Assignment-17 Apoorva

Create a table of Employees with below mentioned fields and insert the data and then write the queries to the below questions.

EMPLOYEE_ID | FIRST_NAME | LAST_NAME | EMAIL | PHONE_NUMBER | HIRE_DATE | JOB_ID | SALARY | COMMISSION_PCT | MANAGER_ID | DEPARTMENT_ID |
+-------------+-------------+-------------+----------+--------------------+------------+------------+----------+----------------+------------+---------------+
100	Steven	King	SKING	515.123.4567	1987-06-17	AD_PRES	24000.00	0.00	0	90
101	Neena	Kochhar	NKOCHHAR	515.123.4568	1987-06-18	AD_VP	17000.00	0.00	100	90
102	Lex	De Haan	LDEHAAN	515.123.4569	1987-06-19	AD_VP	17000.00	0.00	100	90
103	Alexander	Hunold	AHUNOLD	590.423.4567	1987-06-20	IT_PROG	9000.00	0.00	102	60
104	Bruce	Ernst	BERNST	590.423.4568	1987-06-21	IT_PROG	6000.00	0.00	103	60
105	David	Austin	DAUSTIN	590.423.4569	1987-06-22	IT_PROG	4800.00	0.00	103	60
106	Valli	Pataballa	VPATABAL	590.423.4560	1987-06-23	IT_PROG	4800.00	0.00	103	60
107	Diana	Lorentz	DLORENTZ	590.423.5567	1987-06-24	IT_PROG	4200.00	0.00	103	60
108	Nancy	Greenberg	NGREENBE	515.124.4569	1987-06-25	FI_MGR	12000.00	0.00	101	100
109	Daniel	Faviet	DFAVIET	515.124.4169	1987-06-26	FI_ACCOUNT	9000.00	0.00	108	100
110	John	Chen	JCHEN	515.124.4269	1987-06-27	FI_ACCOUNT	8200.00	0.00	108	100
111	Ismael	Sciarra	ISCIARRA	515.124.4369	1987-06-28	FI_ACCOUNT	7700.00	0.00	108	100
112	Jose Manuel	Urman	JMURMAN	515.124.4469	1987-06-29	FI_ACCOUNT	7800.00	0.00	108	100
113	Luis	Popp	LPOPP	515.124.4567	1987-06-30	FI_ACCOUNT	6900.00	0.00	108	100
114	Den	Raphaely	DRAPHEAL	515.127.4561	1987-07-01	PU_MAN	11000.00	0.00	100	30
115	Alexander	Khoo	AKHOO	515.127.4562	1987-07-02	PU_CLERK	3100.00	0.00	114	30

mysql> create table employees(EMPLOYEE_ID int , FIRST_NAME varchar(50), LAST_NAME varchar(30),EMAIL varchar(20), PHONE_NUMBER varchar(10), HIRE_DATE date, JOB_ID varchar(20), SALARY double, COMMISSION_PCT int, MANAGER_ID int, DEPARTMENT_ID int);
Query OK, 0 rows affected (0.03 sec)

```
mysql> desc employees;
+----------------+-------------+------+-----+---------+-------+
| Field          | Type        | Null | Key | Default | Extra |
+----------------+-------------+------+-----+---------+-------+
| EMPLOYEE_ID    | int         | YES  |     | NULL    |       |
| FIRST_NAME     | varchar(50) | YES  |     | NULL    |       |
| LAST_NAME      | varchar(30) | YES  |     | NULL    |       |
| EMAIL          | varchar(20) | YES  |     | NULL    |       |
| PHONE_NUMBER   | varchar(10) | YES  |     | NULL    |       |
| HIRE_DATE      | date        | YES  |     | NULL    |       |
| JOB_ID         | varchar(20) | YES  |     | NULL    |       |
| SALARY         | double      | YES  |     | NULL    |       |
| COMMISSION_PCT | int         | YES  |     | NULL    |       |
| MANAGER_ID     | int         | YES  |     | NULL    |       |
| DEPARTMENT_ID  | int         | YES  |     | NULL    |       |
```

