

# Lab2

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## Title: Data Manipulation Language (DML)

### Objective:

To practice and implement Data Manipulation Language commands.

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.

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### 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

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### 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:

#	Name	Type	Collation	Attributes	Null	Default
1	E_ID	int(11)			Yes	NULL
2	E_NAME	varchar(20)	utf8mb4_general_ci		Yes	NULL
3	E_JOB	varchar(20)	utf8mb4_general_ci		Yes	NULL
4	E_SALARY	int(11)			Yes	NULL

## 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

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**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

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**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

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**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

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**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

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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  $\geq$  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

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## 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

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## 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.

## sheet

### Objective

To practice and implement Data Manipulation Language commands.

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### Lab Exercise

Create a Database named Lab2 and a table called employee with the following structure:

#### Column Name Data Type

e_id	int
e_name	varchar(20)
e_job	varchar(20)
e_salary	int

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### Tasks

1. **Insert a single record in the employee table.**
  2. **Insert more than one record in the employee table using a single insert command.**
  3. **Update the employee table to set salary of all employees to Rs. 25,000 who work as programmer.**
  4. **Select all information from the employee table.**
  5. **Select employee name (e\_name) and job (e\_job) from the employee table.**
  6. **Delete employees working as designer.**
  7. **Display only employees who work as analyst.**
  8. **Display employee job (e\_job) from the table while avoiding duplicate values.**
  9. **Display employee name (e\_name) and job (e\_job) for employees with a salary  $\geq$  Rs. 20,000.**
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## Lab report answer.

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

```
INSERT INTO employee (E_ID, E_NAME, E_JOB, E_SALARY)  
    VALUE (1, 'SANTOSH', 'DOCTOR', 1000),  
          (2, 'SARASWOTI', 'VETNARY', 1001);
```

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

```
SELECT E_ID FROM employee WHERE E_ID='1';
```

```
SELECT E_ID, E_NAME, E_JOB, E_SALARY FROM employee WHERE E_ID='1';
```

```
DELETE FROM employee WHERE E_JOB='DOCTOR';  
// DOCTOR BHAYE KO SABAI.
```

```
SELECT DISTINCT
```