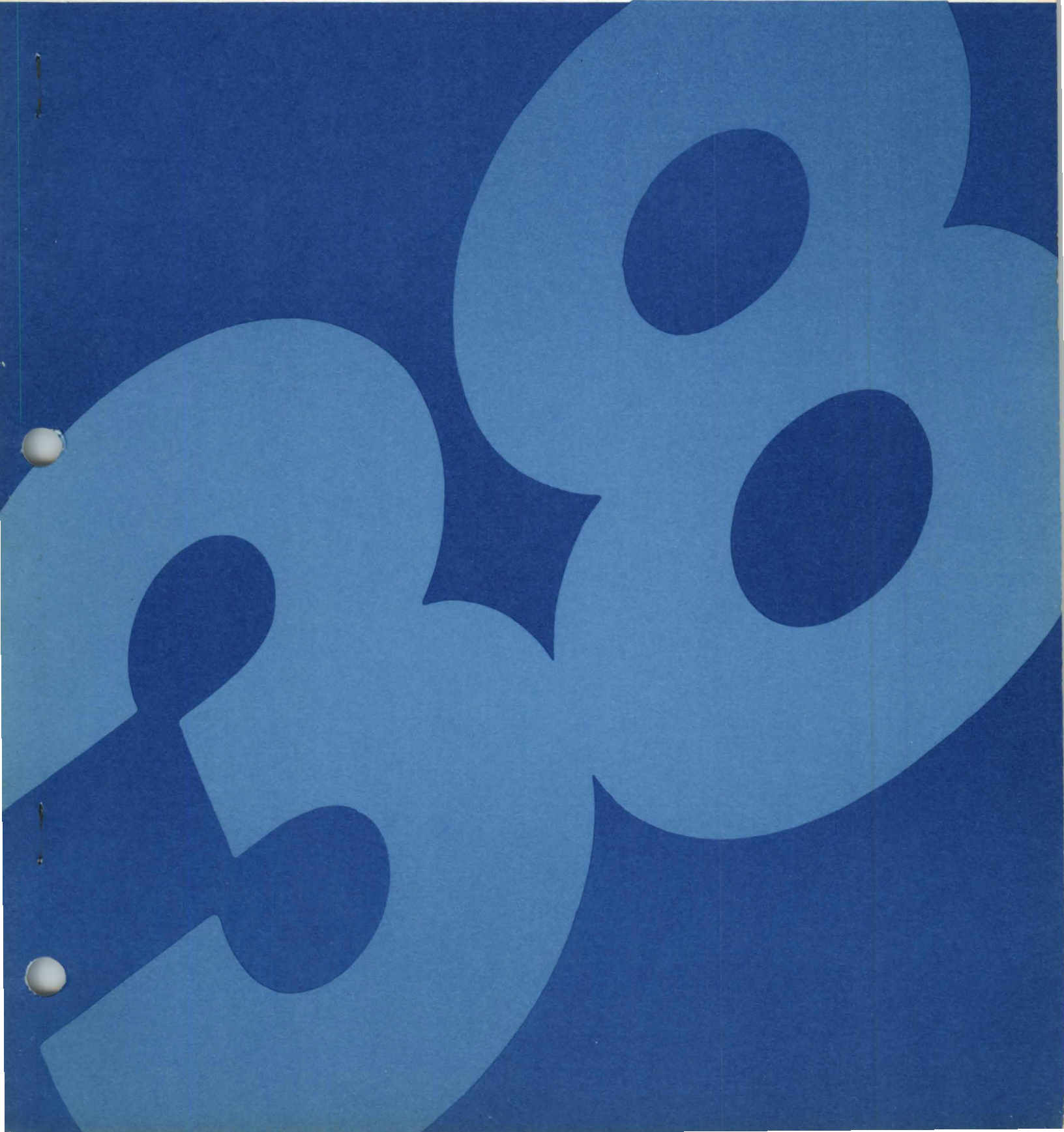


IBM

Applications Made Easy

Installation Guide





Applications Made Easy

Installation Guide

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This major revision obsoletes GB30-3077-1. Appendix C, AME Architecture, has been added.

This edition applies to Version 1, Modification Level 2, of the licensed program Applications Made Easy for the IBM System/38, and to all subsequent versions and modifications until otherwise indicated in new editions or Technical Newsletters. Changes are made periodically to the information herein; any such changes will be reported in subsequent revisions or technical newsletters.

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Section A. Pre-Installation Planning

This installation guide is intended for System Operators or Department Coordinators with knowledge of IBM System/38 (S/38) commands and diskette operations.

1. Applications Made Easy uses these System/38 facilities:
 - a. Subsystems QBATCH and QINTER as supplied by IBM.
 - b. Job Queue QBATCH is used for two types of batch jobs:
 - (1) Application-created reports and file-update programs.
 - (2) Batch jobs to create the applications.

The second type takes approximately 10 to 12 minutes each to execute on a dedicated system. You might want to create another batch job stream or batch subsystem to reduce resource contention between these application-creation jobs and your normal batch-processing.

One of the installation steps lets you change the batch job queue and the priority of these jobs. Refer to Appendix B for an example of how you might use this feature.

- c. Printer output queue QPRINT and other queues defined during the installation procedure.
 - d. Printer file QSYSPRT.
Additional application-dependent printer files are created and used by Applications Made Easy.
2. Arrange people who will use Applications Made Easy so that each person is a member of a department. The Department Coordinator can assign all people to a single department, assign groups of people to separate departments, or assign one person to a separate department.

You may use the Installation Planning Forms in Appendix A to prepare this information.

Applications Made Easy creates and maintains a separate library for each department that uses the system. All applications and files created by users are placed in the department library.

Each department must have a Department Coordinator to perform certain data processing functions outside normal Applications Made Easy activities.

The Department Coordinator needs a separate password to use the DEPARTMENT COORDINATOR'S MENU. The Department Coordinator's System/38 user profile name is used to create and own the department library. This user profile name cannot be transferred to another department. There is no need to personalize the Department Coordinator.

3. During the installation steps, you enter the names of some System/38 objects used by Applications Made Easy. These are:
 - a. User profile name
 - b. Password
 - c. Library name
 - d. Printer output-queue name
 - e. Program names

The general rules for forming these System/38 object names are:

- a. The length of a name can be from one to ten letters and numbers.
- b. The first character must be a letter, A-Z.
- c. Other characters can be letters A-Z, and numbers 0-9. Blanks cannot be entered within a name.

For more information on object names, refer to *System/38 Control Facility Programmers Guide*, SC21-7730.

4. For a department name, department code or person's name you can use any letter, number or character except an apostrophe ('). Upper or lower case letters are permitted. The length may be up to the number of characters indicated. Blanks are permitted within the name.

Make a list of the departments that will use Applications Made Easy. For each department, provide:

- a. Descriptive department name — 25 characters
- b. Department code — 4 characters
- c. System/38 Library name — 10 characters

This information is entered on screens AARB15 (Figure C-3) and AARC11 (Figure C-9) by the Department Coordinator.

For each department, make a list of all persons who can use Applications Made Easy. For each person, provide:

- a. System/38 user profile name — 10 characters
- b. Person's full name — 25 characters
- c. Person's nick name — 10 characters
- d. Department code — 4 characters

This information is entered on screen AARB14 (Figures C-5 and C-6) by the Department Coordinator.

The Security Officer assigns a System/38 password for each person. For security, only the System/38 Security Officer and each individual user should know that user's password.

5. Make a list of the System/38 printer output queues that may be used by Applications Made Easy. These queues must be present on the system. Use the names provided when they were created.

The OUTQUE file already contains one record for output queue QPRINT in library QGPL. For each additional queue, provide:

- a. System/38 Queue name — 10 characters
- b. System/38 Library name — 10 characters
- c. Descriptive name of printer — 40 characters

This information is entered on screen AARZ36 (Figure B-3). The descriptive name appears *later* to users on screen AAR221.

6. Provide the name of the program (and library) to execute when a user selects option 7 on the MAIN MENU, "Use other applications."

This permits a person to use applications developed outside of Applications Made Easy.

If you do not provide a program name, option 7 displays the System/38 command entry display (System/38 program QCL).



Section B. Applications Made Easy Installation Procedure

1. Place the diskette labeled "AAFLB1" in diskette drive *S1.
2. Place the diskettes labeled "AALB1-" in a magazine and place the magazine in drive *M1. If there are diskettes labeled "AALB2-", place these in a second magazine and place the magazine in drive *M2.
3. The System/38 Security Officer should then sign-on at a 5251 Model 11 work station and enter the CL commands shown in Figure B-1. In those commands, these are examples of System/38 passwords and user profile names:

DCS600 represents a Department Coordinator user profile name
DC1234 represents a Department Coordinator password
JRSMITH represents an end-user's profile name
JRS9876 represents an end-user's password

These examples are underlined. Use the profile names and passwords assigned during the pre-installation planning. Lines beginning with ':' are commands to be entered. (Do not enter the ':'.)

```
::CRTUSRPRF AMEMAINT

::CRTLIB LIB(AAALIB) PUBAUT(*NONE) +
      TEXT('Applications Made Easy Program Library')

::CRTLIB LIB(AAFLIB) PUBAUT(*NONE) +
      TEXT('Applications Made Easy Files Library')

::CHGOBJOWN OBJ(AAALIB) OBJTYPE(*LIB) NEWOWN(AMEMAINT)

::CHGOBJOWN OBJ(AAFLIB) OBJTYPE(*LIB) NEWOWN(AMEMAINT)

::RSTLIB SAVLIB(AAALIB) LOC(*M12) VOL(AALB1 AALB2)

::RSTLIB SAVLIB(AAFLIB) LOC(*S1) VOL(AAFLB1)

      Grant authority to required S/38 commands:

::CALL AAPZ2.AAALIB

      For each DEPARTMENT COORDINATOR, create a USER PROFILE as in this
      EXAMPLE: (Replace DCS600 and DC1234 with the appropriate user
                profile name and password)

::CRTUSRPRF  USRPRF(DCS600) PASSWORD(DC1234) INLPGM(AAM10.AAALIB)
```

Figure B-1. (Part 1 of 2). Installation Commands

For each person who will use the Applications Made Easy MAIN MENU, create a USER PROFILE as in this EXAMPLE:
(Replace JRSMITH and JR9876 with the appropriate user profile name and password)

```
::CRTUSRPRF USRPRF(JRSMITH) PASSWORD(JRS9876) INLPGM(AAP00.AAALIB)
```

For the DEPARTMENT COORDINATOR who will sign-on first and enter the names of the departments and people to use Applications Made Easy, give authority to the libraries as in these EXAMPLES:
(Replace DCS600 with the appropriate user profile name)

```
::GRTOBJAUT OBJ(AAALIB) OBJTYPE(*LIB) USER(DCS600)
```

```
::GRTOBJAUT OBJ(AAFLIB) OBJTYPE(*LIB) USER(DCS600)
```

The following steps are optional. The SECURITY OFFICER may do these steps at a later time. These commands may be entered only through a 5251 Model 11 workstation.

Provide the names of all printer output queues available to Applications Made Easy. The file OUTQUE already contains one record for the printer output queue QPRINT in library QGPL. Refer to Figures B-2 and B-3.

```
::CALL AAPZ3.AAALIB
```

Program AAPZ3 may be used at any time to add, change or delete records in the OUTQUE file.

If you want MAIN MENU OPTION 7 to execute a program or menu developed outside of Applications Made Easy, or if you want the batch jobs that create applications to be submitted to a job queue other than QBATCH, enter this command:

```
::CALL AAPZ4.AAALIB
```

Refer to Figures B-4 and B-5

Note: The job queue and the program must be in libraries authorized to all Applications Made Easy users.

If you do not provide a program name, MAIN MENU OPTION 7 will call program QCL (S/38 COMMAND ENTRY).

The SECURITY OFFICER'S installation procedure is now finished. Sign off and continue with Section C. "Installation Steps for Department Coordinators."

```
::SIGNOFF
```

Figure B-1. (Part 2 of 2). Installation Commands

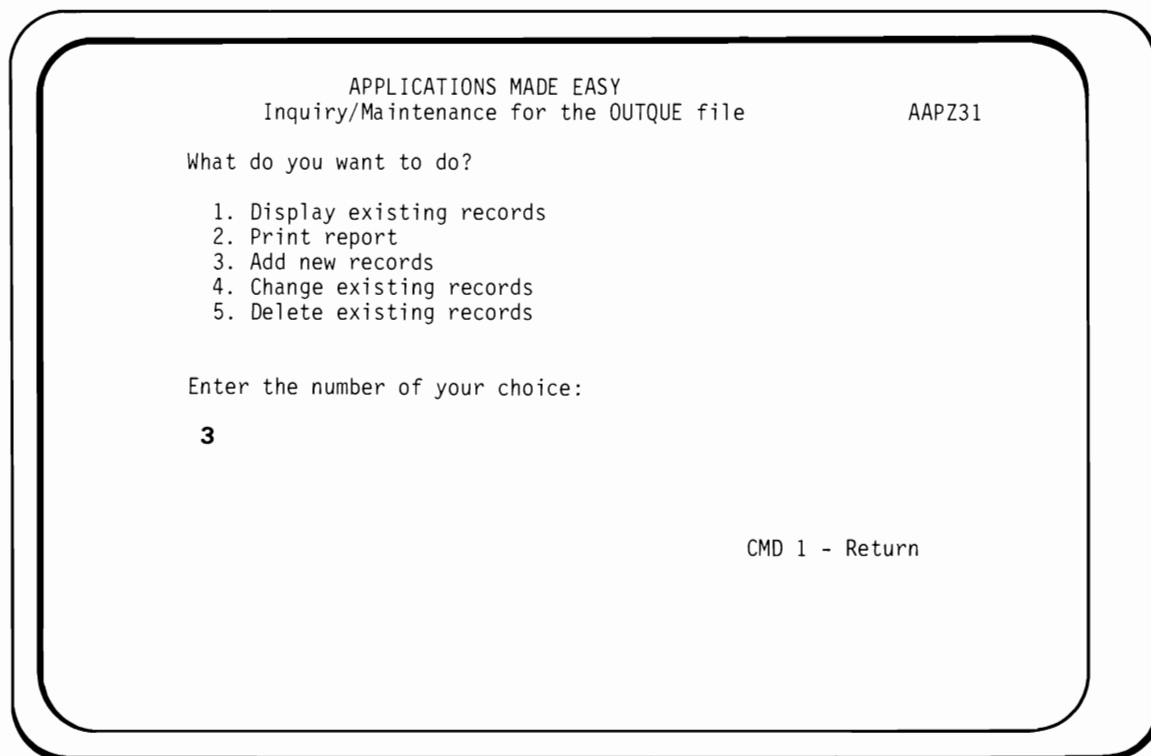


Figure B-2. Select function

Choose option 3 to add records to the OUTQUE file.

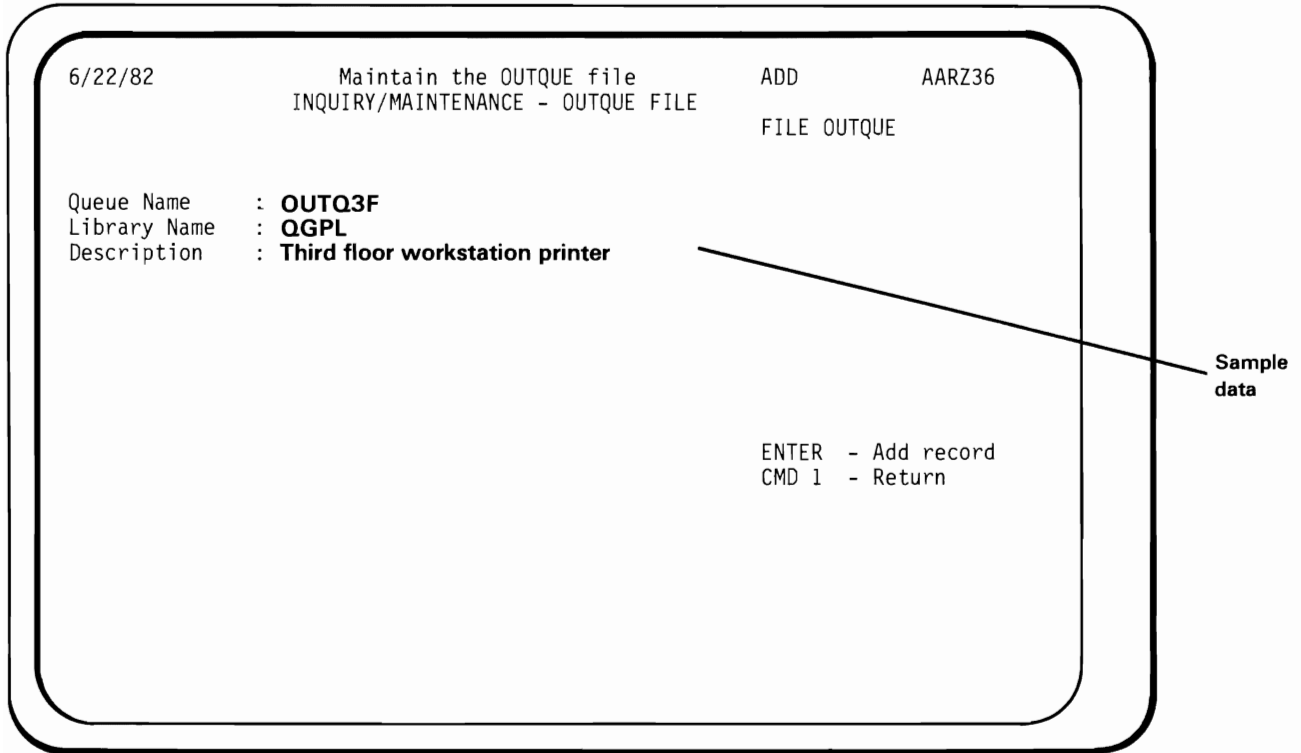


Figure B-3. Add records for printer output queues

For each printer output queue which may be used by Applications Made Easy, type:

Queue Name: Up to 10 characters
Library Name: Up to 10 characters
Description: Up to 40 characters

Press ENTER to add each record.

APPLICATIONS MADE EASY
Installation Options

AAPZ41

You may change the batch job queue used to create applications and you may change the priority of those jobs.

If you choose a batch job queue other than QBATCH, it must be in a library available to all persons who will use APPLICATIONS MADE EASY.

