DDL

```
mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mahesh             |
| mysql              |
| performance_schema |
| sys                |
+--------------------+
5 rows in set (0.00 sec)

mysql> use mahesh;
Database changed
mysql> show tables;
+------------------+
| Tables_in_mahesh |
+------------------+
| employee         |
+------------------+
1 row in set (0.01 sec)

mysql> create table tbl_employee(eid int(5),ename varchar(20),esalary
int(5));
Query OK, 0 rows affected, 2 warnings (0.02 sec)

mysql> show tables;
+------------------+
| Tables_in_mahesh |
+------------------+
| employee         |
| tbl_employee     |
+------------------+
2 rows in set (0.00 sec)

mysql> desc tbl_employee;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| eid     | int         | YES  |     | NULL    |       |
| ename   | varchar(20) | YES  |     | NULL    |       |
| esalary | int         | YES  |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)
```

```
mysql> rename table  employee to tbl_Assignment;
Query OK, 0 rows affected (0.02 sec)

mysql> show tables;
+------------------+
| Tables_in_mahesh |
+------------------+
| tbl_assignment   |
| tbl_employee     |
+------------------+
2 rows in set (0.00 sec)

mysql> alter table tbl_employee add gender char(1);
Query OK, 0 rows affected (0.01 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> desc tbl_employee;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| eid     | int         | YES  |     | NULL    |       |
| ename   | varchar(20) | YES  |     | NULL    |       |
| esalary | int         | YES  |     | NULL    |       |
| gender  | char(1)     | YES  |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql> alter table tbl_employee modify gender varchar(7);
Query OK, 0 rows affected (0.02 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> desc tbl_employee;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| eid     | int         | YES  |     | NULL    |       |
| ename   | varchar(20) | YES  |     | NULL    |       |
| esalary | int         | YES  |     | NULL    |       |
| gender  | varchar(7)  | YES  |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

```
mysql> alter table tbl_employee rename column gender to egender;
Query OK, 0 rows affected (0.01 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> desc tbl_employee;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| eid     | int         | YES  |     | NULL    |       |
| ename   | varchar(20) | YES  |     | NULL    |       |
| esalary | int         | YES  |     | NULL    |       |
| egender | varchar(7)  | YES  |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql> alter table tbl_employee drop column egender;
Query OK, 0 rows affected (0.01 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> desc tbl_employee;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| eid     | int         | YES  |     | NULL    |       |
| ename   | varchar(20) | YES  |     | NULL    |       |
| esalary | int         | YES  |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)

mysql> drop table tbl_employee;
Query OK, 0 rows affected (0.01 sec)

mysql> show tables;
+------------------+
| Tables_in_mahesh |
+------------------+
| tbl_assignment   |
+------------------+
1 row in set (0.00 sec)

mysql> drop table tbl_employee;
```

---***---

DML

```
mysql> insert into tbl_employee values (102,"kumar",5000);
Query OK, 1 row affected (0.00 sec)

mysql> desc tbl_employee;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| eid     | int         | YES  |     | NULL    |       |
| ename   | varchar(20) | YES  |     | NULL    |       |
| esalary | int         | YES  |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)

mysql> select * from tbl_employee;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | mahesh |    4000 |
|  102 | kumar  |    5000 |
+------+--------+---------+

mysql> insert into tbl_employee values (101,"mahesh",4000);
Query OK, 1 row affected (0.01 sec)

mysql> insert into tbl_employee values (102,"kumar",5000);;
Query OK, 1 row affected (0.00 sec)

mysql> select * from tbl_employee;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | mahesh |    4000 |
|  102 | kumar  |    5000 |
+------+--------+---------+
2 rows in set (0.00 sec)

mysql> insert into tbl_employee(eid,ename)values(103,"kumaran");
Query OK, 1 row affected (0.00 sec)
```

