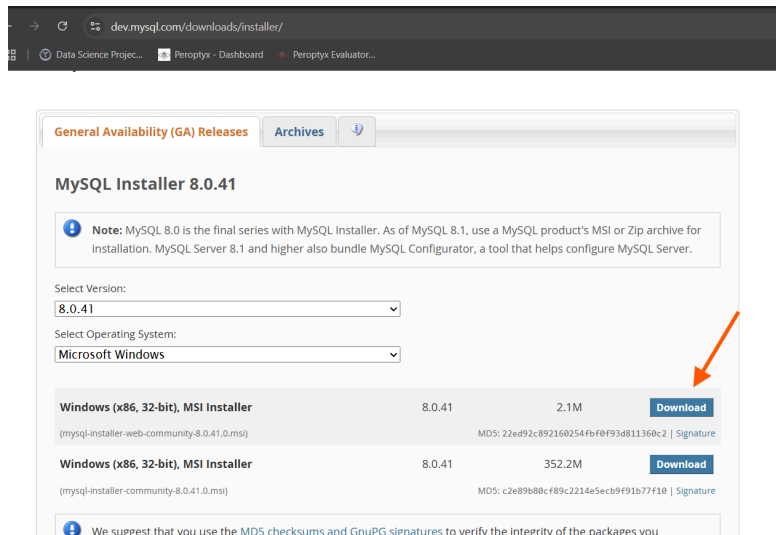


# SQL Basic Guide

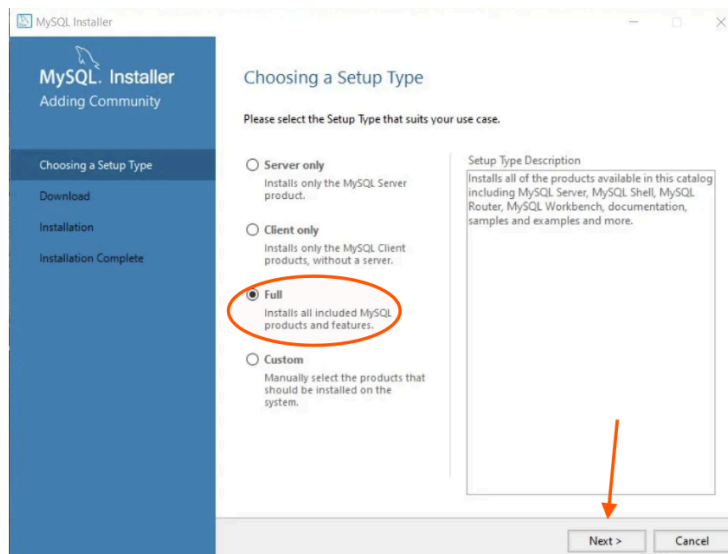
Date : 22 March 2025

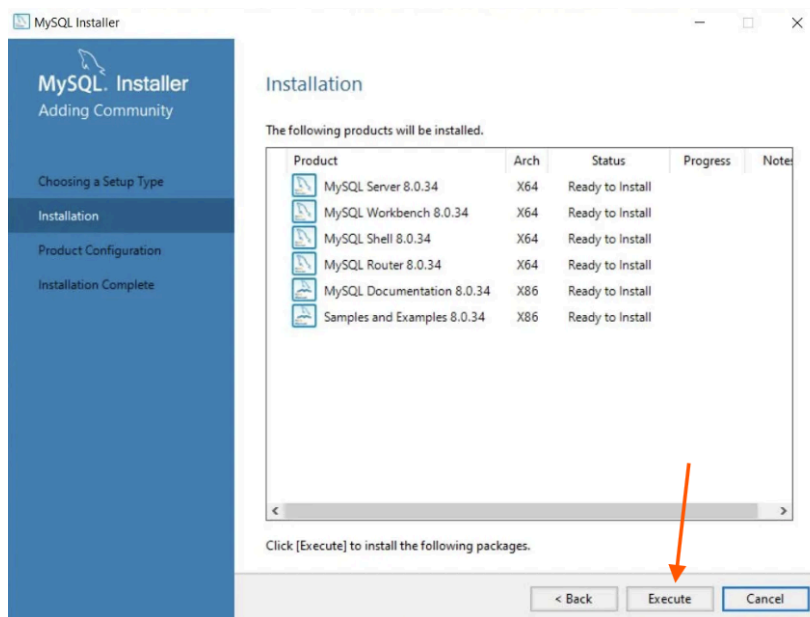
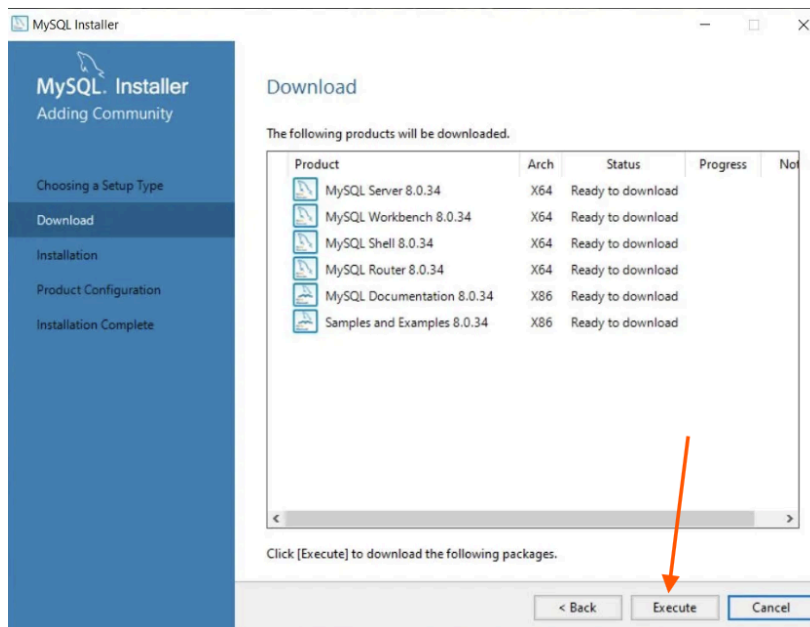
