

**Chapter
2**

CONCEPTS

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Fast Track!*



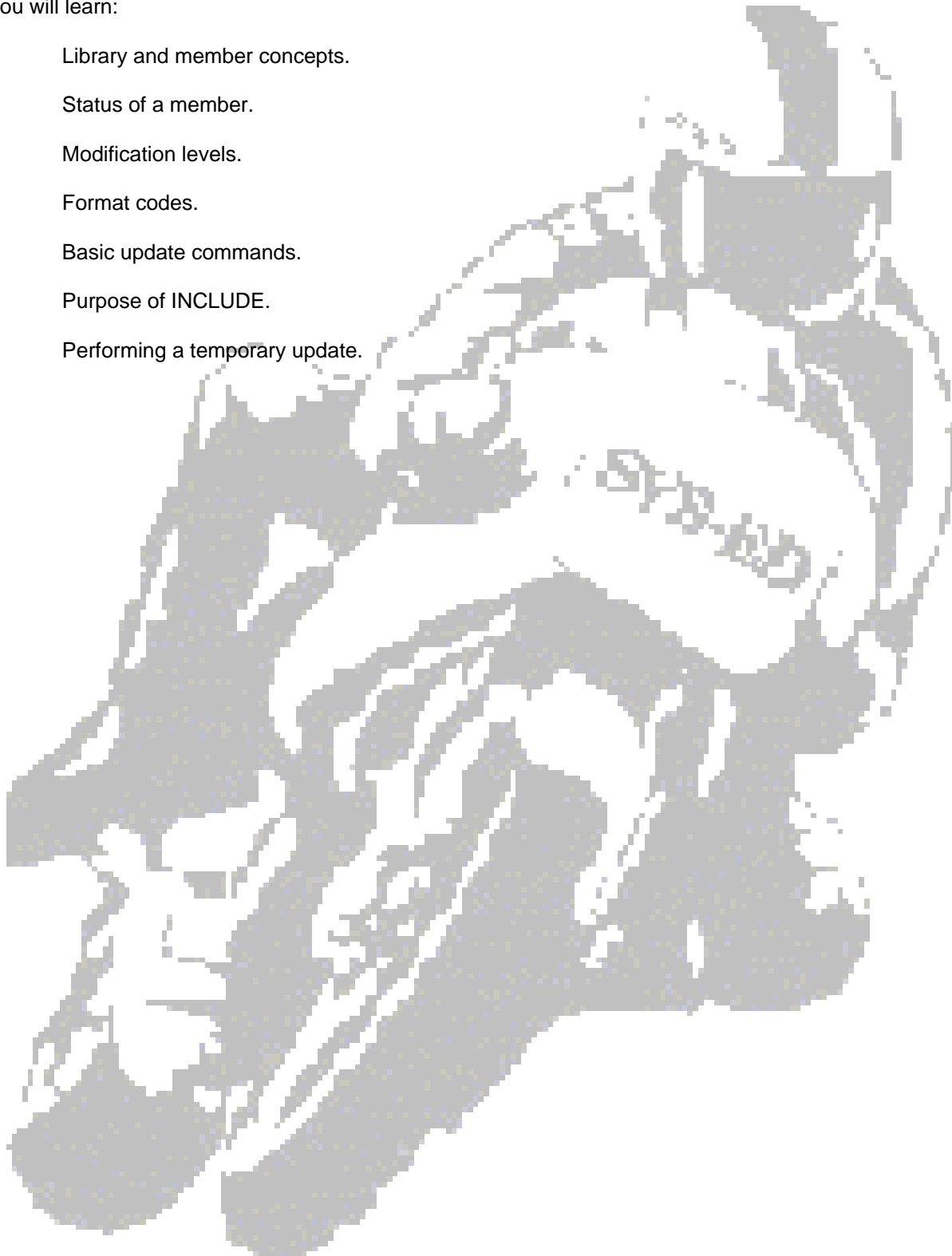
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**SYS-ED/
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Objectives

You will learn:

- C Library and member concepts.
- C Status of a member.
- C Modification levels.
- C Format codes.
- C Basic update commands.
- C Purpose of INCLUDE.
- C Performing a temporary update.



1 Library Member

All entries in the CA-Panvalet library are called members.

A member can contain all or any portion of a:

- C source language program.
- C object program.
- C Job Control Language (JCL).
- C card-image data file.

Any of the 256 EBCDIC characters can be stored in the library.

Library members can be of mixed format.

