Certainly! MySQL supports a wide range of queries for various operations including selecting data, inserting, updating, deleting, and more complex operations involving conditions and joins. Here's a comprehensive list with examples for each type:

**1. Basic Queries**

**Selecting all columns from a table:**

sql

Copy code

**SELECT \* FROM table\_name;**

**Selecting specific columns:**

sql

Copy code

**SELECT column1, column2 FROM table\_name;**

**Inserting a single record:**

sql

Copy code

**INSERT INTO table\_name (column1, column2) VALUES (value1, value2);**

**Updating records:**

sql

Copy code

**UPDATE table\_name SET column1 = value1, column2 = value2 WHERE condition;**

**Deleting records:**

sql

Copy code

**DELETE FROM table\_name WHERE condition;**

**2. Queries with Conditions**

**Simple condition (equals):**

sql

Copy code

**SELECT \* FROM table\_name WHERE column1 = value;**

**Condition with comparison operators:**

sql

Copy code

**SELECT \* FROM table\_name WHERE column1 > value AND column2 <= value2;**

**Using IN operator for multiple values:**

sql

Copy code

**SELECT \* FROM table\_name WHERE column1 IN (value1, value2, value3);**

**Using LIKE for pattern matching:**

sql

Copy code

**SELECT \* FROM table\_name WHERE column1 LIKE 'pattern%';**

**3. Queries with Joins**

**Inner Join:**

sql

Copy code

**SELECT \* FROM table1 INNER JOIN table2 ON table1.column = table2.column;**

**Left Join:**

sql

Copy code

**SELECT \* FROM table1 LEFT JOIN table2 ON table1.column = table2.column;**

**Right Join:**

sql

Copy code

**SELECT \* FROM table1 RIGHT JOIN table2 ON table1.column = table2.column;**

**4. Aggregation Queries**

**Count rows:**

sql

Copy code

**SELECT COUNT(\*) FROM table\_name;**

**Sum of a column:**

sql

Copy code

**SELECT SUM(column\_name) FROM table\_name;**

**Group by with aggregate functions:**

sql

Copy code

**SELECT column1, SUM(column2) FROM table\_name GROUP BY column1;**

**5. Subqueries**

**Subquery in SELECT:**

sql

Copy code

**SELECT column1, (SELECT MAX(column2) FROM another\_table WHERE condition) AS max\_value FROM table\_name;**

**Subquery in WHERE:**

sql

Copy code

**SELECT \* FROM table\_name WHERE column1 = (SELECT column2 FROM another\_table WHERE condition);**

**6. Conditional Logic**

**CASE statement:**

sql

Copy code

**SELECT column1,**

**CASE**

**WHEN condition1 THEN 'Result1'**

**WHEN condition2 THEN 'Result2'**

**ELSE 'Default'**

**END AS result**

**FROM table\_name;**

**7. Transactions**

**Start a transaction:**

sql

Copy code

**START TRANSACTION;**

**Commit a transaction:**

sql

Copy code

**COMMIT;**

**Rollback a transaction:**

sql

Copy code

**ROLLBACK;**

**8. Other Queries**

**Limiting results:**

sql

Copy code

**SELECT \* FROM table\_name LIMIT 10;**

**Sorting results:**

sql

Copy code

**SELECT \* FROM table\_name ORDER BY column1 DESC;**

**Using aliases:**

sql

Copy code

**SELECT column1 AS alias1, column2 AS alias2 FROM table\_name;**

These examples cover a wide range of common SQL operations in MySQL. Depending on your specific needs and database schema, you can adapt these queries accordingly.

3.5

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Sure! Let's break down various types of INSERT queries in MySQL, including handling single rows, multiple rows, conditions, and other use cases.

