

DATABASE MANAGEMENT SYSTEM:

PROGRAM NO.1

Install and set up MySQL. Create a database and a table to store employee details. Perform basic operations like INSERT & DELETE.

```
##CREATE DATABASE EmployeeDB;
USE EmployeeDB;
drop table Employee;
CREATE TABLE Employee (
    EmployeeID INT PRIMARY KEY AUTO_INCREMENT,
    Name VARCHAR(100) NOT NULL,
    Salary DECIMAL(10, 2),
    JoiningDate DATE,
    ActiveStatus BOOLEAN
);
INSERT INTO Employee (Name, Salary, JoiningDate, ActiveStatus)
VALUES
    ('Bhakti Raskar', 55000.00, '2023-06-15', TRUE),
    ('Shravani Unde', 72000.50, '2022-09-25', TRUE),
    ('Mark Smith', 48000.75, '2021-12-10', FALSE),
    ('Emily Davis', 63000.00, '2020-07-05', TRUE);
DELETE FROM Employee
WHERE Name = 'John Doe';
DELETE FROM Employee;
SELECT * FROM Employee;
```

The screenshot shows the MySQL Workbench interface. In the top right, the Query Editor contains the following SQL code:

```

10 );
11 • INSERT INTO Employee (Name, Salary, JoiningDate, ActiveStatus)
12 VALUES
13 ('Bhakti Raskar', 55000.00, '2023-06-15', TRUE),
14 ('Shravani Unde', 72000.50, '2022-09-25', TRUE),
15 ('Mark Smith', 48000.75, '2021-12-10', FALSE),
16 ('Emily Davis', 63000.00, '2020-07-05', TRUE);
17 • DELETE FROM Employee
18 WHERE Name = 'John Doe';
19 • DELETE FROM Employee;
20 • SELECT * FROM Employee;

```

The Result Grid shows the following data:

EmployeeID	Name	Salary	JoiningDate	ActiveStatus
1	John Doe	55000.00	2023-06-15	1
2	Alice Brown	72000.50	2022-09-25	1
3	Mark Smith	48000.75	2021-12-10	0
4	Emily Davis	63000.00	2020-07-05	1
*	HULL	HULL	HULL	HULL

The Output pane displays the following log entries:

Action	Time	Action	Message
16	20:59:19	USE EmployeeDB	0 row(s) affected
17	20:59:19	drop table Employee	0 row(s) affected
18	20:59:19	CREATE TABLE Employee (EmployeeID INT PRIMARY KEY AUTO_INCREMENT, Name VARCHAR(1...	0 row(s) affected
19	20:59:19	INSERT INTO Employee (Name, Salary, JoiningDate, ActiveStatus) VALUES ('John Doe', 55000.00, '2023-06-15', TRUE)	4 row(s) affected Records: 4 Duplicates: 0 Warnings: 0
20	20:59:19	DELETE FROM Employee WHERE Name = 'John Doe'	Error Code: 1175. You are using safe update mode.
21	20:59:31	SELECT * FROM Employee LIMIT 0, 1000	4 row(s) returned

PROGRAM NO.02

Create a table for storing student information. Insert sample data and perform basic operations: **INSERT**, **UPDATE**, **DELETE**, and **SELECT**.

```

CREATE TABLE Students (
    StudentID INT PRIMARY KEY,
    FirstName VARCHAR(50),
    LastName VARCHAR(50),
    Age INT,
    Major VARCHAR(50)
)

```

```

);
INSERT INTO Students (StudentID, FirstName, LastName, Age,
Major)
VALUES
(1, 'Aarav', 'Patel', 20, 'Computer Science'),
(2, 'Ishita', 'Sharma', 22, 'Mathematics'),
(3, 'Rohan', 'Mehta', 19, 'Physics'),
(4, 'Sanya', 'Kapoor', 21, 'Chemistry');
UPDATE Students
SET Age = 21
WHERE StudentID = 3;
DELETE FROM Students
WHERE StudentID = 4;
SELECT * FROM Students;
SELECT FirstName, LastName
FROM Students;

