

# **DATABASE MANAGEMENT SYSTEM PRACTICAL FILES**

SEMESTER - IV(2021-22)

**Submitted To:**

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**Create two schemas Employee and Department given in the guidelines. Insert at least 10 records in each of the schemas. Submit the screenshots of successfully executed queries along with the description of schemas.**

## CREATING AND USING THE DATABASE

```
mysql> CREATE DATABASE db;
Query OK, 1 row affected (0.12 sec)

mysql> USE db;
Database changed
```

## CREATING DEPARTMENT AND DESCRIPTION OF DEPARTMENT SCHEMA :

```
mysql> CREATE TABLE department(Dno int(11) NOT NULL, Dname varchar(50) DEFAULT NULL, Location varchar(50) DEFAULT NULL, PRIMARY KEY(Dno));
Query OK, 0 rows affected, 1 warning (1.49 sec)
```

```
mysql> DESCRIBE department;
+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+
| Dno        | int           | NO   | PRI | NULL    |       |
| Dname      | varchar(50)   | YES  |     | NULL    |       |
| Location   | varchar(50)   | YES  |     | NULL    |       |
+-----+
3 rows in set (0.28 sec)
```

## INSERT DATA IN DEPARTMENT TABLE AND DISPLAY DEPARTMENT TABLE:

```

mysql> INSERT INTO department VALUES(1,'Accounting','New Delhi'),(2,'Research','Gurgaon'),(3,'Sales','Kolkata'),(4,'Operation','Bangalore'),(5,'Marketing','Noida'),(6,'administrative','jaipur'),(7,'computer science','Aligarh'),(8,'Art&Culture','Faridabad'),(9,'literature','Ahmedabad'),(10,'Information Technology','Chennai');
Query OK, 10 rows affected (0.08 sec)
Records: 10 Duplicates: 0 Warnings: 0

mysql> select*from department;
+----+-----+-----+
| Dno | Dname          | Location |
+----+-----+-----+
| 1   | Accounting     | New Delhi |
| 2   | Research       | Gurgaon  |
| 3   | Sales          | Kolkata  |
| 4   | Operation      | Bangalore |
| 5   | Marketing      | Noida    |
| 6   | administrative  | jaipur   |
| 7   | computer science | Aligarh  |
| 8   | Art&Culture    | Faridabad |
| 9   | literature      | Ahmedabad |
| 10  | Information Technology | Chennai |
+----+-----+-----+
10 rows in set (0.05 sec)

```

## CREATING EMPLOYEE SCHEMA AND DESCRIPTION OF EMPLOYEE SCHEMA :

```

mysql> CREATE TABLE employee(Eno char(3) NOT NULL, Ename varchar(50) NOT NULL, job_type varchar(50) NOT NULL, Manager char(3) DEFAULT NULL, Hire_date date NOT NULL,Dno int(11) DEFAULT NULL,Commission decimal(10,2) DEFAULT NULL,Salary decimal(7,2) NOT NULL,PRIMARY KEY(Eno), CONSTRAINT Dno FOREIGN KEY(Dno) REFERENCES department (Dno));
Query OK, 0 rows affected, 1 warning (0.12 sec)

mysql> DESCRIBE employee;
+----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+----+-----+-----+-----+-----+-----+
| Eno   | char(3)       | NO   | PRI | NULL    |       |
| Ename | varchar(50)   | NO   |     | NULL    |       |
| job_type | varchar(50) | NO   |     | NULL    |       |
| Manager | char(3)      | YES  |     | NULL    |       |
| Hire_date | date        | NO   |     | NULL    |       |
| Dno   | int           | YES  | MUL | NULL    |       |
| Commission | decimal(10,2) | YES  |     | NULL    |       |
| Salary | decimal(7,2) | NO   |     | NULL    |       |
+----+-----+-----+-----+-----+-----+
8 rows in set (0.06 sec)

