CHAPTER

11

The LOCK Statement and the LOCK Command

Introduction

The LOCK statement enables you to acquire, list, or release locks on a SAS data library, a SAS data set, a SAS catalog, or a SAS catalog entry. See Chapter 5, "Locking SAS Data Objects," on page 59 for details about locking.

The LOCK command provides a convenient way to lock data objects from a SAS window. As with the LOCK statement, the LOCK command enables you to acquire, list, or release locks on a SAS data library, a SAS data set, a SAS catalog, or a SAS catalog entry.

Note: In this chapter, SAS libraries, data sets, catalogs, and catalog entries are called data objects. △

LOCK Statement

In Version 7 and Version 8 of SAS/SHARE software, a LOCK statement acquires an exclusive lock on the specified data object (that is a SAS data library, SAS data set, SAS catalog, or SAS catalog entry). No other user can read or write to a data object that you have locked by using the LOCK statement. You cannot lock a data object that another user is working on.

You must first access a SAS data library through a SAS server before you can lock that library or any data object in it.

When you use a LOCK statement to lock a data object, you can open that data object as often as you want and in any mode that you want (for example, to create, replace, update, or read the object), as long as your PROC or DATA step does not conflict with what is allowed by the engine that is used by the SAS server to access the data object.

You release a lock on a data object by using the CLEAR argument in the LOCK statement. To find out if a data object is locked and by whom, use the LIST argument in the LOCK statement.

Syntax

LOCK *libref< .member-name< .member-type |*
    .entry-name.entry-type>>
    <LIST | QUERY | SHOW | CLEAR>;

libref
    is a valid SAS name that refers to a SAS data library that is currently accessed
    through a SAS server, that is, the server library.

member-name
    is a valid SAS name that specifies a member of the SAS data library that is
    associated with the libref.

member-type
    is the type of the SAS file to be locked. Valid values include DATA, VIEW, and
    CATALOG. The default is DATA.
       If *member-type* is omitted or it is specified as the value DATA or VIEW, two
    locks are obtained: one on *libref.member-name*.DATA and the other on
    libref.member-name.VIEW.

entry-name
    is the name of the catalog entry to be locked.

entry-type
    is the type of the catalog entry to be locked.

LIST|QUERY|SHOW
    writes to the SAS log whether the specified data object is locked and by whom.
    This argument is optional.

CLEAR
    releases a lock on the specified data object that was acquired by using the LOCK
    statement in your SAS session. This argument is optional.
       See Chapter 5, "Locking SAS Data Objects," on page 59 for more information
    about how and when a lock is released.

Examples

```
lock educlib.mycat.choice1.menu;
lock educlib.mycat.choice2.menu;
/* Update the two catalog entries as needed. */
lock educlib.mycat.choice1.menu clear;
lock educlib.mycat.choice2.menu clear;
```

The first LOCK statement acquires implicit locks on the SAS data library EDUCLIB
and on the SAS catalog EDUCLIB.MYCAT. It then acquires an explicit lock on the
catalog entry EDUCLIB.MYCAT.CHOICE1.MENU. The second LOCK statement
acquires an explicit lock on the catalog entry EDUCLIB.MYCAT.CHOICE2.MENU.

The first LOCK statement that contains the argument CLEAR releases the explicit
lock on the catalog entry CHOICE1.MENU, but it does not release the implicit locks
because an entry in the catalog is still locked. The second LOCK statement that
contains the argument CLEAR releases the explicit lock on the catalog entry
CHOICE2.MENU. Because no catalog entries remain locked, the second statement that
contains the argument CLEAR also releases the implicit lock on the SAS catalog
EDUCLIB.MYCAT. Because no other members of the library are locked, it also releases
the implicit lock on the SAS library EDUCLIB.

LOCK Command

The LOCK command enables you to specify the name of the data object to be locked on the command line of a window, such as the SAS Display Manager System's Program Editor window. You must first access a SAS data library through a SAS server before you can lock that library or any data object in it.

Syntax

LOCK < *data-object*
    <LIST | QUERY | SHOW | CLEAR>>

data-object
    specifies the data object to be locked. A data object can be a SAS data library, a SAS data file, a SAS data view, a SAS catalog, or a SAS catalog entry. The general form of this argument is

    libref<.member-name<.member-type |
        .entry-name.entry-type>>

    libref
        is a valid SAS name that refers to a SAS data library that is currently accessed through a SAS server.

    member-name
        is a valid SAS name that specifies a member of the SAS data library associated with the libref.

    member-type
        is the type of the SAS file to be locked. Valid values include DATA, VIEW, and CATALOG. The default is DATA.
        If *member-type* is omitted or is specified as the value DATA or VIEW, two locks are obtained: one on *libref.member-name.*DATA and one on *libref.member-name.*VIEW.

    entry-name
        is the name of the SAS catalog entry to be locked.

    entry-type
        is the type of the catalog entry to be locked.

LIST|QUERY|SHOW
    writes to the SAS log whether the specified data object is locked and by whom. These arguments are optional.

CLEAR
    releases a lock on the specified data object that was acquired by using the LOCK command in your SAS session. See Chapter 5, "Locking SAS Data Objects," on page 59 for more information about how and when a lock is released. This argument is optional.

Examples

On the command line of the Program Editor window, enter:

```
lock mapslib.mapscat.euromap.cmap
lock mapslib.mapscat.euromap.cmap clear
```

The first LOCK command locks SAS catalog entries of type CMAP. The SAS log will indicate that one catalog entry has already been locked.

The second LOCK command releases the lock on the catalog entry EUROMAP.CMAP. The SAS log will indicate that the lock on this catalog entry has been released and by whom.