Step 1 : Download the installer

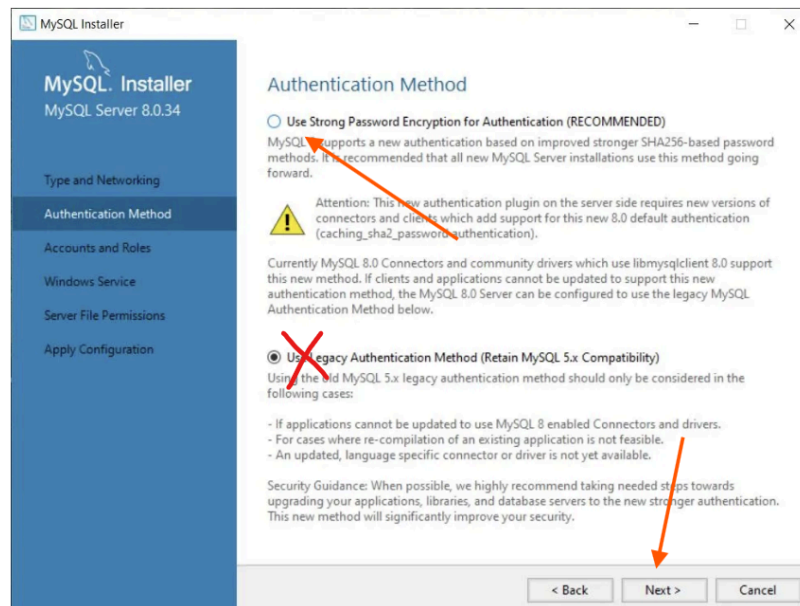
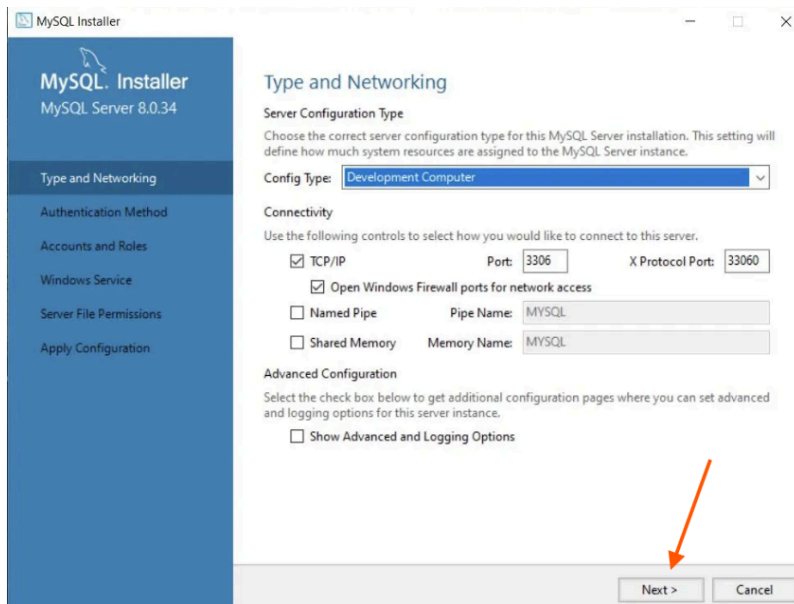
Link : <https://dev.mysql.com/downloads/installer/>