**1. Basic INSERT**

**Insert a single record:**

sql

Copy code

**INSERT INTO table\_name (column1, column2) VALUES (value1, value2);**

Example:

sql

Copy code

**INSERT INTO employees (first\_name, last\_name) VALUES ('John', 'Doe');**

**2. INSERT Multiple Rows**

**Insert multiple records in one query:**

sql

Copy code

**INSERT INTO table\_name (column1, column2) VALUES**

**(value1\_1, value1\_2),**

**(value2\_1, value2\_2),**

**(value3\_1, value3\_2);**

Example:

sql

Copy code

**INSERT INTO employees (first\_name, last\_name) VALUES**

**('John', 'Doe'),**

**('Jane', 'Smith'),**

**('Mike', 'Johnson');**

**3. INSERT with SELECT**

**Insert data from another table:**

sql

Copy code

INSERT INTO table\_name (column1, column2)

SELECT column1, column2 FROM another\_table WHERE condition;

Example:

sql

Copy code

INSERT INTO archived\_employees (first\_name, last\_name)

SELECT first\_name, last\_name FROM employees WHERE status = 'retired';

**4. INSERT IGNORE**

**Insert a record but ignore if there's a duplicate key conflict:**

sql

Copy code

INSERT IGNORE INTO table\_name (column1, column2) VALUES (value1, value2);

Example:

sql

Copy code

INSERT IGNORE INTO employees (id, first\_name, last\_name) VALUES (1, 'John', 'Doe');

**5. INSERT ON DUPLICATE KEY UPDATE**

**Insert a record and update if there's a duplicate key conflict:**

sql

Copy code

INSERT INTO table\_name (column1, column2) VALUES (value1, value2)

ON DUPLICATE KEY UPDATE column1 = new\_value1, column2 = new\_value2;

Example:

sql

Copy code

INSERT INTO employees (id, first\_name, last\_name) VALUES (1, 'John', 'Doe')

ON DUPLICATE KEY UPDATE last\_name = 'Smith';

**6. INSERT with DEFAULT Values**

**Insert a record and let MySQL use default values for some columns:**

sql

Copy code

INSERT INTO table\_name (column1) VALUES (value1);

Example:

sql

Copy code

INSERT INTO employees (first\_name) VALUES ('John'); -- last\_name will use default value

**7. INSERT with NULL Values**

**Insert a record with NULL values for some columns:**

sql

Copy code

INSERT INTO table\_name (column1, column2) VALUES (value1, NULL);

Example:

sql

Copy code

INSERT INTO employees (first\_name, last\_name) VALUES ('John', NULL);

**8. INSERT with Subquery**

**Insert data based on a calculation or condition:**

sql

Copy code

INSERT INTO table\_name (column1, column2)

VALUES ((SELECT MAX(column1) FROM another\_table), 'value2');

Example:

sql

Copy code

INSERT INTO salaries (employee\_id, salary)

VALUES ((SELECT id FROM employees WHERE first\_name = 'John'), 50000);

**9. INSERT with Prepared Statements (for dynamic queries in applications)**

**Prepared statements in MySQL for dynamic inserts:**

sql

Copy code

PREPARE stmt FROM 'INSERT INTO table\_name (column1, column2) VALUES (?, ?)';

SET @value1 = 'John';

SET @value2 = 'Doe';

EXECUTE stmt USING @value1, @value2;

DEALLOCATE PREPARE stmt;

These are some of the most common and useful variations of INSERT queries in MySQL. Depending on your database structure and requirements, you can adapt these examples to suit your needs.

4o

for UPDATE

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Here's a detailed breakdown of various types of UPDATE queries in MySQL, covering single and multiple row updates, updates with conditions, and more.