```
mysql> select * from tbl_employee;
+------+---------+---------+
| eid  | ename   | esalary |
+------+---------+---------+
|  101 | mahesh  |    4000 |
|  102 | kumar   |    5000 |
|  103 | kumaran |    NULL |
+------+---------+---------+
3 rows in set (0.00 sec)

mysql> insert into tbl_employee(eid,esalary)values(104,6000);
Query OK, 1 row affected (0.00 sec)

mysql> select * from tbl_employee;
+------+---------+---------+
| eid  | ename   | esalary |
+------+---------+---------+
|  101 | mahesh  |    4000 |
|  102 | kumar   |    5000 |
|  103 | kumaran |    NULL |
|  104 | NULL    |    6000 |
+------+---------+---------+
4 rows in set (0.00 sec)

mysql> select eid,ename from tbl_employee;
+------+---------+
| eid  | ename   |
+------+---------+
|  101 | mahesh  |
|  102 | kumar   |
|  103 | kumaran |
|  104 | NULL    |
+------+---------+
4 rows in set (0.00 sec)

mysql> select * from tbl_employee where esalary > 2000;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | mahesh |    4000 |
|  102 | kumar  |    5000 |
|  104 | NULL   |    6000 |
+------+--------+---------+
3 rows in set (0.00 sec)
```

```
mysql> select * from tbl_employee where esalary > 4000;
+------+-------+---------+
| eid  | ename | esalary |
+------+-------+---------+
|  102 | kumar |    5000 |
|  104 | NULL  |    6000 |
+------+-------+---------+
2 rows in set (0.00 sec)

mysql> select * from tbl_employee where esalary >= 4000;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | mahesh |    4000 |
|  102 | kumar  |    5000 |
|  104 | NULL   |    6000 |
+------+--------+---------+
3 rows in set (0.00 sec)

mysql> select * from tbl_employee where esalary = 4000;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | mahesh |    4000 |
+------+--------+---------+
1 row in set (0.00 sec)

mysql> select * from tbl_employee where ename='kumar';
+------+-------+---------+
| eid  | ename | esalary |
+------+-------+---------+
|  102 | kumar |    5000 |
+------+-------+---------+
1 row in set (0.00 sec)

mysql> select * from tbl_employee where ename!='kumar';
+------+---------+---------+
| eid  | ename   | esalary |
+------+---------+---------+
|  101 | mahesh  |    4000 |
|  103 | kumaran |    NULL |
+------+---------+---------+
2 rows in set (0.00 sec)
```

```
mysql> select * from tbl_employee;
+------+---------+---------+
| eid  | ename   | esalary |
+------+---------+---------+
|  101 | mahesh  |    4000 |
|  102 | kumar   |    5000 |
|  103 | kumaran |    NULL |
|  104 | NULL    |    6000 |
+------+---------+---------+
4 rows in set (0.00 sec)

mysql> select * from tbl_employee where ename is not null and esalary
is not null;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | mahesh |    4000 |
|  102 | kumar  |    5000 |
+------+--------+---------+
2 rows in set (0.00 sec)

mysql> select * from tbl_employee where ename is null or esalary is
null;
+------+---------+---------+
| eid  | ename   | esalary |
+------+---------+---------+
|  103 | kumaran |    NULL |
|  104 | NULL    |    6000 |
+------+---------+---------+
2 rows in set (0.00 sec)

mysql> select * from tbl_employee where ename is null or esalary is
not null;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | mahesh |    4000 |
|  102 | kumar  |    5000 |
|  104 | NULL   |    6000 |
+------+--------+---------+
3 rows in set (0.00 sec)
```

```
mysql> select * from tbl_employee where eid is null or esalary is not
null;

+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | mahesh |    4000 |
|  102 | kumar  |    5000 |
|  104 | NULL   |    6000 |
+------+--------+---------+
3 rows in set (0.00 sec)

mysql> select * from tbl_employee where eid in(101,106,102);
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | mahesh |    4000 |
|  102 | kumar  |    5000 |
+------+--------+---------+
2 rows in set (0.00 sec)

mysql> select * from tbl_employee where ename in("kumaran","mahesh");
+------+---------+---------+
| eid  | ename   | esalary |
+------+---------+---------+
|  101 | mahesh  |    4000 |
|  103 | kumaran |    NULL |
+------+---------+---------+
2 rows in set (0.00 sec)

mysql> select * from tbl_employee where esalary between 4000 and 6000;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | mahesh |    4000 |
|  102 | kumar  |    5000 |
|  104 | NULL   |    6000 |
+------+--------+---------+
3 rows in set (0.00 sec)
```

