Practical-8

Date:_____

AIM: Perform the following operation for demonstrating the insertion , updation and deletion using the referential integrity constraints.

- To demonstrate insertion, updating, and deleting operations with referential integrity constraints, we will assume we are working with two tables in a relational database: Employees and Departments.

- Referential integrity constraint

i). Primary Key : Departments table has a primary key on DepartmentID.

ii). Foreign Key : Employees table has a foreign key on DepartmentID referring the Departments table.

i). CREATE Table Departments and Employees :-

```
CREATE TABLE Departments (
    DepartmentID INT PRIMARY KEY,
    DepartmentName VARCHAR(100) NOT NULL
);

CREATE TABLE Employees (
    EmployeeID INT PRIMARY KEY,
    EmployeeName VARCHAR(100) NOT NULL,
    DepartmentID INT,
    CONSTRAINT FK_Department FOREIGN KEY (DepartmentID)
        REFERENCES Departments (DepartmentID) ON DELETE
        CASCADE ON UPDATE CASCADE
);
```

ii). Inserting Data into Tables :-

```
INSERT INTO Departments (DepartmentID, DepartmentName)
  VALUES (1, 'Sales');
```

```
INSERT INTO Employees
        (EmployeeID, EmployeeName, DepartmentID)
    VALUES
        (101, 'Alice', 1), (102, 'Bob', 1);
```

Output :-

// Departments Table

DepartmentID	DepartmentName
1	Sales

// Employees Table

EmployeeID	EmployeeName	DepartmentID
101	Alice	1
102	Bob	1

iii). Update data :-

```
UPDATE Departments
SET DepartmentID = 2
WHERE DepartmentID = 1;
```

Output :-

// Departments Table

DepartmentID	DepartmentName
2	Sales

// Employees Table

EmployeeID	EmployeeName	DepartmentID
101	Alice	2
102	Bob	2

iii). Delete Data :-

```
DELETE FROM Departments
WHERE DepartmentID = 2 ;
```

Output :-

// Departments Table

DepartmentID	DepartmentName
(Empty)	(Empty)

// Employees Table

EmployeeID	EmployeeName	DepartmentID
(Empty)	(Empty)	(Empty)