```

## INSERT DATA IN EMPLOYEE TABLE :

```

mysql> INSERT INTO employee VALUES('20','komal','clerk','130','1981-12-17',2,0.00,1000.00),('30','priya','sales-man','70','1981-02-20',3,300.00,2000.00),('40','bhawika','sales-man','70','1981-02-22',3,500.00,1300.00),('50','vasundhara','manager','90','1981-04-02',2,0.00,2300.00),('60','priyanshu','sales-man','100','1981-04-22',3,1400.00,1250.00),('70','Dipanshu','manager','90','1981-05-01',3,0.00,2870.00),('80','Atul','manager','90','1981-06-09',1,0.00,2000.00),('90','Shambhav','president',NULL,'1981-11-17',1,0.00,2950.00),('100','vinod','sales-man','70','1981-09-08',3,0.00,1450.00),('110','Arunab','clerk','80','1983-01-12',2,0.00,1150.00),('120','tiharika','analyst','50','1982-12-09',2,0.00,2850.00),('130','rashika','clerk','70','1981-12-03',3,0.00,950.00),('140','madhav','analyst','50','1981-12-03',2,0.00,2600.00),('150','Vishnu','clerk','120','1982-01-23',4,0.00,1300.00);
Query OK, 14 rows affected (0.06 sec)
Records: 14 Duplicates: 0 Warnings: 0

mysql> ALTER TABLE employee ADD constraint Manager FOREIGN KEY (Manager) REFERENCES employee(Eno);
Query OK, 14 rows affected (0.18 sec)
Records: 14 Duplicates: 0 Warnings: 0

mysql> SELECT* FROM employee;

```

## EMPLOYEE TABLE :

```
mysql> SELECT* FROM employee;
```

Eno	Ename	job_type	Manager	Hire_date	Dno	Commission	Salary
100	vinohd	sales-man	70	1981-09-08	3	0.00	1450.00
110	Arnab	clerk	80	1983-01-12	2	0.00	1150.00
120	niharika	analyst	50	1982-12-09	2	0.00	2850.00
130	rashika	clerk	70	1981-12-03	3	0.00	950.00
140	madhav	analyst	50	1981-12-03	2	0.00	2600.00
150	Vishnu	clerk	120	1982-01-23	4	0.00	1300.00
20	komal	clerk	130	1981-12-17	2	0.00	1000.00
30	riya	sales-man	70	1981-02-20	3	300.00	2000.00
40	bhawika	sales-man	70	1981-02-22	3	500.00	1300.00
50	vasundhra	manager	90	1981-04-02	2	0.00	2300.00
60	priyanshu	sales-man	100	1981-04-22	3	1400.00	1250.00
70	Dipanshu	manager	90	1981-05-01	3	0.00	2870.00
80	Atul	manager	90	1981-06-09	1	0.00	2900.00
90	Shambhav	president	NULL	1981-11-17	1	0.00	2950.00

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

# QUERIES

1- Query to display Employee Name, Job, Hire Date, Employee Number; for each employee with the Employee Number appearing first.

```
mysql> SELECT Eno,Ename,job_type,Hire_date from employee;
+-----+-----+-----+-----+
| Eno | Ename   | job_type | Hire_date |
+-----+-----+-----+-----+
| 100 | vinohd  | sales-man | 1981-09-08 |
| 110 | Arnab   | clerk     | 1983-01-12 |
| 120 | niharika | analyst   | 1982-12-09 |
| 130 | rashika | clerk     | 1981-12-03 |
| 140 | madhav  | analyst   | 1981-12-03 |
| 150 | Vishnu  | clerk     | 1982-01-23 |
| 20  | komal   | clerk     | 1981-12-17 |
| 30  | riya    | sales-man | 1981-02-20 |
| 40  | bhawika | sales-man | 1981-02-22 |
| 50  | vasundhra | manager  | 1981-04-02 |
| 60  | priyanshu | sales-man | 1981-04-22 |
| 70  | Dipanshu | manager  | 1981-05-01 |
| 80  | Atul    | manager  | 1981-06-09 |
| 90  | Shambhav | president | 1981-11-17 |
+-----+-----+-----+-----+
14 rows in set (0.00 sec)
```

2- Query to display unique Jobs from the Employee Table

```
mysql> SELECT DISTINCT job_type FROM employee;
+-----+
| job_type |
+-----+
| sales-man |
| clerk     |
| analyst   |
| manager   |
| president |
+-----+
5 rows in set (0.05 sec)
```

