



# MySQL

**MANUAL V8.3**

**MODULE CODE:**

**ANUDIP FOUNDATION**





## ICONS AND THEIR MEANING



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## Modifying Databases and Tables

**Objective:** After completing this lesson you will be able to :

- \* Select and delete a database
- \* Manage a database

**Materials Required:**

1. Computer
2. Internet access

**Theory Duration:** 90 minutes

**Practical Duration:** 0 minute

**Total Duration:** 90 minutes

## Chapter 8

### Select a database

Selecting a database is necessary once you are connected to a MySQL server, before you can modify any database. Database selection is necessary as there are multiple databases within a MySQL Server.

### Using Command Prompt to Select a MySQL Database

The `mysql>` prompt is a simple way of selecting a database. The 'use' command is utilized for database selection.

#### Example

Example showing how to select a database called CLASSES –

```
[root@host]# mysql -u root -p
```

```
Enter password:*****
```

```
mysql> use CLASSES;
```

```
Database changed
```

```
mysql>
```

In the example above, the CLASSES database and its successive operations are performed within the CLASSES database.

### Using PHP Script for MySQL Database Selection

The `mysql_select_db` function can be used for selecting a database. The function returns TRUE if successful and FALSE in case of a failure.

#### Syntax

```
bool mysql_select_db( db_name, connection );
```

Sr.No.	Parameter and Description
1	db_name - It is required, and specifies the database name to be selected

2

connection - It is optional. If it's not specified the last opened mysql\_connect connection will be utilized.

**Example -**

The example shown below showcases how a database can be selected -

```
<html>
```

```
  <head>
```

```
    <title>Selecting MySQL Database</title>
```

```
  </head>
```

```
  <body>
```

```
    <?php
```

```
      $dbhost = 'localhost:3036';
```

```
      $dbuser = 'guest';
```

```
      $dbpass = 'guest123';
```

```
      $conn = mysql_connect($dbhost, $dbuser, $dbpass);
```

```
      if(! $conn ) {
```

```
        die('Could not connect: ' . mysql_error());
```

```
      }
```

```
      echo 'Connected successfully';
```

```
      mysql_select_db( 'CLASSES' );
```

```
      mysql_close($conn);
```

```
    ?>
```

```
  </body>
```

```
</html>
```

## Delete a database

The MySQL DROP DATABASE statement can be used for deleting a database in a server.

The DROP DATABASE statement drops all database tables and permanently deletes the database. It should be used with precision to prevent any unwanted outcomes.

### DROP DATABASE statement syntax -

```
DROP DATABASE [IF EXISTS] database_name;
```

The name of the database to be deleted has to be specified in the statement.

MySQL produces an error when a user tries to drop a non-existent database.

The IF EXISTS option helps users prevent an error even if they tried to delete a non-existent database. MySQL does not issue any error but terminates the statement.

The DROP DATABASE statement returns how many tables were deleted.

The terms schema and database are interchangeable in MySQL -

```
DROP SCHEMA [IF EXISTS] database_name;
```

This section involves using testdb and testdb2 databases.

### MySQL program DROP DATABASE example -

Log into the MySQL Server with the root user. You can also use another user-created database.

```
>mysql -u root -p
```

Enter password: \*\*\*\*\*

Type the root user password and press Enter.

The next step is using the SHOW DATABASES statement for viewing all databases present in the server -

```
mysql> SHOW DATABASES;
```

```
+-----+
```

```
| Database          |
```

```
+-----+
```

```
| classicmodels     |
```

```
| information_schema |
```

```
| mysql             |
```

```
| performance_schema |
```

```
| sys                |
```

```
| testdb             |
```

```
| testdb2            |
```

```
+-----+
```

```
7 rows in set (0.00 sec)
```

The next step is issuing the DROP DATABASE statement -

```
mysql> DROP DATABASE testdb;
```

```
Query OK, 0 rows affected (0.03 sec)
```

MySQL returns 0 affected rows. Hence, it is understood that there is no table in the testdb database.

### Using MySQL Workbench for MySQL DROP DATABASE

Open the MySQL Workbench and login to the MySQL Server.