```
mysql> select * from tbl_employee where esalary between 5000 and 6000;
+------+-------+---------+
| eid  | ename | esalary |
+------+-------+---------+
|  102 | kumar |    5000 |
|  104 | NULL  |    6000 |
+------+-------+---------+
2 rows in set (0.00 sec)

mysql> select * from tbl_employee where esalary not between 5000 and
6000;
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | mahesh |    4000 |
+------+--------+---------+
1 row in set (0.00 sec)
mysql> select  * from tbl_employee where ename like 'm%';
+------+--------+---------+
| eid  | ename  | esalary |
+------+--------+---------+
|  101 | mahesh |    4000 |
+------+--------+---------+
1 row in set (0.00 sec)

mysql> select  * from tbl_employee where ename like '_u%';
+------+---------+---------+
| eid  | ename   | esalary |
+------+---------+---------+
|  102 | kumar   |    5000 |
|  103 | kumaran |    NULL |
+------+---------+---------+
2 rows in set (0.00 sec)
mysql> select  * from tbl_employee where ename like '__m%';
+------+---------+---------+
| eid  | ename   | esalary |
+------+---------+---------+
|  102 | kumar   |    5000 |
|  103 | kumaran |    NULL |
+------+---------+---------+
2 rows in set (0.00 sec)
```

```
mysql> select  * from tbl_employee where ename like '%a%';
+------+---------+---------+
| eid  | ename   | esalary |
+------+---------+---------+
|  101 | mahesh  |    4000 |
|  102 | kumar   |    5000 |
|  103 | kumaran |    NULL |
+------+---------+---------+
3 rows in set (0.00 sec)


mysql> select  * from tbl_employee;
+------+---------+---------+
| eid  | ename   | esalary |
+------+---------+---------+
|  101 | mahesh  |    4000 |
|  102 | kumar   |    5000 |
|  103 | kumaran |    NULL |
|  104 | NULL    |    6000 |
+------+---------+---------+
4 rows in set (0.00 sec)
```

---***---

Commit & Rollbak :

```
mysql> commit;
Query OK, 0 rows affected (0.00 sec)

mysql> update tbl_employee set esalary = 0;
Query OK, 4 rows affected (0.01 sec)
Rows matched: 4  Changed: 4  Warnings: 0

mysql> select  * from tbl_employee;
+------+---------+---------+
| eid  | ename   | esalary |
+------+---------+---------+
|  101 | mahesh  |       0 |
|  102 | kumar   |       0 |
|  103 | kumaran |       0 |
|  104 | NULL    |       0 |
+------+---------+---------+
4 rows in set (0.00 sec)
```

```
mysql> select @@autocommit;
+--------------+
| @@autocommit |
+--------------+
|            1 |
+--------------+
1 row in set (0.00 sec)

mysql> set autocommit =0;
Query OK, 0 rows affected (0.00 sec)

mysql> select @@autocommit;
+--------------+
| @@autocommit |
+--------------+
|            0 |
+--------------+
1 row in set (0.00 sec)

mysql> select  * from tbl_employee;
+------+---------+---------+
| eid  | ename   | esalary |
+------+---------+---------+
|  101 | mahesh  |       0 |
|  102 | kumar   |       0 |
|  103 | kumaran |       0 |
|  104 | NULL    |       0 |
+------+---------+---------+
4 rows in set (0.00 sec)

mysql> update tbl_employee set esalary = 1000 where eid = 101;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select  * from tbl_employee;
+------+---------+---------+
| eid  | ename   | esalary |
+------+---------+---------+
|  101 | mahesh  |    1000 |
|  102 | kumar   |       0 |
|  103 | kumaran |       0 |
|  104 | NULL    |       0 |
+------+---------+---------+
4 rows in set (0.00 sec)
```