```

Output:

StudentID	FirstName	LastName	Age	Major
1	Aarav	Patel	20	Computer Science
2	Ishita	Sharma	22	Mathematics
3	Rohan	Mehta	21	Physics

FirstName	LastName
Aarav	Patel
Ishita	Sharma
Rohan	Mehta

PROGRAM NO.03

Create a table with columns for EmployeeID, Name, Salary, JoiningDate, and ActiveStatus using different data types. Insert sample data and perform queries to manipulate and retrieve data.

```

CREATE TABLE employee (
    EmployeeID INT PRIMARY KEY AUTO_INCREMENT,
    Name VARCHAR(100) NOT NULL,
    Salary DECIMAL(10, 2),
    JoiningDate DATE,
    ActiveStatus BOOLEAN
);

```

```

INSERT INTO employee (Name, Salary, JoiningDate, ActiveStatus) VALUES
('Bhakti Raskar', 75000.00, '2022-08-01', TRUE),
('Smith Marky', 68000.50, '2021-06-15', TRUE),
('John Doe', 54000.75, '2020-03-20', FALSE),
('Ashish Gaikwad', 82000.00, '2019-11-10', TRUE);

```

```
UPDATE employee SET Salary = 79000.00 WHERE Name = 'Bhakti Raskar';
```

```
DELETE FROM employee WHERE Name = 'John Doe';
```

```
SELECT * FROM employee;
```

```
SELECT * FROM employee WHERE ActiveStatus = TRUE;
```

```
SELECT * FROM employee WHERE JoiningDate > '2021-01-01';
```

```

CREATE TABLE department (
    dept_id INT PRIMARY KEY,
    dept_name VARCHAR(50) UNIQUE
);

```

```

CREATE TABLE employee (
    EmployeeID INT PRIMARY KEY AUTO_INCREMENT,
    Name VARCHAR(100) NOT NULL,
    Salary DECIMAL(10, 2),
    JoiningDate DATE,
    ActiveStatus BOOLEAN
);

INSERT INTO employee (Name, Salary, JoiningDate, ActiveStatus) VALUES
('Bhakti Raskar', 75000.00, '2022-08-01', TRUE),
('Smith Marky', 68000.50, '2021-06-15', TRUE),
('John Doe', 54000.75, '2020-03-20', FALSE),
('Ashish Gaikwad', 82000.00, '2019-11-10', TRUE);

UPDATE employee SET Salary = 79000.00 WHERE Name = 'Bhakti Raskar';

DELETE FROM employee WHERE Name = 'John Doe';

SELECT * FROM employee;

SELECT * FROM employee WHERE ActiveStatus = TRUE;

SELECT * FROM employee WHERE JoiningDate > '2021-01-01';

```

```

CREATE TABLE department (
    dept_id INT PRIMARY KEY,
    dept_name VARCHAR(50) UNIQUE
);

```

STDIN				
Input for the program (Optional)				
Output:				
EmployeeID Name Salary JoiningDate Activestatus				
1 Bhakti Raskar 79000.00 2022-08-01 1				
2 Smith Marky 68000.50 2021-06-15 1				
4 Ashish Gaikwad 82000.00 2019-11-10 1				
EmployeeID Name Salary JoiningDate ActiveStatus				
1 Bhakti Raskar 79000.00 2022-08-01 1				
2 Smith Marky 68000.50 2021-06-15 1				
4 Ashish Gaikwad 82000.00 2019-11-10 1				
EmployeeID Name Salary JoiningDate ActiveStatus				
1 Bhakti Raskar 79000.00 2022-08-01 1				
2 Smith Marky 68000.50 2021-06-15 1				