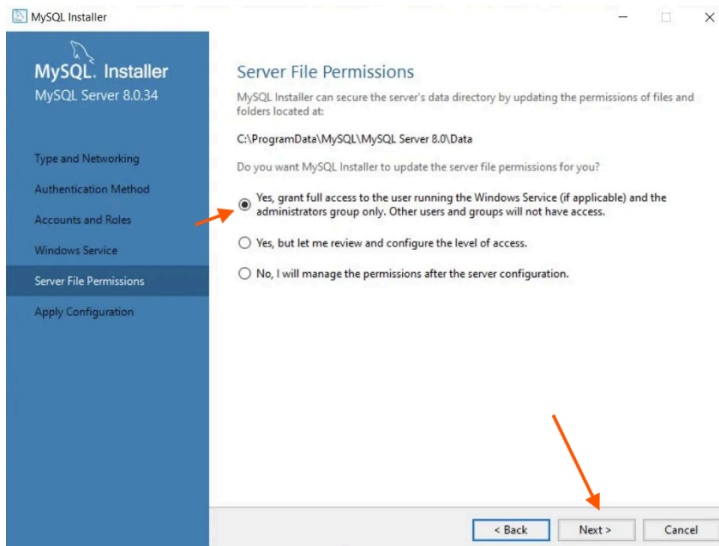
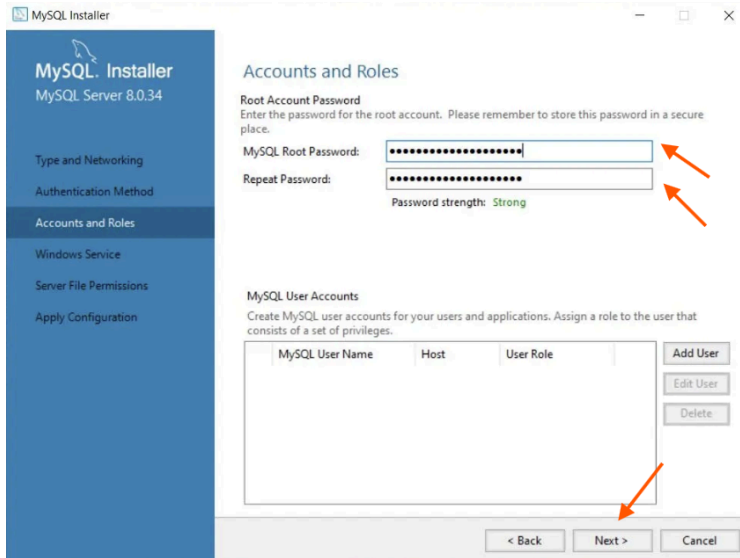


