

Assignment 2

Create a Database name entri_assignment

Create a Table with name departments

```
Department_id (pk)  Department_name  Location_id
```

Create a Table with name employees

```
Employee_id  (pk)  ,first_name,last_name ,email,phone_number,hire_date,
```

```
job_id, salary, commission_pct, manager_id, department_id (fk  
reference
```

```
## Insert into Departments table
```

```
INSERT INTO departments VALUES ( 170 , 'Payroll' , 1700);
```

```
## Insert into Employees table
```

```
; INSERT INTO employees VALUES (101, 'Neena' , 'Kochhar' , 'NKOCHHAR'  
, '515.123.4568' , '1989-11-21' , 'AD_VP' , 17000 , NULL , 100 , 20);
```

```
INSERT INTO employees VALUES (102 , 'Lex' , 'De Haan' , 'LDEHAAN' ,  
'515.123.4569' , '1993-09-12' , 'AD_VP' , 17000 , NULL , 100 , 30);
```

```
INSERT INTO employees VALUES (104 , 'Bruce' , 'Ernst' , 'BERNST' ,  
'590.423.4568' , '1991-05-21', 'IT_PROG' , 6000 , NULL , 103 , 60);
```

```
INSERT INTO employees VALUES (105 , 'David' , 'Austin' , 'DAUSTIN' ,  
'590.423.4569' , '1997-06-25', 'IT_PROG' , 4800 , NULL , 103 , 60);
```

```
INSERT INTO employees VALUES (106 , 'Valli' , 'Pataballa' ,  
'VPATABAL' , '590.423.4560' , '1998-02-05', 'IT_PROG' , 4800 , NULL  
, 103 , 40);
```

```
INSERT INTO employees VALUES (107 , 'Diana' , 'Lorentz' , 'DLORENTZ'  
, '590.423.5567' , '1999-02-09', 'IT_PROG' , 4200 , NULL , 103 ,  
40);
```

```
INSERT INTO employees VALUES (108 , 'Nancy' , 'Greenberg' ,  
'NGREENBE' , '515.124.4569' , '1994-08-17', 'FI_MGR' , 12000 , NULL  
, 101 , 100);
```

```
INSERT INTO employees VALUES (109 , 'Daniel' , 'Faviet' , 'DFAVIET' ,  
'515.124.4169' , '1994-08-12', 'FI_ACCOUNT' , 9000 , NULL , 108 ,  
170);
```

```
INSERT INTO employees VALUES (110 , 'John' , 'Chen' , 'JCHEN' ,  
'515.124.4269' , '1997-04-09', 'FI_ACCOUNT' , 8200 , NULL , 108 ,  
170);
```

```
INSERT INTO employees VALUES (111 , 'Ismael' , 'Sciarra' , 'ISCIARRA'  
, '515.124.4369' , '1997-02-01', 'FI_ACCOUNT' , 7700 , NULL , 108 ,  
160);
```

```
INSERT INTO employees VALUES (112 , 'Jose Manuel' , 'Urman' ,  
'JMURMAN' , '515.124.4469' , '1998-06-03', 'FI_ACCOUNT' , 7800 , NULL  
8 , 150);
```

```
INSERT INTO employees VALUES (114 , 'Den' , 'Raphaely' , 'DRAPHEAL' ,  
'515.127.4561' , '1994-11-08', 'PU_MAN' , 11000 , NULL , 100 , 30);
```

```
INSERT INTO employees VALUES (115 , 'Alexander' , 'Khoo' , 'AKHOO' ,  
'515.127.4562' , '1995-05-12', 'PU_CLERK' , 3100 , NULL , 114 , 80);
```

```
INSERT INTO employees VALUES (116 , 'Shelli' , 'Baida' , 'SBAIDA' ,  
'515.127.4563' , '1997-12-13', 'PU_CLERK' , 2900 , NULL , 114 , 70);
```

```
INSERT INTO employees VALUES (117 , 'Sigal' , 'Tobias' , 'STOBIAS' ,  
'515.127.4564' , '1997-09-10', 'PU_CLERK' , 2800 , NULL , 114 , 30);
```

```
INSERT INTO employees VALUES (118 , 'Guy' , 'Himuro' , 'GHIMURO' ,  
'515.127.4565' , '1998-01-02', 'PU_CLERK' , 2600 , NULL , 114 , 60);
```

```
INSERT INTO employees VALUES (119 , 'Karen' , 'Colmenares' ,  
'KCOLMENA' , '515.127.4566' , '1999-04-08', 'PU_CLERK' , 2500 , NULL  
, 114 , 130);
```

```
INSERT INTO employees VALUES (120 , 'Matthew' , 'Weiss' , 'MWEISS' ,  
'650.123.1234' , '1996-07-18', 'ST_MAN' , 8000 , NULL , 100 , 50);
```

```
INSERT INTO employees VALUES (122 , 'Payam' , 'Kaufling' , 'PKAUFLIN'  
, '650.123.3234' , '1995-05-01', 'ST_MAN' , 7900 , NULL , 100 , 40);
```

```
INSERT INTO employees VALUES (123 , 'Shanta' , 'Vollman' , 'SVOLLMAN'  
, '650.123.4234' , '1997-10-12', 'ST_MAN' , 6500 , NULL , 100 , 50);
```

```
INSERT INTO employees VALUES (124 , 'Kevin' , 'Mourgos' , 'KMOURGOS' ,  
'650.123.5234' , '1999-11-12', 'ST_MAN' , 5800 , NULL , 100 , 80);
```

```
INSERT INTO employees VALUES (125 , 'Julia' , 'Nayer' , 'JNAYER' ,  
'650.124.1214' , '1997-07-02', 'ST_CLERK' , 3200 , NULL , 120 , 50);
```

```
INSERT INTO employees VALUES (126, 'Irene' , 'Mikkilineni' ,  
'IMIKKILI' , '650.124.1224' , '1998-11-12', 'ST_CLERK' , 2700 , NULL  
, 120 , 50);
```

```
INSERT INTO employees VALUES (127, 'James' , 'Landry' , 'JLANDRY' ,  
'650.124.1334' , '1999-01-02' , 'ST_CLERK' , 2400 , NULL , 120 , 90);
```

```
INSERT INTO employees VALUES (128, 'Steven' , 'Markle' , 'SMARKLE' ,  
'650.124.1434' , '2000-03-04' , 'ST_CLERK' , 2200 , NULL , 120 , 50);
```

```
INSERT INTO employees VALUES (130, 'Mozhe' , 'Atkinson' , 'MATKINSO'  
, '650.124.6234' , '1997-10-12' , 'ST_CLERK' , 2800 , NULL , 121 ,  
110);
```

