or by Pressing PF11 while in the previous SQL menu. This SQL menu contains detailed information concerning a particular coordinator. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. Both the last and first name of the coordinator may be a maximum of 16 characters each.
2. The coordinator's position (e.g. Director, Manger, Professor, etc.) may be a maximum of 48 characters.

3. The company or organization name the coordinator is associated with may be a maximum of 64 characters but only 60 characters will be displayed at a time.
4. The division (e.g. Software Engineering, Technical Support, etc.) may be a maximum of 64 characters but only 60 characters will be displayed at a time.
5. The street address may be a maximum of 48 characters but only 32 characters will be displayed at a time.
6. The city name may be a maximum of 24 characters.
7. The state name may be a maximum of 15 characters.
8. The zip code may be a maximum of 10 characters.
9. The phone number may be a maximum of 24 characters but only 20 characters will be displayed at a time.

To go to the next block **Press PF11**, or **Press PF2** to display the "CONFERENCE INFORMATION" submenu and **select option 5, "CONFERENCE CHARGE"**. To return to the "Publications and Conferences" menu, **Press PF3**.

The SQL menu for "CONFERENCE CHARGE" looks like this.

----- CONFERENCE CHARGE -----	
Conference Id	_____
Name	_____
Type of Registration	_____
Fee	_____

This SQL menu contains detailed information concerning a particular conference charge. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The conference id consists of the first 2 letters of the first 4 words of the conference name. This id must have previously been stored in the database using the "CONFERENCE" menu. This field may be a maximum of 8 characters.
2. The conference name may be a maximum of 64 characters.

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3. The type of registration for the conference (e.g. Software Engineering, etc.) may be a maximum of 24 characters but only 15 characters will be displayed at a time.
4. The conference fee may be a real number with a maximum length of 10.

To go to the next block Press PF11, or Press PF2 to display the "CONFERENCE INFORMATION" submenu and select option 6, "PRESENTATION". To return to the "Publications and Conferences" menu, Press PF3.

The SQL menu for "PRESENTATION" looks like this.

```

----- PRESENTATION -----
Conference Id _____
      Name _____
Article Id _____
      Title _____
      Abstract _____
```

This SQL menu contains detailed information concerning the presentation of a particular conference. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The conference id consists of the first 2 letters of the first 4 words of the conference name. This id must have previously been stored in the database using the "CONFERENCE" menu. This field may be a maximum of 8 characters.
2. The conference name may be a maximum of 64 characters.
3. The presentation id consists of the first 4 letters of the author's last name (or first author if there are more than one), plus the last 2 digits of the year of the article. This field may be a maximum of 7 characters.
4. The title of the article may be a maximum of 128 characters but only 63 characters will be displayed at a time.
5. The abstract of the article may be a maximum of 240 characters but only 63 characters will be displayed at a time.

To go to the next block Press PF11, or Press PF2 to display the "CONFERENCE INFORMATION" submenu and select option 7, "PRESENTER". To return to the "Publications and Conferences" menu, Press PF3.

The SQL menu for "PRESENTER" and "PRESENTER INFORMATION" looks like this.

```

----- PRESENTER -----

Article Id _____
Title _____
Last Name _____ First Name _____

----- PRESENTER INFORMATION -----

Last Name _____ First Name _____
Position _____
Organization _____
Division _____
Address _____
City _____ State _____ Zip _____
Phone _____ Electronic Mail Code _____

```

The "PRESENTER" menu may be used if you select option 7, from the "CONFERENCE INFORMATION" submenu, or by Pressing PF11 while in the previous SQL menu. This SQL menu contains detailed information concerning a particular presenter. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The article id will consists of the first 4 letters of the author's last name (or first author if there are more than one), plus the last 2 digits of the year of the article. This id must have previously been stored in the database using the "PRESENTATION" menu. This field may be a maximum of 7 characters.
2. The article title may be a maximum of 128 characters but only 58 characters will be displayed at a time.
3. Both the last and first name of the presenter may be a maximum of 16 characters each.

The "PRESENTER INFORMATION" menu may be used if you select option 8, from the "CONFERENCE INFORMATION" submenu, or by Pressing PF11 while in the previous SQL menu. This SQL menu contains detailed information concerning a particular presenter. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. Both the last and first name of the presenter may be a maximum of 16 characters each.
2. The presenter's position (e.g. Director, Manager, Professor, etc.) may be a maximum of 48 characters.

3. The company or organization that the presenter is associated with may be a maximum of 64 characters but only 60 characters will be displayed at a time.
4. The presenter's division name (e.g. Software Engineering, Computer Science Dept., etc.) may be a maximum of 64 characters but only 60 characters will be displayed at a time.
5. The street address may be a maximum of 48 characters but only 32 characters will be displayed at a time.
6. The city name may be a maximum of 24 characters.
7. The state name may be a maximum of 15 characters.
8. The zip code may be a maximum of 10 characters.
9. The phone number may be a maximum of 24 characters but only 20 characters will be displayed at a time.

We have looked at all of the SQL menus available for selection 2, "Conferences" of the "Publications and Conferences" menu. Use the "CONFERENCE INFORMATION" submenu, options 9)Help, 10)Procedures For Display and 11)Key Map For VT100 Terminal for information corresponding to each particular SQL menu. For instructions to insert, update and delete records in the database, refer to PART II - PART IV of this manual.

Press PF3 to return to the "Publications and Conferences" menu. Press <R>Return to return to the "main" menu.

From the main menu, select option 3, "Projects", and the "PROJECT INFORMATION" submenu will appear.

```
----- PROJECT INFORMATION -----  
1 PROJECT  
2 CONTACT_PERSON  
3 CONTACT_PERSON INFORMATION  
4 SUB_PROJECT  
5 PROJECT KEYWORD  
6 PUBLICATION CROSS-REFERENCE  
7 COMPILER CROSS-REFERENCE  
8 PACKAGE CROSS-REFERENCE  
9 HELP  
10 PROCEDURES FOR DISPLAY  
11 KEY MAP FOR VT100 TERMINAL  
12 ----  
  
Enter selection # __
```

From the "PROJECT INFORMATION" submenu, select option 1, "PROJECT", and this SQL menu will appear.

```
===== PROJECT =====  
Project Id _____  
Name _____  
Description _____  
Start Date _____ Completion Date _____  
Lines of Code _____ Status _____  
Expected Life Time _____  
Host Machines _____  
Target Machines _____  
Compiler _____  
Sponsor _____  
Contractor _____  
Comments _____
```

This SQL menu contains detailed information concerning a particular project. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The project id consists of the first 2 letters of the first 4 words of the project name. This field may be a maximum of 8 characters.
2. The project name may be a maximum of 72 characters but only 49 characters will be displayed at a time.
3. The description of the project may be a maximum of 240 characters but only 60 characters will be displayed at a time.
4. The date on which the project started may be a maximum of 9 characters.
5. The date on which the project was completed may be a maximum of 9 characters.
6. The number of lines of code may be a maximum length of 12.
7. The status of the project (e.g. planned, development, completed, or other) may be a maximum of 16 characters.
8. The expected life time of the project (e.g. 5 years, 10 years, or indefinite) may be a maximum of 12 characters.
9. The host machine(s) that the project will run on (e.g. VAX 785/VMS 4.1) may be a maximum of 64 characters but only 60 characters will be displayed at a time.
10. The target machine(s) that the project will run on (e.g. IBM 4381/UTS) may be a maximum of 64 characters but only 60 characters will be displayed at a time.
11. The compiler used (e.g. DEC VAXAda) may be a maximum of 48 characters.
12. The name of the project's sponsor (e.g. NASA, Navy, Air Force, etc.) may be a maximum of 64 characters but only 60 characters will be displayed at a time.
13. The name of the organization(s) involved in the project may be a maximum of 64 characters but only 60 characters will be displayed at a time.
14. Comments for the project may be a maximum of 240 characters but only 60 characters will be displayed at a time.

To go to the next block, you may select option 2, "CONTACT PERSON", or Press PF11 while in the previous SQL menu. To return to the "Project" menu, Press PF3.

The SQL menu for "CONTACT PERSON" and "CONTACT PERSON INFORMATION" looks like this.

```

----- CONTACT PERSON -----
Project Id _____
Project Name _____
Last Name _____ First Name _____
----- CONTACT PERSON INFORMATION -----
Last Name _____ First Name _____
Position _____
Organization _____
Division _____
Address _____
City _____ State _____ Zip _____
Phone _____ Electronic Mail Code _____

```

The "CONTACT PERSON" menu may be used if you **select option 2**, from the "PROJECT INFORMATION" submenu, or by **Pressing PF11** while in the previous SQL menu. This SQL menu contains information concerning the contact person for a particular project. For the procedures to enter data and insert, update, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The project id consists of the first 2 letters of the first 4 words of the project name. This id must have previously been stored in the database using the "PROJECTS" menu. This field may be a maximum of 8 characters.
2. The project name may be a maximum of 72 characters but only 49 characters will be displayed at a time.
3. Both the last and first name of the project's contact person may be a maximum of 16 characters each.

The "CONTACT PERSON INFORMATION" menu may be used if you **Press PF2** to display the "PROJECT INFORMATION" submenu, and **select option 3**, or by **Pressing PF11** while in the previous SQL menu. This SQL menu contains detailed information concerning the contact person for a particular project. For the procedures to enter data and insert, update, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. Both the last and first name of the contact person may be a maximum of 16 characters each.
2. The contact person's position (e.g. Director, Manager, Professor, etc.) may be a maximum of 48 characters.

3. The name of the company or organization the contact person is associated with may be a maximum of 64 characters but only 60 characters will be displayed at a time.
4. The division name of the contact person (e.g. Research - Development, etc.) may be a maximum of 64 characters but only 60 characters will be displayed at a time.
5. The street address may be a maximum of 48 characters but only 32 characters will be displayed at a time.
6. The city name may be a maximum of 24 characters.
7. The state name may be a maximum of 15 characters.
8. The zip code number may be a maximum of 10 characters.

