```
mysql> CREATE TABLE Employee (id INT(11), Fname VARCHAR(30), Lname
VARCHAR(30),Department VARCHAR(30),Project VARCHAR(10),Address VARCHAR(40),DOB
DATE, Gender VARCHAR(10));

  Query OK, 0 rows affected (0.02 sec)

mysql> desc employee;

+----------+-------------+------+-----+---------+-------+
| Field      | Type        | Null | Key | Default | Extra |
+----------+-------------+------+-----+---------+-------+
| id         | int(11)     | YES  |     | NULL    |       |
| Fname      | varchar(30) | YES  |     | NULL    |       |
| Lname      | varchar(30) | YES  |     | NULL    |       |
| Department | varchar(30) | YES  |     | NULL    |       |
| Project    | varchar(10) | YES  |     | NULL    |       |
| Address    | varchar(40) | YES  |     | NULL    |       |
| DOB        | date        | YES  |     | NULL    |       |
| Gender     | varchar(10) | YES  |     | NULL    |       |
+----------+-------------+------+-----+---------+-------+

8 rows in set (0.02 sec)


mysql> INSERT INTO employee VALUES (1, 'Sanjay', 'Mehra', 'HR', 'P1', 'Hyderabad(HYD)', '1976-
12-01', 'M');

Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO employee VALUES (2, 'Ananya', 'Mishra', 'Admin', 'P2', 'Delhi(DEL)', '1968-
05-02', 'F');

Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO employee VALUES (3, 'Rohan', 'Diwan', 'Account', 'P3', 'Mumbai(BOM)',
'1980-01-01', 'M');

Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO employee VALUES (4, 'Sonia', 'Kulkarni', 'HR', 'P1', 'Hyderabad(HYD)',
'1992-05-02', 'F');

Query OK, 1 row affected (0.00 sec)
```

```
mysql> INSERT INTO employee VALUES (5, 'Ankit', 'Kapoor', 'Admin', 'P2', 'Delhi(DEL)', '1994-07-03', 'M');
Query OK, 1 row affected (0.00 sec)


mysql> SELECT * FROM Employee;
+------+--------+----------+----------+---------+---------------+------------+--------+
| id   | Fname  | Lname    | Department | Project | Address       | DOB        | Gender |
+------+--------+----------+----------+---------+---------------+------------+--------+
|    1 | Sanjay | mehra    | HR       | P1      | Hyderabad(HYD) | 1976-12-01 | M      |
|    2 | Ananya | mishra   | Admin    | P2      | Delhi(DEL)    | 1968-05-02 | F      |
|    3 | Rohan  | diwan    | Account  | P3      | Mumbai(BOM)   | 1980-01-01 | M      |
|    4 | Sonia  | kulkarni | HR       | P1      | Hyderabad(HYD) | 1992-05-02 | F      |
|    5 | Ankit  | kapoor   | Admin    | P2      | Delhi(DEL)    | 1994-07-03 | M      |
+------+--------+----------+----------+---------+---------------+------------+--------+
5 rows in set (0.00 sec)


mysql> SELECT UPPER(Fname) AS EmpName FROM Employee;
+---------+
| EmpName |
+---------+
| SANJAY  |
| ANANYA  |
| ROHAN   |
| SONIA   |
| ANKIT   |
+---------+
5 rows in set (0.00 sec)
```

```
mysql> SELECT COUNT(*) AS NumberofEmployees FROM Employee WHERE Department = 'HR';

+-------------------+
| NumberofEmployees |
+-------------------+
|                 2 |
+-------------------+
1 row in set (0.00 sec)


mysql> SELECT CURRENT_DATE AS CurrentDate;

+-------------+
| CurrentDate |
+-------------+
| 2023-07-30  |
+-------------+
1 row in set (0.00 sec)


mysql> SELECT SUBSTRING(Lname, 1, 4) AS FirstFourCharacters FROM Employee;

+---------------------+
| FirstFourCharacters |
+---------------------+
| Mehr            |
| Mish            |
| Diwa            |
| Kulk            |
| Kapo            |
+---------------------+
5 rows in set (0.00 sec)
```

```
mysql> SELECT SUBSTRING_INDEX(Address, '(', 1) AS Address FROM Employee;
+-----------+
| Address   |
+-----------+
| Hyderabad |
| Delhi     |
| Mumbai    |
| Hyderabad |
| Delhi     |
+-----------+
5 rows in set (0.00 sec)
mysql> CREATE TABLE Employee_Copy AS SELECT * FROM Employee;
Query OK, 5 rows affected (0.02 sec)
Records: 5  Duplicates: 0  Warnings: 0

mysql> Select * from Employee;
+------+--------+----------+----------+---------+---------------+------------+--------+
| id   | Fname  | Lname    | Department | Project | Address       | DOB        | Gender |
+------+--------+----------+----------+---------+---------------+------------+--------+
|    1 | Sanjay | Mehra    | HR       | P1      | Hyderabad(HYD) | 1976-12-01 | M      |
|    2 | Ananya | Mishra   | Admin    | P2      | Delhi(DEL)    | 1968-05-02 | F      |
|    3 | Rohan  | Diwan    | Account  | P3      | Mumbai(BOM)   | 1980-01-01 | M      |
|    4 | Sonia  | Kulkarni | HR       | P1      | Hyderabad(HYD) | 1992-05-02 | F      |
|    5 | Ankit  | Kapoor   | Admin    | P2      | Delhi(DEL)    | 1994-07-03 | M      |
+------+--------+----------+----------+---------+---------------+------------+--------+
5 rows in set (0.00 sec)
```