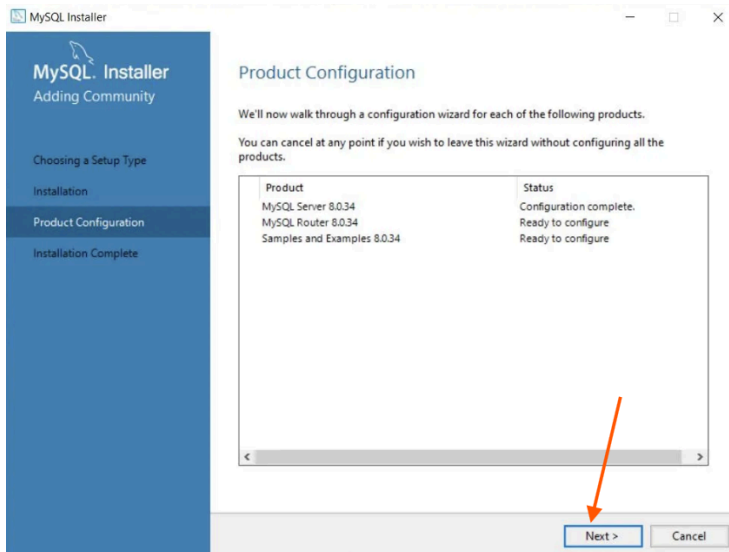
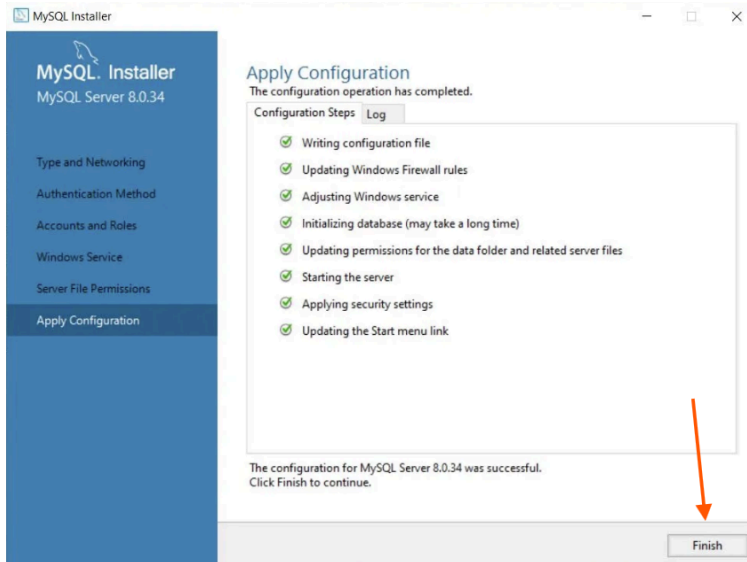
Step 2 : Run the file—>select Full —>Next