**1. Basic UPDATE**

**Update specific columns in a single row:**

sql

Copy code

UPDATE table\_name SET column1 = value1 WHERE condition;

Example:

sql

Copy code

UPDATE employees SET last\_name = 'Smith' WHERE id = 1;

**2. UPDATE Multiple Columns**

**Update multiple columns at once:**

sql

Copy code

UPDATE table\_name SET column1 = value1, column2 = value2 WHERE condition;

Example:

sql

Copy code

UPDATE employees SET first\_name = 'John', last\_name = 'Smith' WHERE id = 1;

**3. UPDATE Multiple Rows**

**Update multiple rows with the same values:**

sql

Copy code

UPDATE table\_name SET column1 = value1 WHERE condition;

Example:

sql

Copy code

UPDATE employees SET status = 'active' WHERE department\_id = 3;

**4. UPDATE with Conditional Logic (CASE)**

**Update using a CASE statement for conditional logic:**

sql

Copy code

UPDATE table\_name

SET column1 = CASE

WHEN condition1 THEN value1

WHEN condition2 THEN value2

ELSE value3

END

WHERE some\_column = some\_value;

Example:

sql

Copy code

UPDATE employees

SET salary = CASE

WHEN performance = 'excellent' THEN salary \* 1.10

WHEN performance = 'good' THEN salary \* 1.05

ELSE salary

END

WHERE department\_id = 2;

**5. UPDATE with Subquery**

**Update a column based on a value from another table:**

sql

Copy code

UPDATE table\_name

SET column1 = (SELECT another\_column FROM another\_table WHERE condition)

WHERE condition;

Example:

sql

Copy code

UPDATE employees

SET department\_id = (SELECT id FROM departments WHERE name = 'HR')

WHERE first\_name = 'John' AND last\_name = 'Doe';

**6. UPDATE with JOIN**

**Update records based on a join with another table:**

sql

Copy code

UPDATE table1

JOIN table2 ON table1.column = table2.column

SET table1.column\_to\_update = value

WHERE condition;

Example:

sql

Copy code

UPDATE employees e

JOIN departments d ON e.department\_id = d.id

SET e.salary = e.salary \* 1.1

WHERE d.name = 'Sales';

**7. UPDATE with NULL Values**

**Update columns to NULL:**

sql

Copy code

UPDATE table\_name SET column1 = NULL WHERE condition;

Example:

sql

Copy code

UPDATE employees SET last\_name = NULL WHERE id = 1;

**8. UPDATE with LIMIT**

**Update only a limited number of rows:**

sql

Copy code

UPDATE table\_name SET column1 = value1 WHERE condition LIMIT number\_of\_rows;

Example:

sql

Copy code

UPDATE employees SET status = 'inactive' WHERE status = 'active' LIMIT 10;

**9. UPDATE with Prepared Statements**

**Prepared statements for dynamic updates:**

sql

Copy code

PREPARE stmt FROM 'UPDATE table\_name SET column1 = ? WHERE column2 = ?';

SET @value1 = 'Smith';

SET @value2 = 1;

EXECUTE stmt USING @value1, @value2;

DEALLOCATE PREPARE stmt;

These UPDATE query examples cover a wide range of use cases, from simple updates to more complex scenarios involving joins, subqueries, and conditional logic. You can adapt these examples based on your specific database structure and requirements.

4o

for DELETE

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Here's a comprehensive guide to various types of DELETE queries in MySQL, covering different scenarios and conditions.

**1. Basic DELETE**

**Delete specific rows based on a condition:**

sql

Copy code

DELETE FROM table\_name WHERE condition;

Example:

sql

Copy code

DELETE FROM employees WHERE id = 1;

**2. DELETE All Rows**

**Delete all rows from a table (without a WHERE clause):**

sql

Copy code

DELETE FROM table\_name;

Example:

sql

Copy code

DELETE FROM employees;

**3. DELETE with Multiple Conditions**

**Delete rows based on multiple conditions using AND or OR:**

sql

Copy code

DELETE FROM table\_name WHERE condition1 AND condition2;

Example:

sql

Copy code

DELETE FROM employees WHERE department\_id = 3 AND status = 'inactive';

**4. DELETE with JOIN**

**Delete rows from one table based on a condition from another table:**

sql

Copy code

DELETE table1 FROM table1

JOIN table2 ON table1.column = table2.column

WHERE condition;