```
mysql> rollback;
Query OK, 0 rows affected (0.00 sec)

mysql> select * from tbl_employee;
+------+----------+----------+
| eid  | ename    | esalary  |
+------+----------+----------+
|  101 | mahesh   |       0  |
|  102 | kumar    |       0  |
|  103 | kumaran  |       0  |
|  104 | NULL     |       0  |
+------+----------+----------+
4 rows in set (0.00 sec)

mysql> commit;
Query OK, 0 rows affected (0.00 sec)

mysql> update tbl_employee set esalary = 2000;
Query OK, 0 rows affected (0.00 sec)
Rows matched: 4  Changed: 0  Warnings: 0

mysql> select * from tbl_employee;
+------+----------+----------+
| eid  | ename    | esalary  |
+------+----------+----------+
|  101 | mahesh   |    2000  |
|  102 | kumar    |    2000  |
|  103 | kumaran  |    2000  |
|  104 | NULL     |    2000  |
+------+----------+----------+
4 rows in set (0.00 sec)

mysql> rollback;
Query OK, 0 rows affected (0.00 sec)

mysql> select * from tbl_employee;
+------+----------+----------+
| eid  | ename    | esalary  |
+------+----------+----------+
|  101 | mahesh   |    2000  |
|  102 | kumar    |    2000  |
|  103 | kumaran  |    2000  |
|  104 | NULL     |    2000  |
+------+----------+----------+
4 rows in set (0.00 sec)
```

```
mysql> update tbl_employee set esalary =4000 where eid = 102;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select * from tbl_employee;
+------+---------+---------+
| eid  | ename   | esalary |
+------+---------+---------+
|  101 | mahesh  |    2000 |
|  102 | kumar   |    4000 |
|  103 | kumaran |    2000 |
|  104 | NULL    |    2000 |
+------+---------+---------+
4 rows in set (0.00 sec)

mysql> update tbl_employee set ename ="karthick" where eid = 104;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select * from tbl_employee;
+------+----------+---------+
| eid  | ename    | esalary |
+------+----------+---------+
|  101 | mahesh   |    2000 |
|  102 | kumar    |    4000 |
|  103 | kumaran  |    2000 |
|  104 | karthick |    2000 |
+------+----------+---------+
4 rows in set (0.00 sec)

mysql> update tbl_employee set esalary =5000 where eid = 103;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0


                              ---***---


mysql> select * from tbl_employee;
+------+----------+---------+
| eid  | ename    | esalary |
+------+----------+---------+
|  101 | mahesh   |    2000 |
|  102 | kumar    |    4000 |
|  103 | kumaran  |    5000 |
|  104 | karthick |    2000 |
+------+----------+---------+
```

```
4 rows in set (0.00 sec)

mysql> update tbl_employee set esalary=3000 where eid = 104;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select * from tbl_employee;
+------+----------+---------+
| eid  | ename    | esalary |
+------+----------+---------+
|  101 | mahesh   |    2000 |
|  102 | kumar    |    4000 |
|  103 | kumaran  |    5000 |
|  104 | karthick |    3000 |
+------+----------+---------+
4 rows in set (0.00 sec)

mysql> update tbl_employee set esalary =5100 where esalary >= 3000;
Query OK, 4 rows affected (0.00 sec)
Rows matched: 4  Changed: 4  Warnings: 0

mysql> select * from tbl_employee;
+------+----------+---------+
| eid  | ename    | esalary |
+------+----------+---------+
|  101 | mahesh   |    5100 |
|  102 | kumar    |    5100 |
|  103 | kumaran  |    5100 |
|  104 | karthick |    5100 |
+------+----------+---------+
4 rows in set (0.00 sec)

mysql> insert into tbl_employee(eid,esalary) values(105,3000);
Query OK, 1 row affected (0.00 sec)

mysql> select * from tbl_employee;
+------+----------+---------+
| eid  | ename    | esalary |
+------+----------+---------+
|  101 | mahesh   |    5100 |
|  102 | kumar    |    5100 |
|  103 | kumaran  |    5100 |
|  104 | karthick |    5100 |
|  105 | NULL     |    3000 |
+------+----------+---------+
```