3- Query to display the Employee Name concatenated by a Job separated by a comma.

```
mysql> SELECT concat(Ename, ',' ,job_type) AS Name_Job FROM employee;
+-----+
| Name_Job |
+-----+
| vinohd,sales-man |
| Arnab,clerk      |
| niharika,analyst |
| rashika,clerk    |
| madhav,analyst   |
| Vishnu,clerk     |
| komal,clerk      |
| riya,sales-man   |
| bhawika,sales-man |
| vasundhra,manager |
| priyanshu,sales-man |
| Dipanshu,manager |
| Atul,manager     |
| Shambhav,president |
+-----+
14 rows in set (0.05 sec)
```

4- Query to display all the data from the Employee Table. Separate each Column by a comma and name the said column as THE\_OUTPUT.

```
mysql> SELECT concat(Eno, ' ', Ename, ' ', job_type, ' ', Manager, ' ', Hire_date, ' ', Dno, ' ', Commission, ' ', Salary) AS THE_OUTPUT FROM employee;
```

THE_OUTPUT									
100	,	vinohd	,	sales-man	,	70	,	1981-09-08	, 3, 0.00, 14500.00
110	,	Arbab	,	clerk	,	80	,	1983-01-12	, 2, 0.00, 11500.00
120	,	niharika	,	analyst	,	50	,	1982-12-09	, 2, 0.00, 28500.00
130	,	rashika	,	clerk	,	70	,	1981-12-03	, 3, 0.00, 9500.00
140	,	madhav	,	analyst	,	50	,	1981-12-03	, 2, 0.00, 26000.00
150	,	Vishnu	,	clerk	,	120	,	1982-01-23	, 4, 0.00, 13000.00
20	,	komal	,	clerk	,	130	,	1981-12-17	, 2, 0.00, 10000.00
30	,	riya	,	sales-man	,	70	,	1981-07-20	, 3, 300.00, 20000.00
40	,	bhawika	,	sales-man	,	70	,	1981-02-22	, 3, 500.00, 13000.00
50	,	vasundhra	,	manager	,	90	,	1981-04-02	, 2, 0.00, 23000.00
60	,	priyanshu	,	sales-man	,	100	,	1981-04-22	, 3, 1400.00, 12500.00
70	,	Dipanshu	,	manager	,	90	,	1981-05-01	, 3, 0.00, 28700.00
80	,	Atul	,	manager	,	90	,	1981-06-09	, 1, 0.00, 29000.00
NULL									

14 rows in set (0.00 sec)

5- Query to display the Employee Name and Salary of all the employees earning more than Rs. 14000.

```
mysql> SELECT Ename , Salary FROM employee WHERE  
-> Salary>14000;
```

Ename	Salary
vinohd	14500.00
niharika	28500.00
madhav	26000.00
riya	20000.00
vasundhra	23000.00
Dipanshu	28700.00
Atul	29000.00
Shambhav	29500.00

8 rows in set (0.00 sec)

6- Query to display Employee Name and Department Number for the Employee No= 50.

```
mysql> SELECT Ename , Dno FROM employee WHERE Eno=50;
+-----+-----+
| Ename   | Dno   |
+-----+-----+
| vasundhra | 2     |
+-----+-----+
1 row in set (0.05 sec)
```

7- Query to display Employee Name and Salary for all employees whose salary is not in the range of Rs.10000 and Rs.20000.

```
mysql> SELECT Ename , Salary FROM employee WHERE Salary<10000 OR Salary>20000;
+-----+-----+
| Ename   | Salary |
+-----+-----+
| niharika | 28500.00 |
| rashika  | 9500.00  |
| madhav   | 26000.00 |
| vasundhra | 23000.00 |
| Dipanshu | 28700.00 |
| Atul     | 29000.00 |
| Shambhav | 29500.00 |
+-----+-----+
7 rows in set (0.00 sec)
```

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8- Query to display Employee Name and Department No. of all the employees in Dept 2 and Dept 3 in the alphabetical order by name.



```
mysql> SELECT Ename , Dno FROM employee WHERE Dno=2 OR Dno=3 ORDER BY Ename;
```

