**Assignment 3 on joins, subqueries**

**Database used:**

emp(eid,ename,street,city);

works(eid,company\_name,salary);

company(company\_name,city);

manages(eid,manager\_id);

mysql> create table emp(eid int primary key,ename varchar(20),street varchar(10),city varchar(10));

Query OK, 0 rows affected (0.05 sec)

mysql> create table works(eid int,company\_name varchar(20),salary int) ;

Query OK, 0 rows affected (0.05 sec)

mysql> create table company(company\_name varchar(20),city varchar(20));Query OK, 0 rows affected (0.08 sec)

mysql> alter table company add primary key(company\_name);

Query OK, 0 rows affected (0.14 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> create table manages(eid int,manager int);

Query OK, 0 rows affected (0.07 sec)

mysql> alter table emp modify eid int auto\_increment;

Query OK, 0 rows affected (0.14 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> insert into emp(ename,street,city) values('Abhishek','Gangapur Road','Nashik'),('Janhavi','Nsk Road','Nashik'),('Jinisha','FC Road','Pune'),('Narayani','Nsk Road','Nashik');

Query OK, 4 rows affected, 1 warning (0.03 sec)

Records: 4 Duplicates: 0 Warnings: 1

mysql> select \* from emp;

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

| eid | ename | street | city |

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

| 1 | Abhishek | Gangapur R | Nashik |

| 2 | Janhavi | Nsk Road | Nashik |

| 3 | Jinisha | FC Road | Pune |

| 4 | Narayani | Nsk Road | Nashik |

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

4 rows in set (0.00 sec)

mysql> insert into company values('Infosys','Pune'),('TCS','Mumbai'),('ESDS','Nashik');

Query OK, 3 rows affected (0.04 sec)

Records: 3 Duplicates: 0 Warnings: 0

mysql> select \* from company;

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

| company\_name | city |

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

| ESDS | Nashik |

| Infosys | Pune |

| TCS | Mumbai |

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

3 rows in set (0.00 sec)

mysql> insert into works values(1,'Infosys',20000);

Query OK, 1 row affected (0.02 sec)

mysql> insert into works values(2,'Infosys',30000);

Query OK, 1 row affected (0.02 sec)

mysql> insert into works values(3,'TCS',30000);

Query OK, 1 row affected (0.05 sec)

mysql> insert into works values(4,'ESDS',20000);

Query OK, 1 row affected (0.04 sec)

mysql> select \* from works;

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

| eid | company\_name | salary |

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

| 1 | Infosys | 20000 |

| 2 | Infosys | 30000 |

| 3 | TCS | 30000 |

| 4 | ESDS | 20000 |

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

4 rows in set (0.00 sec)

mysql> desc manages;

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

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

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

| eid | int(11) | YES | | NULL | |

| manager | int(11) | YES | | NULL | |

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

2 rows in set (0.00 sec)

mysql> insert into manages values(2,1);

Query OK, 1 row affected (0.04 sec)

**1)Display names & cities of all employees who work for 'Infosys'.**

mysql> select e.ename,e.city from emp e,works w where e.eid = w.eid and w.company\_name = 'Infosys';

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

| ename | city |

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

| Abhishek | Nashik |

| Janhavi | Nashik |

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

2 rows in set (0.00 sec)

2)Display names & Street address & of all employees who work in TCS cities and earn more than 20000.

mysql> select e.ename,e.street,e.city from emp e,works w where e.eid = w.eid and w.salary > 20000;

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

| ename | street | city |

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

| Janhavi | Nsk Road | Nashik |

| Jinisha | FC Road | Pune |

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

2 rows in set (0.00 sec)

3)Find all employees in database who do not work for 'Infosys'.

mysql> select eid,ename from emp where eid not in(select eid from works where company\_name='Infosys');

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

| eid | ename |

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

| 3 | Jinisha |

| 4 | Narayani |

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

2 rows in set (0.00 sec)

**\*\*\*\*\*\*\*\*\*\*\*Inserted new entries\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

mysql> insert into emp(ename,street,city) values('Jeshtha','JM Street','Pune'), ('Mansi','Nsk Road','Nashik'),('Diya','Trymbak Rd','Nashik');

Query OK, 3 rows affected (0.03 sec)

Records: 3 Duplicates: 0 Warnings: 0

mysql> select \* from emp;