Job Queue (10) : QBATCH
Library (10) : QGPL
Priority (1) : 6

CMD 1 - Return

Figure B-4. Change the batch job queue

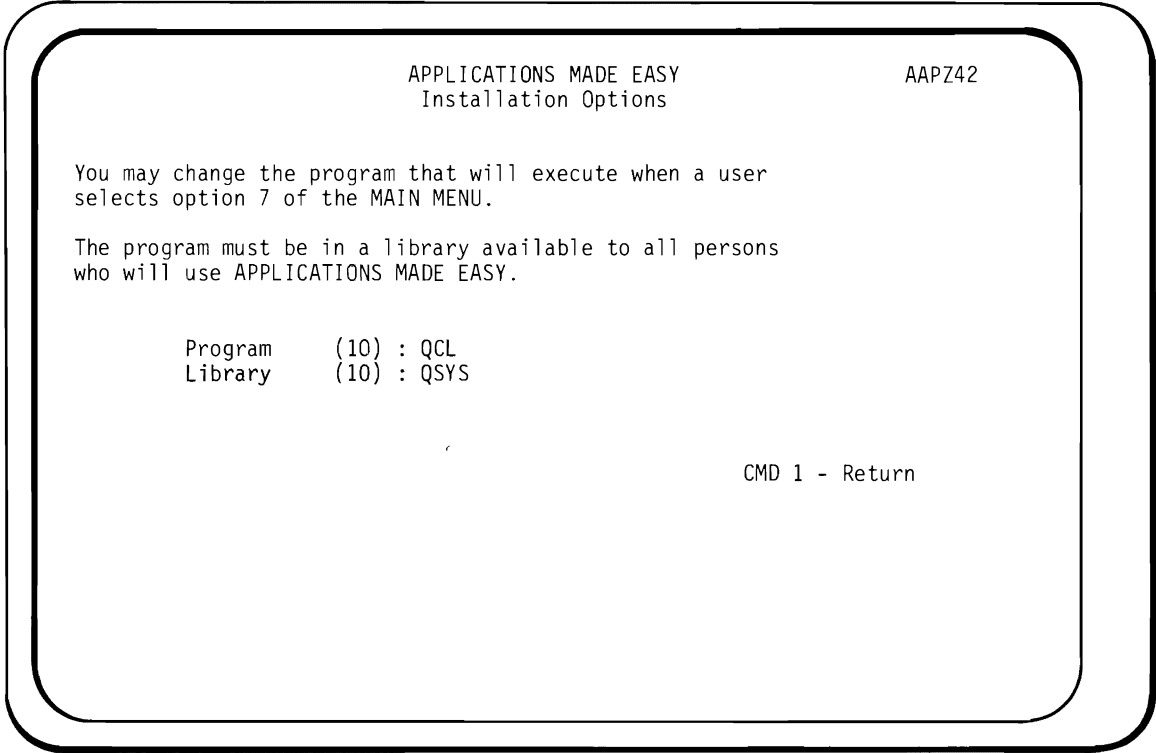


Figure B-5. Change the program to execute for option 7

Section C. Installation Steps for Department Coordinators

1. The first Department Coordinator will sign-on and use option 2 of the DEPARTMENT COORDINATOR'S MENU (Figure C-1) to:
 - a. Identify the departments (refer to Figures C-2 and C-3).
 - b. Add persons to the list of users (refer to Figures C-4 and C-6).

Note: The Department Coordinator *must* add himself (refer to Figure C-5) in order to proceed further.
 - c. Press CMD-1 key to return to the menu.
2. The first Department Coordinator can now create his own department library and authorize selected people to use it. Use menu option 3 (refer to Figures C-8 through C-12).
3. Other Department Coordinators sign-on individually to create libraries and authorize people to use each library. After each Department Coordinator has created his department library, options 4 through 11 of the DEPARTMENT COORDINATOR'S MENU will be available (refer to Figure C-13).
4. Any Department Coordinator can use the DEPARTMENT COORDINATOR'S MENU, option 5, to add entries to the Field Reference File.
5. Applications Made Easy users can now sign-on and use the system.

If a user attempts to sign-on before Step C.3 is completed, the screen shown in Figure C-14 appears and they are automatically signed off.

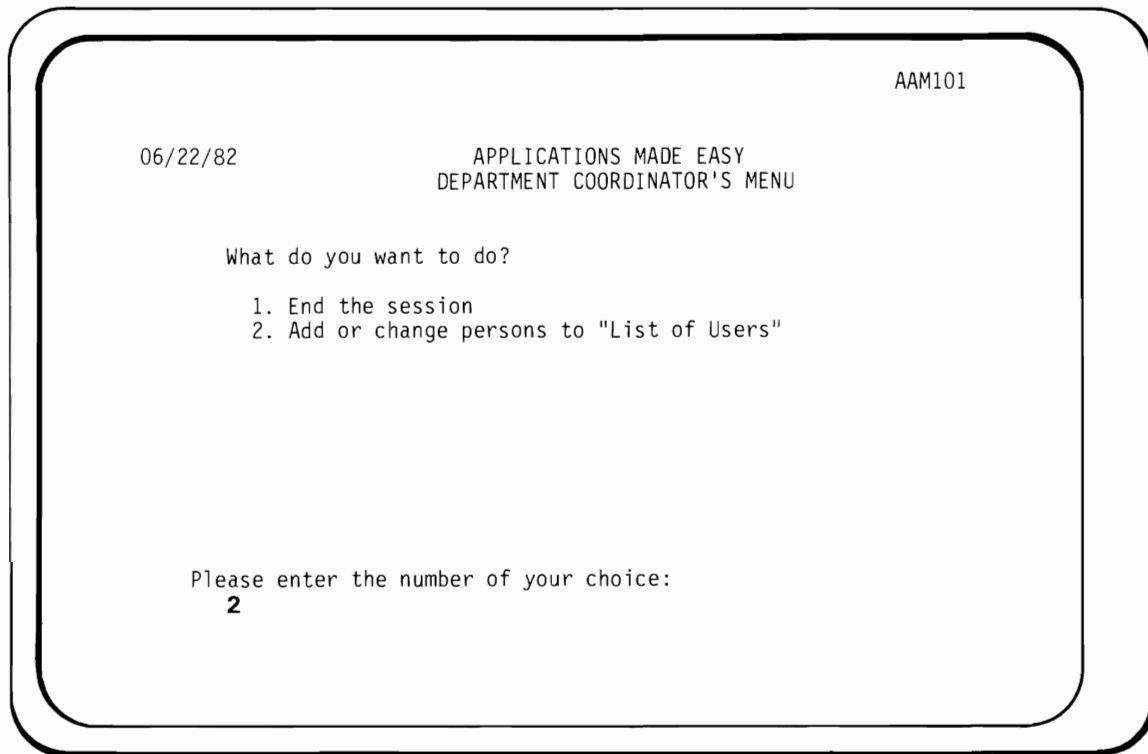


Figure C-1. Partial Department Coordinator's Menu

Choose option 2 to add department names and people who will use Applications Made Easy.

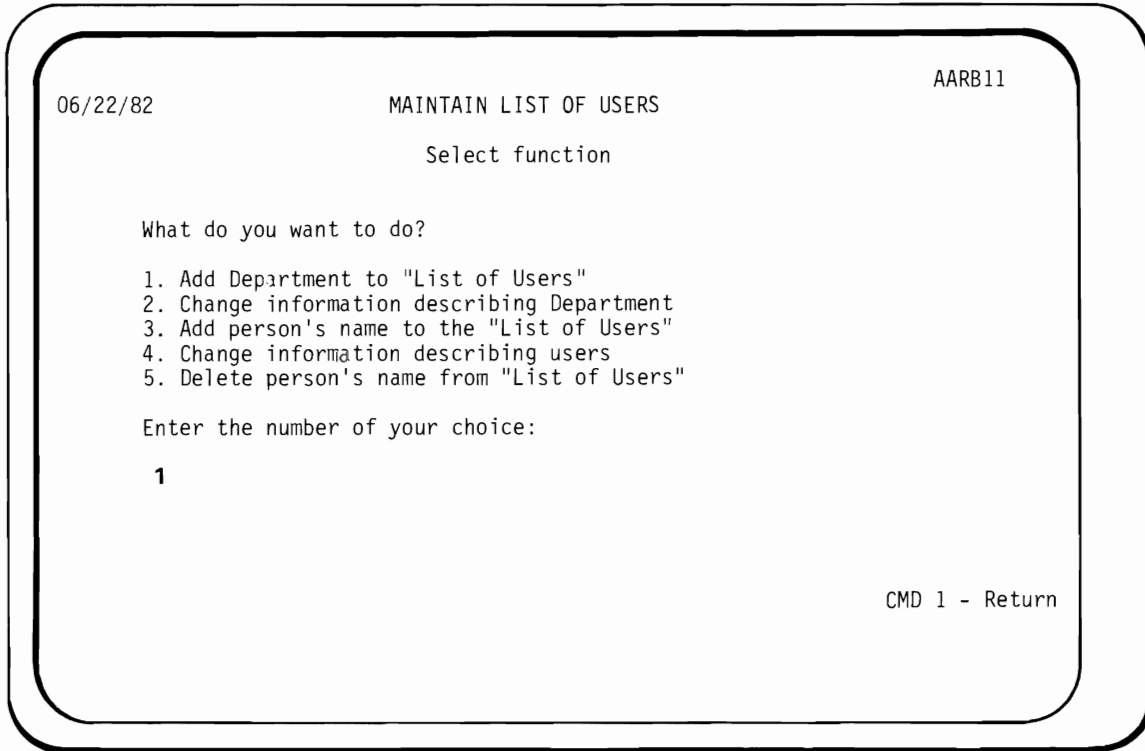


Figure C-2. Select function

Choose option 1 to add department names.

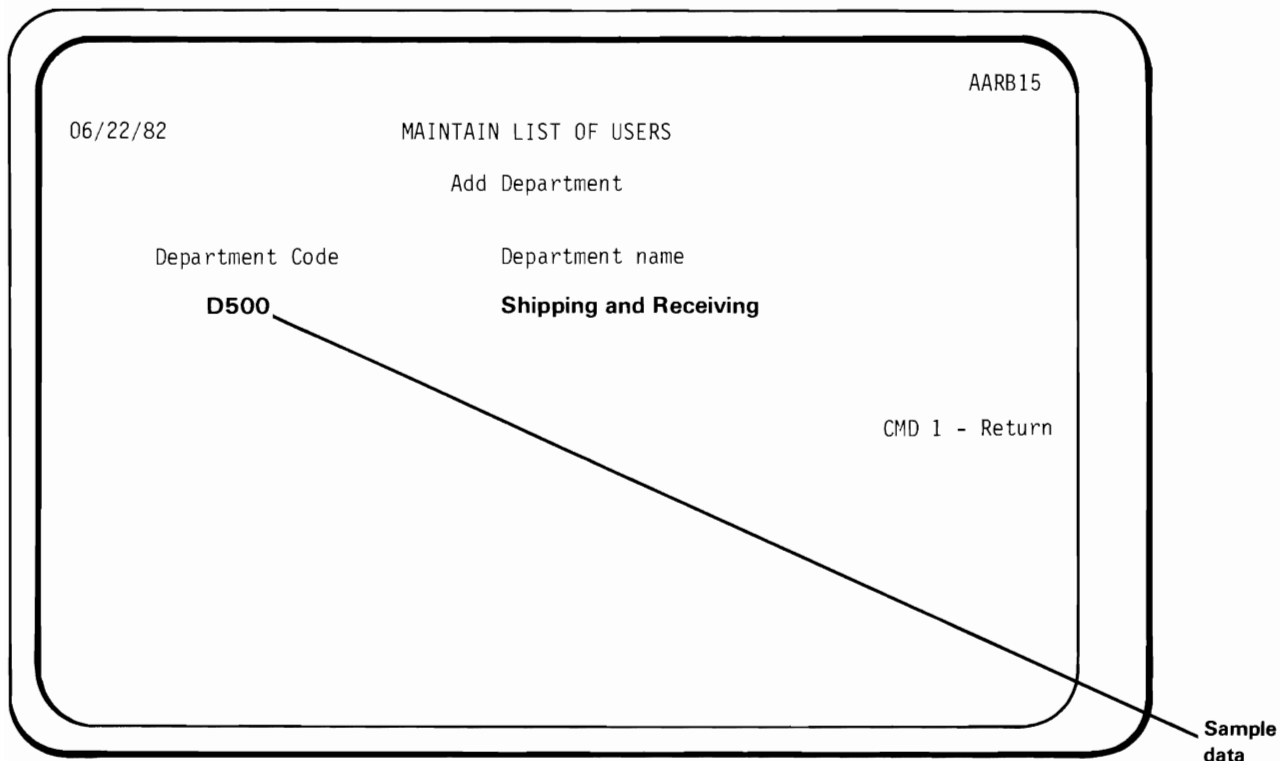


Figure C-3. Add department name

For each department, type:

Department code, up to 4 characters
Department name, up to 25 characters

and press ENTER.

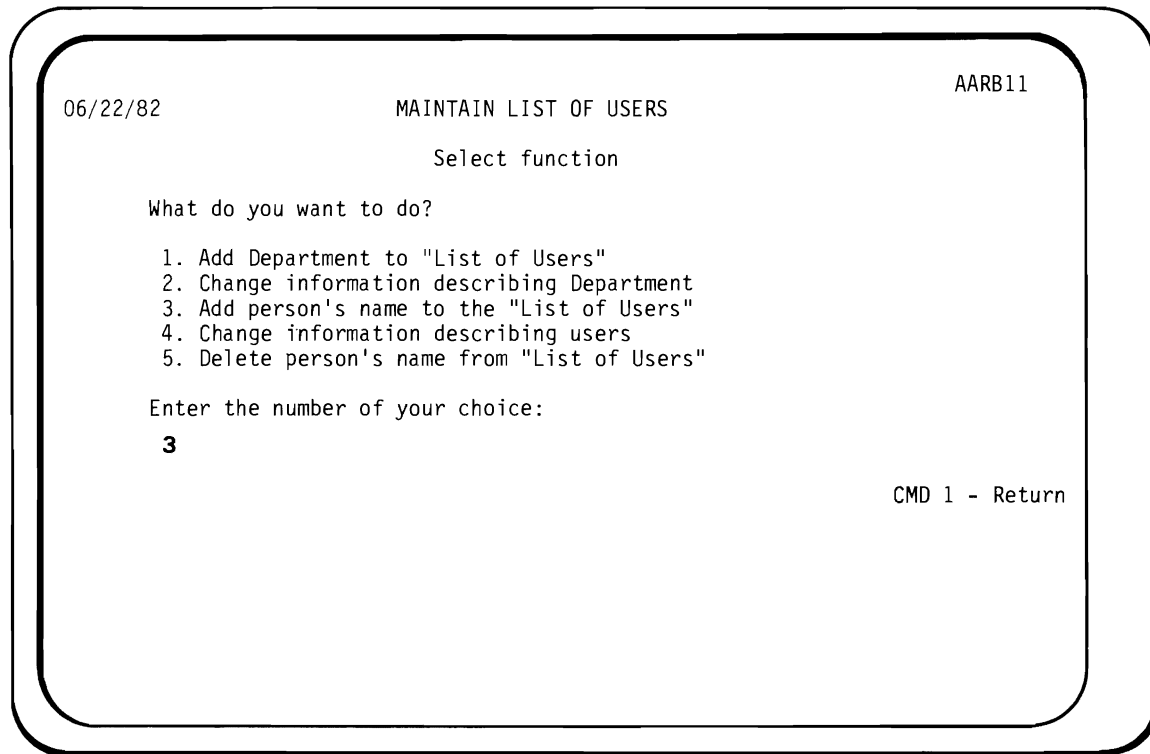


Figure C-4. Select function

Choose option 3 to add the names of people who will use Applications Made Easy.

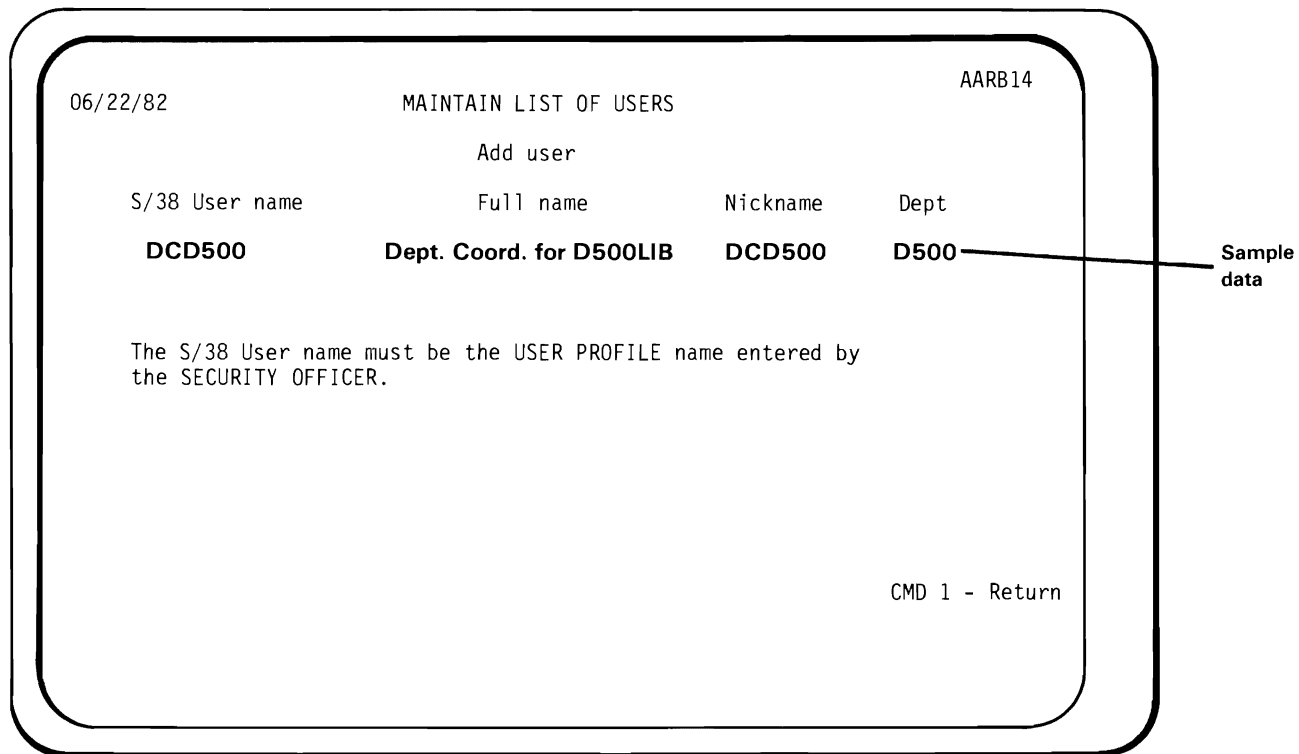


Figure C-5. Add person's name

The Department Coordinator *must* add a record for himself. For the Department Coordinator, the full name and nickname do not need to be the person's real name.

