**Group by , predefined group functions, duplicate the table with and without records**.

**mysql> use db;**

Database changed

**mysql> show tables;**

+---------------+

| Tables\_in\_db |

+---------------+

| employee1 |

| tbl\_dept |

| tbl\_employee |

| tbl\_employee1 |

| tbl\_student |

+---------------+

5 rows in set (0.01 sec)

**mysql> select \* from tbl\_employee;**

+------+----------+---------+------+

| eid | ename | esalary | edno |

+------+----------+---------+------+

| 101 | swetha | 2200 | 10 |

| 102 | Arun | 2200 | 10 |

| 103 | NULL | 2000 | 20 |

| 104 | harishva | 2000 | 20 |

| 101 | Swetha | 50000 | 10 |

+------+----------+---------+------+

5 rows in set (0.00 sec)

**mysql> select \* from tbl\_employee1;**

+-----+--------+--------+------+

| id | name | salary | dno |

+-----+--------+--------+------+

| 101 | Swetha | 50000 | 10 |

+-----+--------+--------+------+

1 row in set (0.00 sec)

**Creating a new table employeee as copy of already existing employee1 table;(with datas)**

**mysql> create table tbl\_employeee as select \* from tbl\_employee1;**

Query OK, 1 row affected (0.04 sec)

Records: 1 Duplicates: 0 Warnings: 0

**New table employee created.**

**mysql> select \* from tbl\_employeee;**

+-----+--------+--------+------+

| id | name | salary | dno |

+-----+--------+--------+------+

| 101 | Swetha | 50000 | 10 |

+-----+--------+--------+------+

1 row in set (0.00 sec)

**Creating new table employee3 as same as tbl\_employee.(Only structure)**

**mysql> create table employee3 as select \* from tbl\_employee where 1=2;**

Query OK, 0 rows affected (0.03 sec)

Records: 0 Duplicates: 0 Warnings: 0

**mysql> desc employee3;**

+---------+-------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+---------+-------------+------+-----+---------+-------+

| eid | int | YES | | NULL | |

| ename | varchar(20) | YES | | NULL | |

| esalary | int | YES | | NULL | |

| edno | int | YES | | NULL | |

+---------+-------------+------+-----+---------+-------+

4 rows in set (0.00 sec)

**mysql> select \* from employee3;**

Empty set (0.00 sec)

**mysql> select \* from tbl\_employee1;**

+-----+--------+--------+------+

| id | name | salary | dno |

+-----+--------+--------+------+

| 101 | Swetha | 50000 | 10 |

+-----+--------+--------+------+

1 row in set (0.00 sec)

*mysql> insert into tbl\_employee1 values(102,"Arun",4000,10);*

*Query OK, 1 row affected (0.01 sec)*

*mysql> insert into tbl\_employee1 values(103,"Harishva",5000,20);*

*ERROR 1452 (23000): Cannot add or update a child row: a foreign key constraint fails (`db`.`tbl\_employee1`, CONSTRAINT `tbl\_employee1\_ibfk\_1` FOREIGN KEY (`dno`) REFERENCES `tbl\_dept` (`dno`))*

mysql> use db;

Database changed

mysql> show tables;

+---------------+

| Tables\_in\_db |

+---------------+

| employee1 |

| employee3 |

| tbl\_dept |

| tbl\_employee |

| tbl\_employee1 |

| tbl\_employeee |

| tbl\_student |

+---------------+

7 rows in set (0.00 sec)

mysql> select \* from employee1;

+-------+------------+--------+--------+---------------+

| EmpID | Name | salary | DeptNo | JobId |

+-------+------------+--------+--------+---------------+

| 100 | John | 23000 | 10 | IT programmer |

| 200 | Johny | 33000 | 10 | IT programmer |

| 300 | Johns | 13000 | 20 | sales rep |

| 400 | Johnson | 22000 | 30 | clerk |

| 500 | Johncy | 11000 | 20 | sales rep |

| 600 | John smith | 12000 | 20 | sales rep |

| 700 | Johncena | 25000 | 30 | clerk |

+-------+------------+--------+--------+---------------+

7 rows in set (0.00 sec)