mysql> Select * from emp;

```
+------+--------+----------+----------+---------+----------------+------------+--------+
| id   | Fname  | Lname    | Department| Project | Address        | DOB        | Gender |
+------+--------+----------+----------+---------+----------------+------------+--------+
|    1 | Sanjay | Mehra    | HR       | P1      | Hyderabad(HYD) | 1976-12-01 | M      |
|    2 | Ananya | Mishra   | Admin    | P2      | Delhi(DEL)     | 1968-05-02 | F      |
|    3 | Rohan  | Diwan    | Account  | P3      | Mumbai(BOM)    | 1980-01-01 | M      |
|    4 | Sonia  | Kulkarni | HR       | P41     | Hyderabad(HYD) | 1992-05-02 | F      |
|    5 | Ankit  | Kapoor   | Admin    | P2      | Delhi(DEL)     | 1994-07-03 | M      |
+------+--------+----------+----------+---------+----------------+------------+--------+
```
5 rows in set (0.01 sec)

mysql> ALTER TABLE Employee ADD COLUMN salary_amount DECIMAL(10, 2);

Query OK, 5 rows affected (0.03 sec)

Records: 5 Duplicates: 0 Warnings: 0

mysql> UPDATE Employee SET salary_amount = 60000 WHERE id = 1;

Query OK, 1 row affected (0.00 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE Employee SET salary_amount = 10000 WHERE id = 2;

Query OK, 1 row affected (0.00 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE Employee SET salary_amount = 80000 WHERE id = 3;

Query OK, 1 row affected (0.00 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE Employee SET salary_amount = 101000 WHERE id = 4;

Query OK, 1 row affected (0.00 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE Employee SET salary_amount = 65000 WHERE id = 5;

Query OK, 1 row affected (0.00 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> SELECT * FROM Employee

