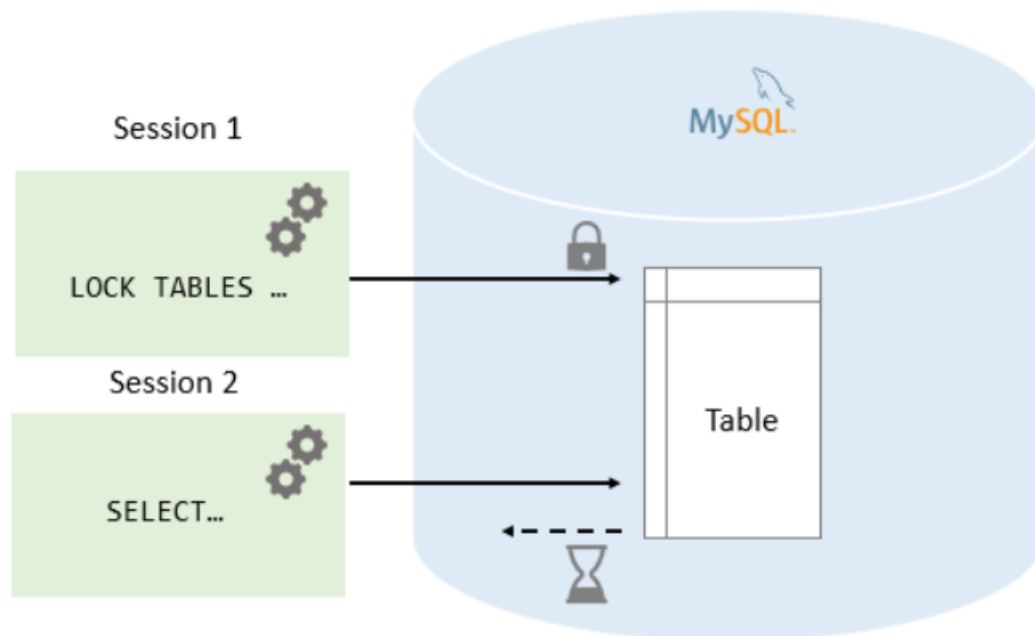


A lock is a flag associated with a table. MySQL allows a client session to explicitly acquire a table lock for preventing other sessions from accessing the same table during a specific period.

A client session can acquire or release table locks only for itself. And a client session cannot acquire or release table locks for other client sessions.



The following statement explicitly acquires a table lock:

```
LOCK TABLES table_name [READ | WRITE]
```

In this syntax, you specify the name of the table that you want to lock after the `LOCK TABLES` keywords. In addition, you specify the type of lock, either `READ` or `WRITE`.

MySQL allows you to lock multiple tables by specifying a list of comma-separated names of tables with lock types that you want to lock after the `LOCK TABLES` keywords:

```
LOCK TABLES table_name1 [READ | WRITE],  
              table_name2 [READ | WRITE],
```

READ Locks

A `READ` lock has the following features:

- A `READ` lock for a table can be acquired by multiple sessions at the same time. In addition, other sessions can read data from the table without acquiring the lock.
- The session that holds the `READ` lock can only read data from the table, but cannot write. And other sessions cannot write data to the table until the `READ` lock is released. The write operations from another session will be put into the waiting states until the `READ` lock is released.
- If the session is terminated, either normally or abnormally, MySQL will release all the locks implicitly. This feature is also relevant for the `WRITE` lock.

Write locks

A WRITE lock has the following features:

- The only session that holds the lock of a table can read and write data from the table.
- Other sessions cannot read data from and write data to the table until the WRITE lock is released.

Read (Shared) vs. Write locks (exclusive)

Read locks are “shared” locks which prevent a write lock is being acquired but not other read locks.

Write locks are “exclusive ” locks that prevent any other lock of any kind.

Shared Lock (s)	Exclusive Lock (x)
Lock mode is read only operation	Lock mode is read as well as write operation
Shared lock can be placed on objects that do not have an exclusive lock already placed on them	Exclusive lock can only be placed on objects that do not have any other kind of lock
Prevents others from updating the data.	Prevents others from reading or updating the data
Any number of transactions can hold shared lock on an item.	Exclusive lock can be held by only one transaction