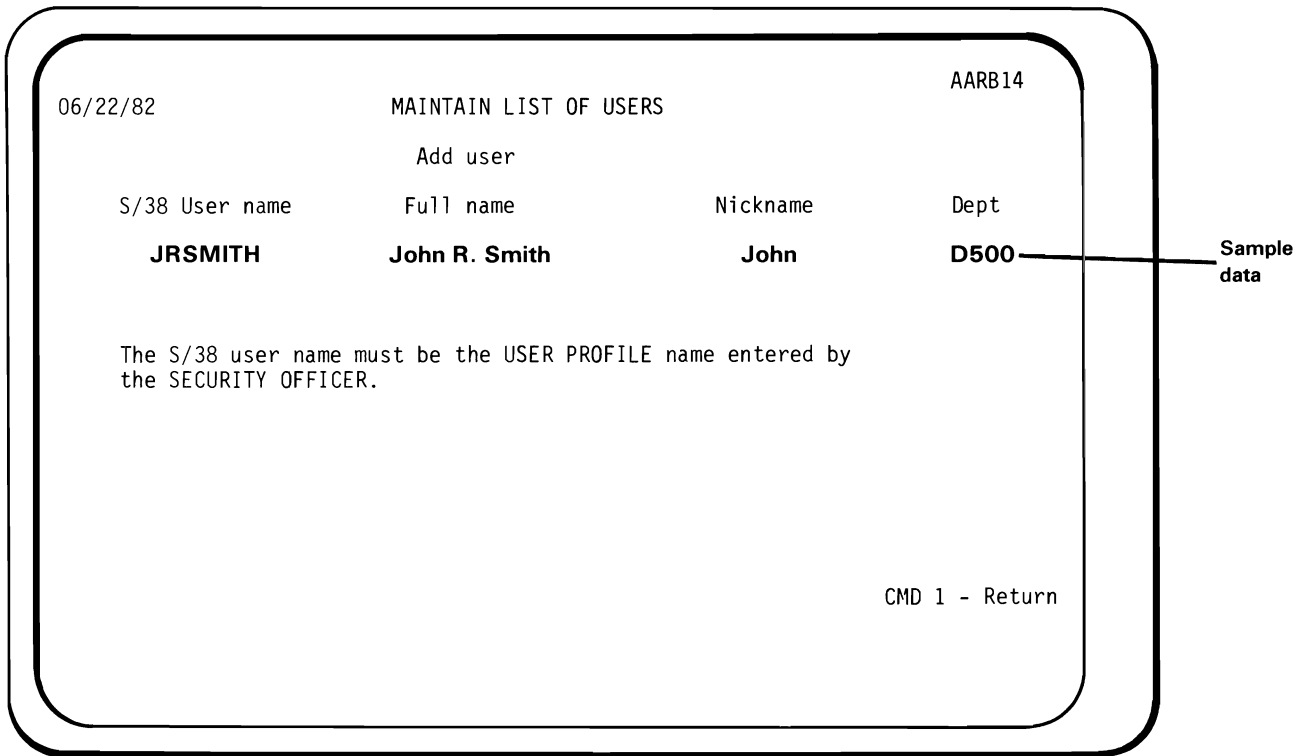


Figure C-6. Add person's name

For each person who will use Applications Made Easy, type:

S/38 User name: Up to 10 characters
 Full name: Up to 25 characters
 Nickname: Up to 10 characters
 Dept. Code: Up to 4 characters

and press ENTER.

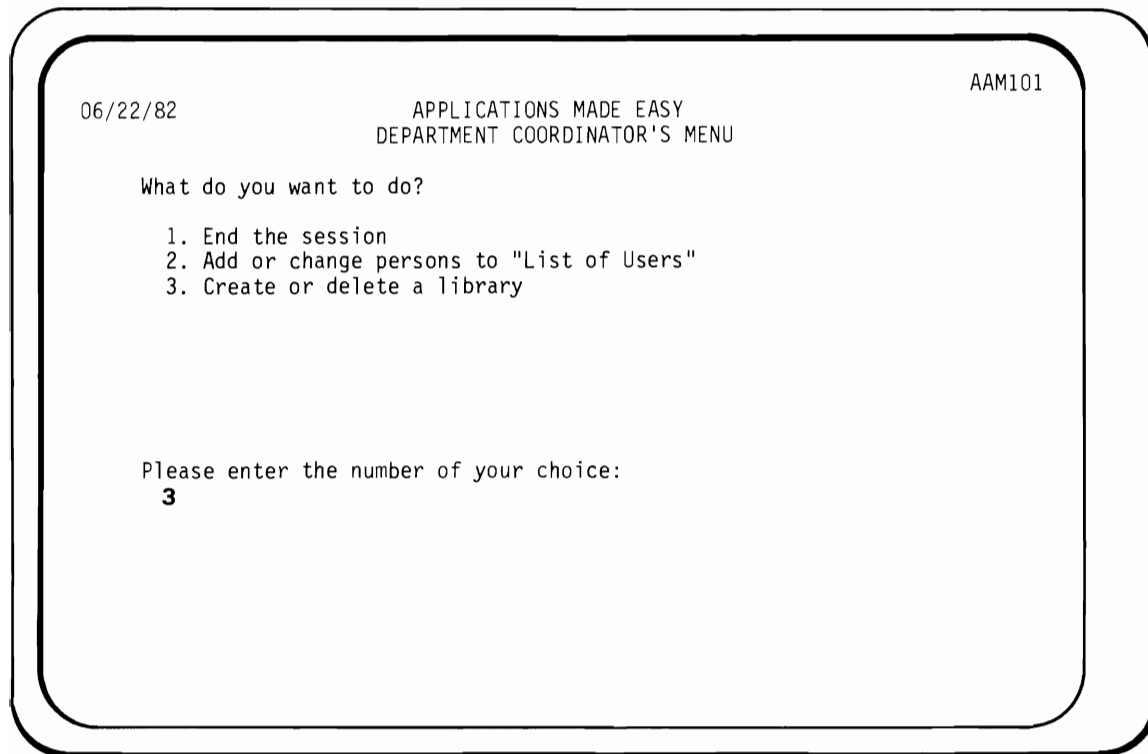


Figure C-7. Partial Department Coordinator's Menu

Choose option 3 to create the department library. If you did not add a record for yourself as Department Coordinator (refer to Figure C-5), option 3 will not appear on this menu.

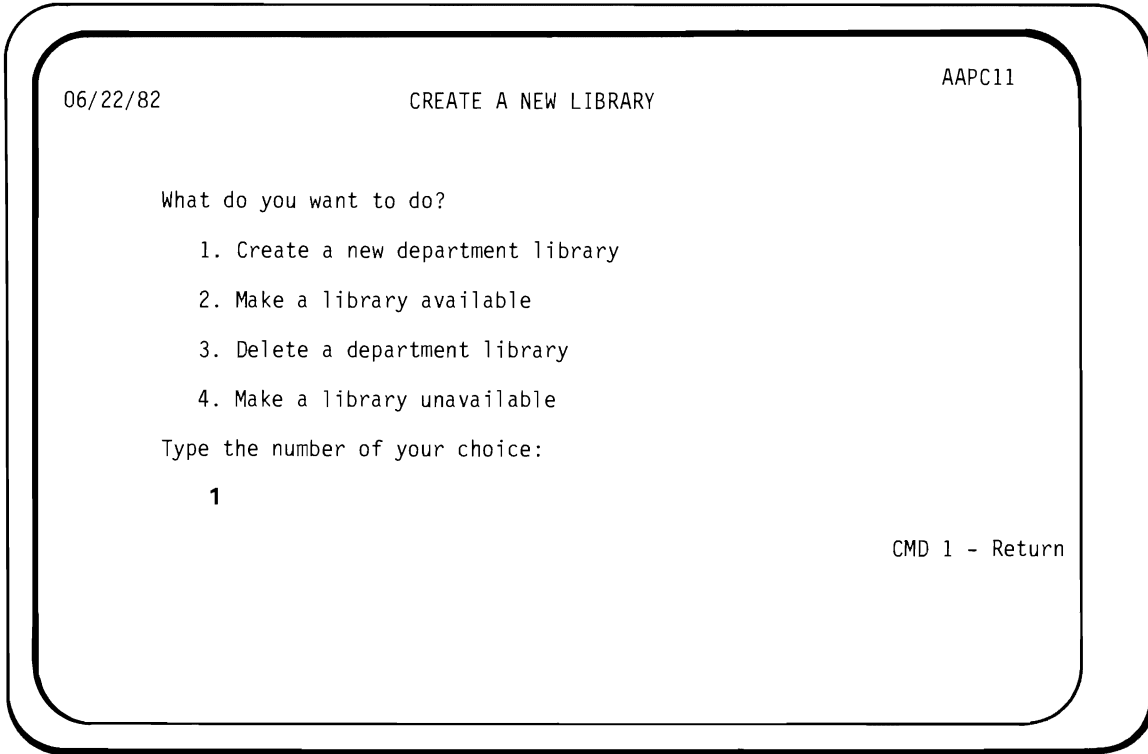


Figure C-8. Select function

Choose option 1 to create the department library.

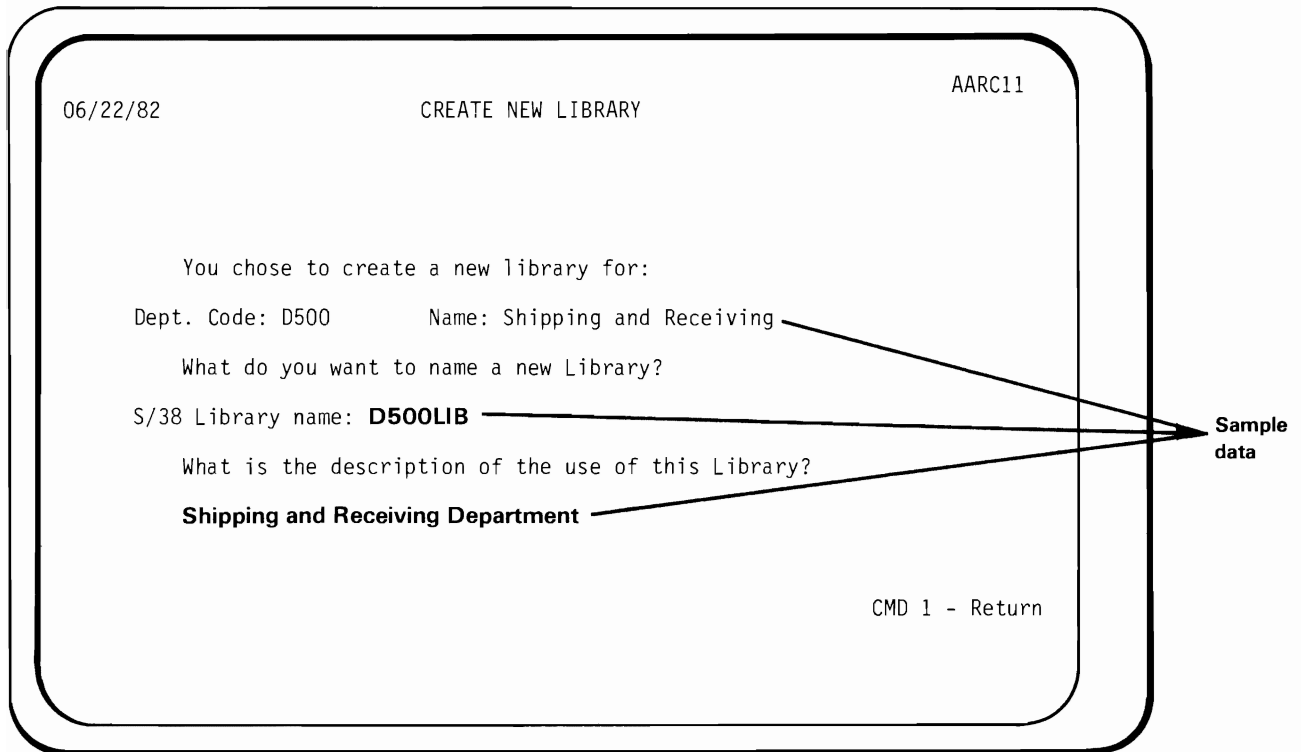


Figure C-9. Create department library

Provide this information to describe your department library:

S/38 library name: Up to 10 characters
Description (optional): Up to 50 characters

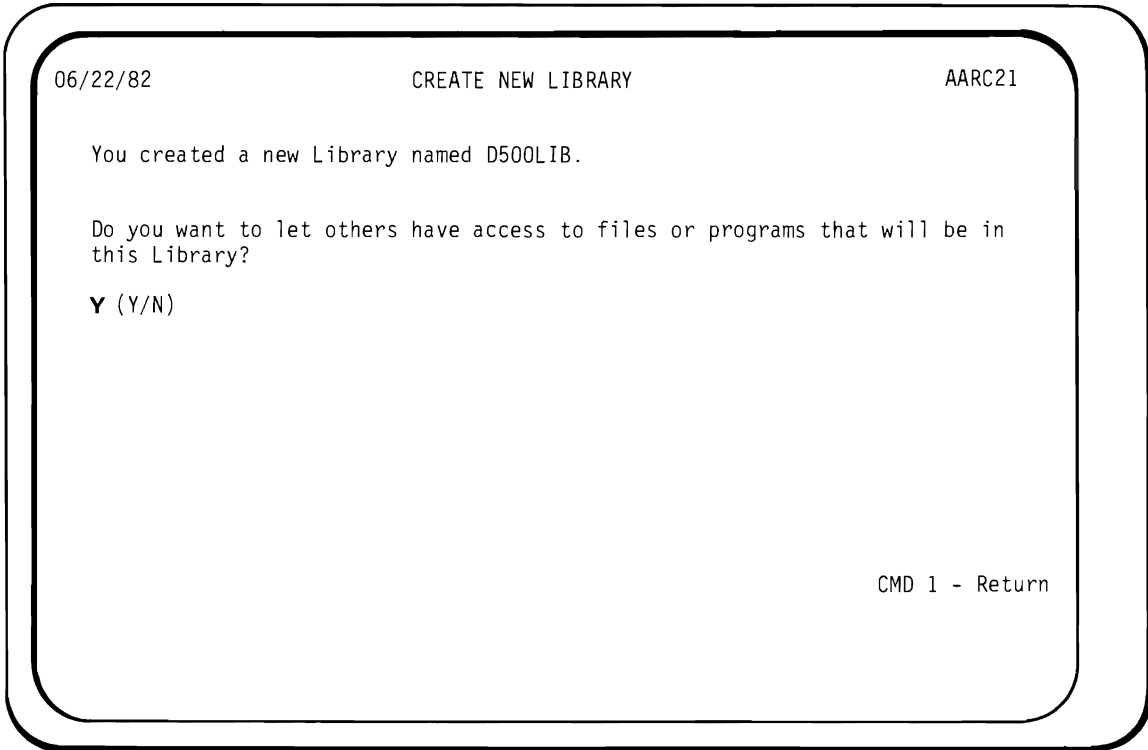
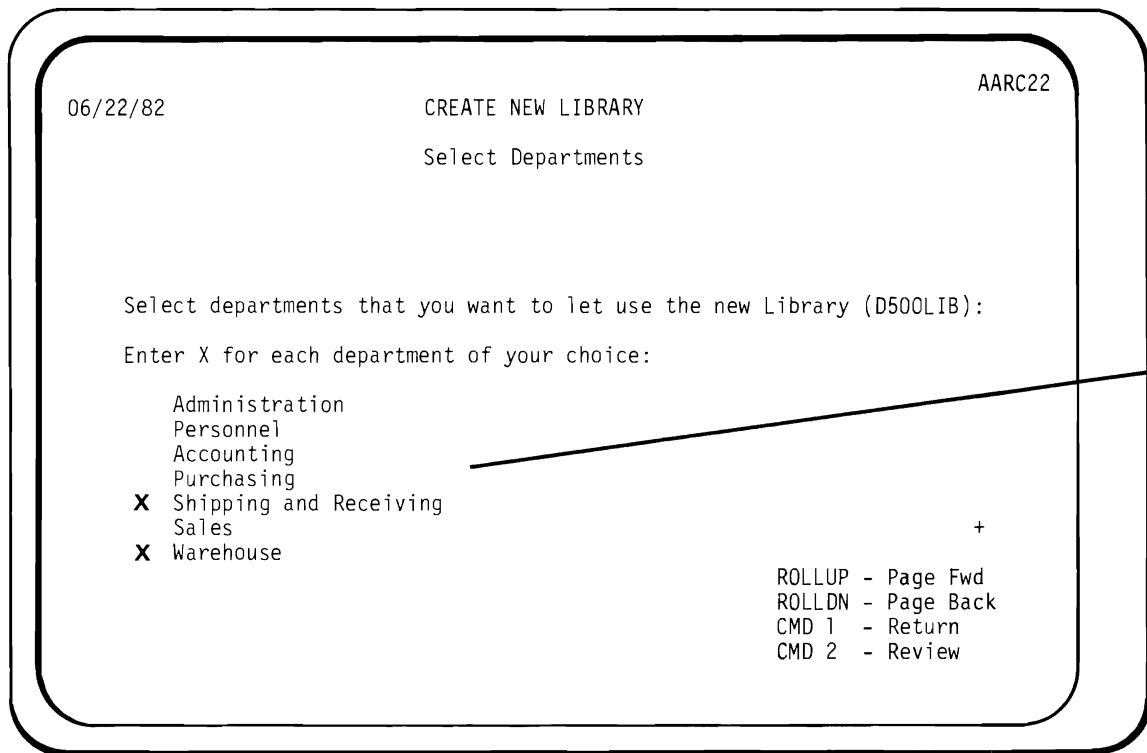


Figure C-10. Select function

Type a Y (yes) in order to authorize other people to use this department library.



Sample names

Figure C-11. Select Departments

Type an X in front of the department names that have some people that you would like to authorize to use your library.