Solve SQL Exercises

1. Select employees first name, last name, job_id and salary whose first name starts with alphabet S

```
mysql> select firstname,lastname,job_id,salary from employees where firstname like 'S%';  
+-----+-----+-----+-----+  
| firstname | lastname | job_id | salary |  
+-----+-----+-----+-----+  
| Shelli    | Baida    | PU_CLERK | 2900.00 |  
| Sigal     | Tobias    | PU_CLERK | 2800.00 |  
| Shanta    | Vollman  | ST_MAN   | 6500.00 |  
| Steven    | Markle    | ST_CLERK | 2200.00 |  
+-----+-----+-----+-----+  
4 rows in set (0.00 sec)
```

2. Write a query to select employee with the highest salary (using an inner query)

```
mysql> select * from employees where salary = (select max(salary) from employees);
```

Employee_id	firstname	lastname	email	phonenum	hire_date	job_id	salary	commision_pct	manager_id	Department_id
101	Neena	Kochhar	NKOCHHAR	515.123.4568	1989-11-21	AD_VP	17000.00	NULL	100	20
102	Lex	De Haan	LDEHAAN	515.123.4569	1993-09-12	AD_VP	17000.00	NULL	100	30

2 rows in set (0.01 sec)

3. Select employee with the second highest salary

```
mysql> select salary from employees order by salary desc limit 1,1;
```

salary
17000.00

1 row in set (0.00 sec)

4. Write a query to select employees and their corresponding managers and their salaries

```
mysql> select e.employee_id as employeeid,
-> e.firstname as employeefirstname,
-> e.lastname as employeeelastname,
-> e.salary as employeesalary,
-> m.employee_id as managerid,
-> m.firstname as managerfirstname,
-> m.lastname as managerlastname,
-> m.salary as managersalary
-> from employees e
-> left join employees m on e.manager_id=m.employee_id;
```