The ADD command of PAN#1 can be used for adding and formatting members in the library.

1.1 Name of a Library Member

When initially entering a member into the library, assign the member a unique name. This name can then be used for referencing the member for retrievals.

The name can consist in any order or combination of up to ten:

- C alphabetic (A through Z)
- C numeric (0 through 9)
- C special characters (#, \$, or @)

1.2 Status of a Library Member

The status of a member controls your ability to alter or delete the member.

It has a three part description:

- C PRODUCTION or TEST
- C ENABLE or DISABLE
- C ACTIVE or INACTIVE

1.3 Modification Level of a Library Member

Each member in the library has a current modification level. The modification level is a number from 1 to 255. When a member is added to the library, its modification level is set to 001. Each time the member is updated, the level is automatically increased by one.

When requesting the PAN#1 UPDATE function it is necessary to specify the level. It must match the level of the member in the library for a successful update. Specifying and checking the level of the member insures that the most current version of the member has been referenced.

1.4 Format of a Library Member

A member entered in the library can be optionally described as:

- C AUTOCODER
- C BAL or ALC
- C COBOL, ANS COBOL, COBOL-72
- C FORTRAN
- C PL/I
- C RPG if a source language program
- C OBJECT
- C JCL
- C DATA
- C OTHER
- C USER780
- C USER180.

The appropriate description is optional on the PAN#1 ADD command.

If a format is not specified, the member is described as unspecified.

This description appears on the CA-Panvalet directory list and also controls the sequence checking option of the ADD command.

The format type can be changed through the FORMAT command.

1.5 Member User Code

An optional user code can be supplied when entering a member into the library. The user code is a parameter on the PAN#1 ADD command. It can consist of up to four numeric digits, 0 to 9999.

The user code can represent additional numeric information related to the member.



2 Sequence Checking of Members

Sequence check members can be checked during initial entry into the library by specifying the SEQ parameter on the ADD command.

CA-Panvalet checks members for ascending sequence in the positions indicated by the standard of the member description specified at installation.

- C When specifying the SEQ option, CA-Panvalet provides a complete print of all 80 positions of each input record.
- C When CA-Panvalet detects a sequence error, the characters SEQUENCE ERROR appear to the right of the out-of-sequence statements on the print output file.

2.1 UPDATE ALL Command

The optional parameter ALL of the UPDATE command replaces the entire contents (ALL) of the named library member with whatever follows in the input stream; change subcommands are not permitted.

The optional ALL parameter of the UPDATE command is useful for replacing object decks with new object decks created during compiles.

When the ALL option is specified, input data of a different logical record length may replace all the existing member's data, thus, changing the logical record length of the member.

2.2 C Subcommand

The second exception to the UPDATE mode does not process CA-Panvalet generated sequence numbers.

The UPDATE command will need to be followed by a special C subcommand in order to specify this operation. This subcommand has a single parameter, SEQ xx y , where xx is the beginning position (left end) of a sequence field contained in the card-images themselves, and y is the length of this field.

The update replaces equal sequence numbers and inserts records when the input stream sequence number is lower than the sequence field in the card-image from the library.

```

col 1                                col 77
UPDATE PAY57,9
C SEQ774
C A401,A427
LR 5,11                               A410
BCT 5,LOOP                             A420
MVC WORK,IOREC                          A778
LR 5,9                                   A894
C
```

3 Temporarily Updating a Library Member

A temporary UPDATE for members with a logical record length up to 80 bytes can be performed by specifying the optional parameter TEMP on the UPDATE command.

This temporary UPDATE feature makes it possible to create an updated library member for an intermediate duration. This duration will be of sufficient duration in order to allow the library member to be retrieved for a subsequent compilation that does not modify the original member.

UPDATE name,level,TEMP

Any of the following actions will erase the temporary copy:

- C Execution of an ID command
- C End of execution of PAN#1. (normal or abnormal end-of-job step)
- C Any PAN#1 command requiring additional library space, which includes:

ADD	ATTACH	DETACH	UPDATE
ALLOCATE	COPY	RENAME (of a subset)	

4 INCLUDE Command

One or more INCLUDE commands can be included within any member in the library.

The INCLUDE command specifies other commonly used members which are also in the library. These are automatically retrieved in the place of the INCLUDE command whenever encountered during retrieval of a member.

The single INCLUDE command can automatically incorporate subroutines, test data, JCL, or object modules. This will eliminate the need to store common routines in the library many times.

INCLUDE commands can be nested.