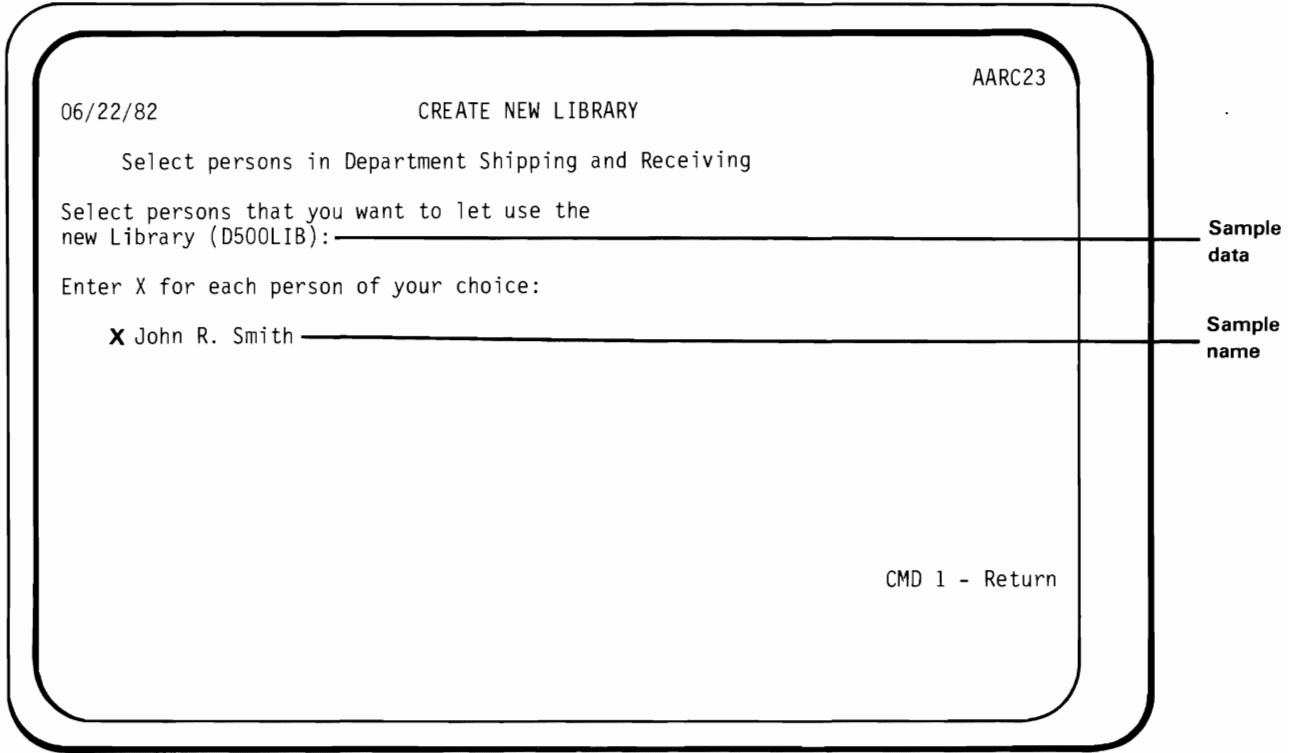


Figure C-12. Grant authority to users

Type an X in front of the name of each person that you want to give authority to use your library.

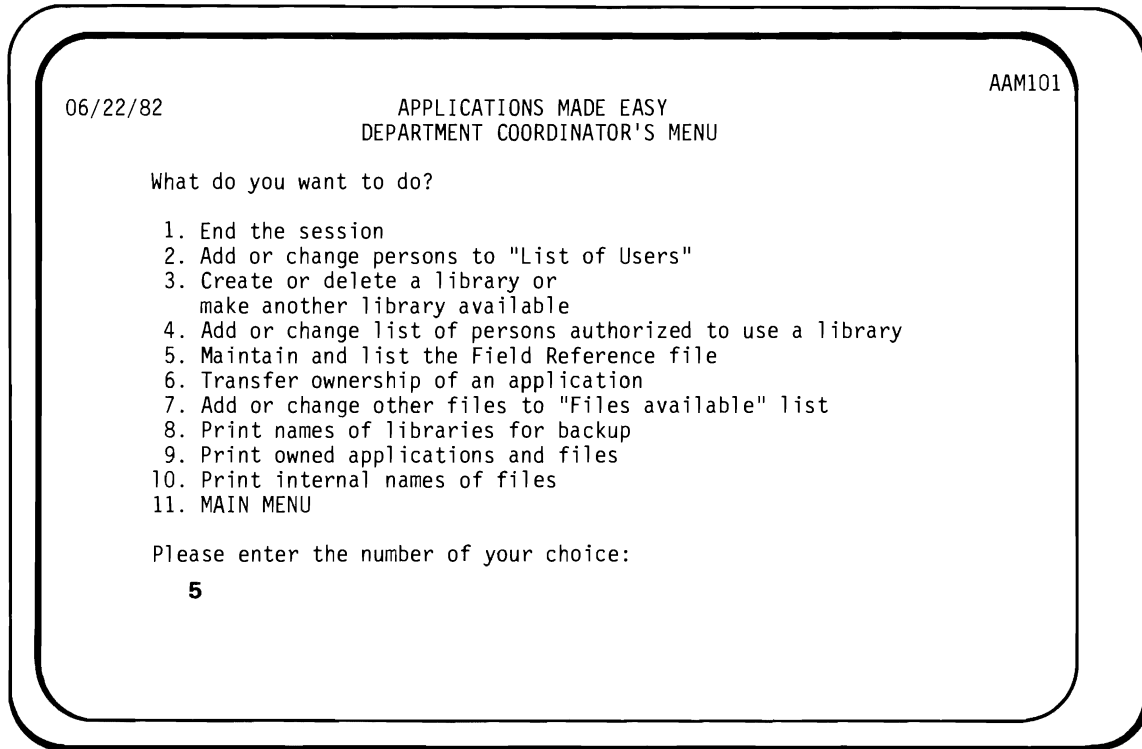


Figure C-13. Full Department Coordinator's Menu

Choose option 5 to add records to the Field Reference File. This is an optional step. You may do this later.

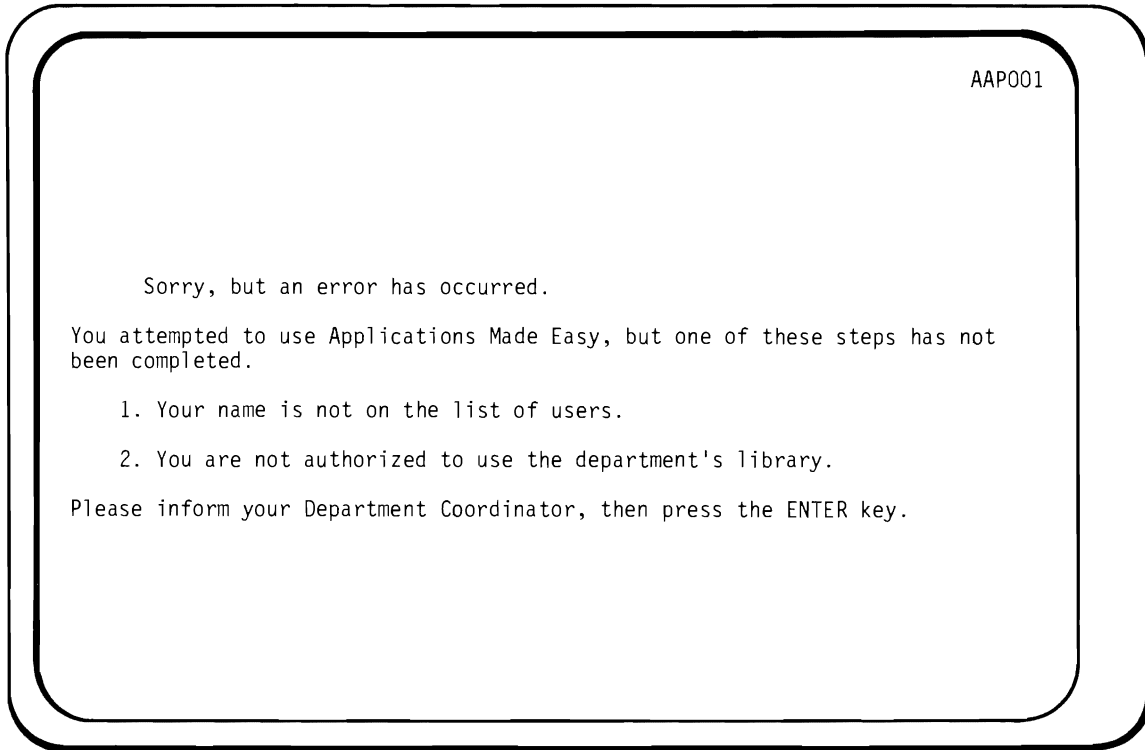


Figure C-14. Message for incomplete installation

If a person attempts to sign-on to Applications Made Easy before a Department Coordinator has completed all of the steps through Step C.3 (refer to Figures C-1 through C-12), this screen will appear.



Section D. Problem Report Form

1. Use the Problem Report Form to submit any problems with Applications Made Easy that may be due to errors in the IBM supplied programs. In order for these errors to be verified and corrected as soon as possible, it is important to submit problem documentation with the form.

Depending on the problem, this documentation should include one or more of the following:

- Copies of reports or screen printouts that are in error.
- Diskette copies of the files used in producing these reports.
- A job log.
- An accurate description of the problem and the circumstances leading to it, including all selection options and any error messages that appeared.
- The release levels of both the System/38 CPF and RPG III.

Any diskettes submitted with the Problem Report Form will be returned when the problem is resolved. All data will be treated as confidential.

2. Please make copies of the original Problem Report Form (Figure D-2). Use the following instructions to complete the copy. The circled letters and numbers refer to the areas on the Problem Report Form sample (Figure D-1).

- A** Enter the name and mailing address. **BE SPECIFIC**. If you want correspondence to a particular person or department, please include that name here, too.
- B** Enter the IBM Customer Number. You may get this number from your:
 - Data Processing Manager, or
 - System Operator, or
 - IBM Representative
- C** Enter the level of the System/38 CPF and RPG III on your system. You may get this from your System Operator or by entering the following commands on the Command Entry Screen.
 - 1** DSPDTAARA Q5714SS1.QSYS
 - 2** DSPDTAARA Q5714RG1.QRPGFill in the boxes with the two numbers following the 'R' and 'M'.
- D** Enter the screen options that are applicable.
 - 1** Enter (in the appropriate box) the option used on the DEPARTMENT COORDINATOR'S MENU, or the MAIN MENU.
 - 2** If you are creating an Applications Made Easy application, enter the Create Application option (selected on screen AAR511).

- Ⓔ Check the appropriate box for each type of material submitted. Use the procedures set up by your department to obtain any printed reports or listings.
- ① Please highlight errors on Report Print-outs.
 - ② The entire series of screens leading to an error is often helpful.
 - a. To get the Screen Print-outs:
 - Redo the steps that led to the error.
 - Type in the information on each screen, then press the **PRINT** key.
 - When the message 'Print operation complete' appears, press the **ERROR RESET** key.
 - Continue to the next screen.
 - b. When finished, return to the MAIN MENU or DEPARTMENT COORDINATOR'S MENU.
 - Use option 1 to end the session (this will make sure that all the screens are released to the printer).
 - The screens will appear on the printer output queue with a FILE NAME of QSYSPRT.
 - ③ The job log appears on the printer output queue with a FILE NAME of QPJOBLOG.
 - ④ When an error occurs in creating or changing an application, the program listings are often helpful. Program listings are available only if you answered yes (Y) on screen AAR5V2 when you created (or changed) the application.
 - You can create (or change) the application again, this time answering yes (Y) on screen AAR5V2.
 - The program listings appear on the printer output queue with a JOB NAME of AMECRTAPPL or AMECHGAPPL.
 - ⑤ The User-Code file for the application is always useful. Each application has a User-Code file containing information about your application. Each User-Code file has a unique name. To get the User-Code file for an application:
 - a. The Department Coordinator chooses 'Print the owned applications' using option 9 on the DEPARTMENT COORDINATOR'S MENU.
 - b. Enter the three character INTERNAL NAME for the application followed by the letters UCD (name of the User-Code file).
 - c. The System Operator uses the Save Object (SAVOBJ) command to save the User-Code file from the department library onto diskette.

Example: If the INTERNAL NAME for your application is B2C, the name of the User-Code file to be saved is B2UCD.

6 Files used by the application are often useful. The System/38 names of the files can be obtained by the Department Coordinator or the System Operator.

a. Department Coordinator:

- Chooses 'Print the owned applications', option 9, on the DEPARTMENT COORDINATOR'S MENU; then
- Chooses 'Print the internal names of files', option 10 on the DEPARTMENT COORDINATOR'S MENU; and
- Uses these print-outs to find the INTERNAL NAMES (System/38) of the files used by the failing application.

b. System Operator:

- Uses the Save Object (SAVOBJ) command to save the files from their department libraries onto diskette(s).

7 Enter the total number of diskettes sent.

F Describe the problem as completely as possible by filling in:

1 Severity Code

Severity Code Meaning

| | |
|--------|--|
| Code 1 | Indicates the inability to use Applications Made Easy to the degree that the problem results in a critical impact on overall operations. The condition requires an immediate solution that is not already available from the development center. |
| Code 2 | The user is able to use Applications Made Easy but is severely restricted. |
| Code 3 | The user is able to use the Applications Made Easy program with limited functions which are not critical to overall operations. |
| Code 4 | The nature of the problem is insignificant. The user has found a way to circumvent it. However, the problem will be evaluated and action will be taken. |

2 What you expected to happen,

3 What did happen,

4 Whether a loss of power occurred and how you recovered.

6 Enter your name and telephone number, then sign and date the form.

Figure D-1.
APPLICATIONS MADE EASY (5714-XE1)
PROBLEM REPORT FORM

(A) *This is a sample form* _____ **(B)**

| | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|

 Company Name IBM Customer Number

Company Mailing Address

| | | | | | | | | | |
|--|---|---|---|--|---|--|---|--|--|
| <p>(C) (1) <table border="1" style="display: inline-table;"><tr><td>R</td><td> </td><td>M</td><td> </td></tr></table> (2) <table border="1" style="display: inline-table;"><tr><td>R</td><td> </td><td>M</td><td> </td></tr></table></p> <p>Level of S/38 CPF Level of RPG III</p> | R | | M | | R | | M | | <p>(D) <input type="checkbox"/> (1) OR <input type="checkbox"/> (2) <input type="checkbox"/></p> <p>Department Coordinator's Menu Option MAIN MENU Option Create Application Option (Screen AAR511)</p> |
| R | | M | | | | | | | |
| R | | M | | | | | | | |

(E) Material Submitted with this form (Check appropriate boxes)

| | | | |
|--|---|---|---|
| (1) <input type="checkbox"/> Report Printouts | (2) <input type="checkbox"/> Screen Print-outs | (3) <input type="checkbox"/> Job Log Print-out | (4) <input type="checkbox"/> Program Listing |
| (5) <input type="checkbox"/> Diskettes | (6) <input type="checkbox"/> User-Code File | (7) <input type="checkbox"/> Application Files | (7) <input type="checkbox"/> Number of Diskettes |

(F) Problem Definition **(1)** Severity Code

(2) What did you expect to happen? _____

(3) What actually happened? (use the back of page if you need more space) _____

(4) Did your system or workstation lose power? Yes _____ No _____
 If yes, explain how you recovered: _____

(G)

| | |
|---------------------------------|-----------------------|
| Submitter's Name (Please print) | Submitter's Signature |
| () | |
| Submitter's Phone No. | Date |

Submit This Form and Supporting Documentation to:

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 IASC/Dept. 20P/83D
 P.O. Box 28331
 Atlanta, Georgia 30358-0331
 ATTN: Applications Made Easy

Figure D-2.
APPLICATIONS MADE EASY (5714-XE1)
PROBLEM REPORT FORM

| | | | | | | | | | | | |
|--------------|---|--|--|--|--|--|--|--|--|--|--|
| Company Name | <table border="1" style="float: right; border-collapse: collapse;"> <tr> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> </tr> </table> | | | | | | | | | | |
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| | IBM Customer Number | | | | | | | | | | |

Company Mailing Address

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|--|------------------|--------------------------------------|------------------|---|--|--|---|--|--|--|--|--------------------------|----|--------------------------|--------------------------|
| <table border="1" style="float: left; border-collapse: collapse;"> <tr> <td style="width: 15px; height: 15px;">R</td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> </tr> </table> | R | | | | | <table border="1" style="float: left; border-collapse: collapse;"> <tr> <td style="width: 15px; height: 15px;">R</td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> </tr> </table> | R | | | | | <input type="checkbox"/> | OR | <input type="checkbox"/> | <input type="checkbox"/> |
| R | | | | | | | | | | | | | | | |
| R | | | | | | | | | | | | | | | |
| Level of S/38 CPF | Level of RPG III | Department Coordinator's Menu Option | MAIN MENU Option | Create Application Option (Screen AAR511) | | | | | | | | | | | |

| | | | | |
|---|--|---|---|---|
| Material Submitted with this form (Check appropriate boxes) | <input type="checkbox"/> Report Printouts | <input type="checkbox"/> Screen Print-outs | <input type="checkbox"/> Job Log Print-out | <input type="checkbox"/> Program Listing |
| Diskettes | <input type="checkbox"/> User-Code File | <input type="checkbox"/> Application Files | <input type="checkbox"/> Number of Diskettes | |

Problem Definition Severity Code

What did you expect to happen? _____

What actually happened? (use the back of page if you need more space) _____

Did your system or workstation lose power? Yes _____ No _____

If yes, explain how you recovered: _____

| | |
|---------------------------------|-----------------------|
| Submitter's Name (Please print) | Submitter's Signature |
| () | |
| Submitter's Phone No. | Date |

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 Atlanta, Georgia 30358-0331
 ATTN: Applications Made Easy

Appendix A. Installation Planning Forms

APPLICATIONS MADE EASY INSTALLATION PLANNING FORM

DEPARTMENT CODE (4) _____

DEPARTMENT NAME (25) _____

S/38 LIBRARY (10) _____

DEPARTMENT COORDINATOR

| S/38 USER PROFILE NAME(10) | FULL NAME (25) | NICKNAME (10) | DEPT CODE (4) |
|-------------------------------|----------------|---------------|------------------|
| _____ | _____ | _____ | _____ |

USERS

| S/38 USER PROFILE NAME(10) | FULL NAME (25) | NICKNAME (10) | DEPT CODE (4) |
|-------------------------------|----------------|---------------|------------------|
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
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| _____ | _____ | _____ | _____ |



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**APPLICATIONS MADE EASY
INSTALLATION PLANNING FORM**

USER PROFILES AND PASSWORDS

DEPARTMENT COORDINATORS

| S/38 USER PROFILE NAME (10) | PASSWORD (10) | INITIAL PROGRAM |
|-----------------------------|---------------|-----------------|
| _____ | _____ | AAM10.AAALIB |
| _____ | _____ | AAM10.AAALIB |
| _____ | _____ | AAM10.AAALIB |
| _____ | _____ | AAM10.AAALIB |
| _____ | _____ | AAM10.AAALIB |
| _____ | _____ | AAM10.AAALIB |

USERS

| S/38 USER PROFILE NAME (10) | PASSWORD (10) | INITIAL PROGRAM |
|-----------------------------|---------------|-----------------|
| _____ | _____ | AAPO0.AAALIB |
| _____ | _____ | AAPO0.AAALIB |
| _____ | _____ | AAPO0.AAALIB |
| _____ | _____ | AAPO0.AAALIB |
| _____ | _____ | AAPO0.AAALIB |
| _____ | _____ | AAPO0.AAALIB |
| _____ | _____ | AAPO0.AAALIB |
| _____ | _____ | AAPO0.AAALIB |
| _____ | _____ | AAPO0.AAALIB |
| _____ | _____ | AAPO0.AAALIB |
| _____ | _____ | AAPO0.AAALIB |

**APPLICATIONS MADE EASY
INSTALLATION PLANNING FORM**

PRINTER OUTPUT QUEUES

| QUEUE NAME (10) | LIBRARY NAME (10) | DESCRIPTIVE NAME (40) |
|-----------------|----------------------|-----------------------|
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |

Appendix B. Performance Considerations of Batch Processing

After a user has defined an application, a job is submitted to a batch job queue. This job creates all source code and objects for execution of the application. For example, there are nine objects created in this manner for a type-1 application and the processing time is approximately twelve minutes on a System/38 Model 5, dedicated. Other application types create fewer objects and execute somewhat faster. As shipped to you, Applications Made Easy will submit these application-creation jobs to job queue QBATCH with a scheduling priority of 6.