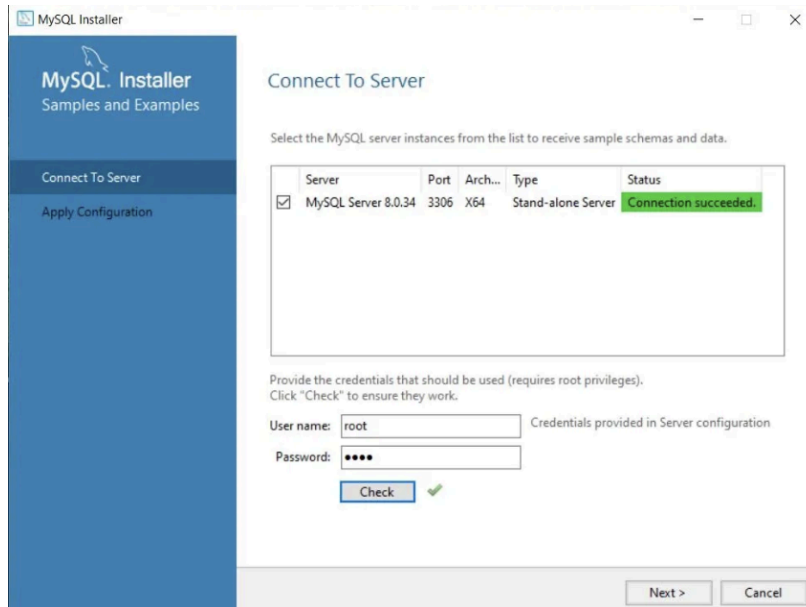
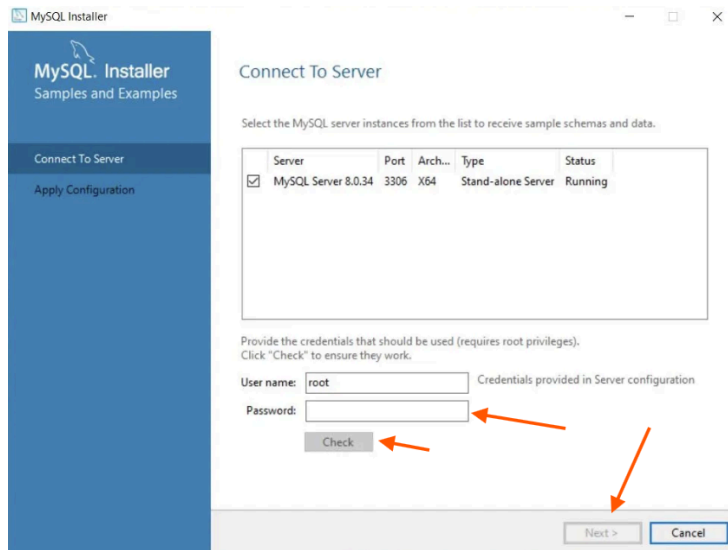


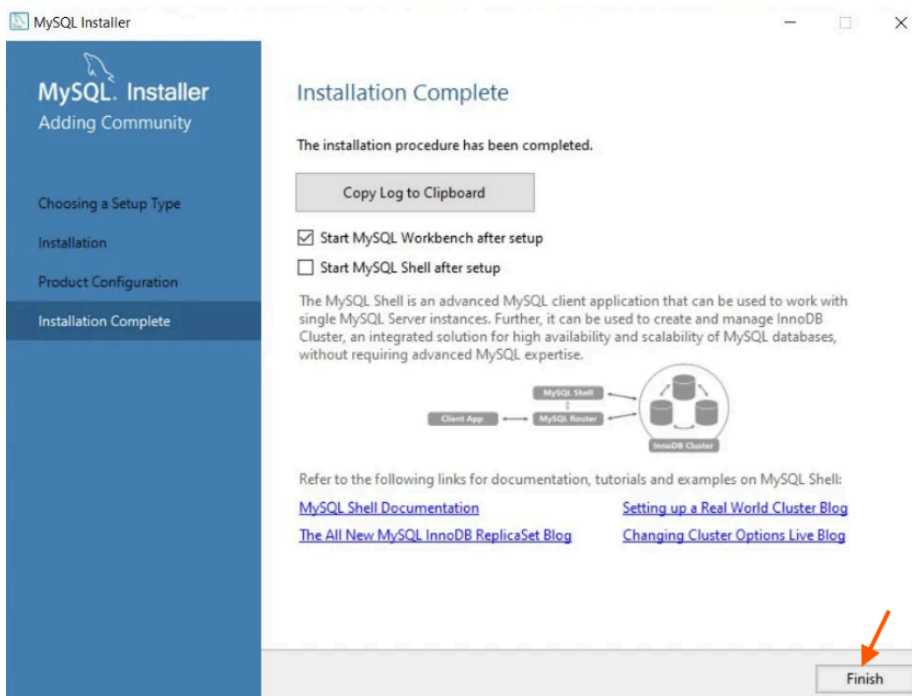
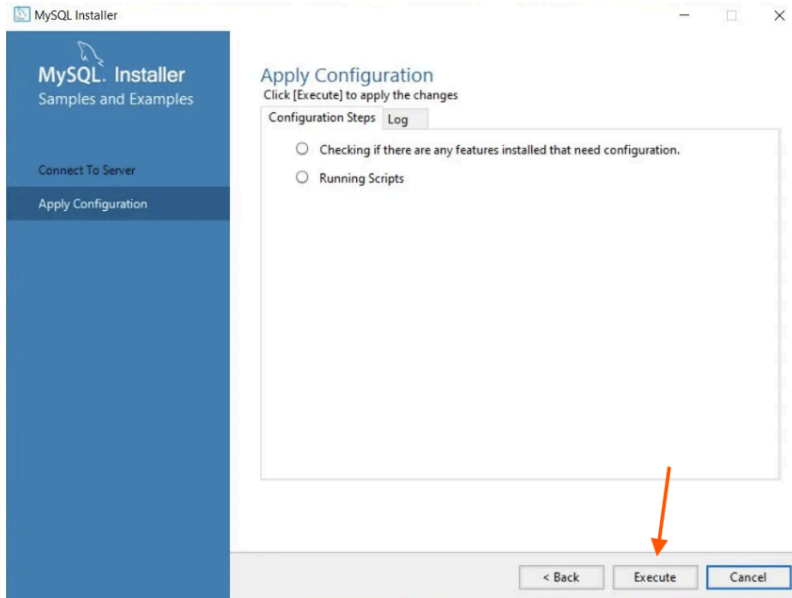