Example:

sql

Copy code

DELETE e FROM employees e

JOIN departments d ON e.department\_id = d.id

WHERE d.name = 'HR';

**5. DELETE with Subquery**

**Delete rows based on a subquery:**

sql

Copy code

DELETE FROM table\_name WHERE column\_name IN (SELECT column\_name FROM another\_table WHERE condition);

Example:

sql

Copy code

DELETE FROM employees WHERE department\_id IN (SELECT id FROM departments WHERE name = 'Sales');

**6. DELETE with LIMIT**

**Delete a limited number of rows:**

sql

Copy code

DELETE FROM table\_name WHERE condition LIMIT number\_of\_rows;

Example:

sql

Copy code

DELETE FROM employees WHERE status = 'inactive' LIMIT 10;

**7. DELETE with ORDER BY and LIMIT**

**Delete the oldest or newest records based on a specific column:**

sql

Copy code

DELETE FROM table\_name WHERE condition ORDER BY column\_name ASC|DESC LIMIT number\_of\_rows;

Example:

sql

Copy code

DELETE FROM employees WHERE status = 'inactive' ORDER BY hire\_date ASC LIMIT 5;

**8. DELETE with FOREIGN KEY Constraints**

**Delete a record in a parent table that affects a child table (with ON DELETE CASCADE):**

sql

Copy code

DELETE FROM parent\_table WHERE condition;

Example:

sql

Copy code

DELETE FROM departments WHERE id = 3; -- This will also delete related records in the child table if ON DELETE CASCADE is set

**9. DELETE with Prepared Statements**

**Prepared statements for dynamic deletes:**

sql

Copy code

PREPARE stmt FROM 'DELETE FROM table\_name WHERE column\_name = ?';

SET @value = 'John';

EXECUTE stmt USING @value;

DEALLOCATE PREPARE stmt;

**10. DELETE with Transactions**

**Use transactions to ensure data integrity:**

sql

Copy code

START TRANSACTION;

DELETE FROM table\_name WHERE condition;

COMMIT;

Example:

sql

Copy code

START TRANSACTION;

DELETE FROM employees WHERE id = 1;

COMMIT;

These DELETE queries cover a range of scenarios, from basic deletions to more complex conditions involving joins, subqueries, and transactions. You can tailor these examples to fit your specific database schema and requirements.

4o

for ALTER

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Here's a detailed guide to various types of ALTER queries in MySQL, which are used to modify the structure of existing tables.

**1. ALTER to Add a Column**

**Add a single column:**

sql

Copy code

ALTER TABLE table\_name ADD column\_name column\_definition;

Example:

sql

Copy code

ALTER TABLE employees ADD email VARCHAR(255);

**Add multiple columns:**

sql

Copy code

ALTER TABLE table\_name

ADD column1 column\_definition1,

ADD column2 column\_definition2;

Example:

sql

Copy code

ALTER TABLE employees

ADD middle\_name VARCHAR(50),

ADD birth\_date DATE;

**2. ALTER to Drop a Column**

**Drop a single column:**

sql

Copy code

ALTER TABLE table\_name DROP COLUMN column\_name;

Example:

sql

Copy code

ALTER TABLE employees DROP COLUMN middle\_name;

**Drop multiple columns:**

sql

Copy code

ALTER TABLE table\_name

DROP COLUMN column1,

DROP COLUMN column2;

Example:

sql

Copy code

ALTER TABLE employees

DROP COLUMN birth\_date,

DROP COLUMN email;

**3. ALTER to Modify a Column**

**Modify a column’s data type or other attributes:**

sql

Copy code

ALTER TABLE table\_name MODIFY column\_name new\_definition;

Example:

sql

Copy code

ALTER TABLE employees MODIFY email VARCHAR(150) NOT NULL;

**Modify column and add a default value:**

sql

Copy code

ALTER TABLE table\_name MODIFY column\_name column\_definition DEFAULT default\_value;