PROGRAM NO.04

Creating Employee Table with Constraints

Aim: Create a table to store employee information with constraints like Primary Key, Foreign Key, and Unique.

```
CREATE TABLE department (
    dept_id INT PRIMARY KEY,
    dept_name VARCHAR(50) UNIQUE
);

CREATE TABLE employee (
    emp_id INT PRIMARY KEY,
    emp_name VARCHAR(50),
    email VARCHAR(100) UNIQUE,
    dept_id INT,
    FOREIGN KEY (dept_id) REFERENCES department(dept_id)
);

INSERT INTO department VALUES (1, 'HR');
INSERT INTO department VALUES (2, 'IT');

INSERT INTO employee VALUES (101, 'Bhakti', 'bhakti@example.com', 1);
INSERT INTO employee VALUES (102, 'Ashish', 'ashish@example.com', 2);
SELECT * FROM department;
SELECT * FROM employee;

-- Invalid Data Tests (Uncomment one by one to test)
-- Duplicate Primary Key (emp_id = 101 already exists)
-- INSERT INTO employee VALUES (101, 'Sahil', 'sahil@example.com', 1);

-- Duplicate Unique email (email = 'bhakti@example.com' already used)
-- INSERT INTO employee VALUES (103, 'Aman', 'bhakti@example.com', 1);

-- Invalid Foreign Key (dept_id = 5 does not exist)
-- INSERT INTO employee VALUES (104, 'Meera', 'meera@example.com', 5);
```

Output:

dept_id	dept_name
1	HR
2	IT

emp_id	emp_name	email	dept_id
101	Bhakti	bhakti@example.com	1
102	Ashish	ashish@example.com	2

PROGRAM NO.05

Testing Employee Constraints

Aim: To test constraints like PRIMARY KEY, UNIQUE, and CHECK by inserting invalid data into the Employee table.

Code:

```
CREATE TABLE customer (
    cust_id INT PRIMARY KEY,
    cust_name VARCHAR(50) NOT NULL,
    age INT CHECK (age >= 18),
    email VARCHAR(100) UNIQUE NOT NULL,
    city VARCHAR(50) DEFAULT 'Pune'
);
INSERT INTO customer VALUES (1, 'Bhakti', 20, 'bhakti@example.com', 'Delhi');
INSERT INTO customer (cust_id, cust_name, age, email)
VALUES (2, 'Ashu', 25, 'ashu@example.com');

SELECT * FROM customer;
-- NULL value
-- INSERT INTO customer VALUES (3, NULL, 23, 'nullname@example.com',
'Pune');
-- INSERT INTO customer VALUES (4, 'Tommy', 16, 'tommy@example.com',
'Delhi');

-- Duplicate email
-- INSERT INTO customer VALUES (5, 'Neha', 30, 'bhakti@example.com',
'Chennai');
```

```

CREATE TABLE customer (
    cust_id INT PRIMARY KEY,
    cust_name VARCHAR(50) NOT NULL,
    age INT CHECK (age >= 18),
    email VARCHAR(100) UNIQUE NOT NULL,
    city VARCHAR(50) DEFAULT 'Pune'
);
INSERT INTO customer VALUES (1, 'Bhakti', 20, 'bhakti@example.com', 'Delhi');
INSERT INTO customer (cust_id, cust_name, age, email)
VALUES (2, 'Ashu', 25, 'ashu@example.com');

SELECT * FROM customer;
-- NULL value
-- INSERT INTO customer VALUES (3, NULL, 23, 'nullname@example.com', 'Pune');
-- INSERT INTO customer VALUES (4, 'Tommy', 16, 'tommy@example.com', 'Delhi');

-- Duplicate email
-- INSERT INTO customer VALUES (5, 'Neha', 30, 'bhakti@example.com', 'Chennai');

```

STDIN

Input for the program (Optional)

Output:

cust_id	cust_name	age	email	city
1	Bhakti	20	bhakti@example.com	Delhi
2	Ashu	25	ashu@example.com	Pune