To go to the next block, Press PF11, or you may Press PF2 to display the "PROJECT INFORMATION" submenu and select option 4, "SUB_PROJECT". To return to the "Projects" menu, Press PF3.

The SQL menu for "SUB_PROJECT" looks like this.

----- SUB_PROJECT -----	
Project Id	_____
Project Name	_____
Sub_Project Id	_____
Sub_Project Name	_____

This SQL menu contains detailed information concerning a particular sub_project. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The project id consists of the first 2 letters of the first 4 words of the project name. This id must have previously been stored in the database using the "PROJECTS" menu. This field may be a maximum of 8 characters.
2. The project name may be a maximum of 72 characters but only 49 characters will be displayed at a time.

3. The sub_project id consists of the first 2 letters of the first 4 words of the sub_project name. This id must have previously been stored in the database using the PROJECT menu. This field may be a maximum of 8 characters.
4. The sub_project name may be a maximum of 72 characters but only 49 characters will be displayed at a time.

To go to the next block, Press PF11, or you may Press PF2 to display the "PROJECT INFORMATION" submenu and select option 5, "PROJECT KEYWORD". To return to the "Projects" menu, Press PF3.

The SQL menu for "PROJECT KEYWORD" looks like this.

```
----- PROJECT KEYWORD -----  
  
Project Id _____  
Project Name _____  
Keyword _____
```

This SQL menu contains detailed information concerning a particular project keyword. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The project id consists of the first 2 letters of the first 4 words of the project name. This id must have previously been stored in the database using the "PROJECT" menu. This field may be a maximum of 8 characters.
2. The project name may be a maximum of 72 characters but only 49 characters will be displayed at a time.
3. The keyword(s) of the project (e.g. Space Station, etc.) may be a maximum of 24 characters.

To go to the next block, Press PF11, or you may Press PF2 to display the "PROJECT INFORMATION" submenu and select option 6, "PUBLICATION CROSS-REFERENCE". To return to the "Projects" menu, Press PF3.

The SQL menu for "PUBLICATION CROSS-REFERENCE" looks like this.

```

----- PUBLICATION CROSS-REFERENCE -----

Project Id _____

      Name _____

Publication Id _____

      Title _____

```

This SQL menu contains detailed information concerning the publication cross-reference for a particular project. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The project id consists of the first 2 letters of the first 4 words of the project name. This id must have previously been stored in the database using the "PROJECT" menu. This field may be a maximum of 8 characters.
2. The project name may be a maximum of 72 characters but only 49 characters will be displayed at a time.
3. The publication id consists of the first 4 letters of the author's name (or first author if there are more than one), plus the last 2 digits of the year of publication, plus a letter (e.g. DATA86a). This id must have previously been stored in the database using the "PUBLICATION" menu. This field may be a maximum of 7 characters.
4. The article title may be a maximum of 128 characters but only 58 characters will be displayed at a time.

To go to the next block, Press PF11, or you may Press PF2 to display the "PROJECT INFORMATION" submenu and select option 7, "COMPILER CROSS-REFERENCE". To return to the "Projects" menu, Press PF3.

The SQL menu for "COMPILER CROSS-REFERENCE" looks like this.

```
----- COMPILER CROSS-REFERENCE -----  
Project Id _____  
      Name _____  
Compiler Id _____  
      Name _____
```

This SQL menu contains detailed information concerning the compiler cross reference for a particular project. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The project id consists of the first 2 letters of the first 4 words of the project name. This id must have previously been stored in the database using the "PROJECT" menu. This field may be a maximum of 8 characters.
2. The project name may be a maximum of 72 characters but only 49 characters will be displayed at a time.
3. The compiler id consists of the first 2 letters of the first 4 words of the compiler name. This id must have previously been stored in the database using the "COMPILER" menu. This field may be a maximum of 8 characters.
4. The name of the compiler may be a maximum of 48 characters.

To go to the next block, Press PF11, or you may Press PF2 to display the "PROJECT INFORMATION" submenu and select option 8, "PACKAGE CROSS-REFERENCE". To return to the "Projects" menu, Press PF3.

The SQL menu for "PACKAGE CROSS-REFERENCE" looks like this.

```
----- PACKAGE CROSS-REFERENCE -----  
Project Id _____  
      Name _____  
Package Id _____  
      Name _____
```

This SQL menu contains detailed information concerning the package cross-reference of a particular project. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The project id consists of the first 2 letters of the first 4 words of the project name. This id must have previously been stored in the database using the "PROJECT" menu. This field may be a maximum of 8 characters.
2. The project name may be a maximum of 72 characters but only 49 characters will be displayed at a time.
3. The package id consists of the first 2 letters of the first 4 words of the package name. This id must have previously been stored in the database using the "REUSABLE PACKAGE" menu. This field may be a maximum of 8 characters.
4. The package name may be a maximum of 48 characters.

We have looked at all of the SQL menus available from the "PROJECT" menu. Use the PROJECT INFORMATION submenu, options 9)Help, 10)Procedures For Display and 11)Key Map For VT100 Terminal for information corresponding to each particular SQL menu. For instructions to insert, update and delete records in the database, refer to PART II - PART IV of this manual.

Press PF3 to return to the "Project" menu. Press <R>Return to return to the "main" menu.

At the main menu, select option 4, the SQL Menu "Compilers and Other Products" will appear on the screen.

```

                                S E A D

                                Compilers and Other Products

                                1. Compiler Information
                                2. Product Information
                                R. Return

Please Enter Selection ==>
```

This menu allows you to select from two areas of information, "Compiler Information" and "Product Information". From the "Compilers and Other Products" menu, select option 1, "Compiler Information", and the "COMPILER INFORMATION" submenu will appear.

COMPILER INFORMATION

- 1 COMPILER
- 2 VENDOR
- 3 HOST SYSTEM
- 4 TARGET SYSTEM
- 5 PERFORMANCE
- 6 EVALUATOR INFORMATION
- 7 PUBLICATION CROSS-REFERENCE
- 8 PROJECT CROSS-REFERENCE
- 9 PACKAGE CROSS-REFERENCE
- 10 HELP
- 11 PROCEDURES FOR DISPLAY
- 12 KEY MAP FOR VT100 TERMINAL
- 13 ----
- 14 ----

Enter selection #

From the "COMPILER INFORMATION" submenu, select option 1, "COMPILER", and this SQL menu will appear.

----- COMPILER -----

Compiler Id _____

Name _____

Price _____

Version Number _____ ACVC Version Number _____ ACVC Date _____

Comment _____

Vendor Id _____

Name _____

This SQL menu contains detailed information concerning a particular compiler. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The compiler id consists of the first 2 letters of the first 4 words of the compiler name. This field may be a maximum of 8 characters.
2. The name of the compiler may be a maximum of 48 characters.
3. The price of the compiler may be a real number with a maximum of 10 characters.
4. The version number of the compiler may be a maximum of 8 characters.
5. The ACVC version number of the compiler may be a maximum of 8 characters.
6. The ACVC date, in the MM-DD-YY format, may be a maximum of 9 characters.
7. Comments about the compiler may be a maximum of 60 characters.
8. The vendor id consists of the first 2 letters of the first 4 words of the vendors name. This id must have previously been stored in the database using the "VENDOR" menu. This field may be a maximum of 8 characters.
9. The vendor name may be a maximum of 48 characters.

To go to the next block, Press PF11, or you may Press PF2 to display the "COMPILER INFORMATION" submenu and select option 2, "VENDOR". To return to the "Compiler Information" menu, Press PF3.

The SQL menu for "VENDOR" looks like this.

```

----- VENDOR -----

Vendor Id _____

Vendor Name _____

Address _____

City _____ State _____ ZIP _____

Phone _____

```

This SQL menu contains detailed information concerning a particular vendor. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The vendor id consists of the first 2 letters of the first 4 words of the vendor name. This field may be a maximum of 8 characters.
2. The name of the vendor may be a maximum of 48 characters.
3. The street address may be a maximum of 48 characters but only 32 characters will be displayed at a time.
4. The city name may be a maximum of 24 characters.
5. The state name may be a maximum of 15 characters.
6. The zip code number may be a maximum of 10 characters but only 20 characters will be displayed at a time.
7. The phone number may be a maximum of 24 characters.

To go to the next block, **Press PF11**, or you may **Press PF2** to display the "COMPILER INFORMATION" submenu and **select option 3, "HOST SYSTEM"**. To return to the "Compiler Information" menu, **Press PF3**.

The SQL menu for "HOST SYSTEM" looks like this.

```
----- HOST SYSTEM -----  
  
Compiler Id _____  
Name _____  
Host Machine _____  
Operating system _____
```

This SQL menu contains detailed information concerning a particular host system. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The compiler id consists of the first 2 letters of the first 4 words of the compiler name. This id must have previously been stored in the database using the "COMPILER" menu. This field may be a maximum of 8 characters.
2. The name of the compiler may be a maximum of 48 characters.
3. The host computer (e.g. VAX8600, IBM 370, etc.) may be a maximum of 48 characters.
4. The operating system for the host computer (e.g. UNIX, VMS, VM/CMS, etc.) may be a maximum of 48 characters.

To go to the next block, Press PF11, or you may Press PF2 to display the "COMPILER INFORMATION" submenu and select option 4, "TARGET SYSTEM". To return to the "Compiler Information" menu, Press PF3.

The SQL menu for "TARGET SYSTEM" looks like this.