Ename	Dno
Arnab	2
bhawika	3
Dipanshu	3
komal	2
madhav	2
niharika	2
priyanshu	3
rashika	3
riya	3
vasundhra	2
vinohd	3

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

9- Query to display Name and Hire Date of every Employee who was hired in 1981.

```
mysql> SELECT Ename, Hire_date FROM employee WHERE Hire_date LIKE '1981%';
```

Ename	Hire_date
vinohd	1981-09-08
rashika	1981-12-03
madhav	1981-12-03
komal	1981-12-17
riya	1981-02-20
bhawika	1981-02-22
vasundhra	1981-04-02
priyanshu	1981-04-22
Dipanshu	1981-05-01
Atul	1981-06-09
Shambhav	1981-11-17

```
11 rows in set (0.05 sec)
```

10- Query to display Name and Job of all employees who don't have a current Manager.

```
mysql> SELECT Ename, job_type FROM employee WHERE Manager IS NULL;
+-----+-----+
| Ename   | job_type |
+-----+-----+
| Shambhav | president |
+-----+-----+
1 row in set (0.05 sec)
```

11- Query to display the Name, Salary and Commission for all the employees who earn commission.

```
mysql> SELECT Ename , Salary , Commission FROM employee WHERE Commission>0;
+-----+-----+-----+
| Ename   | Salary   | Commission |
+-----+-----+-----+
| riya    | 20000.00 | 300.00 |
| bhawika | 13000.00 | 500.00 |
| priyanshu | 12500.00 | 1400.00 |
+-----+-----+-----+
3 rows in set (0.00 sec)
```

12- Sort the data in descending order of Salary and Commission.

```
mysql> SELECT Salary , Commission FROM employee ORDER BY Salary desc , Commission desc;
+-----+-----+
| Salary   | Commission |
+-----+-----+
| 29500.00 | 0.00 |
| 29000.00 | 0.00 |
| 28700.00 | 0.00 |
| 28500.00 | 0.00 |
| 26000.00 | 0.00 |
| 23000.00 | 0.00 |
| 20000.00 | 300.00 |
| 14500.00 | 0.00 |
| 13000.00 | 500.00 |
| 13000.00 | 0.00 |
| 12500.00 | 1400.00 |
| 11500.00 | 0.00 |
| 10000.00 | 0.00 |
| 9500.00  | 0.00 |
+-----+-----+
14 rows in set (0.00 sec)
```

13- Query to display the Name of all the employees where the third letter of their name is 'A'.

```
mysql> SELECT Ename FROM employee WHERE Ename LIKE '__a%';
+-----+
| Ename |
+-----+
| bhawika |
| Shambhav |
+-----+
2 rows in set (0.00 sec)
```

14- Query to display Name of all employees either have two 'A's or have two 'R's in their name and are either in Dept No = 3 or their Manager's Employee No=70.

```
mysql> SELECT Ename FROM employee WHERE Ename LIKE '%a%a%' OR '%e%e%' AND Dno=3 OR Manager=70;
+-----+
| Ename |
+-----+
| vinohd |
| Arnab |
| niharika |
| rashika |
| madhav |
| riya |
| bhawika |
| vasundhra |
| Shambhav |
+-----+
9 rows in set, 1 warning (0.05 sec)
```

15- Query to display Name, Salary and Commission for all employees whose Commission amount is greater than their Salary increased by 5%.

```
mysql> SELECT Ename , Salary , Commission FROM employee WHERE Commission>(Salary*0.05);
+-----+-----+-----+
| Ename | Salary | Commission |
+-----+-----+-----+
| priyanshu | 12500.00 | 1400.00 |
+-----+-----+-----+
1 row in set (0.00 sec)
```

16- Query to display the Current Date.

```
mysql> SELECT Curdate();
+-----+
| Curdate() |
+-----+
| 2021-04-04 |
+-----+
1 row in set (0.05 sec)
```