PROGRAM NO.06

Use DDL commands to create tables and DML commands to insert, update & delete

data. Write SELECT queries to retrieve and verify data changes..

```

CREATE TABLE customers (
    cust_id INT PRIMARY KEY,
    cust_name VARCHAR(50) NOT NULL,
    city VARCHAR(50)
);
CREATE TABLE orders (
    order_id INT PRIMARY KEY,
    cust_id INT,
    product VARCHAR(50),
    amount DECIMAL(10, 2),
    FOREIGN KEY (cust_id) REFERENCES customers(cust_id) ON DELETE CASCADE
);
INSERT INTO customers VALUES (1, 'Kunal', 'Nashik');
INSERT INTO customers VALUES (2, 'Riya', 'Pune');
INSERT INTO customers VALUES (3, 'Aman', 'Mumbai');

INSERT INTO orders VALUES (101, 1, 'Laptop', 55000.00);
INSERT INTO orders VALUES (102, 2, 'Phone', 20000.00);
INSERT INTO orders VALUES (103, 1, 'Keyboard', 1500.00);

SELECT * FROM customers;
SELECT * FROM orders;
UPDATE customers SET city = 'Aurangabad' WHERE cust_id = 3;
UPDATE orders SET amount = 58000.00 WHERE order_id = 101;
SELECT * FROM customers;

```

```

SELECT * FROM orders;
DELETE FROM customers WHERE cust_id = 1;
SELECT * FROM customers;
SELECT * FROM orders;

```

```

CREATE TABLE customers (
    cust_id INT PRIMARY KEY,
    cust_name VARCHAR(50) NOT NULL,
    city VARCHAR(50)
);
CREATE TABLE orders (
    order_id INT PRIMARY KEY,
    cust_id INT,
    product VARCHAR(50),
    amount DECIMAL(10, 2),
    FOREIGN KEY (cust_id) REFERENCES customers(cust_id) ON DELETE CASCADE
);
INSERT INTO customers VALUES (1, 'Bhakti', 'Delhi');
INSERT INTO customers VALUES (2, 'Ashi', 'Pune');
INSERT INTO customers VALUES (3, 'Janhavi', 'Mumbai');

INSERT INTO orders VALUES (101, 1, 'Laptop', 55000.00);
INSERT INTO orders VALUES (102, 2, 'Phone', 20000.00);
INSERT INTO orders VALUES (103, 1, 'Keyboard', 1500.00);

SELECT * FROM customers;
SELECT * FROM orders;
UPDATE customers SET city = 'Aurangabad' WHERE cust_id = 3;
UPDATE orders SET amount = 58000.00 WHERE order_id = 101;
SELECT * FROM customers;
SELECT * FROM orders;
DELETE FROM customers WHERE cust_id = 1;
SELECT * FROM customers;
SELECT * FROM orders;

```

```

CREATE TABLE customers (
    cust_id INT PRIMARY KEY,
    cust_name VARCHAR(50) NOT NULL,
    city VARCHAR(50)
);
CREATE TABLE orders (
    order_id INT PRIMARY KEY,
    cust_id INT,
    product VARCHAR(50),
    amount DECIMAL(10, 2),
    FOREIGN KEY (cust_id) REFERENCES customers(cust_id) ON DELETE CASCADE
);
INSERT INTO customers VALUES (1, 'Bhakti', 'Delhi');
INSERT INTO customers VALUES (2, 'Ashi', 'Pune');
INSERT INTO customers VALUES (3, 'Janhavi', 'Mumbai');

INSERT INTO orders VALUES (101, 1, 'Laptop', 55000.00);
INSERT INTO orders VALUES (102, 2, 'Phone', 20000.00);
INSERT INTO orders VALUES (103, 1, 'Keyboard', 1500.00);

SELECT * FROM customers;
SELECT * FROM orders;
UPDATE customers SET city = 'Aurangabad' WHERE cust_id = 3;
UPDATE orders SET amount = 58000.00 WHERE order_id = 101;
SELECT * FROM customers;
SELECT * FROM orders;
DELETE FROM customers WHERE cust_id = 1;
SELECT * FROM customers;
SELECT * FROM orders;