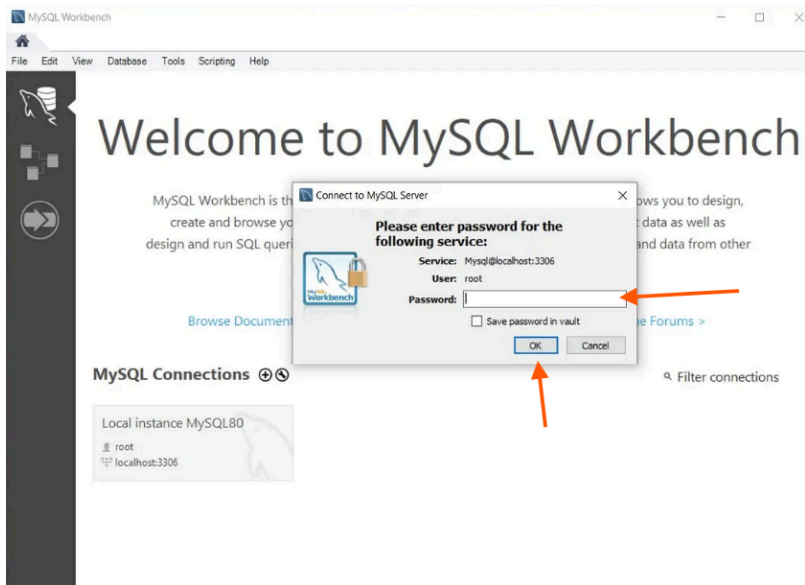
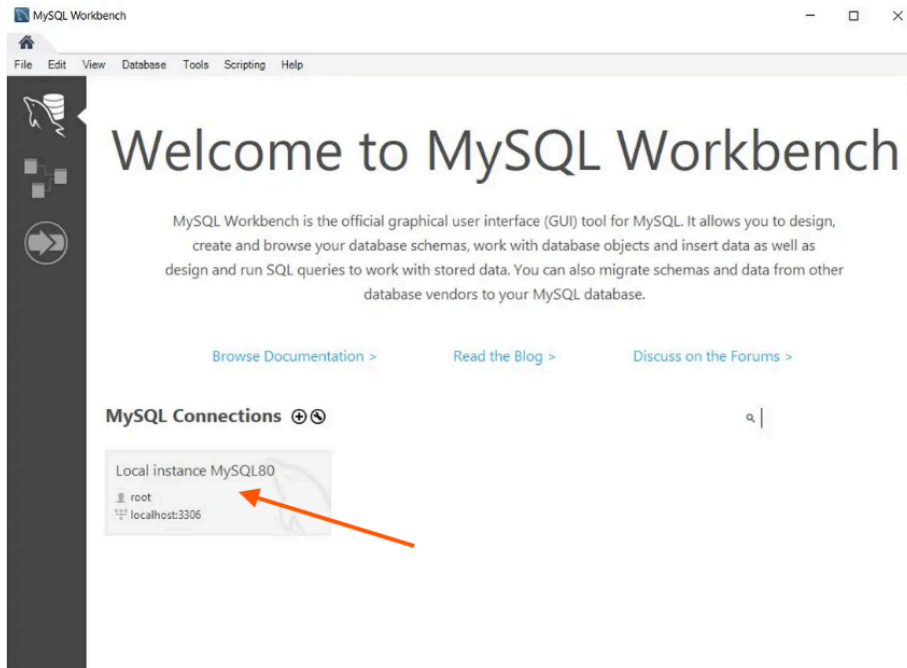