17- Query to display Name, Hire Date and Salary Review Date which is the 1st Monday after six months of employment.

```
mysql> SELECT Ename, Hire_date, date_add(date_add(Hire_date, interval 6 month),interval(7-weekday(date_add(Hire_date,interval 6 month))))DAY) AS REVIEW_DATE FROM employee;
+-----+-----+-----+
| Ename | Hire_date | REVIEW_DATE |
+-----+-----+-----+
| vinohd | 1981-09-08 | 1982-03-15 |
| Arnab | 1983-01-12 | 1983-07-18 |
| niharika | 1982-12-09 | 1983-06-13 |
| rashika | 1981-12-03 | 1982-06-07 |
| madhav | 1981-12-03 | 1982-06-07 |
| Vishnu | 1982-01-23 | 1982-07-26 |
| komal | 1981-12-17 | 1982-06-21 |
| riya | 1981-02-20 | 1981-08-24 |
| bhawika | 1981-02-22 | 1981-08-24 |
| vasundhara | 1981-04-02 | 1981-10-05 |
| priyanshu | 1981-04-22 | 1981-10-26 |
| Dipanshu | 1981-05-01 | 1981-11-02 |
| Atul | 1981-06-09 | 1981-12-14 |
| Shambhav | 1981-11-17 | 1982-05-24 |
+-----+-----+-----+
14 rows in set (0.05 sec)
```

18- Query to display Name and calculate the number of months between today and the date each employee was hired.

```
mysql> SELECT Ename, 12*(year(curdate())-year(Hire_date))+(month(curdate())-month(Hire_date)) AS Months FROM employee;
+-----+-----+
| Ename | Months |
+-----+-----+
| vinohd | 475 |
| Arnab | 459 |
| niharika | 460 |
| rashika | 472 |
| madhav | 472 |
| Vishnu | 471 |
| komal | 472 |
| riya | 482 |
| bhawika | 482 |
| vasundhara | 480 |
| priyanshu | 480 |
| Dipanshu | 479 |
| Atul | 478 |
| Shambhav | 473 |
+-----+-----+
14 rows in set (0.05 sec)
```

19- Query to display the following for each employee earns < Salary> monthly but wants < 3 \* Current Salary >. Label the Column as Dream Salary.

```
mysql> SELECT concat(ENAME, ' earns ', SALARY, ' monthly but wants ', 3 * SALARY) AS Dream_Salary FROM employee;
```

Dream_Salary
vinohd earns 14500.00 monthly but wants 43500.00
Arbab earns 11500.00 monthly but wants 34500.00
niharika earns 28500.00 monthly but wants 85500.00
rashika earns 9500.00 monthly but wants 28500.00
madhav earns 26000.00 monthly but wants 78000.00
Vishnu earns 13000.00 monthly but wants 39000.00
komal earns 10000.00 monthly but wants 30000.00
riya earns 20000.00 monthly but wants 60000.00
bhawika earns 13000.00 monthly but wants 39000.00
vasundhara earns 23000.00 monthly but wants 69000.00
priyanshu earns 12500.00 monthly but wants 37500.00
Dipanshu earns 28700.00 monthly but wants 86100.00
Atul earns 29000.00 monthly but wants 87000.00
Shambhav earns 29500.00 monthly but wants 88500.00

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

20- Query to display Name with the 1st letter capitalized and all other letter lower case and Length of their name of all the employees whose name starts with 'J', 'A' and 'M'.

```
mysql> SELECT concat(upper(substring(ENAME,1,1)), lower(substring(ENAME,2,50))) AS Name, Length(ENAME) AS Length FROM employee WHERE ENAME LIKE 'J%' OR ENAME LIKE 'A%' OR ENAME LIKE 'M%';
```

Name	Length
Arbab	5
Madhav	6
Atul	4

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

```
mysql>
```

21- Query to display Name, Hire Date and Day of the week on which the employee started.

```
mysql> SELECT Ename , Hire_date , dayname(Hire_date) AS Week_day FROM employee;
```

Ename	Hire_date	Week_day
vinohd	1981-09-08	Tuesday
Arnab	1983-01-12	Wednesday
niharika	1982-12-09	Thursday
rashika	1981-12-03	Thursday
madhav	1981-12-03	Thursday
Vishnu	1982-01-23	Saturday
komal	1981-12-17	Thursday
riya	1981-02-20	Friday
bhawika	1981-02-22	Sunday
vasundhra	1981-04-02	Thursday
priyanshu	1981-04-22	Wednesday
Dipanshu	1981-05-01	Friday
Atul	1981-06-09	Tuesday
Shambhav	1981-11-17	Tuesday

```
14 rows in set (0.05 sec)
```