    -> WHERE salary_amount >= 50000 AND salary_amount <= 100000;

```
+------+--------+----------+----------+---------+---------------+------------+--------+--------------+
| id   | Fname  | Lname    | Department | Project | Address       | DOB        | Gender | salary_amount |
+------+--------+----------+----------+---------+---------------+------------+--------+--------------+
|    1 | Sanjay | Mehra    | HR       | P1      | Hyderabad(HYD) | 1976-12-01 | M      |     60000.00 |
|    3 | Rohan  | Diwan    | Account  | P3      | Mumbai(BOM)   | 1980-01-01 | M      |     80000.00 |
|    5 | Ankit  | Kapoor   | Admin    | P2      | Delhi(DEL)    | 1994-07-03 | M      |     65000.00 |
+------+--------+----------+----------+---------+---------------+------------+--------+--------------+
```

5 rows in set (0.00 sec)

```
mysql> SELECT * FROM Employee
    -> WHERE UPPER(Fname) LIKE 'S%';
```

id	Fname	Lname	Department	Project	Address	DOB	Gender	salary_amount
1	Sanjay	Mehra	HR	P1	Hyderabad(HYD)	1976-12-01	M	60000.00
4	Sonia	Kulkarni	HR	P4	Hyderabad(HYD)	1992-05-02	F	101000.00

2 rows in set (0.01 sec)

```
mysql> SELECT * FROM Employee
    -> ORDER BY salary_amount DESC
    -> LIMIT 5;
```

id	Fname	Lname	Department	Project	Address	DOB	Gender	salary_amount
4	Sonia	Kulkarni	HR	P2	Hyderabad(HYD)	1992-05-02	F	101000.00
3	Rohan	Diwan	Account	P3	Mumbai(BOM)	1980-01-01	M	80000.00
5	Ankit	Kapoor	Admin	P2	Delhi(DEL)	1994-07-03	M	65000.00
1	Sanjay	Mehra	HR	P1	Hyderabad(HYD)	1976-12-01	M	60000.00
2	Ananya	Mishra	Admin	P2	Delhi(DEL)	1968-05-02	F	10000.00

5 rows in set (0.02 sec)

```
mysql> SELECT CONCAT(Fname, ' ', Lname) AS fullname
    -> FROM Employee;
+---------------+
| fullname      |
+---------------+
| Sanjay mehra  |
| Ananya mishra |
| Rohan diwan   |
| Sonia kulkarni|
| Ankit kapoor  |
+---------------+
5 rows in set (0.01sec)


mysql> SELECT salary_amount
    -> FROM Employee
    -> ORDER BY salary_amount DESC
    -> LIMIT 1, 2;
+--------------+
| salary_amount|
+--------------+
|    80000.00 |
|    65000.00 |
+--------------+
2 rows in set (0.00 sec)
```

UNIQUE KEY:

mysql> CREATE TABLE Student (student_id INT PRIMARY KEY,first_name VARCHAR(50),last_name VARCHAR(50),email VARCHAR(100) UNIQUE,age INT);

Query OK, 0 rows affected (0.01 sec)

mysql> INSERT INTO Student (student_id, first_name, last_name, email, age)

    -> VALUES

    -> (1, 'lucky', 'sai', 'lucky.sai@example.com', 20),

    -> (2, 'lilly', 'sri', 'lilly.sri@example.com', 22),

    -> (3, 'sita', 'mahalaxmi', 'sita.mahalaxmi@example.com', 21),

    -> (4, 'ram', 'moham', 'ram.mohan@example.com', 19),

    -> (5, 'jay', 'lila', 'jay.lila@example.com', 20);

Query OK, 5 rows affected (0.00 sec)

Records: 5 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM Student;

```
+------------+------------+-----------+--------------------------+------+
| student_id | first_name | last_name | email                    | age  |
+------------+------------+-----------+--------------------------+------+
|          1 | lucky      | sai       | lucky.sai@example.com    |   20 |
|          2 | lilly      | sri       | lilly.sri@example.com    |   22 |
|          3 | sita       | mahalaxmi | sita.mahalaxmi@example.com |   21 |
|          4 | ram        | moham     | ram.mohan@example.com    |   19 |
|          5 | jay        | lila      | jay.lila@example.com     |   20 |
+------------+------------+-----------+--------------------------+------+
```