```
5 rows in set (0.00 sec)

mysql> select * from tbl_employee where ename <=> null;
+------+-------+---------+
| eid  | ename | esalary |
+------+-------+---------+
|  105 | NULL  |    3000 |
+------+-------+---------+
1 row in set (0.00 sec)

mysql> select eid as "Employee ID", ename as "Employee Name" from
tbl_employee;
+-------------+---------------+
| Employee ID | Employee Name |
+-------------+---------------+
|         101 | mahesh        |
|         102 | kumar         |
|         103 | kumaran       |
|         104 | NULL          |
+-------------+---------------+
4 rows in set (0.00 sec)
```

---***---

DATE :

```
mysql> select now();
+---------------------+
| now()               |
+---------------------+
| 2023-10-03 09:53:12 |
+---------------------+
1 row in set (0.00 sec)
```

---***---

SUB QUERIES : (sub queries)

```
mysql> create table tbl_dept(dno int(3),dname varchar(20));
Query OK, 0 rows affected, 1 warning (0.01 sec)

mysql> insert into tbl_dept values(10,"LD");
Query OK, 1 row affected (0.00 sec)

mysql> insert into tbl_dept values(20,"Project");
Query OK, 1 row affected (0.01 sec)
```

```
mysql> select * from tbl_dept;
+------+---------+
| dno  | dname   |
+------+---------+
|   10 | LD      |
|   20 | Project |
+------+---------+
2 rows in set (0.00 sec)

mysql> select dno from tbl_dept where dname = "LD";
+------+
| dno  |
+------+
|   10 |
+------+
1 row in set (0.00 sec)

mysql> select * from tbl_employee where edepno =(select dno from
tbl_dept where dname = "LD");
+------+--------+---------+--------+
| eid  | ename  | esalary | edepno |
+------+--------+---------+--------+
|  101 | mahesh |    2000 |     10 |
|  102 | kumar  |    2000 |     10 |
+------+--------+---------+--------+
2 rows in set (0.00 sec)

mysql> select edepno from tbl_employee where ename="kumar";
+--------+
| edepno |
+--------+
|     10 |
+--------+
1 row in set (0.00 sec)

mysql> select dname from tbl_dept where dno=(select edepno from
tbl_employee where ename="kumar");
+-------+
| dname |
+-------+
| LD    |
+-------+
1 row in set (0.00 sec)
```

```
mysql> update tbl_employee set esalary = esalary +200 where edepno
=(select dno from tbl_dept where dname="LD");
Query OK, 2 rows affected (0.00 sec)
Rows matched: 2  Changed: 2  Warnings: 0

mysql> select * from tbl_employee;
+------+---------+---------+--------+
| eid  | ename   | esalary | edepno |
+------+---------+---------+--------+
|  101 | mahesh  |    2200 |     10 |
|  102 | kumar   |    2200 |     10 |
|  103 | kumaran |    2000 |     20 |
|  104 | NULL    |    2000 |     20 |
+------+---------+---------+--------+
4 rows in set (0.00 sec)

mysql> select edepno from tbl_employee where eid in(101,103);
+--------+
| edepno |
+--------+
|     10 |
|     20 |
+--------+
2 rows in set (0.00 sec)

mysql> select dname from tbl_dept where dno in(select edepno from
tbl_employee where eid in(101,103));
+---------+
| dname   |
+---------+
| LD      |
| Project |
+---------+
2 rows in set (0.00 sec)

mysql> select edepno from tbl_employee where esalary >2000;
+--------+
| edepno |
+--------+
|     10 |
|     10 |
+--------+
2 rows in set (0.00 sec)
```