22- Query to display Name, Department Name and Department No for all the employees.

```
mysql> SELECT e.Ename, d.Dname, d.Dno FROM employee e, department d WHERE e.Dno=d.Dno;
```

Ename	Dname	Dno
Atul	Accounting	1
Shambhav	Accounting	1
Arnab	Research	2
niharika	Research	2
madhav	Research	2
komal	Research	2
vasundhra	Research	2
vinohd	Sales	3
rashika	Sales	3
riya	Sales	3
bhawika	Sales	3
priyanshu	Sales	3
Dipanshu	Sales	3
Vishnu	Operation	4

```
14 rows in set (0.01 sec)
```

23- Query to display Unique listing of all jobs in department #3.

```
mysql> SELECT DISTINCT job_type FROM employee WHERE Dno=3;
+-----+
| job_type |
+-----+
| sales-man |
| clerk    |
| manager  |
+-----+
3 rows in set (0.00 sec)
```

24- Query to display Name, Dept Name of all employees who have an 'A' in their name.

```
mysql> SELECT e.Ename, d.Dname FROM employee e, department d WHERE e.Ename LIKE '%a%' AND e.Dno=d.Dno;
+-----+-----+
| Ename | Dname |
+-----+-----+
| Arnab | Research |
| niharika | Research |
| rashika | Sales |
| madhav | Research |
| komal | Research |
| riya | Sales |
| bhawika | Sales |
| vasundhra | Research |
| priyanshu | Sales |
| Dipanshu | Sales |
| Atul | Accounting |
| Shambhav | Accounting |
+-----+-----+
12 rows in set (0.00 sec)
```

25- Query to display Name, Job, Department No. And Department Name for all the employees working at the Delhi location.

```
mysql> SELECT e.Ename, e.job_type, d.Dname, d.Dno FROM employee e, department d WHERE d.location='New Delhi' AND e.Dno=d.Dno;
+-----+-----+-----+-----+
| Ename | job_type | Dname | Dno |
+-----+-----+-----+-----+
| Atul | manager | Accounting | 1 |
| Shambhav | president | Accounting | 1 |
+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

26- Query to display Name and Employee no. Along with their Manager's Name and the Manager's Employee no; along with the Employees' Name who do not have a Manager.

```
mysql> SELECT e.Ename, e.Eno, d.Ename, d.Eno FROM employee e left outer join employee d on e.Eno=d.Manager;
```

Ename	Eno	Ename	Eno
vinohd	100	priyanshu	60
Arnab	110	NULL	NULL
niharika	120	Vishnu	150
rashika	130	komal	20
madhav	140	NULL	NULL
Vishnu	150	NULL	NULL
komal	20	NULL	NULL
riya	30	NULL	NULL
bhawika	40	NULL	NULL
vasundhra	50	niharika	120
vasundhra	50	madhav	140
priyanshu	60	NULL	NULL
Dipanshu	70	vinohd	100
Dipanshu	70	rashika	130
Dipanshu	70	riya	30
Dipanshu	70	bhawika	40
Atul	80	Arnab	110
Shambhav	90	vasundhra	50
Shambhav	90	Dipanshu	70
Shambhav	90	Atul	80

20 rows in set (0.00 sec)

27- Query to display Name, Dept No. And Salary of any employee whose department No. and salary matches both the department no. And the salary of any employee who earns a commission.

```
mysql> SELECT Ename , Dno , Salary FROM employee WHERE (Dno, Salary) IN (SELECT Dno, Salary FROM employee WHERE Commission>0) ;
```

Ename	Dno	Salary
riya	3	20000.00
bhawika	3	13000.00
priyanshu	3	12500.00

3 rows in set (0.00 sec)

28- Query to display Name and Salaries represented by asterisks, where each asterisk (\*) Signifies Rs 1000.