Inserting the values:

```
insert into employees values(100,'Steven','King','SKING' ,5151234567, '1987-06-17' ,'
AD_PRES', 24000.00, 0.00 , 0 , 90 );

mysql> insert into employees values(101,' Neena',' Kochhar','NKOCHHAR', 5151234568,'
1987-06-18 ',' AD_VP', 17000.00 , 0.00,  100,90);

mysql> insert into employees values(102,'Lex ', 'De Haan',' LDEHAAN', 5151234569,' 1987-06-
19',' AD_VP', 17000.00 , 0.00 , 100 , 90 );

mysql> insert into employees values(103 ,' Alexander'  , ' Hunold    ' , ' AHUNOLD' ,
5904234567,'1987-06-20 ',' IT_PROT', 9000.00        , 0.00   ,  102 , 60 );

insert into employees values(104  ,'Bruce','Ernst' , 'BERNST',5904234568 ,'1987-06-21'
,'IT_PROG' ,6000.00  ,0.00 ,103 ,60 );

mysql> insert into employees values(105  ,'David'  , 'Austin ' , 'DAUSTIN ' ,5904234569,'1987-
06-22 ','IT_PROG ',4800.00 ,0.00 ,103 ,60 );

mysql> insert into employees values(106,'Valli','Pataballa' ,'VPATABAL' ,5904234560 ,'1987-
06-23' ,'IT_PROG ',4800.00 ,0.00  ,103 ,60 );

mysql> insert into employees values(107, 'Diana', 'Lorentz ' ,'DLORENTZ ' ,5904235567 ,
'1987-06-24' ,'IT_PROG ' ,4200.00   ,0.00  ,103  ,60 );

mysql> insert into employees values(108 , 'Nancy' , 'Greenberg' , 'NGREENBE ',5151244569,
'1987-06-25' ,'FI_MGR ',12000.00 ,0.00 ,101 ,100);

mysql> insert into employees values(109  ,'Daniel', 'Faviet', 'DFAVIET ',5151244169,'1987-06-
26' ,'FI_ACCOUNT' ,9000.00  ,0.00 ,108     ,100);
```

```
mysql> insert into employees values(110, 'John', 'Chen', 'JCHEN ',5151244269,'1987-06-27
','FI_ACCOUNT', 8200.00 , 0.00 , 108,100);


mysql> insert into employees values(111, 'Ismael ', 'Sciarra','ISCIARRA', 5151244369, '1987-
06-28' ,' FI_ACCOUNT ',7700.00 , 0.00,108,100);

mysql> insert into employees values(112, 'Jose Manuel ','Urman',' JMURMAN
',5151244469,'1987-06-29', 'FI_ACCOUNT ',7800.00,0.00 ,108 ,100 );


mysql> insert into employees values(113, 'Luis' ,'Popp ','LPOPP' ,5151244567 ,'1987-06-30'
,'FI_ACCOUNT',6900.00,0.00,108,100 );

mysql> insert into employees values(114,'Den' , 'Raphaely', 'DRAPHEAL ', 5151274561 ,
'1987-07-01' , 'PU_MAN',11000.00,0.00 ,100,30  );

mysql> insert into employees values ( 115 ,' Alexander' , ' Khoo '     ,  ' AKHOO', 5151274562 , '
1987-07-02' ,' PU_CLERK ' ,3100.00 , 0.00 ,114, 30 );

mysql> select * from employees;
+-------------+--------------+-------------+-----------+--------------+------------+--------------+--------+----------
--------+------------+---------------+
| EMPLOYEE_ID | FIRST_NAME   | LAST_NAME   | EMAIL     | PHONE_NUMBER | HIRE_DATE
| JOB_ID       | SALARY | COMMISSION_PCT | MANAGER_ID | DEPARTMENT_ID |
+-------------+--------------+-------------+-----------+--------------+------------+--------------+--------+----------
--------+------------+---------------+
|       104 | Bruce       | Ernst       | BERNST    | 5904234568   | 1987-06-21 | IT_PROG      |
6000 |           0 |       103 |          60 |
|       100 | Steven      | King        | SKING     | 5151234567   | 1987-06-17 |  AD_PRES     |
24000 |           0 |         0 |          90 |
|       101 |  Neena      |  Kochhar    | NKOCHHAR  | 5151234568   | 1987-06-18 |  AD_VP
|  17000 |           0 |       100 |          90 |
|       102 | Lex         | De Haan     |  LDEHAAN  | 5151234569   | 1987-06-19 |  AD_VP       |
17000 |           0 |       100 |          90 |
|       105 | David       | Austin      | DAUSTIN   | 5904234569   | 1987-06-22 | IT_PROG      |
4800 |           0 |       103 |          60 |
|       106 | Valli       | Pataballa   | VPATABAL  | 5904234560   | 1987-06-23 | IT_PROG      |
4800 |           0 |       103 |          60 |
|       107 | Diana       | Lorentz     | DLORENTZ  | 5904235567   | 1987-06-24 | IT_PROG      |
4200 |           0 |       103 |          60 |
|       108 | Nancy       | Greenberg   | NGREENBE  | 5151244569   | 1987-06-25 | FI_MGR
|  12000 |           0 |       101 |         100 |
|       109 | Daniel      | Faviet      | DFAVIET   | 5151244169   | 1987-06-26 | FI_ACCOUNT   |
9000 |           0 |       108 |         100 |
|       110 | John        | Chen        | JCHEN     | 5151244269   | 1987-06-27 | FI_ACCOUNT   |
8200 |           0 |       108 |         100 |
```