```
mysql> select dname from tbl_dept where dno in(select edepno from
tbl_employee where esalary > 2000);
+-------+
| dname |
+-------+
| LD    |
+-------+
1 row in set (0.00 sec)
```

CONSTRAINS :

```
mysql> create table tbl_school (srollno int(5) primary key, sname
varchar(20) not null,smarks int(3) check(smarks > 0),sphone int(10)
unique,sage int(3) default 15);
Query OK, 0 rows affected, 4 warnings (0.02 sec)

mysql> desc tbl_school;
+---------+-------------+-
-----+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| srollno | int         | NO   | PRI | NULL    |       |
| sname   | varchar(20) | NO   |     | NULL    |       |
| smarks  | int         | YES  |     | NULL    |       |
| sphone  | int         | YES  | UNI | NULL    |       |
| sage    | int         | YES  |     | 15      |       |
+---------+-------------+------+-----+---------+-------+
5 rows in set (0.00 sec)

mysql> select * from tbl_school;
+---------+--------+--------+-----------+------+
| srollno | sname  | smarks | sphone    | sage |
+---------+--------+--------+-----------+------+
|     101 | Mahesh |     78 | 987654321 |   15 |
+---------+--------+--------+-----------+------+
1 row in set (0.00 sec)
mysql> create table tbl_school_student (srollno int(5) primary key
auto_increment,sname varchar(20),smarks int(3));
Query OK, 0 rows affected, 2 warnings (0.01 sec)
```

```
mysql> desc tbl_school_student;
+---------+-------------+------+-----+---------+----------------+
| Field   | Type        | Null | Key | Default | Extra          |
+---------+-------------+------+-----+---------+----------------+
| srollno | int         | NO   | PRI | NULL    | auto_increment |
| sname   | varchar(20) | YES  |     | NULL    |                |
| smarks  | int         | YES  |     | NULL    |                |
+---------+-------------+------+-----+---------+----------------+
3 rows in set (0.00 sec)

mysql> insert into tbl_school_student(sname,smarks)
values("Mahesh",78);
Query OK, 1 row affected (0.00 sec)

mysql> insert into tbl_school_student(sname,smarks) values("Naga",74);
Query OK, 1 row affected (0.00 sec)

mysql> select * from tbl_school_student;
+---------+--------+--------+
| srollno | sname  | smarks |
+---------+--------+--------+
|       1 | Mahesh |     78 |
|       2 | Naga   |     74 |
+---------+--------+--------+
2 rows in set (0.00 sec)

mysql> insert into tbl_school_student(sname,smarks) values("Raj",72);
Query OK, 1 row affected (0.00 sec)

mysql> select * from tbl_school_student;
+---------+--------+--------+
| srollno | sname  | smarks |
+---------+--------+--------+
|       1 | Mahesh |     78 |
|       2 | Naga   |     74 |
|       3 | Raj    |     72 |
+---------+--------+--------+
3 rows in set (0.00 sec)
```

```
mysql> show tables;
+--------------------+
| Tables_in_mahesh   |
+--------------------+
| countries          |
| dup_countries      |
| jobs               |
| tbl_assignment     |
| tbl_ddl            |
| tbl_dept           |
| tbl_employee       |
| tbl_school         |
| tbl_school_student |
+--------------------+
9 rows in set (0.00 sec)

mysql> drop table tbl_employee;
Query OK, 0 rows affected (0.01 sec)

mysql> drop table tbl_dept;
Query OK, 0 rows affected (0.01 sec)

mysql> show tables;
+--------------------+
| Tables_in_mahesh   |
+--------------------+
| countries          |
| dup_countries      |
| jobs               |
| tbl_assignment     |
| tbl_ddl            |
| tbl_school         |
| tbl_school_student |
+--------------------+
7 rows in set (0.00 sec)

mysql> create table tbl_dept (depno int primary key, depname
varchar(20));
Query OK, 0 rows affected (0.01 sec)