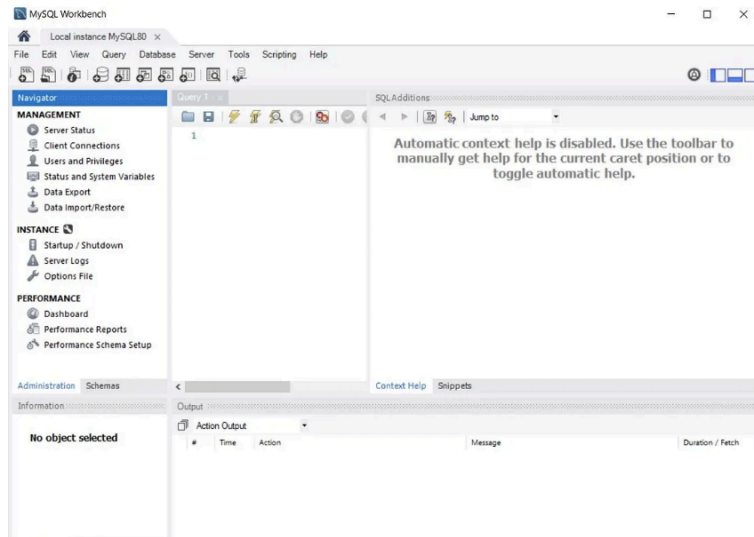












## 1. Database and Table Basics

### 1. Create a Database

...

```
CREATE DATABASE demo;
```

...

- Creates a new database named `demo`.

### 2. Select a Database

...

```
USE demo;
```

...

- Switches to the `demo` database for further operations.

### 3. Create a Table

...

```
CREATE TABLE Users (  
    ID INT,  
    Full_Name VARCHAR(50)  
);  
...
```

- Creates a table named `Users` with two columns: `ID` (integer) and `Full\_Name` (string with max 50 characters).

#### 4. Drop a Table

```
...  
  
DROP TABLE Users;  
...
```

- Deletes the `Users` table.

#### 5. Drop a Database

```
...  
  
DROP DATABASE demo;  
...
```

- Deletes the `demo` database.

---

## 2. Inserting and Retrieving Data

#### 6. Insert Data into a Table

```
...  
  
INSERT INTO Users  
VALUES  
  (1, 'Aman'),  
  (2, 'Priyansh'),  
  (3, 'Ritik');  
...
```

- Adds rows to the `Users` table.

#### 7. Retrieve All Data

```
...  
  
SELECT * FROM Users;  
...
```

- Fetches all rows and columns from the `Users` table.

#### 8. Retrieve Specific Columns

```
...  
  
SELECT ID FROM Users;  
SELECT Full_Name FROM Users;  
...
```

- Fetches only the `ID` or `Full\_Name` column from the `Users` table.

---

### 3. Filtering Data with WHERE Clause

#### 9. Filter Rows Based on Condition

```
...  
SELECT * FROM hacker WHERE Score >= 180;  
...
```

- Retrieves rows from the `hacker` table where the `Score` is greater than or equal to 180.

#### 10. Filter with Multiple Conditions

```
...  
SELECT * FROM student_marks WHERE maths > 0 AND science > 0;  
...
```

- Retrieves rows where both `maths` and `science` marks are greater than 0.

#### 11. Filter with OR Condition

```
...  
SELECT * FROM student_marks WHERE maths = 0 OR science > 0;  
...
```

- Retrieves rows where either `maths` is 0 or `science` is greater than 0.

