```
mysql> USE MYDATA;
Database changed
--Create a  table:
mysql> CREATE TABLE Employees (
    ->     EmpID INT PRIMARY KEY,
    ->     Name VARCHAR(100) NOT NULL,
    ->     Age INT,
    ->     Department VARCHAR(50),
    ->     Salary DECIMAL(10, 2),
    ->     JoiningDate DATE,
    ->     City VARCHAR(50)
    -> );
Query OK, 0 rows affected (0.05 sec)
--Question 2:Insert at least 10 records into the Employees table with sample data.
mysql>  INSERT INTO Employees (EmpID, Name, Age, Department, Salary, JoiningDate, City)
    ->     VALUES
    ->     (1, 'Ram Patil', 28, 'IT', 60000.00, '2022-01-15', 'Mumbai'),
    ->     (2, 'Harry Kumar', 34, 'HR', 55000.00, '2021-06-10', 'Pune'),
    ->     (3, 'Samarth Mahajan', 40, 'Finance', 75000.00, '2020-11-25', 'Nashik'),
    ->     (4, 'Prachi Sapkal', 25, 'Marketing', 45000.00, '2023-03-01', 'Bhusawal'),
    ->     (5, 'Pradnya Narwade', 30, 'IT', 70000.00, '2021-09-18', 'Raver'),
    ->     (6, 'Likhita Satav', 38, 'HR', 58000.00, '2019-02-22', 'Mumbai'),
    ->     (7, 'Bhumi Arya', 45, 'Finance', 80000.00, '2018-08-30', 'Pune'),
    ->     (8, 'Om Sangle', 27, 'Marketing', 40000.00, '2022-11-15', 'Jalgoan'),
```

-> (9, 'Narendra Harankar', 32, 'IT', 65000.00, '2021-05-10', 'Pune'),

-> (10, 'Mohit Ingle', 29, 'Marketing', 42000.00, '2020-07-05', 'Delhi');

Query OK, 10 rows affected (0.03 sec)

Records: 10 Duplicates: 0 Warnings: 0

--3: Write an SQL query to display all the records from the Employees table.

mysql> SELECT * FROM Employees;

EmpID	Name	Age	Department	Salary	JoiningDate	City
1	Ram Patil	28	IT	60000.00	2022-01-15	Mumbai
2	Harry Kumar	34	HR	55000.00	2021-06-10	Pune
3	Samarth Mahajan	40	Finance	75000.00	2020-11-25	Nashik
4	Prachi Sapkal	25	Marketing	45000.00	2023-03-01	Bhusawal
5	Pradnya Narwade	30	IT	70000.00	2021-09-18	Raver
6	Likhita Satav	38	HR	58000.00	2019-02-22	Mumbai
7	Bhumi Arya	45	Finance	80000.00	2018-08-30	Pune
8	Om Sangle	27	Marketing	40000.00	2022-11-15	Jalgoan
9	Narendra Harankar	32	IT	65000.00	2021-05-10	Pune
10	Mohit Ingle	29	Marketing	42000.00	2020-07-05	Delhi

10 rows in set (0.00 sec)

--4: Display only the Name, Department, and Salary of all employees

mysql> SELECT Name, Department, Salary FROM Employees;

Name	Department	Salary
Ram Patil	IT	60000.00
Harry Kumar	HR	55000.00
Samarth Mahajan	Finance	75000.00
Prachi Sapkal	Marketing	45000.00
Pradnya Narwade	IT	70000.00
Likhita Satav	HR	58000.00
Bhumi Arya	Finance	80000.00
Om Sangle	Marketing	40000.00
Narendra Harankar	IT	65000.00
Mohit Ingle	Marketing	42000.00

10 rows in set (0.00 sec)

--- Question 5: Display the records of employees who earn a salary greater than ₹50,0 00

mysql> SELECT * FROM Employees WHERE Salary > 50000.00;