----- TARGET SYSTEM -----	
Compiler Id	_____
Name	_____
Target Machine	_____
Operating System	_____

This SQL menu contains detailed information concerning a particular target system. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The compiler id consists of the first 2 letters of the first 4 words of the compiler name. This id must have previously been stored in the database using the "COMPILER" menu. This field may be a maximum of 8 characters.
2. The name of the compiler may be a maximum of 48 characters.
3. The target computer (e.g. VAX11/780, etc.) may be a maximum of 16 characters.
4. The operating system for the target computer (e.g. UNIX, VMS, VM/CMS, etc.) may be a maximum of 16 characters.

To go to the next block, Press PF11, or you may Press PF2 to display the "COMPILER INFORMATION" submenu and select option 5, "PERFORMANCE". To return to the "Compiler Information" menu, Press PF3.

The SQL menu for "PERFORMANCE" and "EVALUATOR INFORMATION" looks like this.

```

----- PERFORMANCE -----
Compiler Id _____
      Name _____
      Comment _____
Evaluator Id _____
      Name _____

----- EVALUATOR INFORMATION -----
Evaluator Id _____
      Name _____
      Address _____
      City _____ State _____ ZIP _____
      Phone _____
```

This SQL menu contains detailed information concerning the performance of a particular compiler. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The compiler id consists of the first 2 letters of the first 4 words of the compiler name. This id must have previously been stored in the database using the "COMPILER" menu. This field may be a maximum of 8 characters.
2. The name of the compiler may be a maximum of 48 characters.
3. Comments about the compiler may be a maximum of 240 characters but only 66 characters will be displayed at a time.
4. The evaluator id consists of the first 2 letters of the first 4 words of the evaluators name. This field may be a maximum of 8 characters.
5. The name of the evaluator may be a maximum of 48 characters.

The "EVALUATOR INFORMATION" menu may be used if you Press PF2 to display the "COMPILER INFORMATION" submenu, and select option 6, or by Pressing PF11 while in the previous SQL menu. This SQL menu contains information concerning the evaluator information for a particular compiler. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The evaluator id consists of the first 2 letters of the first 4 words of the evaluators name. This field must have previously been stored in the database using the "PERFORMANCE" menu. This field may be a maximum of 8 characters.

2. The name of the evaluator may be a maximum of 48 characters.
3. The street address may be a maximum of 48 characters but only 32 characters will be displayed at a time.
4. The city name may be a maximum of 24 characters.
5. The state name may be a maximum of 15 characters.
6. The zip code number may be a maximum of 24 characters but only 20 characters will be displayed at a time.
7. The phone number may be a maximum of 24 characters.

To go to the next block, Press PF11, or you may Press PF2 to display the "COMPILER INFORMATION" submenu and select option 7, "PUBLICATION CROSS-REFERENCE". To return to the "Compiler Information" menu, Press PF3.

The SQL menu for "PUBLICATION CROSS-REFERENCE" looks like this.

```

----- PUBLICATION CROSS-REFERNCE -----
Compiler Id _____
Name _____
Publication Id _____
Title _____

```

This SQL menu contains detailed information concerning the publication cross-reference of a particular compiler. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The compiler id consists of the first 2 letters of the first 4 words of the compiler name. This id must have previously been stored in the database using the "COMPILER" menu. This field may be a maximum of 8 characters.
2. The name of the compiler may be a maximum of 48 characters.
3. The publication id consists of the first 4 letters of the author's name (or first author if there are more than one), plus the last 2 digits of the year of publication, plus a letter (e.g. DATA86a). This id must have previously been stored in the database using the "PUBLICATION" menu. This field may be a maximum of 7 characters.
4. The article title may be a maximum of 128 characters but only 58 characters will be displayed at a time.

To go to the next block, Press PF11, or you may Press PF2 to display the "COMPILER INFORMATION" submenu and select option 8, "PROJECT CROSS-REFERENCE". To return to the "Compiler Information" menu, Press PF3.

The SQL menu for "PROJECT CROSS-REFERENCE" looks like this.

```
----- PROJECT CROSS-REFERNE -----  
Compiler Id _____  
      Name _____  
Project Id _____  
      Name _____
```

This SQL menu contains detailed information concerning the project cross-reference of a particular compiler. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The compiler id consists of the first 2 letters of the first 4 words of the compiler name. This id must have previously been stored in the database using the "COMPILER" menu. This field may be a maximum of 8 characters.
2. The name of the compiler may be a maximum of 48 characters.
3. The project id consists of the first 2 letters of the first 4 words of the project name. This id must have previously been stored in the database using the "PROJECT" menu. This field may be a maximum of 8 characters.
4. The project name may be a maximum of 72 characters but only 49 characters will be displayed at a time.

To go to the next block, Press PF11, or you may Press PF2 to display the "COMPILER INFORMATION" submenu and select option 9, "PACKAGE CROSS-REFERENCE". To return to the "Compiler Information" menu, Press PF3.

The SQL menu for "PACKAGE CROSS-REFERENCE" looks like this.

```
----- PACKAGE CROSS-REFERNCE -----  
Compiler Id _____  
      Name _____  
Package Id _____  
      Name _____
```

This SQL menu contains detailed information concerning the package cross-reference of a particular compiler. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The compiler id consists of the first 2 letters of the first 4 words of the compiler name. This id must have previously been stored in the database using the "COMPILER" menu. This field may be a maximum of 8 characters.
2. The name of the compiler may be a maximum of 48 characters.
3. The package id consists of the first 2 letters of the first 4 words of the package name. This id must have previously been stored in the database using the "REUSABLE PACKAGE" menu. This field may be a maximum of 8 characters.
4. The package name may be a maximum of 48 characters.

We have looked at all of the SQL menus available for selection 1, "Compiler Information" from the "Compilers and Other Products" menu. Use the COMPILER INFORMATION submenu, options 10)Help, 11)Procedures For Display and 12)Key Map For VT100 Terminal for information corresponding to each particular SQL menu. For instructions to insert, update and delete records in the database, refer to PART II - PART IV of this manual.

Press PF3 to return to the "Compilers and Other Products" menu.

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From the "Compilers and Other Products" menu, select option 2, "Other Products", and the "PRODUCT INFORMATION" submenu will appear.

```
----- PRODUCT INFORMATION -----  
1  PRODUCT  
2  VENDOR  
3  HOST SYSTEM  
4  TARGET SYSTEM  
5  PUBLICATION CROSS-REFERENCE  
6  PROJECT CROSS-REFERENCE  
7  PACKAGE CROSS-REFERENCE  
8  HELP  
9  PROCEDURES FOR DISPLAY  
10 KEY MAP FOR VT100 TERMINAL  
11 ----  
12 ----  
  
Enter selection # ____
```

From the "PRODUCT INFORMATION" submenu, select option 1, "PRODUCT", and this SQL menu will appear.

```
----- PRODUCT -----  
  
Product Id _____  
Name _____  
Price _____ Type _____ Version Number _____  
Comment _____  
Vendor Id _____  
Vendor Name _____
```

This SQL menu contains information concerning a particular product. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The product id consists of the first 2 letters of the first 4 words of the product name. This field may be a maximum of 8 characters.
2. The name of the product may be a maximum of 48 characters.
3. The price of the product may be a real number with a maximum length of 10.
4. The type of the product (e.g. compiler, etc.) may be a maximum of 24 characters but only 15 characters will be displayed at a time.
5. The version number may be a real number with a maximum of 8 characters.
6. Comments about the product may be a maximum of 240 characters but only 60 characters will be displayed at a time.
7. The vendor id consists of the first 2 letters of the first 4 words of the vendor name. This id must have previously been stored in the database using the "VENDOR" menu. This field may be a maximum of 8 characters.
8. The name of the vendor may be a maximum of 48 characters.

To go to the next block, Press PF2 to display the "PRODUCT INFORMATION" submenu and, select option 2, "VENDOR". You may also go to the next block by Pressing PF11 while in the previous SQL menu.

The SQL menu for "VENDOR" looks like this.

----- VENDOR -----

Vendor Id _____

Vendor Name _____

Address _____

City _____ State _____ Zip _____

Phone _____

This SQL menu contains information concerning the vendor of a particular product. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The vendor id consists of the first 2 letters of the first 4 words of the vendor name. This field may be a maximum of 8 characters.

2. The name of the vendor may be a maximum of 48 characters.
3. The street address may be a maximum of 48 characters.
4. The city name may be a maximum of 24 characters but only 15 characters will be displayed at a time.
5. The state name may be a maximum of 15 characters.
6. The zip code may be a maximum of 10 characters.
7. The phone number may be a maximum of 24 characters.

To go to the next block, select option 3, "HOST SYSTEM", from the "PRODUCT INFORMATION" submenu. You may also go to the next block by pressing PF11 while in the previous SQL menu.

The SQL menu for "HOST SYSTEM" looks like this.

```
----- HOST SYSTEM -----  
  
Product Id _____  
  
Name _____  
  
Host Machine _____  
  
Operating System _____
```

This SQL menu contains information concerning a particular host system. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The product id consists of the first 2 letters of the first 4 words of the product name. This id must have previously been stored in the database using the "PRODUCT" menu. This field may be a maximum of 8 characters.
2. The name of the product may be a maximum of 48 characters.
3. The host computer (e.g. VAX8600, IBM 370, etc.) may be a maximum of 48 characters.
4. The operating system for the host computer (e.g. UNIX, VMS, VM/CMS, etc.) may be a maximum of 48 characters.

To go to the next block, **select option 4, "TARGET SYSTEM"**, from the "PRODUCT INFORMATION" submenu. You may also go to the next block by **Pressing PF11** while in the previous SQL menu.