Example:

sql

Copy code

ALTER TABLE employees MODIFY salary DECIMAL(10,2) DEFAULT 0.00;

**4. ALTER to Rename a Column**

**Rename a column:**

sql

Copy code

ALTER TABLE table\_name CHANGE old\_column\_name new\_column\_name new\_definition;

Example:

sql

Copy code

ALTER TABLE employees CHANGE email email\_address VARCHAR(255);

**5. ALTER to Rename a Table**

**Rename a table:**

sql

Copy code

RENAME TABLE old\_table\_name TO new\_table\_name;

Example:

sql

Copy code

RENAME TABLE employees TO staff;

**6. ALTER to Add or Drop Indexes**

**Add an index:**

sql

Copy code

ALTER TABLE table\_name ADD INDEX index\_name (column\_name);

Example:

sql

Copy code

ALTER TABLE employees ADD INDEX idx\_last\_name (last\_name);

**Drop an index:**

sql

Copy code

ALTER TABLE table\_name DROP INDEX index\_name;

Example:

sql

Copy code

ALTER TABLE employees DROP INDEX idx\_last\_name;

**7. ALTER to Add or Drop Primary Keys**

**Add a primary key:**

sql

Copy code

ALTER TABLE table\_name ADD PRIMARY KEY (column\_name);

Example:

sql

Copy code

ALTER TABLE employees ADD PRIMARY KEY (id);

**Drop a primary key:**

sql

Copy code

ALTER TABLE table\_name DROP PRIMARY KEY;

Example:

sql

Copy code

ALTER TABLE employees DROP PRIMARY KEY;

**8. ALTER to Add or Drop Foreign Keys**

**Add a foreign key:**

sql

Copy code

ALTER TABLE child\_table

ADD CONSTRAINT fk\_name

FOREIGN KEY (child\_column)

REFERENCES parent\_table(parent\_column);

Example:

sql

Copy code

ALTER TABLE employees

ADD CONSTRAINT fk\_department

FOREIGN KEY (department\_id)

REFERENCES departments(id);

**Drop a foreign key:**

sql

Copy code

ALTER TABLE table\_name DROP FOREIGN KEY fk\_name;

Example:

sql

Copy code

ALTER TABLE employees DROP FOREIGN KEY fk\_department;

**9. ALTER to Change Table Storage Engine**

**Change the storage engine of a table:**

sql

Copy code

ALTER TABLE table\_name ENGINE = new\_engine;

Example:

sql

Copy code

ALTER TABLE employees ENGINE = InnoDB;

**10. ALTER to Add or Modify Table Constraints**

**Add or modify constraints like UNIQUE, NOT NULL, or DEFAULT:**

sql

Copy code

ALTER TABLE table\_name MODIFY column\_name column\_definition CONSTRAINT;

Example:

sql

Copy code

ALTER TABLE employees MODIFY email VARCHAR(255) UNIQUE;

These ALTER queries cover a wide range of structural modifications you can make to a table in MySQL. Depending on your database schema and requirements, you can use these examples to adjust tables as needed.

4o

for create database

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Here's a guide to CREATE DATABASE queries in MySQL, covering various scenarios and options you might need.

**1. Basic CREATE DATABASE**

**Create a new database:**

sql

Copy code

CREATE DATABASE database\_name;

Example:

sql

Copy code

CREATE DATABASE movie\_booking\_system;

**2. CREATE DATABASE with Character Set and Collation**

**Create a database with a specific character set and collation:**

sql

Copy code

CREATE DATABASE database\_name CHARACTER SET charset\_name COLLATE collation\_name;

Example:

sql

Copy code

CREATE DATABASE movie\_booking\_system CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci;

**3. CREATE DATABASE IF NOT EXISTS**

**Create a database only if it does not already exist:**

sql

Copy code

CREATE DATABASE IF NOT EXISTS database\_name;

Example:

sql

Copy code

CREATE DATABASE IF NOT EXISTS movie\_booking\_system;

**4. CREATE DATABASE with Different Storage Engines (Setting storage engines is typically done at the table level, but can be part of an overall schema design.)**

**Create a database and later create tables with different storage engines:**

sql

Copy code

CREATE DATABASE database\_name;

Example:

sql

Copy code

CREATE DATABASE movie\_booking\_system;

After creating the database, you can create tables with specific storage engines like InnoDB, MyISAM, etc.

