



Experiment No.4
Apply DML commands for the specified system.
Date of Performance:
Date of Submission:



Aim :- Write insert query to insert rows for each table created of your database management system. Use update and delete commands to manipulate the inserted values in the table.

Objective :- To learn commands of Data Manipulation Language(DML) to insert, update or delete the values in the database system.

Theory:

Data Manipulation Language (DML) is a subset of SQL (Structured Query Language) used for managing data within relational database management systems (RDBMS). DML commands are used to perform operations such as inserting, updating, and deleting data from database tables.

1. Inserting Data

The INSERT statement is used to add new rows of data into a table. It specifies the table to insert data into and provides values or expressions for each column in the new row. If a column list is not specified, values must be provided for all columns in the table in the order they were defined.

Syntax:-

```
INSERT INTO table name (column 1, column2, column3) VALUES (value1, value2, value3);
```

2. Updating Data

The UPDATE statement is used to modify existing data within a table. It allows you to change the values of one or more columns in one or more rows based on specified conditions. If no condition is specified, all rows in the table will be updated.

Syntax:-

```
UPDATE table name SET column1 = value1, column2 = value2 WHERE condition;
```

3. Deleting Data

The DELETE statement is used to remove one or more rows from a table based on specified conditions. If no condition is specified, all rows in the table will be deleted.

Syntax:

```
DELETE FROM table name WHERE condition;
```

Implementation:

Inserting Data:

```
insert into employee(employee_id,first_name,middle_name,last_name,dob,gender,age,address,phoneno,job,
department)
values(2201,'John','Roman','Cena',19940808,'male',30,'mumbai',9800687084,'Accountant','Finance');
insert into employee(employee_id,first_name,middle_name,last_name,dob,gender,age,address,phoneno,job,
department)
values(2431,'Brock','Rock','Lesnar',19900609,'male',34,'pune',9824687084,'Web Developer','IT');
insert into employee(employee_id,first_name,middle_name,last_name,dob,gender,age,address,phoneno,job,
department)
values(2928,'Stephanie','Jack','Mahon',19980205,'female',26,'Palghar',9024287093,'Receptionist',
'Administrative');
```



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Result Grid											Filter Rows:		Export:		Wrap Cell Content:				Result Grid	
	employee_id	first_name	middle_name	last_name	dob	gender	age	address	phoneno	job	department									
▶	2201	John	Roman	Cena	1994-08-08	male	30	mumbai	9800687084	Accountant	Finance									
	2431	Brock	Rock	Lesnar	1990-06-09	male	34	pune	9824687084	Web Developer	IT									
	2928	Stephanie	Jack	Mahon	1998-02-05	female	26	Palghar	9024287093	Receptionist	Administrative									

Updating Data:

```
update employee set address='Thane' where employee_id=2431;
```

Result Grid

Filter Rows:

Export:

Wrap Cell Content:

	employee_id	first_name	middle_name	last_name	dob	gender	age	address	phoneno	job	department
▶	2201	John	Roman	Cena	1994-08-08	male	30	mumbai	9800687084	Accountant	Finance
	2431	Brock	Rock	Lesnar	1990-06-09	male	34	Thane	9824687084	Web Developer	IT
	2928	Stephanie	Jack	Mahon	1998-02-05	female	26	Palghar	9024287093	Receptionist	Administrative

Result Grid

Deleting Data:

```
delete from employee where employee_id=2431;
```

Result Grid

Filter Rows:

Export:

Wrap Cell Content:

	employee_id	first_name	middle_name	last_name	dob	gender	age	address	phoneno	job	department
▶	2201	John	Roman	Cena	1994-08-08	male	30	mumbai	9800687084	Accountant	Finance
	2928	Stephanie	Jack	Mahon	1998-02-05	female	26	Palghar	9024287093	Receptionist	Administrative

Result Grid

Conclusion:

1. Explain the role of database constraints in enforcing data integrity during DML operations.

Ans.: Database constraints play a crucial role in enforcing data integrity during DML (Data Manipulation Language) operations by imposing rules and conditions on the data stored in the database tables. These constraints ensure that the data conforms to certain standards and requirements, preventing the insertion, modification, or deletion of data that could compromise its integrity. Constraints such as primary key, foreign key, unique, and check constraints help maintain consistency, accuracy, and reliability in the database by preventing invalid or inconsistent data from being introduced or manipulated.

2. How do you update multiple columns in a table using a single UPDATE statement?

Ans.: To update multiple columns in a table using a single UPDATE statement, you specify the column names and their corresponding new values separated by commas within the SET clause of the UPDATE statement. For example:

```
UPDATE table_name
```

```
SET column1 = value1, column2 = value2, column3 = value3
```

```
WHERE condition;
```

This statement updates the values of column1, column2, and column3 in the specified table with the provided values, subject to the specified condition.