The SQL menu for "TARGET SYSTEM" looks like this.

```

----- TARGET SYSTEM -----

Product Id _____

Name _____

Target Machine _____

Operating System _____
```

This SQL menu contains information concerning the target system for a particular product. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The product id consists of the first 2 letters of the first 4 words of the product name. This id must have previously been stored in the database using the "PRODUCT" menu. This field may be a maximum of 8 characters.
2. The name of the product may be a maximum of 48 characters.
3. The target computer (e.g. VAX11/780, etc.) may be a maximum of 48 characters.
4. The operating system for the target computer (e.g. UNIX, VMS, VM/CMS, etc.) may be a maximum of 48 characters.

To go to the next block, **select option 5, "PUBLICATION CROSS-REFERENCE"**, from the "PRODUCT INFORMATION" submenu. You may also go to the next block by **Pressing PF11** while in the previous SQL menu.

The SQL menu for "PUBLICATION CROSS-REFERENCE" looks like this.

```
----- PUBLICATION CROSS-REFERNCE -----  
  
Product Id _____  
      Name _____  
Publication Id _____  
      Title _____
```

This SQL menu contains information concerning the publication cross-reference on a particular product. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The product id consists of the first 2 letters of the first 4 words of the product name. This id must have previously been stored in the database using the "PRODUCT" menu. This field may be a maximum of 8 characters.
2. The name of the product may be a maximum of 48 characters.
3. The publication id consists of the first 4 letters of the author's name (or first author if there are more than one), plus the last 2 digits of the year of publication, plus a letter (e.g. DATA86a). This id must have previously been stored in the database using the "PUBLICATION" menu. This field may be a maximum of 7 characters.
4. The article title may be a maximum of 128 characters but only 58 characters will be displayed at a time.

To go to the next block, select option 6, "PROJECT CROSS-REFERENCE", from the "PRODUCT INFORMATION" submenu. You may also go to the next block by Pressing PF11 while in the previous SQL menu.

The SQL menu for "PROJECT CROSS-REFERENCE" looks like this.

```
----- PROJECT CROSS-REFERNCE -----  
  
Product Id _____  
      Name _____  
  
Project Id _____  
      Name _____
```

This SQL menu contains information concerning the project cross-reference on a particular product. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The product id consists of the first 2 letters of the first 4 words of the product name. This id must have previously been stored in the database using the "PRODUCT" menu. This field may be a maximum of 8 characters.
2. The name of the product may be a maximum of 48 characters.
3. The project id consists of the first 2 letters of the first 4 words of the project name. This id must have previously been stored in the database using the "PROJECT" menu. This field may be a maximum of 8 characters.
4. The project name may be a maximum of 72 characters but only 49 characters will be displayed at a time.

To go to the next block, select option 7, "PACKAGE CROSS-REFERENCE", from the "PRODUCT INFORMATION" submenu. You may also go to the next block by Pressing PF11 while in the previous SQL menu.

This SQL menu for "PACKAGE CROSS-REFERENCE" looks like this.

```
----- PACKAGE CROSS-REFERNECE -----  
Product Id _____  
      Name _____  
Package Id _____  
      Name _____
```

This SQL menu contains information concerning a package cross-reference on a particular product. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The product id consists of the first 2 letters of the first 4 words of the product name. This id must have previously been stored in the database using the "PRODUCT" menu. This field may be a maximum of 8 characters.
2. The name of the product may be a maximum of 48 characters.
3. The package id consists of the first 2 letters of the first 4 words of the package name. This id must have previously been stored in the database using the "REUSABLE PACKAGE" menu. This field may be a maximum of 8 characters.
4. The package name may be a maximum of 48 characters.

We have looked at all of the SQL menus available for selection 2, "Product Information" from the "Compilers and Other Products" menu. Use the **PRODUCT INFORMATION** submenu, options 8)Help, 9)Procedures For Display and 10)Key Map For VT100 Terminal for information corresponding to each particular SQL menu. For instructions to insert, update and delete records in the database, refer to PART II - PART IV of this manual.

We have now completed main menu option 4, "Compilers and Other Products". Press **PF3** to return to the "Compilers and Other Products" menu, and then Press **<Q>**Return to return to the "main" menu.

From the main menu, select option 5, "Reusable Packages", and the "REUSABLE PACKAGES" submenu will appear.

----- REUSABLE PACKAGE INFORMATION -----

- 1 REUSABLE PACKAGE
- 2 CONTACT_PERSON
- 3 CONTACT PERSON INFORMATION
- 4 CREATOR
- 5 CREATOR INFORMATION
- 6 HOST SYSTEM
- 7 TARGET SYSTEM
- 8 REVISE HISTORY
- 9 PERFORMANCE
- 10 PERFORMANCE EVALUATOR INFORMATION
- 11 PACKAGE KEYWORD
- 12 CROSS REFERENCE FOR PUBLICATION
- 13 CROSS REFERENCE FOR PROJECT
- 14 CROSS REFERENCE FOR PRODUCT
- 15 CROSS REFERENCE FOR COMPILER
- 16 HELP
- 17 PROCEDURES FOR DISPLAY
- 18 KEY MAP FOR VT100 TERMINAL
- 19 ----

Enter selection #

From the "REUSABLE PACKAGES" submenu, select option 1, "REUSABLE PACKAGE", and this SQL menu will appear.

```
----- REUSABLE PACKAGE -----  
  
Package Id _____  
Name _____  
  
Abstract _____  
  
Copyright _  
  
Version Number _____  
  
Release Date _____  
  
Comments _____
```

This SQL menu contains information concerning a particular package. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The package id consists of the first 2 letters of the first 4 words of the package name. This field may be a maximum of 8 characters.
2. The package name may be a maximum of 48 characters.
3. The abstract of the package may be a maximum of 240 characters but only 60 characters will be displayed at a time.
4. The package copyright status may be a maximum of 1 character (Y or N).
5. The version number of the package may be a maximum of 5 characters.
6. The release data of the package may be in the MM/DD/YY format and has a maximum length of 9 characters.
7. Any comments for the package may be a maximum of 240 characters.

To go to the next block, select option 2, "CONTACT_PERSON", from the "REUSABLE PACKAGE INFORMATION" submenu. You may also go to the next block by Pressing PF11 while in the previous SQL menu.

The SQL menu for "CONTACT_PERSON" looks like this.

```
----- CONTACT PERSON -----  
  
Package Id _____  
Name _____  
Last Name _____ First Name _____  
  
----- CONTACT PERSON INFORMATION -----  
  
Last Name _____ First Name _____  
Position _____  
Organization _____  
Division _____  
Address _____  
City _____ State _____ Zip _____  
Phone _____ Electronic Mail Code _____
```

This SQL menu contains information concerning a contact person of a particular package. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The package id consists of the first 2 letters of the first 4 words of the package name. This id must have previously been stored in the database using the "REUSABLE PACKAGE" menu. This field may be a maximum of 8 characters.
2. The package name may be a maximum of 48 characters.
3. Both the last and first name of the project's contact person may be a maximum of 16 characters each.

The "CONTACT PERSON INFORMATION" menu may be used if you Press PF2 to display the "REUSABLE PACKAGE INFORMATION" submenu, and select option 3, or by Pressing PF11 while in the previous SQL menu. This SQL menu contains information concerning the contact person for a particular package. For the procedures to enter data and insert, update, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. Both the last and first name of the contact person may be a maximum of 16 characters each.
2. The contact person's position (e.g. Director, Manager, Professor, etc.) may be a maximum of 48 characters.
3. The name of the company or organization the contact person is associated with may be a maximum of 64 characters but only 60 characters will be displayed at a time.

4. The division name of the contact person (e.g. Research - Development, etc.) may be a maximum of 64 characters but only 60 characters will be displayed at a time.
5. The street address may be a maximum of 48 characters but only 32 characters will be displayed at a time.
6. The city name may be a maximum of 24 characters.
7. The state name may be a maximum of 15 characters.
8. The zip code number may be a maximum of 24 characters but only 20 characters will be displayed at a time.
9. The phone number may be a maximum of 24 characters.
10. The electronic mail code may be a maximum of 16 characters.

To go to the next block, select option 4, "CREATOR", from the "REUSABLE PACKAGE INFORMATION" submenu. You may also go to the next block by pressing PF11 while in the previous SQL menu.

The SQL menu for "CREATOR" looks like this.

```

          ----- CREATOR -----

Package Id _____
      Name _____
Last Name _____ First Name _____

          ----- CREATOR INFORMATION -----

Last Name _____ First Name _____
Position _____
Organization _____
Division _____
Address _____
City _____ State _____ ZIP _____
Phone _____ Electronic Mail Code _____

```

This SQL menu contains information concerning the Creator of a particular package. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The package id consists of the first 2 letters of the first 4 words of the package name. This id must have previously been stored in the database using the "REUSABLE PACKAGE" menu. This field may be a maximum of 8 characters.

2. The package name may be a maximum of 48 characters.
3. Both the last and first name of the creator may be a maximum of 16 characters each.

The "CREATOR INFORMATION" menu may be used if you select option 5 from the "REUSABLE PACKAGE INFORMATION" submenu, or by Pressing PF11 while in the previous SQL menu. This SQL menu contains detailed information concerning the creator of a particular package. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. Both the last and first name of the creator may be a maximum of 16 characters each.
2. The creator's position (e.g. Director, Manager, Professor, etc.) may be a maximum of 48 characters.
3. The name of the company or organization the creator is associated with may be a maximum of 64 characters in length but only 60 characters will be displayed at a time.
4. The division name of the creator (e.g. Research - Development, etc.) may be a maximum of 64 characters in length but only 60 characters will be displayed at a time.
5. The street address may be a maximum of 48 characters in length but only 32 characters will be displayed at a time.
6. The city name may be a maximum of 24 characters.
7. The state name may be a maximum of 15 characters.
8. The zip code may be a maximum of 10 characters.
9. The phone number of the creator may be a maximum of 24 characters in length but only 20 characters will be displayed at a time.