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

| eid | ename | street | city |

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

| 1 | Abhishek | Gangapur R | Nashik |

| 2 | Janhavi | Nsk Road | Nashik |

| 3 | Jinisha | FC Road | Pune |

| 4 | Narayani | Nsk Road | Nashik |

| 5 | Jerry | JM Street | Pune |

| 6 | Disha | Nsk Road | Nashik |

| 7 | Meenu | Trymbak Rd | Nashik |

| 8 | Jeshtha | JM Street | Pune |

| 9 | Mansi | Nsk Road | Nashik |

| 10 | Diya | Trymbak Rd | Nashik |

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

10 rows in set (0.00 sec)

mysql> select \* from works;

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

| eid | company\_name | salary |

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

| 1 | Infosys | 20000 |

| 2 | Infosys | 30000 |

| 3 | TCS | 30000 |

| 4 | ESDS | 20000 |

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

4 rows in set (0.00 sec)

mysql> insert into works values(5,'TCS',50000), (6,'ESDS',35000), (7,'TCS',50000), (8,'Infosys',25000), (9,'ESDS',10000);

Query OK, 5 rows affected (0.04 sec)

Records: 5 Duplicates: 0 Warnings: 0

mysql> select \* from works;

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

| eid | company\_name | salary |

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

| 1 | Infosys | 20000 |

| 2 | Infosys | 30000 |

| 3 | TCS | 30000 |

| 4 | ESDS | 20000 |

| 5 | TCS | 50000 |

| 6 | ESDS | 35000 |

| 7 | TCS | 50000 |

| 8 | Infosys | 25000 |

| 9 | ESDS | 10000 |

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

9 rows in set (0.00 sec)

**4)Find average salary for each company.**

mysql> select company\_name,avg(salary) from works group by company\_name;

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

| company\_name | avg(salary) |

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

| ESDS | 21666.6667 |

| Infosys | 25000.0000 |

| TCS | 43333.3333 |

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

3 rows in set (0.00 sec)

**5)Find all employees who earn more than average salary of all employees in their company.**

mysql> select e.eid,e.ename from emp e,works w where e.eid = w.eid and w.salary > (select avg(salary) from works w2 where w.company\_name = w2.company\_name);

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

| eid | ename |

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

| 2 | Janhavi |

| 5 | Jerry |

| 6 | Disha |

| 7 | Meenu |

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

4 rows in set (0.00 sec)

**6)Find company that has smallest pay roll.**

**--Create View first of payroll**

mysql> create or replace view v\_payroll(company\_name,totalpay) as select company\_name,sum(salary) from works group by company\_name;

Query OK, 0 rows affected (0.05 sec)

mysql> select \* from v\_payroll;

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

| company\_name | totalpay |

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

| ESDS | 65000 |

| Infosys | 75000 |

| TCS | 130000 |

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

3 rows in set (0.00 sec)

**--SQL query to find smallest payroll**

mysql> select company\_name from v\_payroll

-> where totalpay=(select min(totalpay) from v\_payroll);

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

| company\_name |

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

| ESDS |

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

1 row in set (0.00 sec)

**7)Find company that has highest employees.**

**--First create view for no. of employees**

mysql> create or replace view no\_of\_emp(company\_name,empcount) as select company\_name,count(eid) from works group by company\_name;

Query OK, 0 rows affected (0.04 sec)

mysql> select \* from no\_of\_emp;

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

| company\_name | empcount |

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

| ESDS | 3 |

| Infosys | 3 |

| TCS | 3 |

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

3 rows in set (0.00 sec)

mysql> insert into works values(10,'TCS',34000);

Query OK, 1 row affected (0.04 sec)

mysql> select \* from no\_of\_emp;

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

| company\_name | empcount |

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

| ESDS | 3 |

| Infosys | 3 |

| TCS | 4 |

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

3 rows in set (0.00 sec)

-- **company that has highest employees**

**8) Find company wise total salary & display in descending order.**

mysql> select company\_name,sum(salary) as totalsalary from works group by company\_name order by totalsalary desc;

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

| company\_name | totalsalary |

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

| TCS | 164000 |

| Infosys | 75000 |

| ESDS | 65000 |

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

3 rows in set (0.00 sec)

**9) Find the companies having total salary more than 100000.**

mysql> select company\_name,sum(salary) as totalsalary from works group by company\_name having totalsalary > 100000;

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

| company\_name | totalsalary |

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

| TCS | 164000 |

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

1 row in set (0.00 sec)

**10) Find all employees who live in same city as the companies in which they work.**

mysql> select e.ename,e.city from emp e,works w,company c where e.eid = w.eid and w.company\_name = c.company\_name and e.city = c.city;

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

| ename | city |

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

| Narayani | Nashik |

| Disha | Nashik |

| Jeshtha | Pune |

| Mansi | Nashik |

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

4 rows in set (0.00 sec)