EmpID	Name	Age	Department	Salary	JoiningDate	City
1	Ram Patil	28	IT	60000.00	2022-01-15	Mumbai
2	Harry Kumar	34	HR	55000.00	2021-06-10	Pune
3	Samarth Mahajan	40	Finance	75000.00	2020-11-25	Nashik
5	Pradnya Narwade	30	IT	70000.00	2021-09-18	Raver
6	Likhita Satav	38	HR	58000.00	2019-02-22	Mumbai
7	Bhumi Arya	45	Finance	80000.00	2018-08-30	Pune
9	Narendra Harankar	32	IT	65000.00	2021-05-10	Pune

7 rows in set (0.00 sec)

--Question 6:Display the employees who belong to IT depertment string comparison

mysql> SELECT * FROM Employees

   -> WHERE LOWER(Department) = 'it';

EmpID	Name	Age	Department	Salary	JoiningDate	City
1	Ram Patil	28	IT	60000.00	2022-01-15	Mumbai
5	Pradnya Narwade	30	IT	70000.00	2021-09-18	Raver
9	Narendra Harankar	32	IT	65000.00	2021-05-10	Pune

3 rows in set (0.00 sec)

--Question 7: Display Employees Whose Age is Between 25 and 35

mysql> SELECT * FROM Employees

   -> WHERE Age BETWEEN 25 AND 35;

EmpID	Name	Age	Department	Salary	JoiningDate	City
1	Ram Patil	28	IT	60000.00	2022-01-15	Mumbai
2	Harry Kumar	34	HR	55000.00	2021-06-10	Pune
4	Prachi Sapkal	25	Marketing	45000.00	2023-03-01	Bhusawal
5	Pradnya Narwade	30	IT	70000.00	2021-09-18	Raver
8	Om Sangle	27	Marketing	40000.00	2022-11-15	Jalgoan
9	Narendra Harankar	32	IT	65000.00	2021-05-10	Pune
10	Mohit Ingle	29	Marketing	42000.00	2020-07-05	Delhi

7 rows in set (0.00 sec)

--Question 8:Display the the employees who joined the company after 1st Jnanuary 2022.

```
mysql> SELECT * FROM Employees
    -> WHERE Age > 25 AND Age < 35;
```

EmpID	Name	Age	Department	Salary	JoiningDate	City
1	Ram Patil	28	IT	60000.00	2022-01-15	Mumbai
2	Harry Kumar	34	HR	55000.00	2021-06-10	Pune
5	Pradnya Narwade	30	IT	70000.00	2021-09-18	Raver
8	Om Sangle	27	Marketing	40000.00	2022-11-15	Jalgoan
9	Narendra Harankar	32	IT	65000.00	2021-05-10	Pune
10	Mohit Ingle	29	Marketing	42000.00	2020-07-05	Delhi

6 rows in set (0.00 sec)

--Question 9:Display the employee from Mumbai or Pune city.

```
mysql> SELECT * FROM Employees
    -> WHERE City IN ('Mumbai', 'Pune');
```

EmpID	Name	Age	Department	Salary	JoiningDate	City
1	Ram Patil	28	IT	60000.00	2022-01-15	Mumbai
2	Harry Kumar	34	HR	55000.00	2021-06-10	Pune
6	Likhita Satav	38	HR	58000.00	2019-02-22	Mumbai
7	Bhumi Arya	45	Finance	80000.00	2018-08-30	Pune
9	Narendra Harankar	32	IT	65000.00	2021-05-10	Pune

5 rows in set (0.00 sec)

--Question 10:Display the total number of employees in each Department.

```
mysql> SELECT Department, COUNT(*) AS TotalEmployees
    -> FROM Employees;
```

```
+------------+----------------+
| Department | TotalEmployees |
+------------+----------------+
| IT         |              3 |
| HR         |              2 |
| Finance    |              2 |
| Marketing  |              3 |
+------------+----------------+
4 rows in set (0.00 sec)
```

--Question 11:Display the average salary of employees in eacha Department.

