

Step 1: Create a New Database User and Grant Privileges

To create a new user, use the CREATE USER statement. This statement creates a new user account named library_user with a password of password123. The user is allowed to connect from localhost, which means the user can only connect to the MySQL server from the local machine.

```
CREATE USER 'library_user'@'localhost' IDENTIFIED BY  
'password123';
```

After creating the user, grant them specific privileges using the GRANT statement. In this case, you grant the SELECT, INSERT, UPDATE, and DELETE privileges on all tables in the LibraryDB database to the library_user. This allows the user to read, insert, update, and delete data in any table within the LibraryDB database.

```
GRANT SELECT, INSERT, UPDATE, DELETE ON LibraryDB.* TO  
'library_user'@'localhost';
```

To ensure that these changes take effect immediately, use the FLUSH PRIVILEGES statement. This command reloads the privilege tables in MySQL, making sure that the new privileges are applied.

```
FLUSH PRIVILEGES;
```

Step 2: Revoke Certain Privileges

If you need to revoke certain privileges from the user, use the REVOKE statement. For example, if you want to revoke the DELETE privilege from library_user, execute the following statement. This ensures that the user can no longer delete data from any table in the LibraryDB database.

```
REVOKE DELETE ON LibraryDB.* FROM 'library_user'@'localhost';
```

Again, use the FLUSH PRIVILEGES statement to ensure that the revocation takes effect immediately.

```
FLUSH PRIVILEGES;
```

Step 3: Drop the User

If the user is no longer needed, you can remove the user account from the database using the DROP USER statement. This deletes the library_user account from the MySQL server.

DROP USER 'library_user'@'localhost';

Finally, execute FLUSH PRIVILEGES to ensure that the changes are applied immediately, removing the user's access rights and privileges from the server.

FLUSH PRIVILEGES;