If other users outside of Applications Made Easy also submit jobs to job queue QBATCH, then all batch jobs are queued together and must wait in turn for execution.

So that various users will not seriously impact one another by causing queuing in a single job queue, you may wish to have the application-creation jobs submitted to another job queue. This alternate job queue may be used to start a concurrent job stream in subsystem QBATCH or another batch subsystem.

For example, with Release 4.0 of System/38 CPF, you may add multiple JOBQ entries to a single subsystem. If you added a second JOBQ entry to subsystem QBATCH with MAXACT of 1, raised the MAXJOB parameter for subsystem QBATCH to 2, and changed MAXACT for JOBQ entry QBATCH to 1, you could have concurrent operation of two batch job streams, with job selection dependent only upon other jobs in the same job queue.

You may also give the application-creation jobs a higher or lower job scheduling priority from other users. The default priority is 6.

You may use program AAPZ4 to change the job queue or the priority. The Security Officer (QSECOFR) may enter the command:

```
CALL AAPZ4.AAALIB
```

Refer to Figures B-4 and B-5.

For further information on job queues, their creation and attachment to subsystems, and for tuning considerations, see Chapter 18, Using Work Management Functions, and Chapter 19, Performance Tuning, in the System/38 CPF Programmer's Guide, SC21-7730.



Appendix C. AME Architecture

I. PURPOSE OF THIS INFORMATION

This information is a guide to the overall structure, function, and operation of Applications Made Easy (AME). All sections should be read, because introductory comments will be needed for the understanding of later sections. The level of detail presented will be valuable for technical personnel to determine how AME can be a part of their data processing environment. The implementer of AME can gain an understanding of how to organize the users into groups with common data interests. This organization will simplify the interface of AME to other S/38 applications.

The following environments are representative of AME installations:

- * AME used as a fast stand-alone generator for simple applications created by a non-data processing oriented user.
- * AME used as a supplement to programs written by the user's Data Processing department. Programmers create the application for the user.
- * AME used to create the basic application structure to free the programmer for more complex programming tasks. Users may want special edits or calculations added to the AME created programs by the Data Processing department.

Definitions used:

- * Application - The display files, print files, RPG III and CL programs, physical and logical files that are created by AME. These objects are the result of the users response to prompts given in the creation of the six AME application types.
- * Application - The six tasks that AME is designed to create programs for:
 - Type 1 - Create a file with a maintenance program and report. Both physical and logical files are created. Types 2-6 can use the file created.
 - Type 2 - Inquire or print records from 1-2 files.
 - Type 3 - Update a file using input from the file and optionally another file. This type uses the S/38 batch subsystem.

- Type 4 - Add data to a newly created file. The data comes from 1-3 existing files. Application types 2, 3, 4, 5, and 6 can now use the file created.
The data is added by a program running in the S/38 interactive subsystem.
- Type 5 - Print a report from a file with record selection.
- Type 6 - Search, display, and update an existing file interactively with record selection.
- * Department - This concept is the way a user views the storage of his data and applications in the S/38. An AME department consists of a single library created by AME, and control records placed in files in the control library AAFLIB.
- * Department Coordinator - The person who initially creates a department is the coordinator and focal point for that department. The department and library is owned by this person. The coordinator will be the users interface to the S/38 for access to other libraries and files if data is needed.

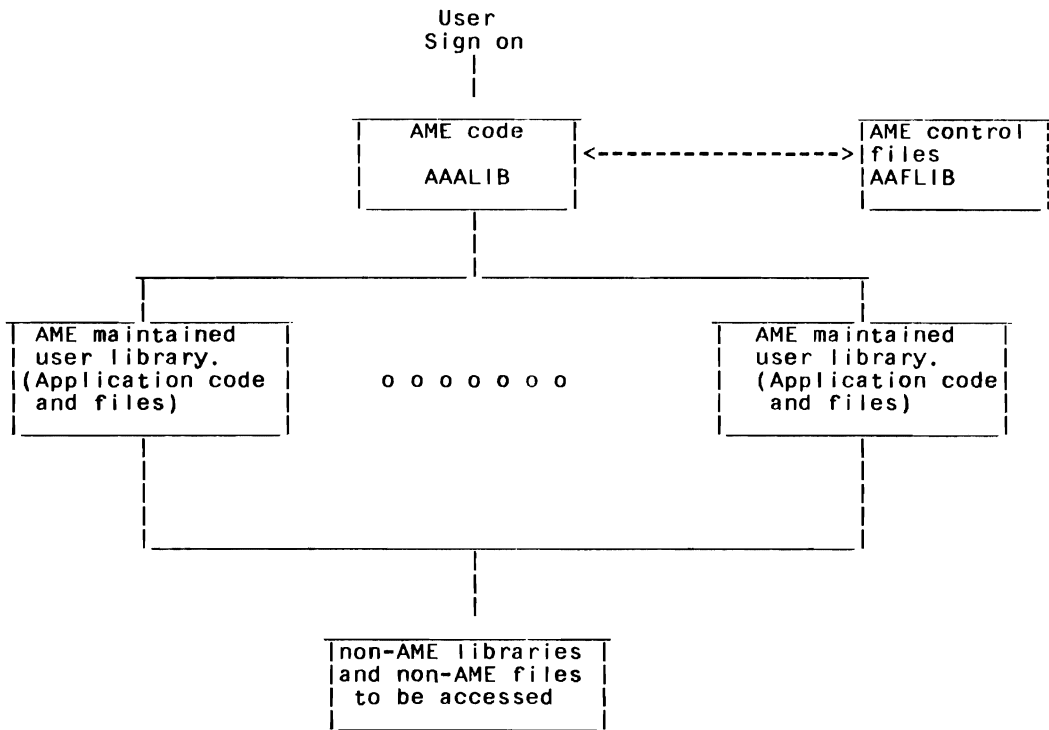
II. AME ARCHITECTURE

A. LIBRARIES

This section explains the contents and use of the various libraries and files used by AME in its operation. The libraries are the AME program library, the AME control library, and the users application libraries (maintained by AME). See Figure 1.

1. AAALIB - The AME program library.
This library contains the executable code and files that make up AME.
 - * AAxxx objects - The programs and display files used to create, use, or maintain a user's application. This is the code that generates AME applications.
 - * AMEMSG file - A message file used by AME or user programs.
 - * AMETXT file - The Help Text displays shown when requested by pressing the help key during application definition.
 - * EXCSRC file - A file containing skeleton source program code which will be changed by the responses given to application creation questions.
 - * PCDTA file - Program communications data area file. This physical file description is used by the RPG III compiler to obtain a layout of the PCDTA data area when applications are created. This file does not contain data records.
 - * PTCOURS file - A file containing the Learning Course displays for familiarization with AME.
 - * XXXUCD file - The template file used for the creation of xxxUCD files which will hold the users responses to interactive application definition.

THE AME APPLICATION ENVIRONMENT



Note: A user library and control records in the files in AAFLIB are called a 'Department'.

Figure 1. The AME Application Environment

2. AAFLIB - The AME control file library.
This library contains the files used for the management of user generated applications. No user code exists in this library.
- * DPTNME - Department name file.
This file contains one record for each department defined to AME.
The file provides the full name of the department and the S/38 library name used for the department.
 - * USRNME - User name file.
This file contains one record for each user assigned to a department.
The file associates the AME user's name with a S/38 user profile. USRNME is used to establish the S/38 library search list for the user at sign on. The file associates one department code with each user so that a library name can be obtained from the DPTNME file. This S/38 library name is placed first in the user's library search list.
 - * DPTUSR - Department/user file.
This logical file is built over the DPTNME and USRNME files to provide a list of users grouped by department. Selection displays will allow users to authorize this list of people to access files, applications, or other libraries.
 - * USRAUT - User authority file.
This file contains the records that authorize a user to access files, applications, and libraries. It provides a list of these authorized items for selection by the user. There is one record for each file, application, and library that is owned by or authorized to a user. The section on AME security will discuss the records in the USRAUT file in greater detail.
 - * TYPNAM - Type/name file.
This logical file is built over the USRAUT file. It is used to insure that the name assigned to an application is unique. A control record is stored here and is used to generate the three character internal application name which is used as a prefix for all S/38 objects generated by AME.
 - * CMPUSR - Component user file.
This logical file is built over the USRAUT file. It is used to track the users and owner of a file, application, or library.

- * APPCOM - Application component control file.
This file tracks and controls the components of each application. It contains one record for each object of each generated application. It is used to execute or delete an application.
- * COMAPP - Component/application file.
This logical file is built over the APPCOM file. It provides a 'file where used' function. For example, it shows which applications use a particular file which is needed when transferring an application to another user, or to check if an application file is used by another application before deletion.
- * FLDREF - Field reference file.
This file provides standard definitions for frequently used fields. These standard fields can be used in the record definition of new files.
- * OUTQUE - Printer queue file.
Provides a plain English name to the print queues available to AME.

3. USERLIBS - AME created application code library(s).
One or more libraries that will store all application code created by AME for some group of users. These library(s) are created by a department coordinator using Option 3 on display AAM101. The library(s) contain these files and programs:

(The xxx stands for the AME generated prefix for an application.)

- * xxxOBJECTS - These are the executable RPG III programs, display files, print files, and data base files produced by the application generation process. See Figure 2 for a list of the objects created by AME.
- * xxxUCD file - The application user code file.
The responses to the interactive definition of the application are stored here. This file data is used if an application is changed by AME, and during the batch create process to produce S/38 programs and files. The availability of an application to be used or deleted is also tested by an ALCOBJ command on the application's user code file.
- * xxxSRC file - The application source code file.
The generated DDS and RPG III source code is stored in this file during application creation and then the file is deleted.

Notes:

AME creates physical and logical files. The files are created with LVLCHK = *YES which ensures that file and program remain at the same 'modification level'. This is explained in the section on customizing the S/38 environment for AME.

The data required for AME to change an application is located in the xxxUCD file. The source required for a programmer to change an application is located in the xxxSRC file. This file will normally be deleted after being used by AME, but can be saved as explained in the section on customizing the S/38 environment.

AME CREATED APPLICATION OBJECTS

APPLICATION TYPE

| S/38 object created by AME | Type 1 | Type 2 | Type 3 | Type 4 | Type 5 | Type 6 | Non-AME file |
|-----------------------------|-----------------|-------------------------|-----------------|-----------------|-----------------|-----------------|---------------|
| Physical file | xxxPFL (1) | -- | -- | xxxPFL | -- | -- | -- |
| Logical file | xxxLFL | -- | -- | xxxLFL | xxxLFL (5) | xxxLFL (5) | xxxLFL (5) |
| Display file | xxxINQFM | xxxINQFM | -- | -- | -- | xxxINQFM | -- |
| Printer device file | xxxRPTPR | xxxRPTPR | -- | -- | -- | -- | -- |
| Report/Inquiry program | xxxINQ (2) | xxxINQ xxxRPT (3) | -- | -- | xxxRPT | xxxINQ | -- |
| File maintenance program | xxxMNT | -- | -- | -- | -- | -- | -- |
| Batch file processing prog. | -- | -- | xxxPRG | xxxPRG | -- | -- | -- |
| Run time option(RTO) prog. | xxxRTO | xxxRTO | xxxRTO | xxxRTO | xxxRTO | xxxRTO | -- |
| Display file for RTO prog. | xxxRTOFM (4) | xxxRTOFM (4) | xxxRTOFM (4) | xxxRTOFM (4) | xxxRTOFM (4) | xxxRTOFM (4) | -- (4) |

Notes:

1. The xxx is replaced by the AME generated internal application name.
2. A type 1 inquiry and report are provided by the same program, xxxINQ
3. A type 2 application creates both xxxINQ and xxxRPT programs.
4. All application types create files xxxUCD and xxxSRC
The file members in xxxSRC are named as in the chart.
5. When the non-AME file is made available a logical file is created in the same library with the physical file.
Creating a type 5 or 6 application with a non-AME file will create a new logical file in the department library.

Figure 2. AME Created Application Objects

B. AME SECURITY AND APPLICATION CODE MANAGEMENT

AME uses two levels of security for its applications. This section shows the rationale behind providing the second level of security in AME. The two levels are the system level, which uses the S/38 profile for the user, and the AME level which uses control records in the USRAUT file in AME. Both levels will keep track of AME objects. The application security built into AME is a second level of security. You cannot go around the second level of security by simply granting others object authority using S/38 commands. The AME security will simplify access to the applications for all users within a department. A user can authorize others to access the data files and programs that he owns by choosing from a list of available people instead of having to use the S/38 commands for granting and revoking authority to objects. The user does not have to know that files must be authorized before programs can be authorized. There is also no need for the user to know the names of display or print files in the applications. This security level prevents a user from deleting a file that is used by another application.

When you create an application in AME you become the owner of the files and programs created. You can let others use your files and applications by selecting them from a list of users in a department. AME will execute the S/38 commands to grant these users authority to use the application. When the users sign on, AME security will provide a list that shows what applications they can access and use. These lists are produced by accessing the following authority records that are in the USRAUT file:

- 1) 'L' records indicate that a user either owns or can use a department library. 'L' records are checked to see if a user can access a file since you must first have access to the library.
- 2) 'A' records are added for the application owner and each user that can access a particular application. The user's right to use an application is also given. (Inquiry and print reports vs. change data rights.)
- 3) 'P' and 'F' records are added for each physical and logical file when an application is created. There is also a record for each authorized user of the file. These records will suggest how a user may access a file.

The use of AME security in the creation or modification of an application shows how the USRAUT file is used. During the interactive part of creating an application AME allows the user to select departments and the users within them who can be authorized to use the application. Only the users who have USRAUT records for the library and/or files used by the new application are displayed on the list. The users selected from the list are stored in the xxxUCD file being created for that application. During the batch part of creating the application the xxxUCD file is read to determine which users will have 'A' records added to USRAUT.

AME executes S/38 commands to cause system authority to be granted to those users for the application objects.

The use of AME security is shown in deleting a type 1 or 4 application. The application is first checked to see if it is in use by locking the xxxUCD file. Then, the COMAPP file is checked to see if the files created by this application are used by any other applications. If the files are not used by other applications, then all objects for the application are removed. The security control record in APPCOM and USRAUT files are then deleted.

If the user decides to change the authorized users of an application, by using Option 3 on menu AAM001, the AME programs will update the xxxUCD and USRAUT records and grant or revoke system authority to the application objects.

C. S/38 SECURITY CONSIDERATIONS WITH AME INSTALLED

When AME creates an application or makes a non-AME file available for use it executes S/38 commands that give object rights and data rights ('rights of use') to users who have been authorized by the owner to use the application. •

- * Physical files - xxxPFL
 - object rights = *OPER, *OBJMGT
 - data rights = *READ, *UPD,*ADD, *DLT
- * Logical files - xxxLFL
 - object rights = *OPER, *OBJMGT
- * User code file - xxxUCD
 - object rights = *OPER
 - data rights = *READ
- * Other program objects - xxxRPT, xxxMNT, xxxINQ, etc.
 - object rights = *OPER

The AME administrator is given *ALL rights for non-AME libraries and files by the security officer. When these libraries or files are made available some rights are passed on to the users. These rights may have been given multiple times to a user, but granting these rights is not cumulative. For example, one execution of the Revoke Object Authority command RVKOBJAUT can remove all rights no matter how many times they may have been granted. AME will not revoke this authority with the RVKOBJAUT command for non-AME libraries or files. If you use this command outside of AME, AME may have unexplained security errors. Do not try to bypass the AME security.

D. APPLICATION RECOVERY WITH NON-AME FILES

Data files and libraries created outside of AME can be used by AME applications. There will be times when those non-AME files must be recovered because of system or software errors. The AME applications built over those files will also have to be recovered. This section shows how AME applications can be recovered after you recover the non-AME files. When the AME administrator makes a non-AME file available for use by an AME application the following objects are created:

- A logical file is created over the non-AME file. This logical file is placed in the same library with the physical file.
- An xxxUCD file is created in the AME administrator's library which specifies the fields and field names that AME will be allowed to use in the non-AME file.

The AME logical file and the non-AME physical file have S/38 linkages that prevent the physical file from being deleted before the logical file is deleted. This is a consideration when you must recover the non-AME file, because of some processing error in a non-AME application. Both files will have to be deleted. You should save the logical file built by AME, and restore it when you restore the non-AME file. This will prevent any level check conflicts with AME applications that use this file. If the logical file was not saved, you can rekey the file definition from the DDS listing produced by AME when the physical file was made available to AME users. When the logical file and physical file have been recovered, you can do the non-AME processing necessary to bring the physical file up-to-date.

There are two methods that can be used to restore files from diskette backup. The method implemented in the non-AME application system will determine whether you must re-grant authority to the files.

- Delete the files, or do a CLRLIB, and then do a RSTLIB
- Use the RSTLIB command before doing the CLRLIB

If you use the first method, then after the restore the security officer must re-grant the rights to use the physical file and the AME logical file described above. (The required authority is described in Section C, S/38 Security Considerations With AME Installed.) This is necessary because only the owner's authority to an object is restored if the object does not exist on the system at the time of restore.

If you use the second method, the authority for files is kept by the object description and does not have to be re-granted after restore of the files.

If a type 5 or 6 AME application is created using the non-AME file, an additional file is built and placed in the users department library. (This file must be deleted before the physical file can be deleted and restored to the non-AME library.) This file can be recreated by taking

Option 3 on main menu AAM001, the 'Change an Application' option (assuming the xxxUCD file for the non-AME file still exists in the AME coordinator's department library). Answer YES to the question about changing the order in which records are presented, but do not make any changes. This will cause the logical file to be recreated. No other steps are required of the users to cause the file to recreate.

E. S/38 ENVIRONMENT FOR AME

AME uses the following standard S/38 facilities and subsystems as shipped with S/38 CPF.

1. QINTER, QBATCH, and QSPL subsystems
2. Job queue QBATCH (or a user defined job queue) in the QBATCH subsystem.
3. QPRINT printer outq in QGPL (or user defined print queue)
4. QSYSPRT printer file

Since AME uses the RPG III compiler, the environment needed is similar to one used by a programming staff which is usually separate from the QINTER subsystem.

The installation of AME creates a message queue for each AME user. The message queues are in QGPL and have the same name as the user's S/38 profile name.

The applications being created by AME run in both the batch and interactive subsystems. Before AME is installed, you should be aware of the general requirements that creating AME programs place on the S/38. These requirements are similar to, but less than, the requirements that a programmer would place on the system. This is true because the AME programs do not need multiple debugging phases that usually are necessary for custom written programming. The general workload on the S/38 tends to increase, because the system will be used more and additional users will be developing new applications.

Using the created AME applications requires both batch and interactive work to take place.