To go to the next block, Press PF11, or you may Press PF2 to display the "REUSABLE PACKAGE INFORMATION" submenu and select option 6, "HOST SYSTEM". To return to the "main" menu, Press PF3.

The SQL menu for "HOST SYSTEM" looks like this.

```

----- HOST SYSTEM -----

Package Id _____

      Name _____

Host Machine _____

Operating System _____
```

This SQL menu contains information concerning the host system for a particular package. For the procedures to enter data and insert, update, delete, and retrieve records in the database refer to the instructions in PART II - PART IV of this manual.

1. The package id consists of the first 2 letters of the first 4 words of the package name. This id must have previously been stored in the database using the "REUSABLE PACKAGE" menu. This field may be a maximum of 8 characters.
2. The package name may be a maximum of 48 characters.
3. The host computer (e.g. VAX8600, IBM 370, etc.) may be a maximum of 48 characters.
4. The operating system for the host computer (e.g. UNIX, VMS, VM/CMS, etc.) may be a maximum of 48 characters.

To go to the next block, Press PF11, or you may Press PF2 to display the "REUSABLE PACKAGE INFORMATION" submenu and select option 7, "TARGET SYSTEM". To return to the main menu, Press PF3.

The SQL menu for "TARGET SYSTEM" looks like this.

```

----- TARGET SYSTEM -----

Package Id _____

      Name _____

Target Machine _____

Operating System _____
```


This SQL menu contains information concerning the target system for a particular package. For the procedures to enter data and insert, update, delete, and retrieve records in the database refer to the instructions in PART II - PART IV of this manual.

1. The package id consists of the first 2 letters of the first 4 words of the package name. This id must have previously been stored in the database using the "REUSABLE PACKAGE" menu. This field may be a maximum of 8 characters.
2. The package name may be a maximum of 48 characters.
3. The target computer (e.g. VAX 11/785, etc.) may be a maximum of 48 characters.
4. The operating system for the target computer (e.g. UNIX, VMS, VM/CSM, etc.) may be a maximum of 48 characters.

To go to the next block, Press PF11, or you may Press PF2 to display the "REUSABLE PACKAGE INFORMATION" submenu and select option 8, "REVISE HISTORY". To return to the "main" menu, Press PF3.

The SQL menu for "REVISE HISTORY" looks like this.

```
----- REVISE HISTORY -----  
  
Package Id _____  
      Name _____  
Description _____  
Revise Date _____      Version Number ____  
      Revisor _____
```

This SQL menu contains information concerning the revision of a particular package. For the procedures to enter data and insert, update, delete, and retrieve records in the database refer to the instructions in PART II - PART IV of this manual.

1. The package id consists of the first 2 letters of the first 4 words of the package name. This id must have previously been stored in the database using the "REUSABLE PACKAGE" menu. This field may be a maximum of 8 characters.
2. The package name may be a maximum of 48 characters.
3. The description of the package may be a maximum of 240 characters but only 60 characters will be displayed at a time.

4. The revision date, in the MM-DD-YY format, may be a maximum of 9 characters.
5. The package version number may be a maximum of 5 characters but only 4 characters will be displayed at a time.
6. The name of the revisor may be a maximum of 32 characters.

To go to the next block, Press PF11, or you may Press PF2 to display the "REUSABLE PACKAGE INFORMATION" submenu and select option 9, "PERFORMANCE". To return to the "main" menu, Press PF3.

The SQL menu for "PERFORMANCE" looks like this.

```

----- PERFORMANCE -----

Package Id _____
      Name _____
      Comment _____
Evaluator Id _____
      Name _____

----- EVALUATOR INFORMATION -----

Evaluator Id _____
      Name _____
      Address _____
      City _____ State _____ Zip _____
      Phone _____

```

This SQL menu contains information concerning the performance of a particular package. For the procedures to enter data and insert, update, delete, and retrieve records in the database refer to the instructions in PART II - PART IV of this manual.

1. The package id consists of the first 2 letters of the first 4 words of the package name. This id must have previously been stored in the database using the "REUSABLE PACKAGE" menu. This field may be a maximum of 8 characters.
2. The package name may be a maximum of 48 characters.
3. Comments about the compiler may be a maximum of 240 characters but only 66 characters will be displayed at a time.
4. The evaluator id consists of the first 2 letters of the first 4 words of the evaluators name. This field may be a maximum of 8 characters.
5. The name of the evaluator may be a maximum of 48 characters.

The "EVALUATOR INFORMATION" menu may be used if you Press PF2 to display the "REUSABLE PACKAGE INFORMATION" submenu, and select option 10, or by Pressing PF11 while in the previous SQL menu. This SQL menu contains information concerning the evaluator information for a particular compiler. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The evaluator id consists of the first 2 letters of the first 4 words of the evaluators name. This field must have previously been stored in the database using the "PERFORMANCE" menu. This field may be a maximum of 8 characters.
2. The name of the evaluator may be a maximum of 48 characters.
3. The street address may be a maximum of 48 characters but only 32 characters will be displayed at a time.
4. The city name may be a maximum of 24 characters.
5. The state name may be a maximum of 15 characters.
6. The zip code number may be a maximum of 10 characters but only 20 characters will be displayed at a time.
7. The phone number may be a maximum of 24 characters.

To go to the next block, Press PF11, or you may Press PF2 to display the "REUSABLE PACKAGE INFORMATION" submenu and select option 11, "PACKAGE KEYWORD". To return to the "main" menu, Press PF3.

The SQL menu for "PACKAGE KEYWORD" looks like this.

```
----- PACKAGE KEYWORD -----  
  
Package Id _____  
  
Name _____  
  
Keyword _____
```

This SQL menu contains information concerning the keyword(s) for a particular package. For the procedures to enter data and insert, update, delete, and retrieve records in the database refer to the instructions in PART II - PART IV of this manual.

1. The package id consists of the first 2 letters of the first 4 words of the package name. This id must have previously been stored in the database using the "REUSABLE PACKAGE" menu. This field may be a maximum of 8 characters.

2. The package name may be a maximum of 48 characters.
3. The keyword(s) of the package may be a maximum of 48 characters.

To go to the next block, Press PF11, or you may Press PF2 to display the "REUSABLE PACKAGE INFORMATION" submenu and select option 12, "PUBLICATION CROSS-REFERENCE". To return to the "main" menu, Press PF3.

The SQL menu for "PUBLICATION CROSS-REFERENCE" looks like this.

```
----- PUBLICATION CROSS-REFERENCE -----  
  
Package Id _____  
      Name _____  
  
Publication Id _____  
      Title _____
```

This SQL menu contains information concerning the publication cross-reference for a particular package. For the procedures to enter data and insert, update, delete, and retrieve records in the database refer to the instructions in PART II - PART IV of this manual.

1. The package id consists of the first 2 letters of the first 4 words of the package name. This id must have previously been stored in the database using the "REUSABLE PACKAGE" menu. This field may be a maximum of 8 characters.
2. The package name may be a maximum of 48 characters.
3. The publication id consists of the first 4 letters of the author's name (or first author if there are more than one), plus the last 2 digits of the year of publication, plus a letter (e.g. DATA86a). This id must have previously been stored in the database using the "PUBLICATION" menu. This field may be a maximum of 7 characters.
4. The article title may be a maximum of 128 characters but only 58 characters will be displayed at a time.

To go to the next block, Press PF11, or you may Press PF2 to display the "REUSABLE PACKAGE INFORMATION" submenu and select option 13, "PROJECT CROSS-REFERENCE". To return to the "Reusable Packages" menu, Press PF3.

The SQL menu for "PROJECT CROSS-REFERENCE" looks like this.

```
----- PROJECT CROSS-REFERENCE -----  
  
Package Id _____  
      Name _____  
  
Project Id _____  
      Name _____
```

This SQL menu contains detailed information concerning the project cross-reference of a particular package. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The package id consists of the first 2 letters of the first 4 words of the package name. This id must have previously been stored in the database using the "REUSABLE PACKAGE" menu. This field may be a maximum of 8 characters.
2. The package name may be a maximum of 48 characters.
3. The project id consists of the first 2 letters of the first 4 words of the project name. This id must have previously been stored in the database using the "PROJECT" menu. This field may be a maximum of 8 characters.
4. The project name may be a maximum of 72 characters but only 49 characters will be displayed at a time.

To go to the next block, Press PF11, or you may Press PF2 to display the "REUSABLE PACKAGE INFORMATION" submenu and select option 14, "PRODUCT CROSS-REFERENCE". To return to the "Reusable Packages" menu, Press PF3.

The SQL menu for "PRODUCT CROSS-REFERENCE" looks like this.

----- PRODUCT CROSS-REFERENCE -----	
Package Id	_____
Name	_____
Product Id	_____
Name	_____

This SQL menu contains detailed information concerning the product cross-reference of a particular package. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The package id consists of the first 2 letters of the first 4 words of the package name. This id must have previously been stored in the database using the "REUSABLE PACKAGE" menu. This field may be a maximum of 8 characters.
2. The package name may be a maximum of 48 characters.
3. The product id consists of the first 2 letters of the first 4 words of the product name. This field may be a maximum of 8 characters.
4. The name of the product may be a maximum of 48 characters.

To go to the next block, Press PF11, or you may Press PF2 to display the "REUSABLE PACKAGE INFORMATION" submenu and select option 15, "COMPILER CROSS-REFERENCE". To return to the "Reusable Packages" menu, Press PF3.

The SQL menu for "COMPILER CROSS-REFERENCE" looks like this.

```
----- COMPILER CROSS-REFERENCE -----  
  
Package Id _____  
      Name _____  
  
Compiler Id _____  
      Name _____
```

This SQL menu contains detailed information concerning the compiler cross-reference of a particular package. For the procedures to enter data and insert, update, delete, and retrieve records in the database, refer to the instructions in PART II - PART IV of this manual.