#### 12. Filter with BETWEEN

```
...  
SELECT * FROM student_marks WHERE maths BETWEEN 45 AND 50;  
...
```

- Retrieves rows where `maths` marks are between 45 and 50 (inclusive).

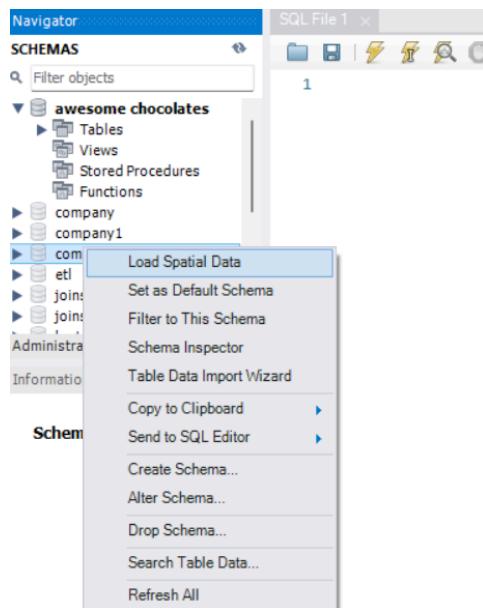
#### 13. Filter with NOT EQUAL

```
...  
SELECT * FROM student_marks WHERE maths <> 90;  
...
```

- Retrieves rows where `maths` marks are not equal to 90.

---

Note : Load the hackers and students\_marks by using the **Table Data import wizard**



## 4. Updating Data

### 14. Update Data in a Table

```
...  
  
UPDATE hacker  
  SET Country = 'United States'  
  WHERE Country = 'USA';  
...
```

- Updates the `Country` column to `United States` where it was `USA`.

### 15. Disable Safe Updates

```
...  
  
SET _SAFE_UPDATES = 0;  
...
```

- Allows updating data without a `WHERE` clause (use with caution).

### 16. Enable Safe Updates

```
...  
  
SET _SAFE_UPDATES = 1;  
...
```

- Re-enables safe update mode.

---

## 5. Sorting Data with ORDER BY

### 17. Sort Data in Ascending Order

...

```
SELECT * FROM student_marks ORDER BY maths ASC;
```

...

- Sorts rows by `maths` marks in ascending order.

### 18. Sort Data in Descending Order

...

```
SELECT * FROM student_marks ORDER BY maths DESC;
```

...

- Sorts rows by `maths` marks in descending order.

---

## 6. Filtering Strings with LIKE

### 19. Filter Names Starting with 'C'

...

```
SELECT * FROM student_marks WHERE name LIKE 'C%';
```

...

- Retrieves rows where `name` starts with `C`.

### 20. Filter Names Ending with 'C'

...

```
SELECT * FROM student_marks WHERE name LIKE '%C';
```

...

- Retrieves rows where `name` ends with `C`.

### 21. Filter Names Containing 'C'

...

```
SELECT * FROM student_marks WHERE name LIKE '%C%';
```

...

- Retrieves rows where `name` contains `C` at any position.

### 22. Filter Names Starting with 'Co'

...

```
SELECT * FROM student_marks WHERE name LIKE 'Co%';
```

...

- Retrieves rows where `name` starts with `Co`.

### 23. Filter Names Ending with 'nt'

...

```
SELECT * FROM student_marks WHERE name LIKE '%nt';
```

...

- Retrieves rows where `name` ends with `nt`.

### 24. Filter Names Starting with 'gr' and Ending with 'nt'

...

```
SELECT * FROM student_marks WHERE name LIKE 'gr%nt';
```

...

- Retrieves rows where `name` starts with `gr` and ends with `nt`.

---

## 7. Shortcuts and Best Practices

### - Execute Query Shortcuts:

- Windows: `Ctrl + Enter`
- Mac: `Cmd + Enter`

### - Sequence of Writing Clauses:

...

```
SELECT -> FROM -> WHERE -> ORDER BY
```

...

### - Use `BETWEEN` for Range Filters:

- More efficient than combining `>=` and `<=`.

---

Keep practicing 🚀