1. Application types 1 and 2 have display portions that run in the interactive subsystem, and report portions that run in the batch subsystem.
2. Application types 3 and 5 run in the batch subsystem.
3. Application types 4 and 6 run in the interactive subsystem
4. Application types 3, 4, 5, and 6 read an entire file sequentially, record by record. This could be time consuming for very large files.

The installation of AME does not require any changes by the user, but since each S/38 installation is different you may want to change certain CL programs to accommodate your subsystem configuration. AME processing can be isolated in its own subsystems. During installation a job queue can be specified to channel AME application create jobs to a separate batch subsystem. Other tailoring techniques allow AME interactive processing to be done in its own subsystem. The following section shows how AME can be isolated from other applications in your system.

F. CUSTOMIZING THE S/38 ENVIRONMENT FOR AME

The changes outlined below are some of the ways that AME can be changed to work in your S/38's unique environment. These changes should be saved and reapplied if an update to AME code is received from IBM.

1. Separate job queue for all AME batch jobs.

The install procedure for AME will allow a user job queue to be specified for the creation of AME applications. The end user will use the standard job queue QBATCH to execute these jobs. This can be changed by retrieving the CL source for five programs, and changing the JOBQ parameter on the SBMJOB command statement. The procedure is:

Install AME with the desired JOBQ as shown on page 2-2 under calling program AAPZ4.AAALIB. This will automatically set up this job queue for the AME application creates. AME uses the SBMJOB command when an AME user selects a menu option to do one of the following functions:

| Function | Program |
|--|---------|
| ----- | ----- |
| Use an application | AAP21 |
| Print user Field Reference file | AAPE1 |
| Print the list of libraries to be saved | AAPH1 |
| Print the list of applications and files | AAPI1 |
| Print the internal names of files | AAPJ1 |

These programs must be modified to call for the new job queue.

2. Exit from AME to other programs.

Main menu Option 7 can be used to exit to your program. The exit program name is stored in the AME data area AMECLDTA in AAFLIB. To load this program name in AMECLDTA, call program AAPZ4.AAALIB and supply the qualified name of the program to be called (each user must have S/38 authority to use the program). All AME users will now exit to this special program. If you would like individual departments to be able to exit to different programs then modify AMECLDTA in AAFLIB and move it to the department library. Restore the original AMECLDTA from the PID diskette to AAFLIB. This works because the department library is placed first in the library list by Main Menu program AAM00.AAALIB

The program you call must set up its library list and can return to AME by transferring control to AAM00.AAALIB

3. Changing default values used in creating AME applications.

The following programs control the characteristics of the files that AME creates and the deletion of the applications source file xxxSRC.

- AAP5C - create a new file
- AAP5C2 - get information from one or two files
- AAP5C3 - replace selected fields using one or two files
- AAP5C4 - create a new file by selecting fields from one, two, or three files
- AAP5C5 - select records for a report
- AAP5C6 - select records for display/update
- AAPG1 - make a non-AME file available (creates a logical file).

When you recreate an AME CL program be sure to use the same parameters that were specified when the program was originally created. The RTVCLSRC and DSPPGM commands can be used to determine these parameters.

- a). The CRTPF and CRTLF command parameters in the above programs which may be changed are:

| Parameter and change value | Physical files | Logical files |
|-------------------------------|-------------------|------------------|
| LVLCHK (*YES) to (*NO) | X | X |
| MAINT (*IMMED) to (*DLY) | | X * |
| PUBAUT (*NONE) to (*NORMAL) | X | |

* Note: Files must not require unique keys to use delayed maintenance of the keyed access path.

- b). Saving the AME generated application source code is done by commenting out the DLTF FILE(&xxxSRC.&LIBRN) command from the above programs. The source files will then remain in the department library and can be modified and recompiled by a programmer. After recompile, be sure to use the GRTOBJAUT command on the program object for AME users. The object owner must be the same as the owner information that appears when you use the DSPPGM command.

c). An easy way to give the same authority to the modified version of an AME application program.

- Rename the original program.

```
RNMOBJ OBJ(rptpgm.mylib) OBJTYPE(*PGM)
      NEWOBJ(origrpt.mylib)
```

- Compile the new version of the program. Give the program the same name as the original program (rpt pgm)

- Grant the same authority as the original program.

```
GRTOBJAUT OBJ(rptpgm.mylib) OBJTYPE(*PGM)
      REFOBJ(origrpt.mylib)
```

4. Installations with a nonstandard QSYSPRT printer file.

If you have modified the QSYSPRT printer file so that its output goes to a specific printer queue and you want to use AME's capability to select printers, then restore the unmodified QSYSPRT printer file to each AME department library and move your modified version to QGPL.

5. Changing the DDS for non-AME files used by AME.

When AME creates the logical file for a non-AME physical file it will print a listing of the DDS. If you would like to add select/omit logic, or other changes to the file, you should do it now before a type 2, 3, or 4 application is built using the file. Application types 5, and 6 create their own logical files over the non-AME physical file and will also need to be modified with your changes.

Display the object authority to the logical file, then delete the file. If the source member for the file has been saved as explained above, insert the changes in the source and create the DDS. The last step is to re-grant the rights as previously displayed.

III. IMPLEMENTATION OF AME

A. HOW TO ORGANIZE THE INSTALLATION OF AME

The typical AME installation will have many users who have limited knowledge of S/38 functions. These users will look to someone who can organize the use of AME. This person can be the S/38 security officer, or someone who works closely with the security officer. This person will be called the AME ADMINISTRATOR, and will work with one or more users who will be called DEPARTMENT COORDINATORS. The DEPARTMENT COORDINATORS will work with the END USERS of AME. The duties of the AME administrator and department coordinator are described below. See Figure 3 and Figure 4.

1. The AME administrator:

The AME administrator works with the security officer to install AME on the S/38. Before installation starts the administrator should plan the number of departments, and assign a department coordinator to each department. The end users are assigned to a department on the basis of their mutual interest in certain data files that exist or will be created by AME. The administrator should also plan to have a separate library for himself.

Based on the data required by the end users, the administrator will determine which S/38 files and libraries must be made available to the end users. This list is given to the security officer who will authorize the administrator to use the files and libraries. The security officer then installs the AME libraries. The security officer keys the following commands to authorize the AME administrator to use AME and other S/38 libraries and files.

1. CRTUSRPRF USRPRF(administrator profile name) PASSWORD(your choice)
INLPGM(AAM10.AAALIB)
2. GRTOBJAUT OBJ(AAALIB.QSYS)
OBJTYPE(*LIB) USER(administrator profile name) AUT(*ALL)
3. GRTOBJAUT OBJ(AAFLIB.QSYS)
OBJTYPE(*LIB) USER(administrator profile name) AUT(*ALL)

The following commands are keyed in to allow the AME administrator access to data files that have information which will be used by the end users of AME.

4. GRTOBJAUT OBJ(user library names.QSYS)
OBJTYPE(*LIB) USER(administrator profile name) AUT(*ALL)
Note: Repeat for each library needed.

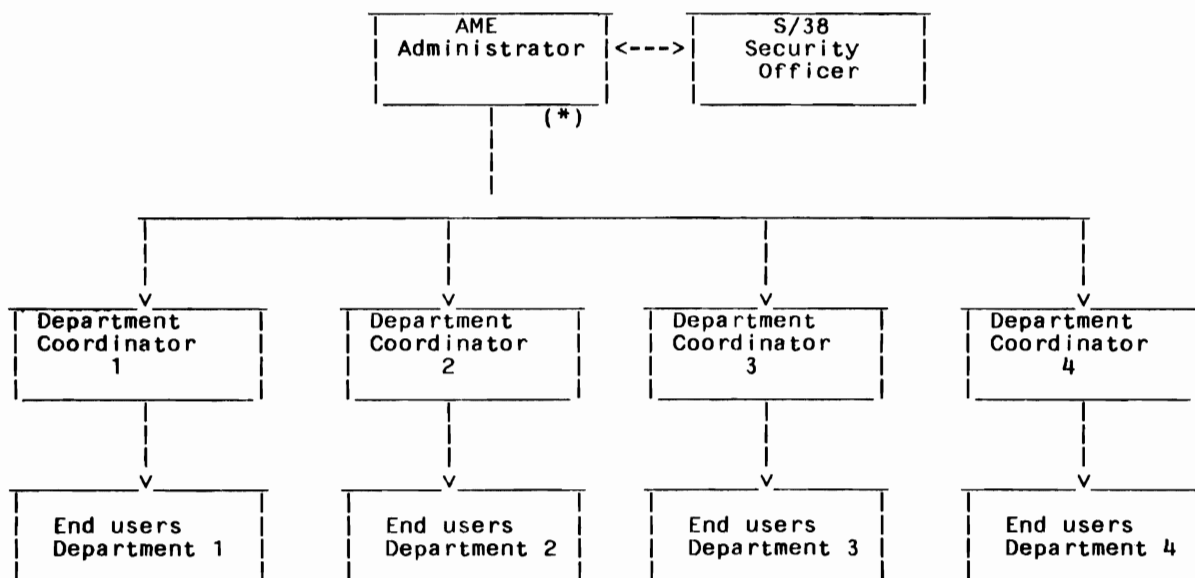
5. GRTOBJAUT OBJ(user file names.userlib names)
OBJTYPE(*FILE) USER(administrator profile name) AUT(*ALL)
Note: Repeat for each file needed.

Before the administrator can 'ADD' users, the user profiles must exist. The security officer must create a profile for each department coordinator and each AME user. Refer to the Installation steps in the Applications Made Easy Installation Guide, Figure B-1.

The AME administrator signs on the S/38 and uses menu AAM101, Option 2, to add a department entry for the administrator's department and for all other departments wanted. Then the administrator adds all users of AME, including himself, the department coordinators, and end users by assigning them to a department. The administrator creates his own library with Option 3 on menu AAM101. The section on using non-AME files will show how the administrator grants others the rights to use these files.

The AME administrator and department coordinators have the same initial program in their profiles. This gives them similar capabilities in AME, but the administrator will be the focal point for granting the department coordinators the rights to use non-AME libraries and files. The administrator does not use the S/38 commands to grant authority to others, but does this through an AME menu option.

ORGANIZATION OF AME



* Note: The AME administrator and the S/38 security officer may be the same person in some installations.

Figure 3. Organization of AME

2. The Department coordinator(s)

The department coordinator is the focal point for all users in his department. The department coordinator sets up new users and guides them initially in learning AME. If applications need to be transferred between users, then the department coordinator will do the transfer. The S/38 security officer creates the department coordinator's profile with the following command:

```
CRTUSRPRF USRPRF(coordinator profile name) PASSWORD(your choice)
          INLPGM(AAM10.AAALIB)
```

The AME administrator will have entered the name and department of the department coordinator, so the new coordinator can now sign on and create the department library using menu AAM101, Option 3. The users must be authorized to the library by using Option 4 on menu AAM101. If the AME administrator did not add the department coordinator to the list of users for the department library, then Option 3 will not appear on menu AAM101, and the coordinator will first have to add himself to the list of users.

PLANNING THE USE OF AME

1. Determine the number of departments to be set up.
(Will your organization require more than one?)
2. Set up one department for controlling access to all non-AME libraries and files. The AME administrator will use this department.
3. Define the following items for each department:
 - a. Identify the department coordinator.
 - b. Assign end users according to data needs.
 - c. Identify which users in other departments have a need to access this department's files.
 - d. Identify which users in this department have a need to access other departments files.
4. Set up a training schedule
 - a. Department coordinators
 - b. End users
5. Install AME and set S/38 environment
6. Change AME CL programs & CPF printer files if needed
7. Follow the steps for adding users
8. Create the department library(s)
9. Prepare the Field Reference File(s)
10. Turn over to users and monitor progress

Figure 4. Planning the Use of AME

B. AME FUNCTIONS AND CAPABILITIES

A summary of AME functions by application type is shown in Figure 5.

| AME function | APPLICATION TYPE | | | | | |
|--|------------------|--------|--------|--------|--------|--------|
| | Type 1 | Type 2 | Type 3 | Type 4 | Type 5 | Type 6 |
| Report with run time options (1) | Y | Y | Y | N | Y | N |
| User format choices available | N | Y | Y | N | Y | N |
| Record selection & logical operators | N | N | N | Y | Y | N |
| Inquiry display | Y | Y | N | N | N | Y |
| User format choices available | N | Y | N | N | N | Y |
| File maintenance program | Y | N | N | N | N | Y |
| User format choices available | N | N | N | N | N | Y |
| Basic calculations (+,-,*,/) | N | Y | Y | N | Y | Y |
| Field totals | Y | Y | Y | N | Y | Y |
| Subtotals | N | Y | Y | N | Y | N |
| Record count | Y | Y | Y | Y(2) | Y | Y |
| Average, standard deviation, variance | N | N | N | N | Y | N |
| Replace one field with another | N | N | Y | N | N | N |
| Update a data field after calculations | N | N | Y | N | N | N |

Notes:

(1) Run time options include:

- Skip 1-2 lines between detail records
- Skip to a new page after sub-total groups (types 2, 3, 5)
- Print on the system or work station printer
- Select limits on records to print

(2) The completion message gives the number of records copied to the new file.

Figure 5. AME Functions by Application Type

C. HOW AME CREATES AN APPLICATION

There are two phases to the Create/Change an application process (see Figure 6). The interactive question/answer phase and the batch create phase. In the interactive phase, AME interface programs ask questions that are needed to generate and identify the application code. The replies to the questions are:

1. Yes or no
2. Short answer (fill in the blanks)
3. Selection from a list

The information requested for an application is stored in the xxxUCD file and includes the following:

1. The application name
2. Type of application (types 1-6)
3. Files used
4. Fields used
5. Calculations wanted
6. Output format
7. Authorized users

The AME interface programs also read information from the control files in AAFLIB to provide the list of departments, users, and files. This information is passed to the batch phase where AME creates the xxxSRC file. AME then copies skeleton members from the EXCSRC file to xxxSRC or it may add records to xxxSRC itself. The xxxSRC file is then changed by the answers in the xxxUCD file, and the files and programs are created to reside in the department library. The control files in AAFLIB are updated and the xxxSRC file is deleted.

CREATING OR CHANGING AN APPLICATION

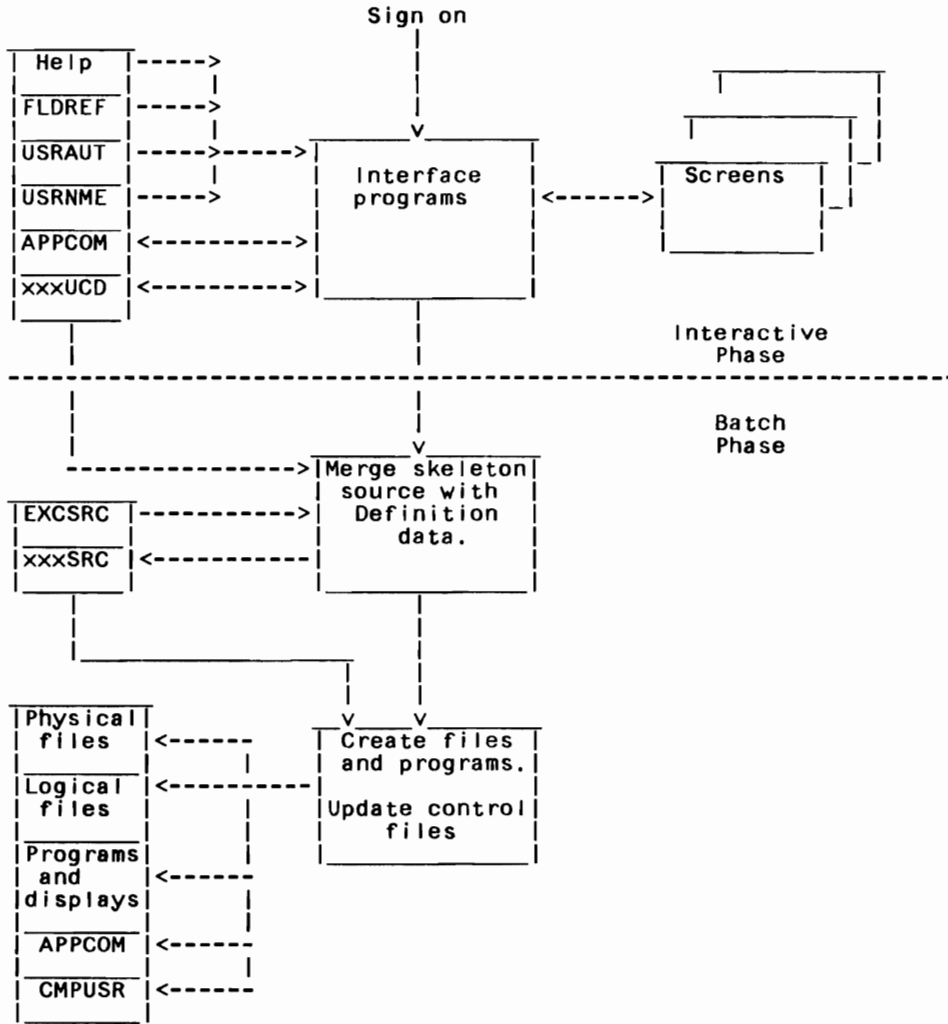


Figure 6. Creating or Changing an Application

D. USE OF MULTIPLE FIELD REFERENCE FILES

The field reference file FLDREF in AAFLIB is a keyed database physical file with a record for each field that you want to reference while creating AME applications. The 'key' to each record is the field name such as EMPLOYEE NAME or SALARY. The department coordinator will add records to this file for fields that should be standardized for his department.

When a non-AME file is made available the logical file created has fields with certain attributes such as field length, field type, and number of decimal places. To insure that a field description used by AME created files is consistent with its description outside of AME, describe it once in the field reference file. The end user can use this definition when creating a file (type 1 application only) by entering the field name and the character 'R' as the reference. AME will get the attributes of the field and use that name. If you are using non-AME files such as MAPICS, you do not have to give the AME field the same name that MAPICS uses. The only requirement is that the same attributes (field length, field type, and number of decimal places) that MAPICS uses are used in the FLDREF file description of the field.

If an end user wants to know what fields are available, or wants to add a field to the file, the user should contact the department coordinator. The coordinator can print or maintain the file by using Option 5 on the coordinator's menu AAM101.

AME comes with one FLDREF file installed in the AAFLIB that all departments can use, but each department can have their own reference file. This is done by having the security officer restore a copy of the FLDREF file from the diskette AAFLB1 to the departments library.

IV. DEPARTMENT COORDINATOR'S MENU

A. DESCRIPTION OF MENU OPTIONS

The Department Coordinator's menu is displayed at sign on time if the users profile has program AAM10.AAALIB as the initial program. The S/38 security officer will put this program in the AME Administrator and Department Coordinator's profile. The first time the AME administrator signs on, a partial menu will appear with two options available: (see Figure 7)

- * Option 1 - End the session
- * Option 2 - Add or change persons to 'List of Users'

As the AME administrator, you should take Option 2 and add records for yourself, all departments, and users assigned to the departments. Now, Option 3 will appear on the menu (see Figure 8). As the AME administrator, you should create your library. The full menu with eleven options is shown in Figure 9.