**5. CREATE DATABASE and USE**

**Create a database and set it as the active database:**

sql

Copy code

CREATE DATABASE database\_name;

USE database\_name;

Example:

sql

Copy code

CREATE DATABASE movie\_booking\_system;

USE movie\_booking\_system;

**6. CREATE DATABASE with Privileges**

**Grant privileges to a user after creating a database:**

sql

Copy code

CREATE DATABASE database\_name;

GRANT ALL PRIVILEGES ON database\_name.\* TO 'username'@'localhost' IDENTIFIED BY 'password';

Example:

sql

Copy code

CREATE DATABASE movie\_booking\_system;

GRANT ALL PRIVILEGES ON movie\_booking\_system.\* TO 'movie\_user'@'localhost' IDENTIFIED BY 'strongpassword';

**7. CREATE DATABASE in a Script**

**Create a database as part of a larger SQL script:**

sql

Copy code

DROP DATABASE IF EXISTS database\_name;

CREATE DATABASE database\_name;

USE database\_name;

Example:

sql

Copy code

DROP DATABASE IF EXISTS movie\_booking\_system;

CREATE DATABASE movie\_booking\_system;

USE movie\_booking\_system;

These examples cover a range of options for creating a database in MySQL, allowing you to specify settings like character sets, handle conditional creation, and manage privileges.

4o

for drop database

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Memory updated

Here's a guide to the DROP DATABASE command in MySQL, including various scenarios and precautions.

**1. Basic DROP DATABASE**

**Delete a database permanently:**

sql

Copy code

DROP DATABASE database\_name;

Example:

sql

Copy code

DROP DATABASE movie\_booking\_system;

**2. DROP DATABASE IF EXISTS**

**Delete a database only if it exists, avoiding errors if it doesn't:**

sql

Copy code

DROP DATABASE IF EXISTS database\_name;

Example:

sql

Copy code

DROP DATABASE IF EXISTS movie\_booking\_system;

**3. DROP DATABASE with Caution**

**Using DROP DATABASE with caution, as this operation cannot be undone:**

* Always back up the database before dropping it.
* Ensure no users are actively using the database.

**4. DROP DATABASE in a Script**

**Dropping a database as part of a larger SQL script, often followed by creating a new one:**

sql

Copy code

DROP DATABASE IF EXISTS database\_name;

CREATE DATABASE database\_name;

Example:

sql

Copy code

DROP DATABASE IF EXISTS movie\_booking\_system;

CREATE DATABASE movie\_booking\_system;

**5. DROP DATABASE with User Privileges**

**Revoke user privileges before dropping a database (optional but good practice in some environments):**

sql

Copy code

REVOKE ALL PRIVILEGES ON database\_name.\* FROM 'username'@'localhost';

DROP DATABASE database\_name;

Example:

sql

Copy code

REVOKE ALL PRIVILEGES ON movie\_booking\_system.\* FROM 'movie\_user'@'localhost';

DROP DATABASE movie\_booking\_system;

**6. Using DROP DATABASE in a Production Environment**

* In production, it is crucial to double-check the database name to avoid accidental deletion of the wrong database.
* Consider disabling direct database dropping in production environments or requiring extra confirmation steps.

These examples cover the DROP DATABASE command in MySQL, including safe usage practices and how to incorporate it into larger SQL scripts.

4o

for create table

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Here's a detailed guide to various types of CREATE TABLE queries in MySQL, covering different scenarios and options for table creation.