5 rows in set (0.00 sec)

PRIMARY KEY:

mysql> CREATE TABLE Books (

    -> book_id INT PRIMARY KEY,

    -> title VARCHAR(100),

    -> author VARCHAR(100),

    -> publication_year INT);

Query OK, 0 rows affected (0.01 sec)

mysql> INSERT INTO Books (book_id, title, author, publication_year)

    -> VALUES

    -> (1, 'To Kill a Mockingbird', 'Harper Lee', 1960),

    -> (2, '1984', 'George Orwell', 1949),

    -> (3, 'The Great Gatsby', 'F. Scott Fitzgerald', 1925),

    -> (4, 'Pride and Prejudice', 'Jane Austen', 1813),

    -> (5, 'The Catcher in the Rye', 'J.D. Salinger', 1951);

Query OK, 5 rows affected (0.00 sec)

Records: 5 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM Books;

```
+---------+----------------------+--------------------+-----------------+
| book_id | title                | author             | publication_year |
+---------+----------------------+--------------------+-----------------+
|       1 | To Kill a Mockingbird | Harper Lee        |            1960 |
|       2 | 1984                 | George Orwell      |            1949 |
|       3 | The Great Gatsby     | F. Scott Fitzgerald |           1925 |
|       4 | Pride and Prejudice  | Jane Austen        |            1813 |
|       5 | The Catcher in the Rye | J.D. Salinger     |            1951 |
+---------+----------------------+--------------------+-----------------+
```

5 rows in set (0.00 sec)

FOREIGN KEY:

```
mysql> CREATE TABLE Departments (
    ->  department_id INT PRIMARY KEY,
    ->  department_name VARCHAR(100)
    -> );
Query OK, 0 rows affected (0.01 sec)
mysql> CREATE TABLE Managers (
    ->  manager_id INT PRIMARY KEY,
    ->  manager_name VARCHAR(100),
    ->  department_id INT,
    ->  FOREIGN KEY (department_id) REFERENCES Departments(department_id)
    -> );
Query OK, 0 rows affected (0.01 sec)


mysql> INSERT INTO Departments (department_id, department_name)
    -> VALUES
    ->  (1, 'HR'),
    ->  (2, 'Finance'),
    ->  (3, 'Marketing'),
    ->  (4, 'IT'),
    ->  (5, 'Operations');
Query OK, 5 rows affected (0.00 sec)
Records: 5  Duplicates: 0  Warnings: 0
```

```
mysql> SELECT * FROM Departments;

+---------------+-----------------+
| department_id | department_name |
+---------------+-----------------+
|             1 | HR              |
|             2 | Finance         |
|             3 | Marketing       |
|             4 | IT              |
|             5 | Operations      |
+---------------+-----------------+
5 rows in set (0.00 sec)


mysql> INSERT INTO Managers (manager_id, manager_name, department_id)
    -> VALUES
    ->  (1, 'LILLY SRI', 1),
    ->  (2, 'LUCKY BITTU', 2),
    ->  (3, 'CHINMAI SAI', 3),
    ->  (4, 'ADVIK SAI' , 4),
    ->  (5, 'MOKSHA SRI', 5);
Query OK, 5 rows affected (0.00 sec)
Records: 5  Duplicates: 0  Warnings: 0
```

```
mysql> SELECT * FROM Managers;

+------------+--------------+---------------+
| manager_id | manager_name | department_id |
+------------+--------------+---------------+
|          1 | LILLY SRI    |             1 |
|          2 | LUCKY BITTU  |             2 |
|          3 | CHINMAI SAI  |             3 |
|          4 | ADVIK SAI    |             4 |
|          5 | MOKSHA SRI   |             5 |
+------------+--------------+---------------+
5 rows in set (0.00 sec)
```