When a Department coordinator signs on for the first time there will be three options shown on the menu. The first step should be to create a department library, Option 3, since the AME administrator has previously added the department description records and user name records for the whole company.

The eleven options on the complete menu are:

- * Option 1 - End the session
Allows the department coordinator to end the session and sign off.
- * Option 2 - Add or change persons to "List of Users"
Allows the department coordinator to add, change, or delete records that define departments and users.
- * Option 3 - Create or delete a library or make another library available. This option creates the S/38 library(s) used for the users applications, and allows the coordinator to specify the names of the users who should have access to this library. These are the users who are assigned to this department as well as those assigned to other departments. An AME user is a member of only one department, but can be granted access to multiple libraries. The libraries are called 'Departments' by the users.

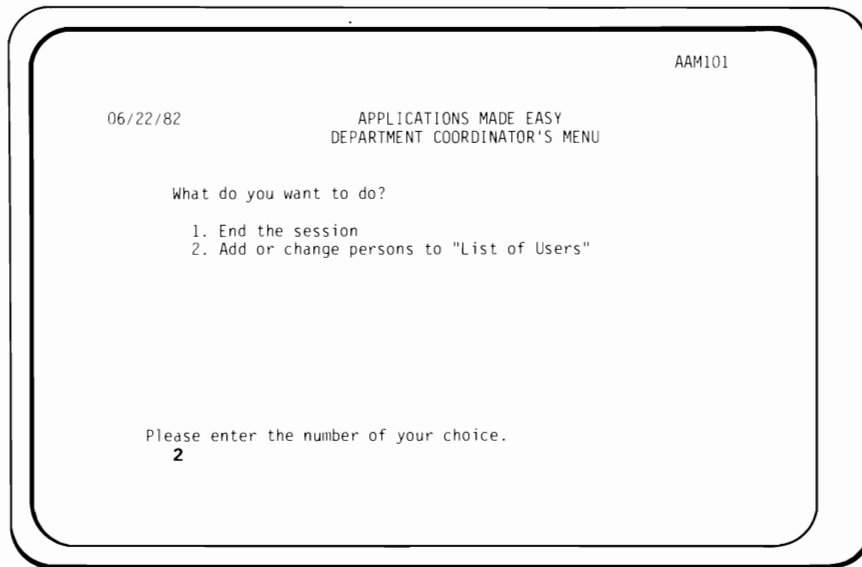


Figure 7. Partial Department Coordinator's Menu

Choose Option 2 to add department names and people who will use Applications Made Easy. Be sure to add the name of the Department Coordinator.

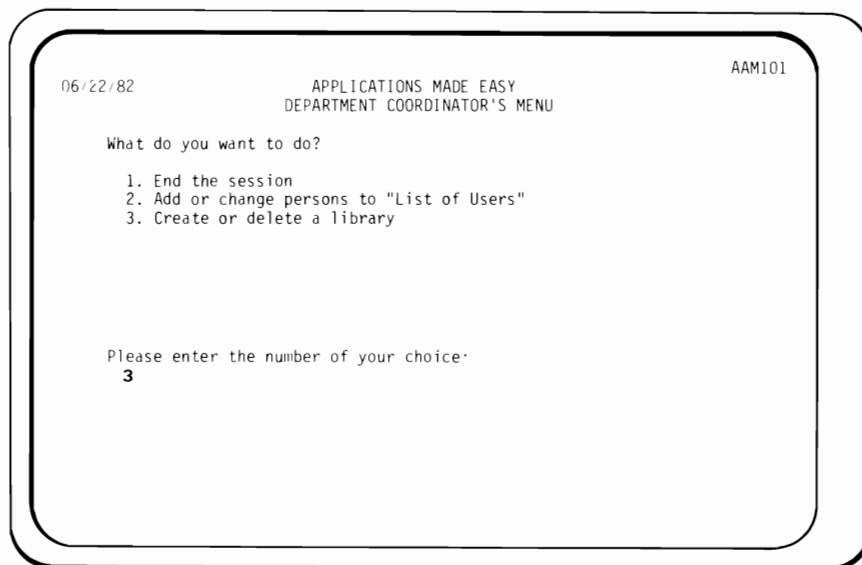


Figure 8. Partial Department Coordinator's Menu

Choose Option 3 to create the department library. If you did not add a record for yourself as Department Coordinator, Option 3 will not appear on this menu.

The AME administrator or coordinator who takes Option 3 is the AME owner of that library and selects the names of all other users that should be allowed to use the library. The capability to make non-AME libraries available should only be used by the AME administrator so that you know who to contact for access to all non-AME libraries.

When a non-AME library is made unavailable AME does not revoke the rights of the end users to use the files or the library.

- * Option 4 - Add or change the list of persons authorized to use a library.
This option allows library owners to grant or revoke authority (S/38 and AME authority) for users to access a library. The department coordinator established a list of end users for the department. Option 3 may also be used to grant or revoke rights to use an AME department library.
- * Option 5 - Maintain and list the Field Reference file
Allows the department coordinator to add, change, or delete records in the Field Reference file. The records describe commonly used fields that are standardized for this department.
- * Option 6 - Transfer ownership of an application.
Allows the department coordinator to change the application ownership from one end user to another. The ownership can also be transferred to the department coordinator.

The owner of the application can allow others to use the application if they have been authorized to the libraries and files used by the application.
- * Option 7 - Add or change other files to the 'Files available List'
Allows the AME administrator to make S/38 files available to AME end users. The section, AME Use of Non-AME Libraries and Files, has additional information on the required steps.
- * Option 8 - Print the names of libraries for backup
Allows the department coordinator to print a list of AME libraries for backup with the SAVLIB command.

- * Option 9 - Print owned applications and files.
Prints a report showing the files and applications created by each user in the department. There is a S/38 command that can be used by the object owner or the security officer to determine the authorized users and the object rights they have been granted. Use the DSPOBJAUT command.
- * Option 10 - Print internal names of files.
Prints a report showing the name that AME assigned to a file created by AME, and a 'where used' list which shows all applications that use each file.
- * Option 11 - Main Menu
Displays the main menu AAM001 for application work. (See Figure 10)

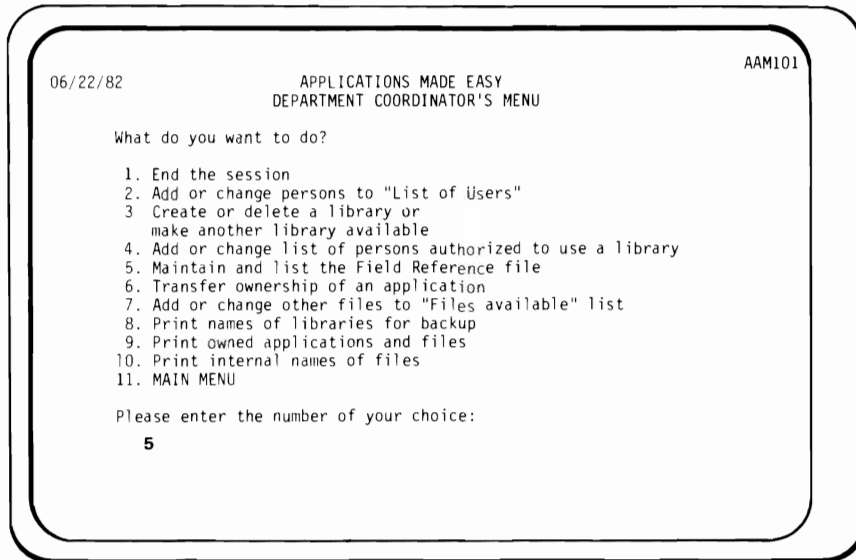


Figure 9. Full Department Coordinator's Menu

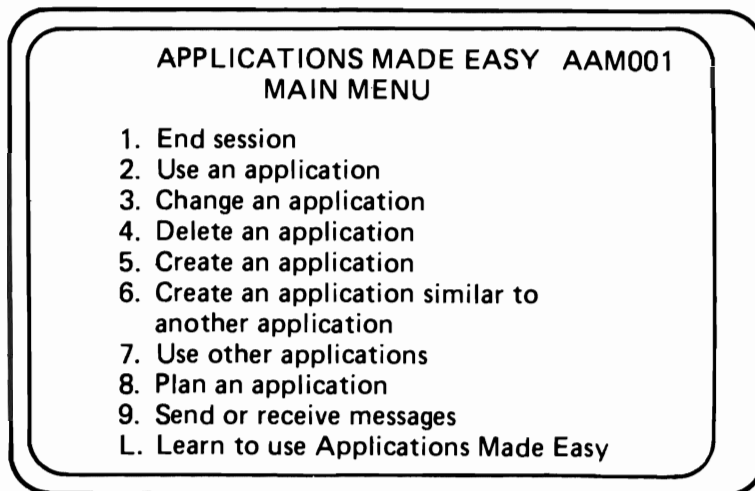


Figure 10. Main Menu for End Users

B. CREATING DEPARTMENTS

You must be the AME administrator or a department coordinator to create a department library. The S/38 security officer grants authority to the intended coordinator(s) to access AAALIB and AAFLIB. Once authorized, the department coordinator can sign on and add the new department and end user records to the AME control files. This step is usually done for the whole installation by the AME administrator. Department coordinators should use impersonal names when they are entered as users of AME, rather than full name and nickname. This will make the coordinators job one that can be easily given to another employee if necessary. It is recommended that the AME administrator determine the following:

1. What departments need to be created
2. Who the other department coordinators are
3. The end users to be assigned to each department
4. Which departments need to share information
5. Which libraries outside of AME should be made available

The AME administrator then adds the department records and end user records to the control files. These steps will allow one person to know which departments have been created, and who the end users are. After installation of AME this information will be helpful in maintaining control of AME. The planning forms, in Appendix A, should be used to perform the preceding steps.

C. DELETING DEPARTMENTS

The process to delete a department requires the following steps be taken by the department coordinator and end users in the order given. (See Figure 11)

1. Ensure that the library was initially set up properly
2. Determine all applications and files that must be deleted, which includes those in other departments that use this departments files.
3. Delete all applications in other libraries that use files from this library.
4. Delete the newest applications first, then the oldest ones
5. Delete the files (type 1 applications)
6. Delete the users
7. Delete the library

The department should be initially set up properly. This means that the department has a coordinator assigned and the library was created. A department cannot be deleted unless there is a library record in the User Authority (USRAUT) file. There will be no library record if a department library has not been created with menu AAM101, Option 3. There must be at least one user (the department coordinator) for the department. This will add a record to the User Name (USRNME) file.

The list of owned applications and files can be produced by selecting Option 9 on menu AAM101, then printing the internal names of the applications with Option 10 on menu AAM101. The second report printed will show other departments applications that use this department's files.

Using the report produced by Option 10, the coordinator can locate the end users departments, find out which applications use the files, and have the end users delete the applications.

The department end user now deletes his applications. A list of the end users applications can be displayed by taking Option 4 on menu AAM001. The highest numbered application on the list should be deleted first, and work down towards the first application created.

The department coordinator then removes the users from the control files by taking Option 2 on menu AAM101, then taking Option 5 on menu AARB11. Display AARB12 will show departments, and you must place an 'X' by the department(s) to be deleted. The end users of the departments are now shown on display AARB13 and are selected to be deleted. The library is deleted by taking Option 3 on menu AAM101 and then Option 3 on the displayed menu AAPC11. The preceding steps delete the department library, the department record in DPTNME file, and the department coordinator USRNME record.

DELETING A DEPARTMENT

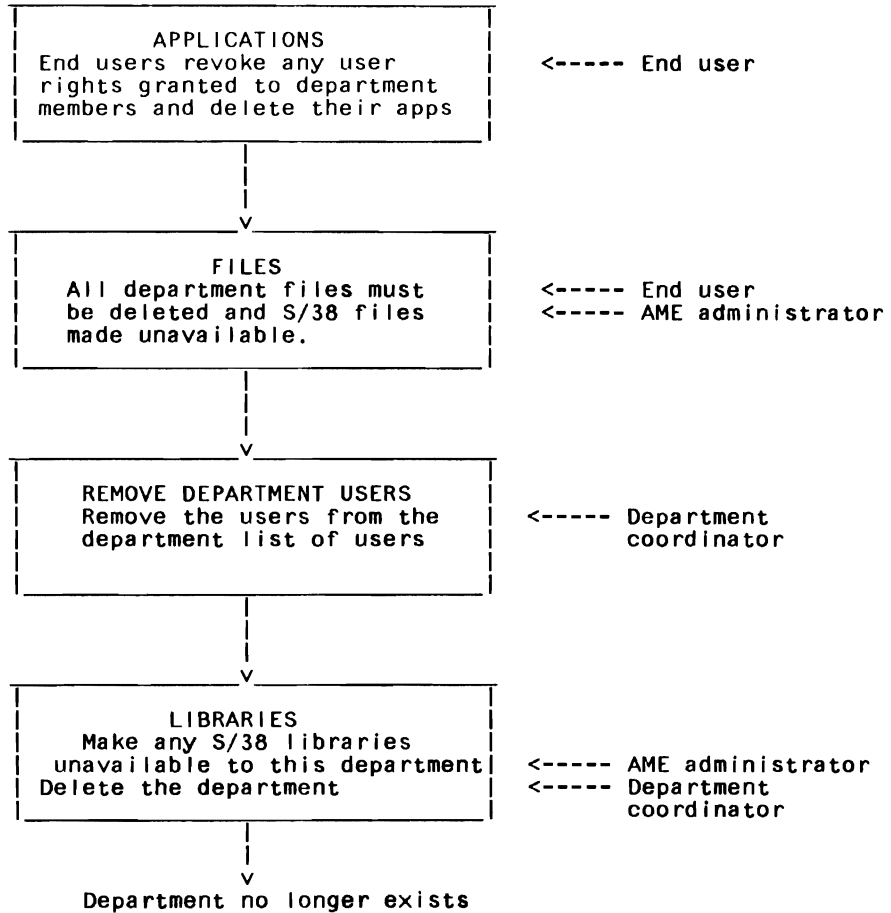


Figure 11. Deleting a Department

D. TRANSFERRING APPLICATIONS TO ANOTHER USER

1. Transferring ownership between department users.

The department coordinator can transfer ownership of an application within the department by using Option 6 on menu AAM101. System and AME security will prevent any automated transfer of ownership to someone outside of a department. You should not attempt to transfer ownership of AME applications to another department by using S/38 commands such as MOVOBJ, RSTOBJ, RVKOBJAUT, and GRTOBJAUT. There are coordinated changes that also have to be made to control records in the USRAUT and APPCOM files which can be very complex.

AME has added records in the USRAUT and APPCOM files to prevent a user from selecting a library, file, or application which has not been authorized to them through AME. These will also have to be changed by using DFU if you want to transfer an application to someone outside of your department. The USRAUT file contains one record for each library, file, and application for each authorized user. The records contain a qualified name (object name.library name) of the internal AME object. The APPCOM file contains the qualified name of objects to be used by an application. The steps needed to manually transfer ownership of applications can quickly become very complex, as the libraries, files, and applications can be shared between departments.

2. Transferring ownership within the department.

The transfer of application ownership should start with the oldest application created and work toward the latest application created. This insures that the files are always transferred before the applications that depend on them. The department coordinator uses menu AAM101, Option 6, to perform the transfer.

E. AME USE OF NON-AME LIBRARIES AND FILES

The AME administrator should be the person who coordinates the use of non-AME files and libraries. The security officer will grant object authority of the libraries and files to the administrator, who will then use AME's menu options to make the libraries available to other users. The following steps will make libraries and files available:

Libraries:

1. Select Option 3 on menu AAM101, then select Option 2 on menu AAPC11. Using display AARC24, type 'Y' for grant access to library.
2. Display AARC25 shows departments. Type an 'X' next to the department you want to grant access to.
3. Display AARC23 shows end users. Type an 'X' next to the users you want to grant access to the library.

Files:

1. Select Option 7 on menu AAM101, then Option 1 on menu AAPG11. Using display AAR5X1, type 'Y' for the question, 'Do you want to let others use your file'.
2. Using display AAR5X2, type an 'X' next to the departments that can have access to the file.
3. Using display AAR5X3, type a '1' or '2' next to the user's name. A '1' will grant display and print authority, and a '2' will grant display, print, and update authority.

The S/38 physical files in non-AME libraries cannot be accessed directly. These files will have a logical file built over them by AME when you use Option 7 on the coordinator's menu AAM101.

When AME users no longer need S/38 libraries and files. You should use AME security to make the libraries and files unavailable rather than deleting the libraries or files. You should perform the following steps:

1. Delete all applications that use files from the particular S/38 library. This can be done by the end users.
2. The AME administrator must revoke end user access to all files by making the files unavailable.
3. The AME administrator must make the S/38 library unavailable with Option 3 on menu AAM101.
4. The security officer can now revoke the AME administrators and other user's object authority to the libraries and files.