112	Jose Manuel	Urman	JMURMAN	5151244469	1987-06-29	FI_ACCOUNT	7800	0	108	100
111	Ismael	Sciarra	ISCIARRA	5151244369	1987-06-28	FI_ACCOUNT	7700	0	108	100
115	Alexander	Khoo	AKHOO	5151274562	1987-07-02	PU_CLERK	3100	0	114	30
113	Luis	Popp	LPOPP	5151244567	1987-06-30	FI_ACCOUNT	6900	0	108	100
114	Den	Raphaely	DRAPHEAL	5151274561	1987-07-01	PU_MAN	11000	0	100	30
103	Alexander	Hunold	AHUNOLD	5904234567	1987-06-20	IT_PROG	9000	0	102	60

16 rows in set (0.00 sec)

1. Write a query to list the number of jobs available in the employees table

Query:

```
select count(job_id) as number_of_jobs from employees;
```

number_of_jobs
16

2. Write a query to get the total salaries payable to employees.

Query:

```
select sum(salary) as total from employees;
```

total
152500

3. Write a query to get the minimum salary from employees table.

Query:

```
select min(salary) as minimum from employees;
```

```
+---------+
| minimum |
+---------+
|    3100 |
+---------+
```

4. Write a query to get the maximum salary of an employee working as a Programmer.

```
mysql> select max(salary)  from employees where job_id=' IT_PROG';
+-------------+
| max(salary) |
+-------------+
|        9000 |
+-------------+
```

5. Write a query to get the average salary and number of employees working the department 90.

```
mysql> select avg(salary) ,count(employee_id) from employees where department_id=90;
+--------------------+--------------------+
| avg(salary)        | count(employee_id) |
+--------------------+--------------------+
| 19333.333333333332 |                  3 |
+--------------------+--------------------+
1 row in set (0.00 sec)
```

6. Write a query to get the highest, lowest, sum, and average salary of all employees.

```
mysql> select avg(salary),max(salary),min(salary),sum(salary) from employees;
+-------------+-------------+-------------+-------------+
```

| avg(salary) | max(salary) | min(salary) | sum(salary) |

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

| 9531.25 | 24000 | 3100 | 152500 |

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

7. Write a query to get the number of employees with the same job.

mysql> SELECT job_id, COUNT(*) FROM employees GROUP BY job_id;