1. The package id consists of the first 2 letters of the first 4 words of the package name. This id must have previously been stored in the database using the "REUSABLE PACKAGE" menu. This field may be a maximum of 8 characters.
2. The package name may be a maximum of 48 characters.
3. The compiler id consists of the first 2 letters of the first 4 words of the compiler name. This id must have previously been stored in the database using the "COMPILER" menu. This field may be a maximum of 8 characters.
4. The name of the compiler may be a maximum of 48 characters.

We have looked at all of the SQL menus available for main menu selection 5, "Reusable Packages". Use the "REUSABLE PACKAGE INFORMATION" submenu, options 16)Help, 17)Procedures For Display and 18)Key Map For VT100 Terminal for information corresponding to each particular SQL menu. For instructions to insert, update and delete records in the database, refer to PART II - PART IV of this manual.

We have now completed main menu option 5, "Reusable Packages", and have completed the content and layout of menus and the attributes of each field in each SQL menu. Press PF3 to return to the main menu. To exit out of SEAD, Press <R>Return and then Press <E>Exit.



PART IV. DATABASE TUTORIAL

(To Be Used Only As A Reference)

Chapter 1.	Basic Concept
Chapter 2.	Running A Form
Chapter 3.	Retrieving All Records
Chapter 4.	Moving Around The Form
Chapter 5.	Retrieving Specific Records
Chapter 6.	The [HELP] Feature
Chapter 7.	[HELP] With Function Keys
Chapter 8.	[HELP] With A Field With A List Of Values
Chapter 9.	[HELP] Form A Form
Chapter 10.	Leaving SQL*Forms



Chapter 1. Basic Concept

BASIC TUTORIAL FOR SQL*Forms

Chapter 1. Basic Concepts

A FORM is a "fill-in-the-blanks" arrangement of database data that allows easier data entry, update, and query. Although a form may be displayed on one or more PAGES, only one page is visible on the terminal screen at a time.

A form consists of one or more BLOCKS. Each block corresponds to a single table in the ORACLE database. For each block, the form will display one or more RECORDS (or rows) from the database table. Each record consists of one or more FIELDS, which may correspond to columns in the database. See Figure I-1.

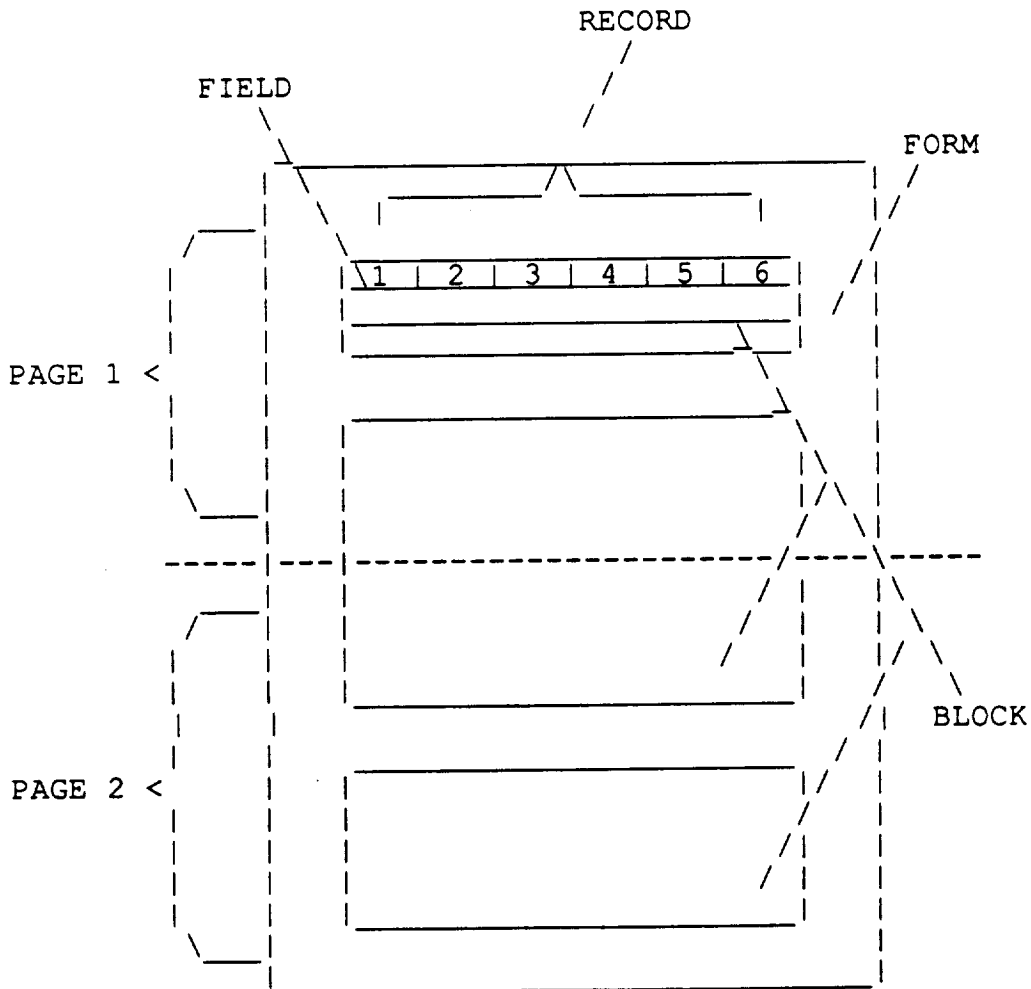


Figure I-1
Basic Concepts

Chapter 2. Running A Form

You can use a form to enter new information into an ORACLE database or to issue a query that retrieves and displays existing information. Once information is displayed on the screen, you can view it, change it, or remove it from the database entirely.

Chapter 2. Running a Form

To enter SQL*Forms and run an existing form, follow these steps:

*****This tutorial is not available on-line at this time, but can be used as a guide for using SEAD. Logon to SEAD using the directions in PART II - Chapter 1 of this users manual, please use this tutorial as a reference.**

1. Log on to your system in the normal manner.
2. At the system command prompt, you have to enter IAP, the name of the form you want to run, and your ORACLE user name and password in the following format:

```
IAP form_name username/password
```

For this tutorial, type

```
IAP EMPLOYEE SCOTT/TIGER
```

and press ENTER.

After completing these steps, SQL*Forms displays the sample form on your screen (Figure I-2).

===== EMP =====	
EMPNO _____	ENAME _____
JOB _____	MGR _____
HIREDATE _____	SAL _____
COMM _____	DEPTNO _____
Char Mode: Replace Page 1	
Count: *0	

Figure I-2
Displaying the Sample Form

The sample is based on the EMP table from ORACLE's sample database, and contains information about the employees numbers, names, job titles, managers, hire dates, salaries and commissions, and department numbers.

Chapter 3. Retrieving All Records

Chapter 3. Retrieving All Records

Currently, the sample form has no information displayed in its fields. To retrieve all the records stored in EMP, press the [EXECUTE QUERY] key (for a list of the keys, see Chapter 7. **HELP WITH FUNCTION KEY DEFINITIONS or PART II Chapters 3-4**). SQL*Forms displays the first record on the screen (Figure I-3).

Note: If you or someone else (in a multiuser environment) have previously done the exercises in the Tutorial, permanent changes may have been made to the sample Oracle tables. In that case, the data you see on your screen may differ somewhat from the data shown in the screen images of this Tutorial.

```

===== EMP =====

EMPNO | 7369 |          ENAME | SMITH |
      |      |          MGR   | 7902 |
JOB   | CLERK |          SAL   | 800  |
      |      |          DEPTNO | 20   |
HIREDATE | 17-DEC-80 |
      |      |
COMM   |      |

-----
Char Mode: Replace Page 1                      Count: 1
-----
```

Figure I-3
Displaying the First Record

Chapter 4. Moving Around The Form

Chapter 4. Moving Around The Form

Each displayed field on the screen corresponds to a column in the database. You can move from field to field by using the **[NEXT FIELD]** and **[PREVIOUS FIELD]** keys. For example:

1. Press **[NEXT FIELD]** three times.

The cursor should be positioned on the MGR field.

2. Press **[PREVIOUS FIELD]** three times, to position the cursor back on the EMPNO field.
3. Press **[NEXT FIELD]** seven times, until you reach the DEPTNO field.
4. Press **[NEXT FIELD]** once more.

The cursor should be positioned on the EMPNO field.

Notice that the **[NEXT FIELD]** key cycles through all the employee fields in a forward direction. The **[PREVIOUS FIELD]** key cycles through all the fields in the opposite direction.

Just as [NEXT FIELD] and [PREVIOUS FIELD] cycle through fields, [NEXT RECORD] and [PREVIOUS RECORD] cycle through the retrieved records. To view the remaining employee records, press the [NEXT RECORD] key once for each succeeding record. For example, when you press [NEXT RECORD] once, SQL*Forms displays the record for Employee 7499 (Figure I-4).

```
===== EMP =====  
  
EMPNO | 7499 | ENAME | ALLEN |  
JOB | SALESMAN | MGR | 7698 |  
HIREDATE | 20-FEB-81 | SAL | 1600 |  
COMM | 111 | DEPTNO | 30 |  
  
-----  
Char Mode: Replace Page 1 Count: 2
```

Figure I-4
Retrieving the Next Record

You can continue pressing [NEXT RECORD] until the last record is displayed. At this point the message, "Last row of query retrieved," appears in the message area and the fields on the screen are set to their default values (blank, in this example).

To display preceding records, use the [PREVIOUS RECORD] function key. If you continue pressing [PREVIOUS RECORD] until the first record is redisplayed, SQL*Forms issues the message, "At first record."

