1. Query Optimization-

ID is increment automatically.

* **INSERT QUERY-**

In this query we insert the value of state.

INSERT INTO state\_table(state)VALUES(‘M.P’);

* **SELECT QUERY-**

In this query we select the table.

SELECT \* FROM state\_table;

SELECT \* FROM state\_table WHERE id=1;

* **UPDATE QUERY-**

In this query we update the table with new data.

UPDATE state\_table SET state=”U.P” WHERE id=1;

* **DELETE QUERY-**

In this query we delete the selected data.

DELETE FROM state\_table WHERE id=3;

2) MULTI-LEVEL INNER JOIN-

The INNER JOIN selects records that have matching values in both tables.

We create 2 tables first one is state\_table and second one is city\_table.

SELECT \* FROM state\_table INNER JOIN city\_table ON state\_table.id = city\_table.sid;

3) SQL INJECTION-

SQL injection is a code injection technique that might destroy your database.

SQL injection is one of the most common web hacking techniques.

The SQL above is valid and will return ALL rows from the "user\_table" table, since **OR 1=1** is always TRUE.

A hacker might get access to all the user names and passwords in a database, by simply inserting 105 OR 1=1 into the input field.

SQL injection is a web security vulnerability that allows an attacker to interfere with the queries that an application makes to its database.

It generally allows an attacker to view data that they are not normally able to retrieve. This might include data belonging to other users, or any other data that the application itself is able to access.

In many cases, an attacker can modify or delete this data, causing persistent changes to the application's content or behavior

4) There is a MYSQL table containing cities of India with states. Write a function to:-

1. **Return a list of states in descending order of number of cities in the state**

* SELECT \* FROM state\_table INNER JOIN city\_table ON state\_table.id = city\_table.sid ORDER BY city DESC;

1. **Returns a list of cities & there states in alphabetical order of name of state**

* SELECT \* FROM state\_table INNER JOIN city\_table ON state\_table.id=city\_table.sid ORDER BY state ASC;