**mysql> select \* from tbl\_employeee;**

+-----+--------+--------+------+

| id | name | salary | dno |

+-----+--------+--------+------+

| 101 | Swetha | 50000 | 10 |

+-----+--------+--------+------+

1 row in set (0.00 sec)

**mysql> insert into tbl\_employeee values(103,"Avantika",5000,20);**

Query OK, 1 row affected (0.01 sec)

**mysql> insert into tbl\_employeee values(104,"Janikaa",45000,20);**

Query OK, 1 row affected (0.02 sec)

**mysql> select \* from tbl\_employeee;**

mysql> select \* from tbl\_employeee;

+-----+----------+--------+------+

| id | name | salary | dno |

+-----+----------+--------+------+

| 101 | Swetha | 50000 | 10 |

| 103 | Avantika | 5000 | 20 |

| 104 | Janikaa | 45000 | 20 |

+-----+----------+--------+------+

3 rows in set (0.00 sec)

**mysql> select count(\*) from tbl\_employeee;**

+----------+

| count(\*) |

+----------+

| 3 |

+----------+

1 row in set (0.01 sec)

**mysql> select dno as "Department No" ,count(\*) as "No of Employees" from tbl\_employeee group by dno;**

+---------------+-----------------+

| Department No | No of Employees |

+---------------+-----------------+

| 10 | 1 |

| 20 | 2 |

+---------------+-----------------+

2 rows in set (0.00 sec)

**mysql> select dno as "Department No" ,count(\*) as "No of Employees" from tbl\_employeee group by dno;**

+---------------+-----------------+

| Department No | No of Employees |

+---------------+-----------------+

| 10 | 1 |

| 20 | 2 |

+---------------+-----------------+

2 rows in set (0.00 sec)

**mysql> select dno as "Dapartment No",count(\*) as "No of employees" from tbl\_employeee group by dno order by dno desc;**

+---------------+-----------------+

| Dapartment No | No of employees |

+---------------+-----------------+

| 20 | 2 |

| 10 | 1 |

+---------------+-----------------+

2 rows in set (0.00 sec)

**mysql> select dno, sum(salary) from tbl\_employeee group by dno;**

+------+-------------+

| dno | sum(salary) |

+------+-------------+

| 10 | 50000 |

| 20 | 50000 |

+------+-------------+

2 rows in set (0.00 sec)

**mysql> select dno ,min(salary) from tbl\_employeee group by dno;**

+------+-------------+

| dno | min(salary) |

+------+-------------+

| 10 | 50000 |

| 20 | 5000 |

+------+-------------+

2 rows in set (0.00 sec)

**mysql> select dno ,min(salary) from tbl\_employeee group by dno;**

+------+-------------+

| dno | min(salary) |

+------+-------------+

| 10 | 50000 |

| 20 | 5000 |

+------+-------------+

2 rows in set (0.00 sec)

**mysql> select dno ,max(salary) from tbl\_employeee group by dno;**

+------+-------------+

| dno | max(salary) |

+------+-------------+

| 10 | 50000 |

| 20 | 45000 |

+------+-------------+

2 rows in set (0.00 sec)

mysql> select \* ,max(salary) from tbl\_employeee group by dno;

ERROR 1055 (42000): Expression #1 of SELECT list is not in GROUP BY clause and contains nonaggregated column 'db.tbl\_employeee.id' which is not functionally dependent on columns in GROUP BY clause; this is incompatible with sql\_mode=only\_full\_group\_by

**mysql> select count(\*) ,max(salary) from tbl\_employeee group by dno;**

+----------+-------------+

| count(\*) | max(salary) |

+----------+-------------+

| 1 | 50000 |

| 2 | 45000 |

+----------+-------------+

2 rows in set (0.00 sec)

**mysql> select dno ,avg(salary) from tbl\_employeee group by dno;**

+------+-------------+

| dno | avg(salary) |

+------+-------------+

| 10 | 50000.0000 |

| 20 | 25000.0000 |

+------+-------------+

2 rows in set (0.00 sec)