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

| job_id | COUNT(*) |

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

| IT_PROG | 1 |

| AD_PRES | 1 |

| AD_VP | 2 |

| IT_PROG | 3 |

| FI_MGR | 1 |

| FI_ACCOUNT | 3 |

| FI_ACCOUNT | 1 |

| FI_ACCOUNT | 1 |

| PU_CLERK | 1 |

| PU_MAN | 1 |

| IT_PROG | 1 |

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

8. Write a query to get the difference between the highest and lowest salaries.

mysql> select max(salary)-min(salary) difference from employees;

```
+------------+
| difference |
+------------+
|      20900 |
+------------+
```

9. Write a query to find the manager ID and the salary of the lowest-paid employee for that manager.

```
mysql> SELECT manager_id, MIN(salary) FROM employees WHERE manager_id IS NOT NULL
    GROUP BY manager_id ORDER BY MIN(salary) DESC;
+------------+-------------+
| manager_id | MIN(salary) |
+------------+-------------+
|          0 |       24000 |
|        101 |       12000 |
|        100 |       11000 |
|        102 |        9000 |
|        108 |        6900 |
|        103 |        4200 |
|        114 |        3100 |
+------------+-------------+
```

10. Write a query to get the department ID and the total salary payable in each department.

```
mysql> select department_id,sum(salary) total from employees group by department_id;
+---------------+-------+
| department_id | total |
```

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

| 60 | 28800 |

| 90 | 58000 |

| 100 | 51600 |

| 30 | 14100 |

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

4 rows in set (0.00 sec)

11. Write a query to get the average salary for each job ID excluding programmer.

mysql> SELECT job_id, AVG(salary) FROM employees WHERE job_id <> 'IT_PROG' GROUP BY job_id;

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

| job_id | AVG(salary) |

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

| AD_PRES | 24000 |

| AD_VP | 17000 |

| IT_PROG | 4600 |

| FI_MGR | 12000 |

| FI_ACCOUNT | 8033.333333333333 |

| FI_ACCOUNT | 7800 |

| FI_ACCOUNT | 7700 |

| PU_CLERK | 3100 |

| PU_MAN | 11000 |

| IT_PROG | 9000 |

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

12. Write a query to get the total salary, maximum, minimum, average salary of employees (job ID wise), for department ID 90 only.

mysql> select job_id, min(salary),max(salary),avg(salary),sum(salary) from employees where department_id=90 group by job_id ;

```
+----------+-------------+-------------+-------------+-------------+
| job_id   | min(salary) | max(salary) | avg(salary) | sum(salary) |
+----------+-------------+-------------+-------------+-------------+
| AD_PRES |       24000 |       24000 |       24000 |       24000 |
| AD_VP   |       17000 |       17000 |       17000 |       34000 |
+----------+-------------+-------------+-------------+-------------+
```

2 rows in set (0.00 sec)

13. Write a query to get the job ID and maximum salary of the employees where maximum salary is greater than or equal to $4000.

mysql> SELECT job_id, MAX(salary) FROM employees GROUP BY job_id

HAVING MAX(salary) >=4000;

```
+--------------+-------------+
| job_id       | MAX(salary) |
+--------------+-------------+
| IT_PROG      |        6000 |
| AD_PRES      |       24000 |
| AD_VP        |       17000 |
| IT_PROG      |        4800 |
| FI_MGR       |       12000 |
| FI_ACCOUNT   |        9000 |
```

| FI_ACCOUNT | 7800 |

| FI_ACCOUNT | 7700 |

| PU_MAN | 11000 |

| IT_PROG | 9000 |

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

14. Write a query to get the average salary for all departments employing more than 10 employees.

mysql> SELECT department_id, AVG(salary), COUNT(*) FROM employees GROUP BY department_id HAVING COUNT(*) > 10;

Empty set (0.00 sec)