```
mysql> SELECT Ename, repeat('*', (Salary/1000)) AS Salary_In_Stars FROM employee ;
```

Ename	Salary_In_Stars
vinohd	*****
Annab	*****
niharika	*****
rashika	*****
madhav	*****
Vishnu	*****
komal	*****
riya	*****
bhawika	*****
vasundhra	*****
priyanshu	*****
Dipanshu	*****
Atul	*****
Shambhav	*****

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

29- Query to display the Highest, Lowest, Sum and Average Salaries of all the employees.

```
mysql> SELECT max(salary), min(salary), sum(salary), avg(salary) FROM employee ;
```

max(salary)	min(salary)	sum(salary)	avg(salary)
29500.00	9500.00	268700.00	19192.857143

```
1 row in set (0.01 sec)
```

30- Query to display the number of employees performing the same Job type functions.

```
mysql> SELECT job_type , count(*) FROM employee GROUP BY job_type;
```

job_type	count(*)
sales-man	4
clerk	4
analyst	2
manager	3
president	1

5 rows in set (0.01 sec)

31- Query to display the no. of managers without listing their names.

```
mysql> SELECT count(DISTINCT Manager) FROM employee ;
```

count(DISTINCT Manager)
7

1 row in set (0.00 sec)

32- Query to display the Department Name, Location Name, No. of Employees and the average salary for all employees in that department.

```
mysql> SELECT d.Dname, d.location, e.Eno, avg(e.salary) , count(*) FROM employee e , department d WHERE e.Dno=d.Dno GROUP BY d.Dname;
```

Dname	location	Eno	avg(e.salary)	count(*)
Sales	Kolkata	100	16366.666667	6
Research	Gurgaon	110	19800.000000	5
Operation	Bangalore	150	13000.000000	1
Accounting	New Delhi	80	29250.000000	2

4 rows in set (0.00 sec)

33- Query to display Name and Hire Date for all employees in the same dept. as atul.

```
mysql> SELECT Ename, Hire_date FROM employee WHERE Dno=(SELECT Dno FROM employee WHERE Ename = 'atul');
+-----+-----+
| Ename   | Hire_date |
+-----+-----+
| Atul    | 1981-06-09 |
| Shambhav | 1981-11-17 |
+-----+-----+
2 rows in set (0.00 sec)
```

34- Query to display the Employee No. And Name for all employees who earn more than the average salary.

```
mysql> SELECT Eno, Ename FROM employee WHERE Salary>(SELECT avg(Salary) FROM employee);
+-----+-----+
| Eno | Ename   |
+-----+-----+
| 120 | niharika |
| 140 | madhav   |
| 30  | riya     |
| 50  | vasundhra |
| 70  | Dipanshu |
| 80  | Atul     |
| 90  | Shambhav |
+-----+-----+
7 rows in set (0.00 sec)
```

35- Query to display Employee Number and Name for all employees who work in a department with any employee whose name contains a 'T'.

```
mysql> SELECT e.Eno, e.Ename FROM employee e, employee d WHERE e.Manager = d.Dno AND d.Ename LIKE '%t%';
Empty set (0.00 sec)

mysql> █
```

36- Query to display the names and salaries of all employees who report to vasundhra.

```
mysql> SELECT Ename, Salary FROM employee WHERE Manager=(SELECT Eno FROM employee WHERE Ename='vasundhra');
+-----+-----+
| Ename   | Salary |
+-----+-----+
| niharika | 28500.00 |
| madhav   | 26000.00 |
+-----+-----+
2 rows in set (0.00 sec)
```

37- Query to display the department no, name and job for all employees in the Sales department.

```
mysql> SELECT Dno, Ename, job_type FROM employee WHERE Dno=(SELECT Dno FROM department WHERE Dname='sales');
+-----+-----+-----+
| Dno | Ename   | job_type |
+-----+-----+-----+
| 3 | vinohd  | sales-man |
| 3 | rashika | clerk    |
| 3 | riya    | sales-man |
| 3 | bhawika | sales-man |
| 3 | priyanshu | sales-man |
| 3 | Dipanshu | manager  |
+-----+-----+-----+
6 rows in set (0.00 sec)
```