Note: Besides [NEXT FIELD], [PREVIOUS FIELD], [NEXT RECORD], and [PREVIOUS RECORD], SQL*Forms provides several other functions for cursor movement. For a list of available cursor-movement functions, see the SQL*Forms User's Quick Reference.

Exercises:

1. If you are currently in the employee record for Allen (Figure I-4) and the cursor is positioned at the HIREDATE field, how do you get to the ENAME field?
2. Suppose the database currently contains two employee records: Smith (Figure I-3) and Allen (Figure I-4) in that order. If you are currently in the first record, Smith, what steps are necessary to get to the JOB field for Allen?
3. If you are in the record for Allen, what steps are necessary to get to the SAL field for Smith?

Chapter 5. Retrieving Specific Records

Chapter 5. Retrieving Specific Records

If your database contains a large number of records, it is time-consuming to retrieve all the records and look through them one at a time to find a particular one. Instead, when you want to retrieve specific records, you can specify criteria you want those records to meet and SQL*Forms will retrieve all records matching your specification.

Suppose you want to see the records of all employees whose job is MANAGER. You can do this by entering the value you want to match directly on the form:

1. Press the **[ENTER QUERY]** key.

SQL*Forms displays the message, "Enter a query, then press QUERY key to execute it."

2. Press **[NEXT FIELD]** two times, until the cursor is positioned on the Job field.
3. Type MANAGER in the JOB field.

If you make a mistake when entering your query, you can use the **[CHARACTER DELETE]** function key to delete the character to the left of the cursor. Or, you can use the functions **[RIGHT]** or **[LEFT]** to move the cursor in either direction horizontally without changing any characters; and then type the desired character over the incorrect one.

4. Press the **[EXECUTE QUERY]** key.

SQL*Forms displays the first record that satisfies your query (Figure I-5).

```

===== EMP =====

EMPNO | 7566 |          ENAME | Jones |
      |      |          MGR   | 7839 |
JOB   | MANAGER |        SAL    | 2975 |
HIREDATE | 02-APR-81 |      DEPTNO  | 20 |
COMM  |      |

Char Mode: Replace Page 1                      Count: 1

```

Figure I-5
Retrieving Records that Match a Specific Value

As always, pressing **[NEXT RECORD]** and **[PREVIOUS RECORD]** displays the other records retrieved by the query.

Note: Although this example showed a value entered in only one field, you can also specify values for several fields. For example, entering **MANAGER** in the **JOB** field and **30** in the **DEPTNO** field would retrieve the record for the manager of Department 30.

Exercises:

1. If you are currently in the EMPNO field of a record and you want to display the employee record for Jones, how would you do this?
2. If you are currently in the COMM field of a record and you want to display all the employee records that have employee number 7566 as their manager, how would you do this?
3. Suppose you are currently in the ENAME field of a record, what steps are necessary to find all the salesmen in department 20?

Chapter 6. The [HELP] Function

Chapter 6. The [HELP] Function

The [HELP] function displays information about the current field. [HELP] can display information in two forms:

1. a brief description of the field, displayed on the message line.
2. a screenful of information about the field, which replaces the current page of the form on the display.

If the designer of the form provided a brief description of the current field, that description appears when you press [HELP]. If you want to see the screenful of information, press [HELP] a second time.

If the designer of the form did not provide a brief description of the current field, the screenful of information appears when you press [HELP] the first time.

To leave the screenful of help information and redisplay the current page of the form, press any function key except [HELP].

From the basic tutorial, if you were at the screen in Figure I-2 and the cursor is positioned at the first field, EMPNO, pressing the [HELP] key once would display:

```

===== EMP =====

EMPNO |_____|          ENAME |_____|
      JOB |_____|          MGR |_____|
HIREDATE |_____|        SAL |_____|
      COMM |_____|        DEPTNO |_____|

-----
Enter value for : EMPNO
-----
Char Mode: Replace Page 1          Count: **0
-----
```

To get to the help screen, press the [HELP] key a second time to display:

```
Help Screen for Column: EMPNO Value:
Block: EMP12 Table: EMP Prompt: EMPNO

Explanatory Text
Enter value for : EMPNO

Type      Format
NUMBER    \+!99999999999\9999999999!\E\+!99!

Length: 6

Characteristics
Displayed Enterable Mandatory Primary

< Hit any (function) key to return to form >
```

Pressing the [HELP] key once while at the ENAME field will display:

```
===== EMP =====

EMPNO |  | ENAME |  |
JOB   |  | MGR   |  |
HIREDATE |  | SAL   |  |
COMM  |  | DEPTNO |  |

Enter value for : ENAME

Char Mode: Replace Page 1 Count: *0
```

Chapter 7. [HELP] With Function Keys

Pressing the **[HELP]** key a second time will display:

```
Help Screen for Column: ENAME Value:
Block: EMP12 Table: EMP Prompt: ENAME

Explanatory Text
Enter value for : ENAME

Type      Format
CHAR      1 or more printable symbols

Length: 10

Characteristics
Displayed Enterable Updatable

< Hit any (function) key to return to form >
```

You can also display a help screen by pressing **[DISPLAY ERROR]**. This key displays information about the field or operation in which an error most recently was detected, whether or not that is the current field. It never displays the one-line field description.

Chapter 7. Help With Function Key Definitions

You can display the keyboard map that corresponds to your computer by pressing **[SHOW FUNCTION KEYS]**. This is **PF1** or **ESC1** in most, but not all, keyboard maps.

KEYMAP FOR THE IBM 3270

FUNCTION	KEYSTROKE(S)	FUNCTION	KEYSTROKE(S)
Transmit	PF21	Execute Query	PF5
Scroll Right	PF22	Block Menu	PF2
Next Field	PF20	Enter	ENTER
Next Record	PF8	Commit Transaction	PF6
Next Set of Records	PF9	Exit/Cancel	PF3
Next Block	PF11	No Operation	PF16
Scroll Left	PF23	Redisplay Page	CLEAR for VM PA2 for MVS
Previous Field	PF19	Help	PF14
Previous Record	PF7	List Field Values	PF15
Previous Block	PF10	Display Error	PF13
Clear Field	PF12+PF19	Enable Record Update	PF12+PF18
Clear Record	PF12+PF20	Show Function Keys	PF1
Clear Block	PF17		
Clear Form/Rollback	PF18		
Delete Record	PF12+PF17		
Create Record	PF12+PF14		
Duplicate Field	PF12+PF15		
Duplicate Record	PF12+PF16		
Enter Query	PF4		
Count Query Hits	PF12+PF13		

KEYMAP FOR THE VT100

FUNCTION	KEYSTROKE (S)	FUNCTION	KEYSTROKE (S)
Transmit	ESC O	Execute Query	ESC 5
Scroll Right	ESC P	Block Menu	ESC 2
Next Field	ESC I	Enter	ENTER
Next Record	ESC 8	Commit Transaction	ESC 6
Next Set of Records	ESC 9	Exit/Cancel	ESC 3
Next Block	ESC -	No Operation	PF16
Scroll Left	PF23	Redisplay Page	CLEAR for VM PA2 for MVS
Previous Field	ESC U	Help	ESC 14
Previous Record	ESC 7	List Field Values	ESC E
Previous Block	ESC 0	Display Error	ESC Q
Clear Field	ESC = + ESC U	Enable Record Update	ESC = + ESC Y
Clear Record	ESC = + ESC Y	Show Function Keys	ESC 1
Clear Block	ESC T		
Clear Form/Rollback	ESC Y		
Delete Record	ESC = + ESC T		
Create Record	ESC = + ESC W		
Duplicate Field	ESC = + ESC E		
Duplicate Record	ESC = + ESC R		
Enter Query	ESC 4		
Count Query Hits	ESC = + ESC Q		

Note: All function keys on the VT100 correspond to the function keys on the IBM 3270. Example: PF12 on the IBM 3270 is ESC 12 or ESC = on the VT100 keyboard.

- Chapter 8. [HELP] With A Field With A
List Of Values
- Chapter 9. [HELP] Form A Form
- Chapter 10. Leaving SQL*Forms

Chapter 8. Help With A Field With A List Of Values

If the current field has a list of valid values, you can display the first possible value by pressing **[LIST OF FIELD VALUES]**. A two-character state name field is one example of a field that might well have such a list of values.

Chapter 9. Help Form A Form

Some forms can provide additional kinds of help at your request. Where additional help is available, it usually takes the form of a box or screenful of information that you can display by pressing a certain function key or making a certain selection from a menu. The instructions for using a form may tell you whether that form can provide any additional help, and if so, how to request it.

Chapter 10. Leaving SQL*Forms

Once you have completed your work with a particular form, press the **[EXIT]** function key. This ends the session.

APPENDIX A

UNIVERSITY
of HOUSTON

CLEAR LAKE
Houston, Texas

S E A D
Software Engineering and Ada Database
University of Houston, Clear Lake-NASA Johnson Space Center
GHG Corporation

====GENERAL INFORMATION====

====QUICK REFERENCE FOR LOGGING INTO SEAD====

UNIVERSITY
of HOUSTON

=====

CLEAR LAKE
Houston, Texas

S E A D
Software Engineering and Ada Database
University of Houston, Clear Lake-NASA Johnson Space Center
GHG Corporation

=====GENERAL INFORMATION=====

=====QUICK REFERENCE FOR LOGGING INTO SEAD=====

TO: _____

Your user I.D. (username) is _____.
You may access the SEAD through the NASA/JSC Center
Information Network (CIN).

If you do not have the capability to directly connect to the CIN, you may dial in at 713/483-2500. You should use or emulate a VT100 terminal. Once you are connected, follow the procedure outlined on the following pages. If you do have a direct connection, simply type SEAD followed by your username at the CIN Menu. For direct connection, it is best to have or emulate an IBM3270. Please be aware that the SEAD relies on the function keys (ESC sequence on the VT100) and, if you or your communications software have redefined these keys to some other functions, you will have difficulty using the database.