**1. Basic CREATE TABLE**

**Create a simple table with columns and data types:**

sql

Copy code

CREATE TABLE table\_name (

column1 data\_type constraints,

column2 data\_type constraints,

...

);

Example:

sql

Copy code

CREATE TABLE employees (

id INT AUTO\_INCREMENT PRIMARY KEY,

first\_name VARCHAR(50) NOT NULL,

last\_name VARCHAR(50) NOT NULL,

hire\_date DATE

);

**2. CREATE TABLE with Different Data Types**

**Create a table using various data types:**

sql

Copy code

CREATE TABLE table\_name (

id INT,

name VARCHAR(100),

salary DECIMAL(10, 2),

hire\_date DATE,

is\_active BOOLEAN

);

Example:

sql

Copy code

CREATE TABLE products (

product\_id INT PRIMARY KEY,

product\_name VARCHAR(100) NOT NULL,

price DECIMAL(8, 2),

available\_date DATE,

in\_stock BOOLEAN

);

**3. CREATE TABLE with Constraints**

**Add constraints like NOT NULL, UNIQUE, PRIMARY KEY, FOREIGN KEY, and DEFAULT:**

sql

Copy code

CREATE TABLE table\_name (

column1 data\_type NOT NULL,

column2 data\_type UNIQUE,

column3 data\_type DEFAULT default\_value,

PRIMARY KEY (column1),

FOREIGN KEY (column2) REFERENCES another\_table(column)

);

Example:

sql

Copy code

CREATE TABLE orders (

order\_id INT AUTO\_INCREMENT PRIMARY KEY,

customer\_id INT NOT NULL,

order\_date DATETIME DEFAULT CURRENT\_TIMESTAMP,

FOREIGN KEY (customer\_id) REFERENCES customers(customer\_id)

);

**4. CREATE TABLE IF NOT EXISTS**

**Create a table only if it does not already exist:**

sql

Copy code

CREATE TABLE IF NOT EXISTS table\_name (

column1 data\_type,

column2 data\_type,

...

);

Example:

sql

Copy code

CREATE TABLE IF NOT EXISTS departments (

department\_id INT AUTO\_INCREMENT PRIMARY KEY,

department\_name VARCHAR(100) NOT NULL UNIQUE

);

**5. CREATE TABLE with AUTO\_INCREMENT**

**Use AUTO\_INCREMENT for automatically incrementing values, usually used with primary keys:**

sql

Copy code

CREATE TABLE table\_name (

id INT AUTO\_INCREMENT PRIMARY KEY,

...

);

Example:

sql

Copy code

CREATE TABLE categories (

category\_id INT AUTO\_INCREMENT PRIMARY KEY,

category\_name VARCHAR(50) NOT NULL

);

**6. CREATE TABLE with Composite Primary Key**

**Create a table with a composite primary key (using multiple columns):**

sql

Copy code

CREATE TABLE table\_name (

column1 data\_type,

column2 data\_type,

PRIMARY KEY (column1, column2)

);

Example:

sql

Copy code

CREATE TABLE order\_items (

order\_id INT,

product\_id INT,

quantity INT,

PRIMARY KEY (order\_id, product\_id),

FOREIGN KEY (order\_id) REFERENCES orders(order\_id),

FOREIGN KEY (product\_id) REFERENCES products(product\_id)

);

**7. CREATE TABLE with Indexes**

**Add indexes to columns for faster searching and querying:**

sql

Copy code

CREATE TABLE table\_name (

column1 data\_type,

column2 data\_type,

...

INDEX (column1),

INDEX idx\_name (column2)

);

Example:

sql

Copy code

CREATE TABLE customers (

customer\_id INT AUTO\_INCREMENT PRIMARY KEY,

first\_name VARCHAR(50),

last\_name VARCHAR(50),

INDEX (last\_name),

INDEX idx\_first\_name (first\_name)

);

**8. CREATE TABLE with Table Options (like Storage Engine, Charset)**

**Specify table options like the storage engine and character set:**

sql

Copy code

CREATE TABLE table\_name (

column1 data\_type,

column2 data\_type,

...