```

STDIN																		
Output:																		
<table border="1"> <thead> <tr><th>cust_id</th><th>cust_name</th><th>city</th></tr> </thead> <tbody> <tr><td>1</td><td>Bhakti</td><td>Delhi</td></tr> <tr><td>2</td><td>Ashi</td><td>Pune</td></tr> <tr><td>3</td><td>Janhavi</td><td>Mumbai</td></tr> </tbody> </table>			cust_id	cust_name	city	1	Bhakti	Delhi	2	Ashi	Pune	3	Janhavi	Mumbai				
cust_id	cust_name	city																
1	Bhakti	Delhi																
2	Ashi	Pune																
3	Janhavi	Mumbai																
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order_id	cust_id	product	amount															
101	1	Laptop	55000.00															
102	2	Phone	20000.00															
103	1	Keyboard	1500.00															
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cust_id	cust_name	city																
1	Bhakti	Delhi																
2	Ashi	Pune																
3	Janhavi	Aurangabad																
STDIN																		
Input for the program (Optional)																		
<table border="1"> <tbody> <tr><td>103</td><td>1</td><td>Keyboard</td><td>1500.00</td></tr> </tbody> </table>			103	1	Keyboard	1500.00												
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<table border="1"> <thead> <tr><th>cust_id</th><th>cust_name</th><th>city</th></tr> </thead> <tbody> <tr><td>1</td><td>Bhakti</td><td>Delhi</td></tr> <tr><td>2</td><td>Ashi</td><td>Pune</td></tr> <tr><td>3</td><td>Janhavi</td><td>Aurangabad</td></tr> </tbody> </table>			cust_id	cust_name	city	1	Bhakti	Delhi	2	Ashi	Pune	3	Janhavi	Aurangabad				
cust_id	cust_name	city																
1	Bhakti	Delhi																
2	Ashi	Pune																
3	Janhavi	Aurangabad																
<table border="1"> <thead> <tr><th>order_id</th><th>cust_id</th><th>product</th><th>amount</th></tr> </thead> <tbody> <tr><td>101</td><td>1</td><td>Laptop</td><td>58000.00</td></tr> <tr><td>102</td><td>2</td><td>Phone</td><td>20000.00</td></tr> <tr><td>103</td><td>1</td><td>Keyboard</td><td>1500.00</td></tr> </tbody> </table>			order_id	cust_id	product	amount	101	1	Laptop	58000.00	102	2	Phone	20000.00	103	1	Keyboard	1500.00
order_id	cust_id	product	amount															
101	1	Laptop	58000.00															
102	2	Phone	20000.00															
103	1	Keyboard	1500.00															
<table border="1"> <thead> <tr><th>cust_id</th><th>cust_name</th><th>city</th></tr> </thead> <tbody> <tr><td>2</td><td>Ashi</td><td>Pune</td></tr> <tr><td>3</td><td>Janhavi</td><td>Aurangabad</td></tr> </tbody> </table>			cust_id	cust_name	city	2	Ashi	Pune	3	Janhavi	Aurangabad							
cust_id	cust_name	city																
2	Ashi	Pune																
3	Janhavi	Aurangabad																
<table border="1"> <thead> <tr><th>order_id</th><th>cust_id</th><th>product</th><th>amount</th></tr> </thead> <tbody> <tr><td>102</td><td>2</td><td>Phone</td><td>20000.00</td></tr> </tbody> </table>			order_id	cust_id	product	amount	102	2	Phone	20000.00								
order_id	cust_id	product	amount															
102	2	Phone	20000.00															

PROGRAM NO.07

7. Create a Sales table and use aggregate functions like COUNT, SUM, AVG, MIN, and MAX to summarize sales data and calculate statistics.

```

CREATE TABLE Sales (
    SaleID INT PRIMARY KEY,
    ProductName VARCHAR(50),
    Quantity INT,
    Price DECIMAL(10, 2),
    SaleDate DATE
);