Right click on the database that is to be removed. For this example, right click the database named testdb2 and select Drop Schema.

A dialog box appears prompting users to confirm the deletion of the database. If the Review SQL option is clicked the SQL statement is executed. The database is removed immediately if Drop Now is chosen.

### What happens if Review SQL is chosen?

After reviewing, if you are sure that the right database will be dropped, click on the Execute button.

### MySQL will showcase the output given below -

Check the schema list and you will not find the testdb2 database.

- **Manage a database**

This tutorial will show you how to manage MySQL databases.

### Creating Databases

The database is a data container that stores different types of data. The CREATE DATABASE statement is used for creating a MySQL database -

```
CREATE DATABASE [IF NOT EXISTS] database_name;
```

Dissecting the CREATE DATABASE statement:

- The database name preferred by a super is mentioned after typing in the CREATE DATABASE statement.
- The statement also has the IF NOT EXISTS clause. This clause enables error prevention when a user tries to create a database that already exists. Two databases with the same name cannot be present in a MySQL database server.

### Example -

We are creating a database named classicmodels with the CREATE DATABASE statement -

```
CREATE DATABASE classicmodels;
```

MySQL returns a notification message to inform if the database has been successfully created or not.

### Displaying Databases

MySQL databases can be displayed by using the SHOW DATABASES statement. It shows you all the databases within a server, including the one that you have just created. Example -

```
SHOW DATABASES;
```

Refer to the screenshot given above. It shows that the server has three databases. Here, classicmodels is the newly created database.

### Selecting a database

A user must inform MySQL which database they want to work with. This can be done by using the Use statement.

```
USE database_name;
```

For example, if you have a database named employees, the Use statement would be -

```
USE employees;
```

After incorporating the USE statement, users can start conducting operations like querying data, creating tables and calling procedures. All of these operations will have an impact on the database being modified.

### Removing Databases

Removing a database is deleting all tables within a database, and permanently deleting the database.

The DROP DATABASE statement is used for deleting a database. Example -

```
DROP DATABASE [IF EXISTS] database_name;
```

The name of the database to be used has to be typed after the DROP DATABASE clause. The IF EXISTS part of the statement is optional and used to prevent a user from deleting a non-existent database in the server.



**Instructions: The progress of students will be assessed with the exercises mentioned below.**

**MCQ**

1. Which of these prompts can be used for selecting a MySQL database?

- a) mysql>select
- b) mysql>prompt
- c) mysql>prompts
- d) none of the mentioned

2. Which PHP script function can be used for selecting a MySQL database?

- a) mysql\_select\_db
- b) mysql\_db\_select
- c) mysql\_db\_prompt
- d) none of the mentioned

3. db\_name is a parameter used for specifying the database name to be \_\_\_\_\_.

- a) deleted
- b) selected
- c) categorized
- d) none of the mentioned

4. If the connection parameter is not specified the last opened \_\_\_\_\_ connection will be used by MySQL.

- a) mysql\_db
- b) mysql\_connector
- c) mysql\_connect
- d) none of the mentioned

5. Which statement can be used for deleting a server database?
- a) DELETE DATABASE
  - b) DROP DATABASE
  - c) REMOVE DATABASE
  - d) none of the mentioned
6. What will happen if a user tries to delete a database that does not exist?
- a) DROP SCHEMA
  - b) DROP DATABASE
  - c) both a and b
  - d) none of the mentioned
7. Which statement exhibits all the databases within a MySQL server?
- a) SHOW DATABASE
  - b) SHOW DATABASES
  - c) SHOWCASE DATABASES
  - d) none of the mentioned
8. Why is the IF NOT EXISTS clause used?
- a) to create a new database
  - b) preventing MySQL error
  - c) to find and list all databases
  - d) none of the mentioned
9. Which of these statements is used for selecting a MySQL database?
- a) USE
  - b) INIT

c) SELECT

d) none of the mentioned

10. What password must be inputted before gaining MySQL server access for deleting a database?

a) admin

b) root

c) server

d) none of the mentioned