mysql> SELECT Department, AVG(Salary) AS AverageSalary

-> FROM Employees

-> GROUP BY Department;

```
+------------+---------------+
| Department | AverageSalary |
+------------+---------------+
| IT         |  65000.000000 |
| HR         |  56500.000000 |
| Finance    |  77500.000000 |
| Marketing  |  42333.333333 |
+------------+---------------+
4 rows in set (0.00 sec)
```

--Advanced Question:

--Question 12:Display the employee with the higest salary

mysql> SELECT Name,Salary FROM Employees

-> WHERE Salary = (SELECT MAX(Salary) FROM Employees);

```
+------------+----------+
| Name       | Salary   |
+------------+----------+
| Bhumi Arya | 80000.00 |
+------------+----------+
1 row in set (0.00 sec)
```

--Question 13:Display the top 3 higest-paid employees

```
mysql> SELECT * FROM Employees
    -> ORDER BY Salary DESC
    -> LIMIT 3;
```

EmpID	Name	Age	Department	Salary	JoiningDate	City
7	Bhumi Arya	45	Finance	80000.00	2018-08-30	Pune
3	Samarth Mahajan	40	Finance	75000.00	2020-11-25	Nashik
5	Pradnya Narwade	30	IT	70000.00	2021-09-18	Raver

3 rows in set (0.00 sec)

--Question 14:Display employees sorted in Ascending order by Name and descending order by salary.

```
mysql> SELECT * FROM Employees
    -> ORDER BY Name ASC, Salary DESC;
```

EmpID	Name	Age	Department	Salary	JoiningDate	City
7	Bhumi Arya	45	Finance	80000.00	2018-08-30	Pune
2	Harry Kumar	34	HR	55000.00	2021-06-10	Pune
6	Likhita Satav	38	HR	58000.00	2019-02-22	Mumbai
10	Mohit Ingle	29	Marketing	42000.00	2020-07-05	Delhi
9	Narendra Harankar	32	IT	65000.00	2021-05-10	Pune
8	Om Sangle	27	Marketing	40000.00	2022-11-15	Jalgoan
4	Prachi Sapkal	25	Marketing	45000.00	2023-03-01	Bhusawal
5	Pradnya Narwade	30	IT	70000.00	2021-09-18	Raver
1	Ram Patil	28	IT	60000.00	2022-01-15	Mumbai
3	Samarth Mahajan	40	Finance	75000.00	2020-11-25	Nashik

10 rows in set (0.00 sec)

--Question 15:Update the salary of employees in the It department by increasing it by 10%.

```
mysql> UPDATE Employees
    -> SET Salary = Salary * 1.10
    -> WHERE Department = 'IT';
```

Query OK, 3 rows affected (0.02 sec)

Rows matched: 3 Changed: 3 Warnings: 0

mysql> SELECT * FROM Employees

-> WHERE Department = 'IT';

EmpID	Name	Age	Department	Salary	JoiningDate	City
1	Ram Patil	28	IT	66000.00	2022-01-15	Mumbai
5	Pradnya Narwade	30	IT	77000.00	2021-09-18	Raver
9	Narendra Harankar	32	IT	71500.00	2021-05-10	Pune

--Question 16: Delete employees who belong in HR department.

mysql> DELETE FROM Employees

-> WHERE Department = 'HR';

Query OK, 2 rows affected (0.01 sec)

mysql> SELECT * FROM Employees;

EmpID	Name	Age	Department	Salary	JoiningDate	City
1	Ram Patil	28	IT	66000.00	2022-01-15	Mumbai
3	Samarth Mahajan	40	Finance	75000.00	2020-11-25	Nashik
4	Prachi Sapkal	25	Marketing	45000.00	2023-03-01	Bhusawal
5	Pradnya Narwade	30	IT	77000.00	2021-09-18	Raver
7	Bhumi Arya	45	Finance	80000.00	2018-08-30	Pune
8	Om Sangle	27	Marketing	40000.00	2022-11-15	Jalgoan
9	Narendra Harankar	32	IT	71500.00	2021-05-10	Pune
10	Mohit Ingle	29	Marketing	42000.00	2020-07-05	Delhi