The first time you sign on, your password will be the same as your username. The system will immediately prompt you to enter a new password. Your new password must be from 6 to 8 characters and can contain alpha and numeric characters. You will be asked to type the new password twice to verify it. Please remember your new password, as this is what you will use for your next logon.

After you get to the main menu of SEAD, you should be able to follow the on-line menus, comments, and help. When you are ready to quit, return to the main menu and select <E> to exit, then hang up.

If you encounter any problems, call the SEAD Administrator at (713) 488-8806. We also welcome any comments or suggestions you may have regarding the structure, content, and usability of the SEAD.

NOTES: UPPER CASE indicates system response
 lower case indicates user input
 ===== indicates new screen

<cr>

<cr>

ENTER NUMBER:

cin1 <cr>

CALLING 61247

CALL COMPLETE

<cr>

YALE ASCII TERMINAL COMMUNICATIONS SYSTEM V2.1

ENTER TERMINAL TYPE: vt100 <cr>

W E L C O M E T O J O H N S O N S P A C E
C E N T E R H O U S T O N T E X A S
C E N T E R I N F O R M A T I O N N E T W O R K
C I N - B D I A L - I N F A C I L I T Y

FOR NASA AUTHORIZED USERS ONLY-UNAUTHORIZED USE IS A
VIOLATION OF FEDERAL LAW

CALL (713)-280-4800 IF YOU NEED HELP

PRESS ENTER THEN CLEAR KEY TO PROCEED <cr>

sead username <cr>

LOGON USERNAME
VMXACI104R ENTER LOGON PASSWORD:

password <cr>

Description of the Open Main Menu.

B. Bulletin Board -

Enables the user to browse the following Ada information: Conferences, Workshops, Meetings, etc.

I. Beginner Information -

Enables the first time user to browse instructions explaining about the structure of the database and how to retrieve information from the database.

K. Function Keymap -

Enables the user to browse the function keys available to use while in the database.

C. Continue with SEAD -

Enables the user to continue research by browsing through the database for the following information: Education and Training Resources, Publications and Conferences, Project, Compilers and Other Products, and Reusable Packages.

P. Change VM Password -

Enables the user to change his/her password within SEAD without logging out of the VM System. This function is only temporarily available.

E. Exit -

Enables the user to exit out of SEAD.

=====PROCEDURES FOR DISPLAY=====

- To display all records in a table:
Press **EXECUTE QUERY <PF5>**.
Press **NEXT RECORD <PF8>** to display each subsequent record.
- To retrieve records by matching values:
Press **ENTER QUERY <PF4>**;
enter the values you want to match into the appropriate fields
(a value can be exactly as JONES, or, ON%, where " " represents any character and "%" represents any string);
press **COUNT QUERY HITS <PF12+PF13>** to find the number of records matched;
press **ENTER QUERY <PF5>**.
Press **NEXT RECORD <PF8>** to view subsequent records retrieved by the query.
- To retrieve records by entering a **WHERE** condition:
Press **ENTER QUERY <PF4>**;
move the cursor to the field where you want to enter a variable; type &, followed by a variable name (for example, &SAL);
press **EXECUTE QUERY <PF5>**;
When prompted with "Query where ... ?", enter any **WHERE** condition.
(for example: &FEE > 1000; &DATE < 31-NOV-87;
&SAL = 45000 or &NAME like "KERRY") then press **ENTER**.
- Return to **Menu <PF2>**

KEYMAP FOR THE IBM 3270

FUNCTION	KEYSTROKE (S)	FUNCTION	KEYSTROKE (S)
Transmit	PF21	Execute Query	PF5
Scroll Right	PF22	Block Menu	PF2
Next Field	PF20	Enter	ENTER
Next Record	PF8	Commit Transaction	PF6
Next Set of Records	PF9	Exit/Cancel	PF3
Next Block	PF11	No Operation	PF16
Scroll Left	PF23	Redisplay Page	CLEAR for VM PA2 for MVS
Previous Field	PF19	Help	PF14
Previous Record	PF7	List Field Values	PF15
Previous Block	PF10	Display Error	PF13
Clear Field	PF12+PF19	Enable Record Update	PF12+PF18
Clear Record	PF12+PF20	Show Function Keys	PF1
Clear Block	PF17		
Clear Form/Rollback	PF18		
Delete Record	PF12+PF17		
Create Record	PF12+PF14		
Duplicate Field	PF12+PF15		
Duplicate Record	PF12+PF16		
Enter Query	PF4		
Count Query Hits	PF12+PF13		

KEYMAP FOR THE VT100 TERMINAL

FUNCTION	KEYSTROKE (S)	FUNCTION	KEYSTROKE (S)
Transmit	ESC O	Execute Query	ESC 5
Scroll Right	ESC P	Block Menu	ESC 2
Next Field	ESC I	Enter	ENTER
Next Record	ESC 8	Commit Transaction	ESC 6
Next Set of Records	ESC 9	Exit/Cancel	ESC 3
Next Block	ESC -	No Operation	PF16
Scroll Left	PF23	Redisplay Page	CLEAR for VM PA2 for MVS
Previous Field	ESC U	Help	ESC 14
Previous Record	ESC 7	List Field Values	ESC E
Previous Block	ESC 0	Display Error	ESC Q
Clear Field	ESC = + ESC U	Enable Record Update	ESC = + ESC Y
Clear Record	ESC = + ESC Y	Show Function Keys	ESC 1
Clear Block	ESC T		
Clear Form/Rollback	ESC Y		
Delete Record	ESC = + ESC T		
Create Record	ESC = + ESC W		
Duplicate Field	ESC = + ESC E		
Duplicate Record	ESC = + ESC R		
Enter Query	ESC 4		
Count Query Hits	ESC = + ESC Q		

Note: All function keys on the VT100 correspond to the function keys on the IBM 3270. Example: PF12 on the IBM 3270 is ESC 12 or ESC = on the VT100 keyboard.

S E A D
Software Engineering and Ada Database

====DATABASE ORGANIZATIONAL OUTLINE====

MAIN MENU

1. EDUCATION AND TRAINING RESOURCES

1. Course Information
 - Each course record has 5 screens: course, sponsor, audience, format, and material.
2. Book Information
 - Each book record has 4 screens: book, location, publisher, and author/author information.

2. PUBLICATIONS AND CONFERENCES

1. Publication Information
 - Each publication record has ten screens: publication, location, author/author information, category and subject, general term, keyword, project cross-reference, product cross-reference, compiler cross-reference and package cross-reference.
2. Conference Information
 - Each Conference record has six screens: conference, conference sponsor, coordinator/coordinator information, conference charge, presentation, presenter/presenter information.

3. PROJECTS

Each Project record has eight screens: project, contact_person/contact_person information, sub_project, project keyword, publication cross-reference, compiler cross-reference, compiler cross-reference, and package cross-reference.

4. COMPILERS AND OTHER PRODUCTS

1. Compiler Information
 - Each Compiler record has eight screens: compiler, vendor, host system, target system, performance/evaluator information, publication cross-reference, project cross-reference, and package cross-reference.
2. Product Information
 - Each Product record has seven screens: product, vendor, host system, target system, publication cross-reference, project cross-reference, and package cross-reference..

5. REUSABLE PACKAGE INFORMATION

Each Reusable Package record has twelve screens: reusable package, contact_person/contact_person information, creator/creator information, host system, target system, revise history, performance/performance evaluator information, package keyword(s), publication cross-reference, project cross-reference, product cross-reference, and compiler cross-reference.

***Note:** Each screen and each data item has on-line help available.

APPENDIX B

USING THE KEYBOARD

The following tables show what keys to press to perform various actions within the database. The keys below are listed for the IBM3270 keyboard and the VT100 keyboard.

For Cursor Movement

	Press	
	<u>IBM3270</u>	<u>VT100</u>
Left	<--	<--
Right	-->	-->
Scroll Left	PF23	ESC [
Scroll Right	PF22	ESC P
Menu	PF2	ESC 2
Next Block	PF11	ESC -
Next Field	ENTER	ENTER
Next Primary Key Field	PF20	ESC I
Next Record	PF8	ESC 8
Next Set of Records	PF9	ESC 9
Previous Block	PF10	ESC 0
Previous Field	PF19	ESC U
Previous Record	PF7	ESC 7

To Edit Data

	Press	
	<u>IBM3270</u>	<u>VT100</u>
Character Delete	DEL	DEL
Character Insert	INS	INS
Clear Block	PF17	ESC T
Clear Field	PF12 + PF19	ESC = + ESC U
Clear Form/Rollback	PF18	ESC Y
Clear Record	PF12 + PF20	ESC = + ESC Y

Query Processing (To Retrieve Records)

Press

	<u>IBM3270</u>	<u>VT100</u>
Abort Query	PF16	ESC R
Count Query	PF12 + PF13	ESC = + ESC Q
Enter Query	PF4	ESC 4
Execute Query	PF5	PF5

Maintaining the Database

Press

	<u>IBM3270</u>	<u>VT100</u>
Commit (Saves Changes)	PF6	ESC 6
Create Record	PF12 + PF14	ESC = + ESC W
Delete Record	PF12 + PF17	ESC = + ESC T
Duplicate Record	PF12 + PF16	ESC = + ESC R
Enable Record Update	PF12 + PF18	ESC = + ESC Y

To

Press

	<u>IBM3270</u>	<u>VT100</u>
Display Error	PF13	ESC Q
Duplicate Field	PF12 + PF15	ESC = + ESC E
EXIT	PF3	ESC 3
HELP	PF14	ESC W
List of Field Values	PF15	ESC E
Print Form	Disabled	Disabled
Redisplay Page	<CLEAR>	CTRL + #
Show Function Keys	PF1	ESC 1