V. CONTROL FILE LAYOUTS

This section gives the record layouts for control files in AAFLIB and AAALIB. The physical files have the following five common fields in each record, starting at position one:

| Rcd. Fmt Name | Field Name | Data Type | Field Length | Dec. Pos. | Comments |
|------------------|---------------|--------------|-----------------|--------------|----------------------|
| | RCD CD | A | 2 | | Record identifier |
| | ACREC | A | 1 | | Record status |
| | DATCH | N | 6 | 0 | Date last changed |
| | TIMCH | N | 6 | 0 | Time last changed |
| | USRCH | A | 10 | | User by whom changed |

File name: DPTNME - Department name file in AAFLIB

Purpose:

1. Provide the full department name for each department using this system.
2. Provide the S/38 library name for this department to be placed in the user's library search list.

| Rcd. Fmt Name | Field Name | Data Type | Field Length | Dec. Pos. | Comments |
|------------------|------------------|--------------|-----------------|--------------|---|
| DPTNMER | common fields | | | | located in each physical file record |
| | DPTCD | A | 4 | | * User defined department code. |
| | DPTNM | A | 25 | | Full name assigned to the department. |
| | LIBNM | A | 10 | | S/38 library name for this department. |

* keyfield is DPTCD

File name: USRNME - User name file in AAFLIB

Purpose:

1. Associate a S/38 user profile with the person's full name or nickname.
2. Provide nickname for friendly sign on.
3. Provide a department code to obtain a library name from DPTNME file.
4. Provide user information for the PCDTA data area.
5. Stores the learning course section reentry point.
6. When using DPTUSR, this file provides a list of users grouped by department.
7. Provides a list of users to receive a message.

| Rcd. Fmt Name | Field Name | Data Type | Field Length | Dec. Pos. | Comments |
|------------------|------------------|--------------|-----------------|--------------|--|
| USRNMR | common fields | | | | located in each physical file record |
| | USERN | A | 10 | * | S/38 user profile name |
| | FNAME | A | 25 | | User's full name |
| | NICKN | A | 10 | | User's nickname |
| | DPTCD | A | 4 | | Department code assigned to this user |
| | L\$ | A | 8 | | AME learning - course |
| | C\$ | A | 8 | | AME learning - section |
| | D\$ | A | 3 | | AME learning - frame |

* keyfield is USERN

File name: DPTUSR - Department/user file in AAFLIB

Purpose:

This logical file accesses physical files DPTNME and USRNME to provide lists of users grouped by department. These lists can be used to select users to be authorized access to files, use applications, or receive messages.

| Rcd. Name | Fmt Name | Field Name | Data Type | Field Length | Dec. Pos. | Comments |
|-----------|----------|---------------|-----------|--------------|-----------|--------------------------------------|
| | | common fields | | | | located in each physical file record |
| DPTNMEL | | DPTCD | | | * | key from physical file DPTNME |
| | | DPTNM | A | 25 | | |
| | | LIBNM | A | 10 | | |
| USRNMEL | | DPTCD | | | * | key from physical file USRNME |
| | | USERN | A | 10 | * | key from USRNME |
| | | FNAME | A | 25 | | Users full name |
| | | NICKN | A | 10 | | Users nickname |
| | | DPTCD | A | 4 | | Users department code |

* key fields

File name: USRAUT - User authority file in AAFLIB

Purpose:

This file maintains authorization of each user to libraries, files, and applications. AME uses this file to present lists of authorized items to a user for selection. The file contains one record for each library, file, and application owned by or authorized to this user.

| Rcd. Fmt Name | Field Name | Data Type | Field Length | Dec. Pos. | Comments |
|------------------|------------------|--------------|-----------------|--------------|---|
| USRAUTR | common fields | | | | located in each physical file record |
| | USERN | A | 10 | * | User name |
| | USRRT | A | 1 | | User's rights 0 = owner 1 = Read only 2 = Update |
| | CTYPE | A | 1 | * | Object/component type |
| | CNAME | A | 10 | | Object/component S/38 internal name |
| | LIBRN | A | 10 | | Library where located |
| | EXNAM | A | 25 | | External name |
| | PFNAM | A | 21 | | Physical file name (if CTYPE = 'F') |
| | FILCD | A | 1 | | File code 'A' = AME created file 'N' = non-AME file |

* key fields = USERN/CTYPE

Notes for USRAUT File

1 Field CTYPE can have the following values:

C - Control Record

L - Library

A - Application

F - Logical File

P - Physical File

2 If CTYPE = C, the record contains the control number used to generate the internal application name. The number is six digits and is in field PFNAM. For this record, the key fields (LIBRN, CNAME and USERN) contain 'CONTROLNO'.

3 CTYPE = L (Library)

There is one record for the library owner and one record for each authorized user.

USERN = S/38 user profile name

USRRT = 1 (authorized user)

CNAME = S/38 library name

LIBRN = S/38 library name

EXNAM = Department name. If this is a 'private user library', this field contains what was entered on display AARB15.

FILCD = 'A'

4 CTYPE = A (Application)

There is one record for the application owner and one record for each authorized user.

USERN = S/38 user profile name

USRRT = 0 (Owner)

1 (User may do inquiry, print report)

2 (User may change data)

CNAME = Internal application name

LIBRN = Library containing the application

EXNAM = External name of application

FILCD = 'A'

5 CTYPE = F (Logical file)

There is one record for the owner of the file and one record for each authorized user.

USERN = S/38 user profile name
USRRT = 0 (Owner)
 = 1 (user has read rights only)
 = 2 (user has read and change rights)
CNAME = S/38 file name
LIBRN = Library where file located
EXNAM = External name of file
FILCD = A (AME created)
 = N (Non-AME)

6 CTYPE = P (Non-AME physical file)

There is one record for the owner (department coordinator) of the non-AME physical file and one record for each authorized user.

USRRT = 0 (Owner)
 = 2 (Authorized user)
CNAME = S/38 file name
LIBRN = Library where the file is located
EXNAM = External name of file
FILCD = N (non-AME)

7 If a non-AME file is made available more than once, there will be 'F' and 'P' records for each version.

8 Program AAR21 reads the USRAUT file 'A' records to present lists of applications to use, change, or delete (screen AAR211).

Program AAR5E reads the USRAUT file 'L' records to present the list of departments (screen AAR5E1) and reads the 'F' records to present the list of files (screen AAR5E2) owned or authorized to each user.

For the department coordinator, programs AARC1, AARC2, AARD1, and AARD2 read the USRAUT 'L' records to present lists of departments and libraries. AARG4 reads USRAUT 'L' and 'F' records to present lists of non-AME libraries and files.

The CMPUSR logical file is based on the USRAUT physical file and is the primary access path for adding and deleting records. The key fields are CTYPE/CNAME/USERN. This allows logical 'grouping' of all records for a given application, library, or file.

The primary purpose of the USRAUT file is to track all applications, department libraries, and files that are owned by or authorized to each AME user.

The primary purpose of the CMPUSR file is to track the owner and all authorized users of any application, department library, or file.

Records are added and maintained through the CMPUSR file as follows:

- a. When a user names a new application (screen AAR512), program AAS51 adds the 'A' record for the owner. If the user cancels the definition, program AAS50 deletes the 'A' record.
- b. When the application is created, program AAR5Y adds one 'A' record for each authorized user. If the application creates a new file, AAR5Y adds one 'F' record for the owner and one 'F' record for each authorized user.
- c. Program AAR5Y adds, deletes, and updates 'A' and 'F' records as changes are made to authorized users of applications and files.
- d. When a department coordinator creates the department library or makes a non-AME library available, program AARC2 adds one 'L' record for the owner.
- e. Programs AARC2 and AARD2 add and delete 'L' records for authorized users of department and non-AME libraries.
- f. For the owner and authorized users of non-AME files, program AAR5Y adds, updates, and deletes 'F' and 'P' records.

The TYPNAM logical file is based on the USRAUT physical file. The key fields are CTYPE/LIBRN/EXFIL.

The primary purpose of this file is to verify that the new name of an application or file is unique.

The TYPNAME file is used by program AAR51 to test the uniqueness of an application name and by AAR52 and AAR5B to test AME file names.

The TYPNAM file is used by programs AAR51 and AARG2 to get and update the control number and generate the unique three character internal application name. The control number is stored in the 'C' record.

Program AARG2 uses the TYPNAM file to verify that the external file name for non-AME files is unique within the department and within the non-AME library.

File name: APPCOM - Application - component file in AAFLIB

Purpose:

Track and control all components of each application in all libraries.

| Rcd. Fmt Name | Field Name | Data Type | Field Length | Dec. Pos. | Comments |
|------------------|------------------|--------------|-----------------|--------------|---|
| APPCOMR | common fields | | | | located in each physical file record |
| | IAPPN | A | 3 | * | Internal application name |
| | OBTYP | A | 1 | * | Object or component type - see fields value |
| | EXFIL | A | 15 | | External file name |
| | QONAM | A | 25 | | Qualified component or object name or external name of application |

* keyfields = IAPPN/OBTYP

Notes for APPCOM File

QONAM field values for object types 0-9 and A-P are listed:

| OBTYP | Positions used | Field QANAM (Qualified object name) Contents |
|--------------|-----------------------|--|
| 0 | 1-25 | External name of application |
| 1 | 1 | Application type 1-6, N |
| 2 | 1-20 | Qualified name of user - code file (Positions 1-10 = file name) (Positions 11-20 = library name) |
| 3 | 1-20 | Qualified name of source - code file |
| 4 | 1-20 | Qualified name of new or owned logical file (APTYPE = 1, 4, or N) |
| 5 | 1-20 | Qualified name of new or owned physical file (APTYPE = 1, 4, or N) |
| 6 | 1-20 | Qualified name of permanent non-owned file used by this application |
| 7 | 1-20 | Qualified name of temporary logical file (APTYPE = 5 or 6) |
| 8 | 1-20 | Qualified name of application data area (not used) |
| 9 | 1-20 | Qualified name of file to be updated (APTYPE = 3) |
| A | 1-6 | Name of inquiry program to execute |
| B | 1-6 | Name of file maintenance program |
| C | 1-6 | Name of report program |
| D | 1-6 | Name of report run-time option program |
| E | 1-6 | Name of file update (BATCH) program |
| P | 1-8 | Name(s) of program(s) (one record per program or display file) |

Notes:

- 1 Non-AME files are OBTYP = 4 or 5
- 2 Logical file COMAPP selects only OBTYP = 4, 5, 6, 9
- 3 If OBTYP = 4, 6, or 9, then field EXFIL contains the external file name. Otherwise, EXFIL is blank.

Depending upon the AME application type, there will be a variety of records contained in the APPCOM file. The following table summarizes the type (OBTYP) and quantity of each.

Records in APPCOM by Application Type

| OBTYP | 1 | 2 | 3 | 4 | 5 | 6 | N (non-AME file) |
|-------|---|----|---|-----|---|---|------------------|
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 3 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 4 | 1 | | | 1 | | | 1 |
| 5 | 1 | | | 1 | | | 1 |
| 6 | | 2 | 1 | 1-3 | 1 | 1 | |
| 7 | | | | | 1 | 1 | |
| 8 | | | | | | | |
| 9 | | | 1 | | | | |
| A | 1 | 1 | | | | 1 | |
| B | 1 | | | | | | |
| C | 1 | 1 | | | 1 | | |
| D | 1 | 1 | 1 | | 1 | 1 | |
| E | | | 1 | 1 | - | | |
| P | 4 | 3+ | | 2 | 3 | | |

Contents of APPCOM File Records

Application type: (Common records for types 1-6)

Field Values

| OBTYP | Fields used | Contents of fields |
|-------|-------------|---|
| 0 | QONAM | Name of application |
| 1 | QONMAM | Type of application 1-6 |
| 2 | QONAM | 1-6 xxxUCD (User-code file name) 11-20 Department library name |
| 3 | QONAM | 1-6 xxxSRC (Application source file) 11-20 Department library name |
| P | QONAM | 1-8 Object name 11-20 Department library name |

Contents of other APPCOM file records by application type.

Application type: 1

| OBTYP | Fields used | Contents of fields |
|-------|----------------|---|
| 4 | QONAM EXFIL | 1-6 xxxLFL (New logical file) 11-20 Department library name 1-15 External name of the new file |
| 5 | QONAM EXFIL | 1-6 xxxPFL (New physical file) 11-20 Department library name 1-15 External name of the new file |
| A | QONAM | 1-6 xxxINQ (Inquiry/Report program) 11-20 Department library name |
| B | QONAM | 1-6 xxxMNT (File maintenance program) 11-20 Department library name |
| D | QONAM | 1-6 xxxRTO (Run-time option program) 11-20 Department library name |

Application type: 2

| OBTYP | Fields used | Contents of fields |
|-------|-------------|--|
| 6 | QONAM | 1-6 xxxLFL (Logical file used) 11-20 Library where that file is located |
| | EXFIL | 1-15 External name of file used |

Note: There can be two '6' records for a type-2 application

| | | |
|---|-------|---|
| A | QONAM | 1-6 xxxINQ (Inquiry program) 11-20 Department library name |
| C | QONAM | 1-6 xxxRPT (Report program) 11-20 Department library name |
| D | QONAM | 1-6 xxxRTO (Run-time option program) 11-20 Department library name |

Application type: 3

| OBTYP | Fields used | Contents of fields |
|-------|-------------|---|
| 6 | QONAM | 1-6 xxxLFL (Logical file used, not updated) 11-20 Library where that file is located |
| | EXFIL | 1-15 External name of file used |
| 9 | QONAM | 1-6 xxxLFL (Logical file used, updated) 11-20 Library where that file is located |
| | EXFIL | 1-15 External name of file used |
| D | QONAM | 1-6 xxxRTO (Run-time option program) 11-20 Department library name |
| E | QONAM | 1-6 xxxPRG (File update program) 11-20 Department library name |

Application type: 4

| OBTYP | Fields used | Contents of fields |
|-------|-------------|--|
| 4 | QONAM | 1-6 xxxLFL (New logical file) 11-20 Department library name |
| | EXFIL | 1-15 External name of the new file |
| 5 | QONAM | 1-6 xxxPFL (New physical file) 11-20 Department library name |
| | EXFIL | 1-15 External name of the new file |
| 6 | QONAM | 1-6 xxxLFL (Logical file used) 11-20 Library where that file is located |
| | EXFIL | 1-15 External name of the new file |

Note: There can be three '6' records for a type-4 application

| | | |
|---|-------|---|
| D | QONAM | 1-6 xxxRTO (Run-time option program) 11-20 Department library name |
| E | QONAM | 1-6 xxxPRG (Processing program) 11-20 Department library name |

Application type: 5

| OBTYP | Fields used | Contents of fields |
|-------|-------------|---|
| 6 | QONAM | 1-10 Name of the physical file used 11-20 Library where that file is located |
| | EXFIL | 1-15 External name of file used |
| 7 | QONAM | 1-6 Name of the new logical file 11-20 Library where that file is located |
| | EXFIL | 1-3 (If the file used is a non-AME file, the IAPPN of that file is contained here; otherwise blank) |
| C | QONAM | 1-6 xxxRPT (Report program) 11-20 Department library name |
| D | QONAM | 1-6 xxxRTO (Run-time option program) 11-20 Department library name |

Application type: 6

| OB TYP | Fields used | Contents of fields |
|--------|-------------|---|
| 6 | QONAM | 1-10 Name of the physical file used 11-20 Library where that file is located |
| | EXFIL | 1-15 External name of file used |
| 7 | QONAM | 1-6 Name of the new logical file 11-20 Library where that file is located |
| | EXFIL | 1-3 (If the file used is a non-AME file, the IAPPN of that file is contained here; otherwise blank) |
| A | QONAM | 1-6 xxxINQ (File search and display program) |
| | | 11-20 Document library name |
| B | QONAM | 1-6 xxxRTO (Run-time option program) |
| | | 11-20 Document library name |

Notes:

- Records are added to the APPCOM file as follows:
 - When a user names a new application (screen AAR512), program AAR51 adds the '0' record. If the user cancels the definition, program AAS30 deletes the '0' record.
 - When the application has been successfully created, program AAS5Z adds the remaining records.
 - Logical file COMAPP will show which applications use any file.
- If an application is in 'Change' mode, program AAS31 changes field ACREC in the '1' record to a 'C' and changed ACREC back to a ' ' when the change process is complete. Program AAR21 tests ACREC before adding the application to the user's list of applications to use. (Screen AAR211)
- When an application is used, program AAS21 reads records from the AACOM file to pass the names of AME-created files and programs to programs AAP21, AAP22, AAP214, and AAP216. This permits AME to allocate and override the correct files and CALL the correct program.
- When an application is deleted, program AAR41 deletes all APPCOM records for that application.

Application type: non-AME file

| OBTYP | Fields used | Contents of fields |
|-------|-------------|--|
| 0 | QONAM | 1-10 'NON-AME -' 11-25 External name of the file |
| 1 | QONAM | 1-1 Type of application: 'N' |
| 2 | QONAM | 1-6 xxxUCD (User-code file name) 11-20 Department library name |
| 4 | QONAM | 1-6 xxxLFL (New logical file) 11-20 Library where that logical file is created |
| | EXFIL | 1-15 External name of the new file |
| 5 | QONAM | 1-10 Physical file name 11-20 Library where that physical file is located |
| | EXFIL | 1-15 Name of the physical file member (This can be changed by program AARG5. Use the Department Coordinator's menu - Option 7) |

Notes:

- a. APPCOM records for non-AME files are added and deleted by program AARG5.
- b. The name of the non-AME physical file member is retrieved from the '5' record by program AAS21 and passed to programs AAP21, AAP22, AAP214, and AAP216. Existing AME applications will use the physical file member that is currently available.

The COMAPP Logical file provides a 'file-where-used' function.

The COMAPP file is used by the following programs:

- AAR41 - to insure there are no applications using a type-1 or type-4 file before deleting the file.
- AARG4 - to ensure there are no applications using a non-AME file before making it unavailable.
- AARJ1 - print a report showing all applications that use each file.

File name: FLDREF - AME Field Reference file in AAFLIB

Purpose:

Provides a standard definition for frequently used fields for use during definition of data fields.

| Rcd. Fmt Name | Field Name | Data Type | Field Length | Dec. Pos. | Comments |
|------------------|------------------|--------------|-----------------|--------------|---|
| FLDREFR | common fields | | | | located in each physical file record |
| | EFDNM | A | 15 | | External field name |
| | TYPE | A | 1 | | Type of AME field |
| | LENTH | N | 2 | 0 | Length of field |
| | DECIM | N | 1 | 0 | Decimal positions |
| | EDITC | A | 3 | | Edit code |
| | EDTWD | A | 24 | | Edit word |
| | POSREQ | N | 3 | 0 | Positions required to print or display |
| | PCTUR | A | 21 | | How the field will appear |

* key field = EFDNM

File name: XXXUCD - Application source file in AAALIB

Purpose:

This file provides a template for the creation of the xxxUCD files in the department library(s) that will store source code.

This file is formatted as a S/38 source file. There will be members in xxxUCD in the department library(s) for the following application components:

1. Physical file DDS
2. Logical file(s) DDS
3. Display file DDS
4. Print file DDS
5. RPG III program source
6. CL program source

The member name is the application file or program name created by AME.

File name: EXCSRC - AME source file in AAALIB

Purpose:

This file provides a skeleton source program code which will be modified by the responses given to application creation questions.

This file is formatted as a S/38 source file. The members are used to create the application objects.

File name: AMETXT - On-line help text file in AAALIB

Purpose:

Provides text for displaying when the 'HELP' key is pressed in interactive programs.

| Rcd. Fmt Name | Field Name | Data Type | Field Length | Dec. Pos. | Comments |
|------------------|------------------|--------------|-----------------|--------------|--|
| AMETXTR | common fields | | | | located in each physical file record |
| | SCRID | A | 6 | | Screen ID |
| | TEXTA | A | 80 | | Text data |
| | SKIPB | A | 1 | | Skip before (1-23) |
| | SKIPA | A | 1 | | Skip after (1-23, F = fill remainder of display with blank lines) |

File name: OUTQUE - Printer outq available to AME in AAFLIB

Purpose:

Provides a plain English name to the S/38 printer queues.

| Rcd. Fmt Name | Field Name | Data Type | Field Length | Dec. Pos. | Comments |
|------------------|------------------|--------------|-----------------|--------------|---|
| OUTQUER | common fields | | | | located in each physical file record |
| | EXQNM | A | 40 | | External name of print queue |
| | OUTQN | A | 10 | * | S/38 name of print queue |
| | OUTQL | A | 10 | * | S/38 library for printer queue |

* key fields = OUTQN/OUTQL

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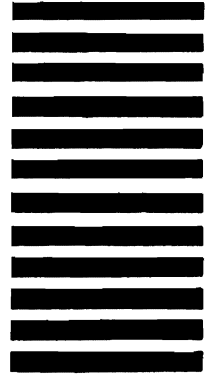
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