```

```

INSERT INTO Sales VALUES (1, 'Laptop', 2, 60000.00, '2025-04-01');
INSERT INTO Sales VALUES (2, 'Mouse', 5, 500.00, '2025-04-02');
INSERT INTO Sales VALUES (3, 'Keyboard', 3, 1500.00, '2025-04-02');
INSERT INTO Sales VALUES (4, 'Monitor', 1, 12000.00, '2025-04-03');
INSERT INTO Sales VALUES (5, 'Laptop', 1, 60000.00, '2025-04-03');
INSERT INTO Sales VALUES (6, 'Mouse', 10, 500.00, '2025-04-04');

```

```
SELECT COUNT(*) AS TotalSales FROM Sales;
```

```
SELECT SUM(Quantity * Price) AS TotalRevenue FROM Sales;
```

```
SELECT AVG(Price) AS AveragePrice FROM Sales;
```

```
SELECT MIN(Price) AS MinimumPrice FROM Sales;
```

```
SELECT MAX(Price) AS MaximumPrice FROM Sales;
```

```

SELECT ProductName, SUM(Quantity) AS TotalUnitsSold
FROM Sales

```

```
GROUP BY ProductName;
```

```

SELECT SaleDate, SUM(Quantity * Price) AS Revenue
FROM Sales

```

```
GROUP BY SaleDate;
```

```

CREATE TABLE Sales (
    SaleID INT PRIMARY KEY,
    ProductName VARCHAR(50),
    Quantity INT,
    Price DECIMAL(10, 2),
    SaleDate DATE
);
INSERT INTO Sales VALUES (1, 'Laptop', 2, 60000.00, '2025-04-01');
INSERT INTO Sales VALUES (2, 'Mouse', 5, 500.00, '2025-04-02');
INSERT INTO Sales VALUES (3, 'Keyboard', 3, 1500.00, '2025-04-02');
INSERT INTO Sales VALUES (4, 'Monitor', 1, 12000.00, '2025-04-03');
INSERT INTO Sales VALUES (5, 'Laptop', 1, 60000.00, '2025-04-03');
INSERT INTO Sales VALUES (6, 'Mouse', 10, 500.00, '2025-04-04');

SELECT COUNT(*) AS TotalSales FROM Sales;
SELECT SUM(Quantity * Price) AS TotalRevenue FROM Sales;
SELECT AVG(Price) AS AveragePrice FROM Sales;
SELECT MIN(Price) AS MinimumPrice FROM Sales;
SELECT MAX(Price) AS MaximumPrice FROM Sales;

SELECT ProductName, SUM(Quantity) AS TotalUnitsSold
FROM Sales
GROUP BY ProductName;
SELECT SaleDate, SUM(Quantity * Price) AS Revenue
FROM Sales
GROUP BY SaleDate;

```

STDIN

Input for the program (Optional)

Output:

+-----+
TotalSales
+-----+
6
+-----+
TotalRevenue
+-----+
204000.00
+-----+
AveragePrice
+-----+
22416.666667
+-----+
MinimumPrice
+-----+
500.00
+-----+
MaximumPrice
+-----+
60000.00
+-----+

```

CREATE TABLE Sales (
    SaleID INT PRIMARY KEY,
    ProductName VARCHAR(50),
    Quantity INT,
    Price DECIMAL(10, 2),
    SaleDate DATE
);
INSERT INTO Sales VALUES (1, 'Laptop', 2, 60000.00, '2025-04-01');
INSERT INTO Sales VALUES (2, 'Mouse', 5, 500.00, '2025-04-02');
INSERT INTO Sales VALUES (3, 'Keyboard', 3, 1500.00, '2025-04-02');
INSERT INTO Sales VALUES (4, 'Monitor', 1, 12000.00, '2025-04-03');
INSERT INTO Sales VALUES (5, 'Laptop', 1, 60000.00, '2025-04-03');
INSERT INTO Sales VALUES (6, 'Mouse', 10, 500.00, '2025-04-04');

SELECT COUNT(*) AS TotalSales FROM Sales;
SELECT SUM(Quantity * Price) AS TotalRevenue FROM Sales;
SELECT AVG(Price) AS AveragePrice FROM Sales;
SELECT MIN(Price) AS MinimumPrice FROM Sales;
SELECT MAX(Price) AS MaximumPrice FROM Sales;
SELECT ProductName, SUM(Quantity) AS TotalUnitsSold
FROM Sales
GROUP BY ProductName;
SELECT SaleDate, SUM(Quantity * Price) AS Revenue
FROM Sales
GROUP BY SaleDate;
|
```