) ENGINE = InnoDB DEFAULT CHARSET = utf8mb4;

Example:

sql

Copy code

CREATE TABLE logs (

log\_id INT AUTO\_INCREMENT PRIMARY KEY,

log\_message TEXT,

log\_time TIMESTAMP DEFAULT CURRENT\_TIMESTAMP

) ENGINE = InnoDB DEFAULT CHARSET = utf8mb4;

**9. CREATE TEMPORARY TABLE**

**Create a temporary table that exists only for the duration of a session:**

sql

Copy code

CREATE TEMPORARY TABLE temp\_table\_name (

column1 data\_type,

column2 data\_type,

...

);

Example:

sql

Copy code

CREATE TEMPORARY TABLE temp\_employees (

id INT,

first\_name VARCHAR(50),

last\_name VARCHAR(50)

);

**10. CREATE TABLE LIKE Another Table**

**Create a new table with the same structure as an existing table:**

sql

Copy code

CREATE TABLE new\_table\_name LIKE existing\_table\_name;

Example:

sql

Copy code

CREATE TABLE archived\_employees LIKE employees;

These CREATE TABLE queries cover a wide range of use cases and features in MySQL, from basic table creation to more advanced configurations with constraints, indexes, and storage options.

4o

for drop table

ChatGPT

Memory updated

Here's a guide to the DROP TABLE command in MySQL, covering various scenarios and options.

**1. Basic DROP TABLE**

**Delete a table permanently:**

sql

Copy code

DROP TABLE table\_name;

Example:

sql

Copy code

DROP TABLE employees;

**2. DROP TABLE IF EXISTS**

**Delete a table only if it exists, avoiding errors if the table doesn't exist:**

sql

Copy code

DROP TABLE IF EXISTS table\_name;

Example:

sql

Copy code

DROP TABLE IF EXISTS employees;

**3. DROP Multiple Tables**

**Delete multiple tables in a single statement:**

sql

Copy code

DROP TABLE table\_name1, table\_name2, ...;

Example:

sql

Copy code

DROP TABLE employees, departments;

**4. DROP TEMPORARY TABLE**

**Drop a temporary table created for a session:**

sql

Copy code

DROP TEMPORARY TABLE table\_name;

Example:

sql

Copy code

DROP TEMPORARY TABLE temp\_employees;

**5. DROP TABLE with Foreign Key Constraints**

**Delete a table that has foreign key constraints:**

* If a table has foreign key constraints, you may need to drop the constraints or the related tables first.

Example:

sql

Copy code

ALTER TABLE order\_items DROP FOREIGN KEY fk\_order;

DROP TABLE orders;

**6. DROP TABLE in a Script**

**Use DROP TABLE as part of a larger SQL script to recreate a table or reset data:**

sql

Copy code

DROP TABLE IF EXISTS table\_name;

CREATE TABLE table\_name (

column1 data\_type,

column2 data\_type,

...

);

Example:

sql

Copy code

DROP TABLE IF EXISTS employees;

CREATE TABLE employees (

id INT AUTO\_INCREMENT PRIMARY KEY,

first\_name VARCHAR(50),

last\_name VARCHAR(50)

);

**7. Using DROP TABLE in a Production Environment**

* In production, it's crucial to back up your data before dropping tables.
* Double-check the table name to avoid accidental deletion of the wrong table.

**8. DROP TABLE with Transactions (for engines that support it)**

**Use a transaction to ensure the DROP TABLE command is part of an all-or-nothing operation:**

sql

Copy code

START TRANSACTION;

DROP TABLE table\_name;

COMMIT;

Example:

sql

Copy code

START TRANSACTION;

DROP TABLE employees;

COMMIT;

These DROP TABLE queries provide various options to safely and effectively delete tables in MySQL, from handling simple deletions to more complex scenarios involving foreign keys and temporary tables.