Lab2

Title: Data Manipulation Language (DML)

Objective:
To practice and implement Data Manipulation Language commands.

Description

This lab focuses on core DML operations using SQL, including inserting, updating, selecting, and deleting data. Students will create an **employee** table and perform practical tasks like bulk record insertion, conditional updates, and filtered queries.

Questions:

Create a database Lab2 and a table employee with the following structure:

Column Name	Data Type
E_ID	INT
E_NAME	VARCHAR(20)
E_JOB	VARCHAR(20)
E_SALARY	INT

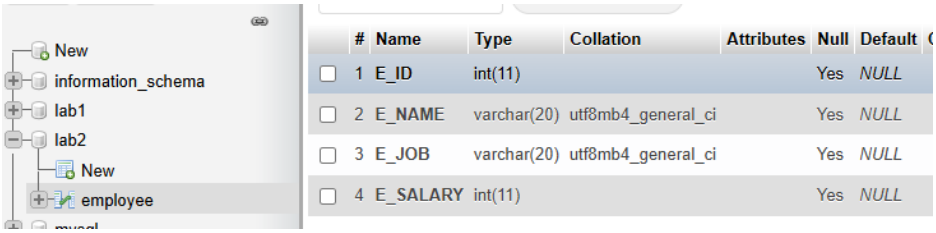
SQL Queries

1. Create Database and Table

```
CREATE DATABASE Lab2;
USE Lab2;

CREATE TABLE employee (
    E_ID INT,
    E_NAME VARCHAR(20),
    E_JOB VARCHAR(20),
    E_SALARY INT
);
```

Output:



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2. Insert a single record in the employee table

SQL Queries

```
INSERT INTO employee (E_ID, E_NAME, E_JOB, E_SALARY)
VALUES (1, 'Santosh', 'Programmer', 30000);
```

Output:

E_ID	E_NAME	E_JOB	E_SALARY
1	Santosh	Programmer	30000

---

3. Insert more than one record in the employee table using a single insert command.

SQL Queries

```
INSERT INTO employee (E_ID, E_NAME, E_JOB, E_SALARY)
VALUES
    (2, 'Surya', 'Designer', 22000),
    (3, 'Phura', 'Analyst', 28000);
```

Output:

E_ID	E_NAME	E_JOB	E_SALARY
1	Santosh	Programmer	30000
2	Surya	Designer	22000
3	Phura	Analyst	28000

---

4. Update the employee table to set salary of all employees to Rs. 25,000 who work as programmer.

SQL Queries

```
UPDATE employee
SET E_SALARY = 25000
WHERE E_JOB = 'Programmer';
```

Output:

E_ID	E_NAME	E_JOB	E_SALARY
1	Santosh	Programmer	25000
2	Surya	Designer	22000
3	Phura	Analyst	28000

---

5. Select all information from the employee table.

SQL Queries

```
SELECT * FROM employee;
```

Output:

E_ID	E_NAME	E_JOB	E_SALARY
1	Santosh	Programmer	25000
2	Surya	Designer	22000
3	Phura	Analyst	28000

---

6. Select employee name (e_name) and job (e_job) from the employee table.

SQL Queries

```
SELECT E_NAME, E_JOB FROM employee;
```

Output:

E_NAME	E_JOB
Santosh	Programmer
Surya	Designer
Phura	Analyst

---

7. Delete employees working as designer.

SQL Queries

```
DELETE FROM employee
WHERE E_JOB = 'Designer';
```

Output:

E_ID	E_NAME	E_JOB	E_SALARY
1	Santosh	Programmer	25000
3	Phura	Analyst	28000

---

8. Display only employees who work as analyst.

SQL Queries

```
SELECT * FROM employee
WHERE E_JOB = 'Analyst';
```

Output:

E_ID	E_NAME	E_JOB	E_SALARY
3	Phura	Analyst	28000

---

9. Display employee job (e_job) from the table while avoiding duplicate values.

SQL Queries

```
SELECT DISTINCT E_JOB FROM employee;
```

Output:

E_JOB
Programmer
Analyst

10. Display employee name (e_name) and job (e_job) for employees with a salary ≥ Rs. 20,000.

SQL Queries

```
SELECT E_NAME, E_JOB
FROM employee
WHERE E_SALARY >= 20000;
```

Output:

E_NAME	E_JOB
Santosh	Programmer
Phura	Analyst

Appendix: Final Table State

SQL Queries

```
SELECT * FROM employee;
```

Output:

E_ID	E_NAME	E_JOB	E_SALARY
1	Santosh	Programmer	25000
3	Phura	Analyst	28000

Conclusion

This lab successfully demonstrated key DML operations for manipulating database records, including inserting, updating, querying, and deleting data. The exercises provide a strong foundation for real-world database administration and data-driven application development.