mysql> create table tbl_employee (id int primary key , name
varchar(20),salary int,depno int, foreign key (depno) references
tbl_dept(depno));
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> desc tbl_dept;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| depno   | int         | NO   | PRI | NULL    |       |
| depname | varchar(20) | YES  |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
2 rows in set (0.00 sec)

mysql> desc tbl_employee;
+--------+-------------+------+-----+---------+-------+
| Field  | Type        | Null | Key | Default | Extra |
+--------+-------------+------+-----+---------+-------+
| id     | int         | NO   | PRI | NULL    |       |
| name   | varchar(20) | YES  |     | NULL    |       |
| salary | int         | YES  |     | NULL    |       |
| depno  | int         | YES  | MUL | NULL    |       |
+--------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql> insert into tbl_employee values(10,"Mahesh Kumar",3000,10);
ERROR 1452 (23000): Cannot add or update a child row: a foreign key
constraint fails (`mahesh`.`tbl_employee`, CONSTRAINT
`tbl_employee_ibfk_1` FOREIGN KEY (`depno`) REFERENCES `tbl_dept`
(`depno`))

mysql> insert into tbl_dept values(10,"L&D");
Query OK, 1 row affected (0.00 sec)

mysql> insert into tbl_employee values(10,"Mahesh Kumar",3000,10);
Query OK, 1 row affected (0.00 sec)

mysql> select * from tbl_dept;
+-------+---------+
| depno | depname |
+-------+---------+
|    10 | L&D     |
+-------+---------+
1 row in set (0.00 sec)
```

```
mysql> select * from tbl_employee;
+----+--------------+--------+-------+
| id | name         | salary | depno |
+----+--------------+--------+-------+
| 10 | Mahesh Kumar |   3000 |    10 |
+----+--------------+--------+-------+
1 row in set (0.00 sec)

mysql> create table tbl_new_employee as select * from tbl_employee;
Query OK, 1 row affected (0.05 sec)
Records: 1  Duplicates: 0  Warnings: 0

mysql> desc tbl_new_employee;
+--------+-------------+------+-----+---------+-------+
| Field  | Type        | Null | Key | Default | Extra |
+--------+-------------+------+-----+---------+-------+
| id     | int         | NO   |     | NULL    |       |
| name   | varchar(20) | YES  |     | NULL    |       |
| salary | int         | YES  |     | NULL    |       |
| depno  | int         | YES  |     | NULL    |       |
+--------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql> select * from tbl_new_employee;
+----+--------------+--------+-------+
| id | name         | salary | depno |
+----+--------------+--------+-------+
| 10 | Mahesh Kumar |   3000 |    10 |
+----+--------------+--------+-------+
1 row in set (0.00 sec)

mysql> select * from tbl_employee;
+----+--------------+--------+-------+
| id | name         | salary | depno |
+----+--------------+--------+-------+
| 10 | Mahesh Kumar |   3000 |    10 |
+----+--------------+--------+-------+
1 row in set (0.00 sec)

mysql> create table tbl_IT_Employee as select * from tbl_employee
where 1=2;
Query OK, 0 rows affected (0.04 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

// if you need only the structure, you don't want records.so,use
condition as wrong.

```
mysql> select * from tbl_IT_Employee;
Empty set (0.00 sec)

mysql> desc tbl_IT_Employee;
+--------+-------------+------+-----+---------+-------+
| Field  | Type        | Null | Key | Default | Extra |
+--------+-------------+------+-----+---------+-------+
| id     | int         | NO   |     | NULL    |       |
| name   | varchar(20) | YES  |     | NULL    |       |
| salary | int         | YES  |     | NULL    |       |
| depno  | int         | YES  |     | NULL    |       |
+--------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```
                              ---***---
Group by :