STDIN	
Input for the program (Optional)	
+-----+	
+-----+	MinimumPrice
+-----+	500.00
+-----+	MaximumPrice
+-----+	60000.00
+-----+	ProductName TotalUnitsSold
+-----+	Laptop 3
+-----+	Mouse 15
+-----+	Keyboard 3
+-----+	Monitor 1
+-----+	SaleDate Revenue
+-----+	2025-04-01 120000.00
+-----+	2025-04-02 7000.00
+-----+	2025-04-03 72000.00
+-----+	2025-04-04 5000.00

PROGRAM NO.08

Given Customers and Orders tables, write SQL queries to perform INNERJOIN LEFTJOIN, and RIGHTJOIN to retrieve combined data for customer orders..

```

CREATE TABLE Customers (
    CustomerID INT PRIMARY KEY,
    Name VARCHAR(50),
    City VARCHAR(50)
);
CREATE TABLE Orders (
    OrderID INT PRIMARY KEY,
    CustomerID INT,
    Product VARCHAR(50),
    OrderDate DATE,
    FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID)
);
INSERT INTO Customers (CustomerID, Name, City) VALUES
(1, 'Bhakti', 'Delhi'),
(2, 'Ashu', 'Pune'),
(3, 'Priya', 'Nashik'),
(4, 'Aditya', 'Nagpur');
INSERT INTO Orders (OrderID, CustomerID, Product, OrderDate) VALUES
(101, 1, 'Laptop', '2025-02-01'),
(102, 2, 'Mobile', '2025-02-03'),
(103, 1, 'Tablet', '2025-02-04'),
(104, 3, 'Headphones', '2025-02-05');

SELECT Customers.CustomerID, Name, City, Product, OrderDate
FROM Customers
INNER JOIN Orders ON Customers.CustomerID = Orders.CustomerID;
SELECT Customers.CustomerID, Name, City, Product, OrderDate
FROM Customers
LEFT JOIN Orders ON Customers.CustomerID = Orders.CustomerID;
SELECT Customers.CustomerID, Name, City, Product, OrderDate
|
```

```
FROM Customers
RIGHT JOIN Orders ON Customers.CustomerID = Orders.CustomerID;
SELECT * FROM Customers;
SELECT * FROM Orders;
```

```

CREATE TABLE Customers (
    CustomerID INT PRIMARY KEY,
    Name VARCHAR(50),
    City VARCHAR(50)
);
CREATE TABLE Orders (
    OrderID INT PRIMARY KEY,
    CustomerID INT,
    Product VARCHAR(50),
    OrderDate DATE,
    FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID)
);
INSERT INTO Customers (CustomerID, Name, City) VALUES
(1, 'Bhakti', 'Delhi'),
(2, 'Asha', 'Pune'),
(3, 'Priya', 'Nashik'),
(4, 'Aditya', 'Nagpur');
INSERT INTO orders (OrderID, CustomerID, Product, OrderDate) VALUE
(101, 1, 'Laptop', '2025-02-01'),
(102, 2, 'Mobile', '2025-02-03'),
(103, 3, 'Tablet', '2025-02-04'),
(104, 3, 'Headphones', '2025-02-05');
SELECT Customers.CustomerID, Name, City, Product, OrderDate
FROM Customers
INNER JOIN Orders ON Customers.CustomerID = Orders.CustomerID;
SELECT Customers.CustomerID, Name, City, Product, OrderDate
FROM Customers
LEFT JOIN Orders ON Customers.CustomerID = Orders.CustomerID;
SELECT Customers.CustomerID, Name, City, Product, OrderDate
FROM Customers
RIGHT JOIN Orders ON Customers.CustomerID = Orders.CustomerID;
SELECT * FROM Customers;
SELECT * FROM Orders;

