

Managing Object Libraries

SYNOPSIS

This chapter describes the techniques required to build and maintain a subroutine library on UNIX systems available at Cal Poly.

BUILDING A SUBROUTINE LIBRARY

To create a library of subroutines, we compile the routines as we did in one of the previous chapters. Once all of the ".o" files have been produced for the desired processor, we then use the **ar** command to create the library and add, replace, or delete entries from it. For purposes of this example we will assume that we have object modules named "what.o", "the.o", and "heck.o".

To create a library for these subroutines we would enter

```
% ar q libname.a what.o the.o <CR>
```

where "**libname.a**" is the library being created and "**what.o**" and "**the.o**" are the subroutines being added to it.

To add additional subroutines to the existing library we would type

```
% ar r libname.a heck.o <CR>
```

where "**libname.a**" is the library file that already exists and "**heck.o**" is a subroutine being added to the end of it.

To remove a member from the existing library we would type

```
% ar d libname.a deletem.o <CR>
```

Delete a member from the existing library where "**libname.a**" is the library file that already exists and "**deletem.o**" is a member being deleted from it.

Additional parameters which may be concatenated to the second parameter position are

r

Replace a named member if it already exists in the library. May be combined with the "**u**" flag.

s

Force the regeneration of the library symbol table whether or not the command modifies the contents. This flag should be used after using the "**strip**" command on the library.

u

Copy only files which have been updated since they were last copied to the library.

Additional information on the **ar** command can be found in the UNIX man pages.

COMMAND SUMMARY % ar q *libname.a* *what.o* *the.o* <CR>

Create a library where "**libname.a**" is the library being created and "**what.o**" and "**the.o**" are the subroutines being added to it.

% ar r libname. a heck. o<CR>

Add a member to an existing library where "**libname. a**" is the library file that already exists and "**heck. o**" is a subroutine being added to the end of it.

% ar d libname. a deleteme. o<CR>

Delete a member from the existing library where "**libname. a**" is the library file that already exists and "**deleteme. o**" is a member being deleted from it.

% ar vt libname. a<CR>

Produce a listing of contents of the library "**libname. a**".

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NOTES