

2. MySql – Database

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2. MySql – Database

1. Database

- ✓ A Database having one or more tables.
- ✓ Table having data in the form of rows and column.

2. Table Example

- ✓ Below is the **employees** table.

Number	Name	Salary
101	Ranjan	10000
102	Akshay	20000
103	Daniel	30000
104	Veeru	40000

Columns and Rows are

✓ Columns are

- First column name is : Number
- Second column name is : Name
- Third column name is : Salary

✓ Rows are

- First row data is : 101 Ranjan 10000
- Second row data is : 102 Akshay 20000
- Third row data is : 103 Daniel 10000
- Forth row data is : 104 Veeru 10000

3. Login to MYSQL

- ✓ Open a command prompt and enter below command to login into mysql.

Login Login with valid credentials
Command `mysql -u root -p`

```
C:\Users\Nireekshan>mysql -u root -p
Enter password: *****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 27
Server version: 8.0.33 MySQL Community Server - GPL

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql>
```

Explanation

Its successfully connected to MYSQL

Login If login with invalid credentials
Command `mysql -u root -p`

```
C:\Windows\system32\cmd.exe
C:\Users\Nireekshan>mysql -u root -p
Enter password: *****
ERROR 1045 (28000): Access denied for user 'root'@'localhost' (using password: YES)
C:\Users\Nireekshan>
```

Explanation

If we enter wrong password then we will get above response

Login If login with invalid command
Command `mysql -u`
Command `mysql -u root`

```
C:\Users\Nireekshan>mysql -u
mysql: [ERROR] mysql: option '-u' requires an argument.

C:\Users\Nireekshan>mysql -u root
ERROR 1045 (28000): Access denied for user 'root'@'localhost' (using password: NO)
```

Explanation

Kindly use right command to login mysql

4. Exit from MYSQL

- ✓ We can exit from mysql by using exit command.

Login Login with valid credentials
Query To display existing databases.

mysql> exit

Output

```
C:\Users\Nireekshan>mysql -u root -p
Enter password: *****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 41
Server version: 8.0.33 MySQL Community Server - GPL

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> exit
Bye
```

5. Show Databases

- ✓ Once successfully login into mysql then we can check total existing databases by using SQL statements.
- ✓ By default, few databases existing in mysql.

Login Login with valid credentials
Query To display existing databases.

```
mysql> show databases;
```

Output

```
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| sys |
+-----+
4 rows in set (0.00 sec)
```

6. Show schemas

- ✓ We can still use schemas command alternatively to check the databases.

Login Login with valid credentials
Query To display existing databases.

```
mysql> show schemas;
```

Output

```
+-----+  
| Database |  
+-----+  
| information_schema |  
| mysql |  
| performance_schema |  
| sys |  
+-----+  
4 rows in set (0.00 sec)
```

7. Semicolon

- ✓ Semicolon is the standard way to separate each SQL statement in database systems.
- ✓ By using this we can execute more than one SQL statements.

8. SQL is not case sensitive

- ✓ SQL keywords are not case sensitive.
- ✓ **select** is the same as **SELECT**
- ✓ Both are valid like,
 - show databases; == SHOW DATABASES;

Login Login with right credentials
Query To display existing databases.

mysql> SHOW DATABASES;

Output

```
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| sys |
+-----+
4 rows in set (0.00 sec)
```

9. Create Database

- ✓ Once successfully login into mysql then we can create a database by using SQL statements.

Login Login with valid credentials
Purpose Creating danieldb1 Database.

```
mysql> create database danieldb1;  
Query OK, 1 row affected (0.01 sec)
```

Output

danieldb1 database is created successfully

Login Login with valid credentials
Purpose Checking all Database.

```
mysql> show databases;
```

Output

```
+-----+  
| Database  
+-----+  
| danieldb1  
| information_schema  
| mysql  
| performance_schema  
| sys  
+-----+  
5 rows in set (0.00 sec)
```

10. Can't create existing database

- ✓ We should not create existing database.
- ✓ If we are creating existing database then we will get an error like,
 - **ERROR 1007 (HY000):** Can't create database 'danieldb1'; database exists.

Login Login with valid credentials

Purpose Creating existing Database.

```
mysql> create database danieldb1;  
ERROR 1007 (HY000): Can't create database 'danieldb1'; database exists
```

Output

```
mysql> create database danieldb1;  
ERROR 1007 (HY000): Can't create database 'danieldb1'; database exists
```

11. Creating two databases in one line

- ✓ We can create two databases in one line.
- ✓ We can run two SQL queries by separating semi colon symbol.

Login Login with valid credentials
Purpose Creating existing Database.

```
mysql> create database danieldb2;create database danieldb3;
```

Output

```
mysql> create database danieldb2;create database danieldb3;  
Query OK, 1 row affected (0.00 sec)  
  
Query OK, 1 row affected (0.00 sec)
```

Login Login with valid credentials
Purpose Creating existing Database.

```
mysql> show databases;
```

Output

```
+-----+  
| Database  
+-----+  
| danieldb1  
| danieldb2  
| danieldb3  
| information_schema  
| mysql  
| performance_schema  
| sys  
+-----+  
7 rows in set (0.00 sec)
```

12. Drop Database

- ✓ We can delete or drop existing database.

Login Login with valid credentials

Purpose Creating Database.

```
mysql> drop database danieldb3;  
Query OK, 1 row affected (0.01 sec)
```

Output

```
+-----+  
| Database |  
+-----+  
| danieldb1 |  
| danieldb2 |  
| information_schema |  
| mysql |  
| performance_schema |  
| sys |  
+-----+  
6 rows in set (0.00 sec)
```

13. Use Database

- ✓ Once successfully created database then we can use the database.

Login Login with valid credentials
Purpose Use the created Database.

```
mysql> use danieldb1;  
Database changed
```

Output

```
mysql> use danieldb1;  
Database changed
```