8 rows in set (0.00 sec)

--Question 17:Create a New table called project with the following colums

mysql> CREATE TABLE Project (

-> Projected INT PRIMARY KEY,

-> ProjectName VARCHAR(255),

-> EmpID INT,

-> StartDate DATE,

-> EndDate DATE,

```
    ->     FOREIGN KEY (EmpID) REFERENCES Employees(EmpID)
    -> );
Query OK, 0 rows affected (0.17 sec)
--Question18:Insert asample data inti Project table and Display all Project assigned to employee
   INSERT INTO Project (project_id, project_name, start_date, end_date, manager_id)
VALUES
    (101, 'Project Alpha', '2025-04-01', '2025-09-30', 1),
    (102, 'Project Beta', '2025-05-15', '2025-10-15', 2),
    (103, 'Project Gamma', '2025-06-01', '2025-12-31', 3),
    (105, 'Project Epsilon', '2025-05-15', '2025-10-15', 5),
    (106, 'Project Zeta', '2025-06-01', '2025-12-31', 6),
    (107, 'Project Eta', '2025-04-01', '2025-09-30', 7),
    (108, 'Project Theta', '2025-05-15', '2025-10-15', 8),
    (109, 'Project Iota', '2025-06-01', '2025-12-31', 9),
    (110, 'Project Kappa', '2025-04-01', '2025-09-30', 10);
Query OK, 10 rows affected (0.03 sec)
```

```
mysql> SELECT * FROM Project;
+-----------+-----------------+-------+------------+------------+
| Projected | ProjectName     | EmpID | StartDate  | EndDate    |
+-----------+-----------------+-------+------------+------------+
|       101 | Project Alpha   |     1 | 2025-04-01 | 2025-09-30 |
|       102 | Project Beta    |     2 | 2025-05-15 | 2025-10-15 |
|       103 | Project Gamma   |     3 | 2025-06-01 | 2025-12-31 |
|       104 | Project Delta   |     4 | 2025-04-01 | 2025-09-30 |
|       105 | Project Epsilon |     5 | 2025-05-15 | 2025-10-15 |
|       106 | Project Zeta    |     6 | 2025-06-01 | 2025-12-31 |
|       107 | Project Eta     |     7 | 2025-04-01 | 2025-09-30 |
|       108 | Project Theta   |     8 | 2025-05-15 | 2025-10-15 |
|       109 | Project Iota    |     9 | 2025-06-01 | 2025-12-31 |
|       110 | Project Kappa   |    10 | 2025-04-01 | 2025-09-30 |
+-----------+-----------------+-------+------------+------------+
10 rows in set (0.02 sec)
```

```
mysql> SELECT
    ->     p.Projected AS ProjectID,
    ->     p.ProjectName,
    ->     p.StartDate,
    ->     p.EndDate,
    ->     e.Name AS EmployeeName
    -> FROM
    ->     Project p
    -> JOIN
    ->     Employees e ON p.EmpID = e.EmpID;
```

ProjectID	ProjectName	StartDate	EndDate	EmployeeName
101	Project Alpha	2025-04-01	2025-09-30	Ram Patil
102	Project Beta	2025-05-15	2025-10-15	Harry Kumar
103	Project Gamma	2025-06-01	2025-12-31	Samarth Mahajan
104	Project Delta	2025-04-01	2025-09-30	Prachi Sapkal
105	Project Epsilon	2025-05-15	2025-10-15	Pradnya Narwade
106	Project Zeta	2025-06-01	2025-12-31	Likhita Satav
107	Project Eta	2025-04-01	2025-09-30	Bhumi Arya
108	Project Theta	2025-05-15	2025-10-15	Om Sangle
109	Project Iota	2025-06-01	2025-12-31	Narendra Harankar
110	Project Kappa	2025-04-01	2025-09-30	Mohit Ingle

```
10 rows in set (0.00 sec)
```

