MySQL Tutorial: Deleting duplicate rows from a table

Soumyabrata Bhattacharjee

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Introduction

In this tutorial, we will learn how to perform various database operations using MySQL. We'll cover creating databases, tables, inserting data, and making structural changes.

Step 1: Show Existing Databases

```
-- Show existing databases
SHOW DATABASES;
```

This command lists all the databases available in your MySQL server.

Step 2: Create a New Database

```
-- Create a new database named expt_2
CREATE DATABASE expt_2;
```

This creates a new database named `expt_2`.

Step 3: Switch to the New Database

```
-- Switch to the expt_2 database
USE expt_2;
```

This command makes `expt_2` the active database.

Step 4: Create a Table

```sql
-- Create a table named students
CREATE TABLE students (
  id INT NOT NULL AUTO_INCREMENT,
  first_name VARCHAR(255) NOT NULL,
  age INT NOT NULL,
  PRIMARY KEY (id)
);
```

This creates a table called `students` with columns `id`, `first_name`, and `age`.

Step 5: Insert Data into the Table

```sql
-- Insert data into the students table
INSERT INTO students (first_name, age) VALUES
  ('X', 20),
  ('Y', 21),
  ('Y', 21),
  ('Z', 22),
  ('XY', 22);
```

This adds records to the `students` table.

Step 6: View Records in the Table

```sql
-- Select all records from the students table
SELECT * FROM students;
```

This displays all the records in the `students` table.

Step 7: Create a Temporary Table

```sql
-- Create a temporary table with the same structure as
    students
CREATE TABLE students_temp LIKE students;
```

This creates a temporary table called `students_temp` with the same structure as `students`.

Step 8: Insert Distinct Records into Temporary Table

```sql
-- Insert distinct records into the temporary table
INSERT INTO students_temp
SELECT MAX(id), first_name, age
FROM students
GROUP BY first_name, age;
```

This inserts distinct records from `students` into `students_temp`.

Step 9: Replace Original Table with Temporary Table

```sql
-- Drop the original students table
DROP TABLE students;

-- Rename the temporary table to the original name
ALTER TABLE students_temp RENAME TO students;
```

These commands replace the original `students` table with the temporary table.

Step 10: View Records in Modified Table

```sql
SELECT * FROM students;
```

This displays the modified records in the `students` table.

Step 11: Drop the Database

```sql
-- Drop the expt_2 database
DROP DATABASE expt_2;
```

This deletes the `expt_2` database.

Conclusion

Congratulations! You've learned how to manage databases and tables in MySQL. Keep practicing and experimenting to strengthen your SQL skills.