```
mysql>  insert into tbl_new_employee values(11,"Naga",4000,10);
Query OK, 1 row affected (0.00 sec)

mysql>  insert into tbl_new_employee values(12,"Domnic",5000,20);
Query OK, 1 row affected (0.00 sec)

mysql>  insert into tbl_new_employee values(13,"Purush",6000,20);
Query OK, 1 row affected (0.00 sec)

mysql>  insert into tbl_new_employee values(14,"Vel",6500,10);
Query OK, 1 row affected (0.00 sec)

mysql>  insert into tbl_new_employee values(15,"Sara",6550,20);
Query OK, 1 row affected (0.00 sec)

mysql> select * from tbl_new_employee;
+----+--------------+--------+-------+
| id | name         | salary | depno |
+----+--------------+--------+-------+
| 10 | Mahesh Kumar |   3000 |    10 |
| 11 | Naga         |   4000 |    10 |
| 12 | Domnic       |   5000 |    20 |
| 13 | Purush       |   6000 |    20 |
| 14 | Vel          |   6500 |    10 |
| 15 | Sara         |   6550 |    20 |
+----+--------------+--------+-------+
```

```
6 rows in set (0.00 sec)

mysql> select count(*)from tbl_new_employee;
+----------+
| count(*) |
+----------+
|        6 |
+----------+
1 row in set (0.01 sec)

mysql> select depno,count(*) from tbl_new_employee group by depno;
+-------+----------+
| depno | count(*) |
+-------+----------+
|    10 |        3 |
|    20 |        3 |
+-------+----------+
2 rows in set (0.00 sec)

mysql> select depno as "Department Number",count(*) as "Number of
Employee" from tbl_new_employee group by depno;
+-------------------+-------------------+
| Department Number | Number of Employee |
+-------------------+-------------------+
|                10 |                 3 |
|                20 |                 3 |
+-------------------+-------------------+
2 rows in set (0.00 sec)

mysql> select depno as "Department Number",count(*) as "Number of
Employee" from tbl_new_employee group by depno order by depno desc;
+-------------------+-------------------+
| Department Number | Number of Employee |
+-------------------+-------------------+
|                20 |                 3 |
|                10 |                 3 |
+-------------------+-------------------+
2 rows in set (0.00 sec)

mysql> select max(salary)from tbl_new_employee;
+-------------+
| max(salary) |
+-------------+
|        6550 |
+-------------+
```

```
1 row in set (0.00 sec)

mysql> select min(salary)from tbl_new_employee;
+------------+
| min(salary) |
+------------+
|        3000 |
+------------+
1 row in set (0.00 sec)

mysql> select avg(salary)from tbl_new_employee;
+------------+
| avg(salary) |
+------------+
|    5175.0000 |
+------------+
1 row in set (0.00 sec)

mysql> select sum(salary)from tbl_new_employee;
+------------+
| sum(salary) |
+------------+
|       31050 |
+------------+
1 row in set (0.00 sec)

mysql> select name as "Employee Name",min(salary) as "Minimum Salary"
from tbl_new_employee group by name;
+--------------+----------------+
| Employee Name | Minimum Salary |
+--------------+----------------+
| Mahesh Kumar  |           3000 |
| Naga          |           4000 |
| Domnic        |           5000 |
| Purush        |           6000 |
| Vel           |           6500 |
| Sara          |           6550 |
+--------------+----------------+
6 rows in set (0.00 sec)
```

```
mysql> select name as "Employee Name",min(salary) as "Minimum Salary"
from tbl_new_employee group by name order by name asc;
+---------------+----------------+
| Employee Name | Minimum Salary |
+---------------+----------------+
| Domnic        |           5000 |
| Mahesh Kumar  |           3000 |
| Naga          |           4000 |
| Purush        |           6000 |
| Sara          |           6550 |
| Vel           |           6500 |
+---------------+----------------+
6 rows in set (0.00 sec)

mysql> select min(salary) as "Minimum Salary",depno as "Department
number" from tbl_new_employee group by depno order by depno asc;
+----------------+-------------------+
| Minimum Salary | Department number |
+----------------+-------------------+
|           3000 |                10 |
|           5000 |                20 |
+----------------+-------------------+
2 rows in set (0.00 sec)
```