--Question 19:Display the list of employess who are working on a project that start after 1 january 2023.

```
mysql> SELECT
    ->     e.EmpID,
    ->     e.Name,
    ->     e.Department,
    ->     e.Salary,
    ->     e.JoiningDate,
```

```
    ->     p.Projected AS ProjectID,
    ->     p.ProjectName,
    ->     p.StartDate
    -> FROM
    ->     Employees e
    -> INNER JOIN
    ->     Project p ON e.EmpID = p.EmpID
    -> WHERE
    ->     p.StartDate > '2023-01-01';
```

EmpID	Name	Department	Salary	JoiningDate	ProjectID	ProjectName	StartDate
1	Ram Patil	IT	60000.00	2022-01-15	101	Project Alpha	2025-04-01
2	Harry Kumar	HR	55000.00	2021-06-10	102	Project Beta	2025-05-15
3	Samarth Mahajan	Finance	75000.00	2020-11-25	103	Project Gamma	2025-06-01
4	Prachi Sapkal	Marketing	45000.00	2023-03-01	104	Project Delta	2025-04-01
5	Pradnya Narwade	IT	70000.00	2021-09-18	105	Project Epsilon	2025-05-15
6	Likhita Satav	HR	58000.00	2019-02-22	106	Project Zeta	2025-06-01
7	Bhumi Arya	Finance	80000.00	2018-08-30	107	Project Eta	2025-04-01
8	Om Sangle	Marketing	40000.00	2022-11-15	108	Project Theta	2025-05-15
9	Narendra Harankar	IT	65000.00	2021-05-10	109	Project Iota	2025-06-01
10	Mohit Ingle	Marketing	42000.00	2020-07-05	110	Project Kappa	2025-04-01

10 rows in set (0.00 sec)

--Question 20:Display employees who are not assigned to any project.

```
mysql> DELETE FROM Project
    -> WHERE Projected = 101;
```

Query OK, 1 row affected (0.03 sec)

```
mysql> SELECT * FROM Project;
+-----------+-----------------+-------+------------+------------+
| Projected | ProjectName     | EmpID | StartDate  | EndDate    |
+-----------+-----------------+-------+------------+------------+
|       102 | Project Beta    |     2 | 2025-05-15 | 2025-10-15 |
|       103 | Project Gamma   |     3 | 2025-06-01 | 2025-12-31 |
|       104 | Project Delta   |     4 | 2025-04-01 | 2025-09-30 |
|       105 | Project Epsilon |     5 | 2025-05-15 | 2025-10-15 |
|       106 | Project Zeta    |     6 | 2025-06-01 | 2025-12-31 |
|       107 | Project Eta     |     7 | 2025-04-01 | 2025-09-30 |
|       108 | Project Theta   |     8 | 2025-05-15 | 2025-10-15 |
|       109 | Project Iota    |     9 | 2025-06-01 | 2025-12-31 |
|       110 | Project Kappa   |    10 | 2025-04-01 | 2025-09-30 |
+-----------+-----------------+-------+------------+------------+
9 rows in set (0.00 sec)
```

```
mysql> SELECT
    ->     e.EmpID,  e.Name,  e.Department,
    ->     e.Salary,
    ->     e.JoiningDate,
    ->     e.City
    -> FROM
    ->     Employees e
    -> LEFT JOIN
    ->     Project p ON e.EmpID = p.EmpID
    -> WHERE
    ->     p.Projected IS NULL;
```

```
+-------+-----------+------------+----------+-------------+--------+
| EmpID | Name      | Department | Salary   | JoiningDate | City   |
+-------+-----------+------------+----------+-------------+--------+
|     1 | Ram Patil | IT         | 60000.00 | 2022-01-15  | Mumbai |
+-------+-----------+------------+----------+-------------+--------+
1 row in set (0.00 sec)
```