```

```
STDIN
Input for the program (Optional)

Output:
+-----+-----+-----+-----+-----+
| CustomerID | Name   | City   | Product | OrderDate |
+-----+-----+-----+-----+-----+
|       1 | Bhakti | delhi | Laptop  | 2025-02-01 |
|       1 | Bhakti | delhi | Tablet  | 2025-02-04 |
|       2 | Ashu   | Pune   | Mobile  | 2025-02-03 |
|       3 | Priya  | Nashik | Headphones | 2025-02-05 |
+-----+-----+-----+-----+-----+
+-----+-----+-----+-----+-----+
| CustomerID | Name   | City   | Product | OrderDate |
+-----+-----+-----+-----+-----+
|       1 | Bhakti | delhi | Laptop  | 2025-02-01 |
|       1 | Bhakti | delhi | Tablet  | 2025-02-04 |
|       2 | Ashu   | Pune   | Mobile  | 2025-02-03 |
|       3 | Priya  | Nashik | Headphones | 2025-02-05 |
|       4 | Aditya | Nagpur | NULL    | NULL      |
+-----+-----+-----+-----+-----+
+-----+-----+-----+-----+-----+
| CustomerID | Name   | City   | Product | OrderDate |
+-----+-----+-----+-----+-----+
|       1 | Bhakti | delhi | Laptop  | 2025-02-01 |
|       2 | Ashu   | Pune   | Mobile  | 2025-02-03 |
|       1 | Bhakti | delhi | Tablet  | 2025-02-04 |
|       3 | Priya  | Nashik | Headphones | 2025-02-05 |
+-----+-----+-----+-----+-----+
```

```
CREATE TABLE Customers (
    CustomerID INT PRIMARY KEY,
    Name VARCHAR(50),
    City VARCHAR(50)
);
CREATE TABLE Orders (
    OrderID INT PRIMARY KEY,
    CustomerID INT,
    Product VARCHAR(50),
    OrderDate DATE,
    FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID)
);
INSERT INTO customers (CustomerID, Name, City) VALUES
(1, 'Bhakti', 'Delhi'),
(2, 'Ashu', 'Pune'),
(3, 'Priya', 'Nashik'),
(4, 'Aditya', 'Nagpur');
INSERT INTO Orders (OrderID, CustomerID, Product, OrderDate) VALUES
(101, 1, 'Laptop', '2025-02-01'),
(102, 2, 'Mobile', '2025-02-03'),
(103, 1, 'Tablet', '2025-02-04'),
(104, 3, 'Headphones', '2025-02-05');
SELECT Customers.CustomerID, Name, City, Product, OrderDate
FROM Customers
INNER JOIN Orders ON Customers.CustomerID = Orders.CustomerID;
SELECT Customers.CustomerID, Name, City, Product, OrderDate
FROM Customers
LEFT JOIN Orders ON Customers.CustomerID = Orders.CustomerID;
SELECT Customers.CustomerID, Name, City, Product, OrderDate
FROM Customers
RIGHT JOIN Orders ON Customers.CustomerID = Orders.CustomerID;
SELECT * FROM Customers;
SELECT * FROM Orders;
```

Input for the program (Optional)					
	CustomerID	Name	City	Product	OrderDate
1	1	Bhakti	Delhi	Laptop	2025-02-01
2	2	Ashu	Pune	Mobile	2025-02-03
3	1	Bhakti	Delhi	Tablet	2025-02-04
4	3	Priya	Nashik	Headphones	2025-02-05
CustomerID Name City					
1	1	Bhakti	Delhi		
2	2	Ashu	Pune		
3	3	Priya	Nashik		
4	4	Aditya	Nagpur		
OrderID CustomerID Product OrderDate					
101	1	Laptop	2025-02-01		
102	2	Mobile	2025-02-03		
103	1	Tablet	2025-02-04		
104	3	Headphones	2025-02-05		