employeeid	employeefirstname	employeeelastname	employeesalary	managerid	managerfirstname	managerlastname	managersalary
101	Neena	Kochhar	17000.00	NULL	NULL	NULL	NULL
102	Lex	De Haan	17000.00	NULL	NULL	NULL	NULL
104	Bruce	Ernst	6000.00	NULL	NULL	NULL	NULL
105	David	Austin	4800.00	NULL	NULL	NULL	NULL
106	Valli	Pataballa	4800.00	NULL	NULL	NULL	NULL
107	Diana	Lorentz	4200.00	NULL	NULL	NULL	NULL
108	Nancy	Greenberg	12000.00	101	Neena	Kochhar	17000.00
109	Daniel	Faviet	9000.00	108	Nancy	Greenberg	12000.00
110	John	Chen	8200.00	108	Nancy	Greenberg	12000.00
111	Ismael	Sciarra	7700.00	108	Nancy	Greenberg	12000.00
112	Jose Manuel	Urman	7800.00	NULL	NULL	NULL	NULL
114	Den	Raphaely	11000.00	NULL	NULL	NULL	NULL
115	Alexander	Khoo	3100.00	114	Den	Raphaely	11000.00
116	Shelli	Baida	2900.00	114	Den	Raphaely	11000.00
117	Sigal	Tobias	2800.00	114	Den	Raphaely	11000.00
118	Guy	Himuro	2600.00	114	Den	Raphaely	11000.00
119	Karen	Colmenares	2500.00	114	Den	Raphaely	11000.00
120	Matthew	Weiss	8000.00	NULL	NULL	NULL	NULL
122	Payam	Kaufling	7900.00	NULL	NULL	NULL	NULL
123	Shanta	Vollman	6500.00	NULL	NULL	NULL	NULL
124	Kevin	Mourgos	5800.00	NULL	NULL	NULL	NULL
125	Julia	Nayer	3200.00	120	Matthew	Weiss	8000.00
126	Irene	Mikkilineni	2700.00	120	Matthew	Weiss	8000.00
127	James	Landry	2400.00	120	Matthew	Weiss	8000.00
128	Steven	Markle	2200.00	120	Matthew	Weiss	8000.00
130	Mozhe	Atkinson	2800.00	NULL	NULL	NULL	NULL

26 rows in set (0.00 sec)

5. Write a query to select employees and their corresponding managers and their salaries (SELF Join)

```
mysql> select e.employee_id as employeeid,
-> e.firstname as employeefirstname,
-> e.lastname as employeeelastname,
-> e.salary as employeesalary,
-> m.employee_id as managerid,
-> m.firstname as managerfirstname,
-> m.lastname as managerlastname,
-> m.salary as managersalary
-> from employees e
-> left join employees m on e.manager_id=m.employee_id;
```

employeeid	employeefirstname	employeeelastname	employeesalary	managerid	managerfirstname	managerlastname	managersalary
101	Neena	Kochhar	17000.00	NULL	NULL	NULL	NULL
102	Lex	De Haan	17000.00	NULL	NULL	NULL	NULL
104	Bruce	Ernst	6000.00	NULL	NULL	NULL	NULL
105	David	Austin	4800.00	NULL	NULL	NULL	NULL
106	Valli	Pataballa	4800.00	NULL	NULL	NULL	NULL
107	Diana	Lorentz	4200.00	NULL	NULL	NULL	NULL
108	Nancy	Greenberg	12000.00	101	Neena	Kochhar	17000.00
109	Daniel	Faviet	9000.00	108	Nancy	Greenberg	12000.00
110	John	Chen	8200.00	108	Nancy	Greenberg	12000.00
111	Ismael	Sciarra	7700.00	108	Nancy	Greenberg	12000.00
112	Jose Manuel	Urman	7800.00	NULL	NULL	NULL	NULL
114	Den	Raphaely	11000.00	NULL	NULL	NULL	NULL
115	Alexander	Khoo	3100.00	114	Den	Raphaely	11000.00
116	Shelli	Baida	2900.00	114	Den	Raphaely	11000.00
117	Sigal	Tobias	2800.00	114	Den	Raphaely	11000.00
118	Guy	Himuro	2600.00	114	Den	Raphaely	11000.00
119	Karen	Colmenares	2500.00	114	Den	Raphaely	11000.00
120	Matthew	Weiss	8000.00	NULL	NULL	NULL	NULL
122	Payam	Kaufling	7900.00	NULL	NULL	NULL	NULL
123	Shanta	Vollman	6500.00	NULL	NULL	NULL	NULL
124	Kevin	Moungos	5800.00	NULL	NULL	NULL	NULL
125	Julia	Nayer	3200.00	120	Matthew	Weiss	8000.00
126	Irene	Mikkilineni	2700.00	120	Matthew	Weiss	8000.00
127	James	Landry	2400.00	120	Matthew	Weiss	8000.00
128	Steven	Markle	2200.00	120	Matthew	Weiss	8000.00
130	Mozhe	Atkinson	2800.00	NULL	NULL	NULL	NULL

26 rows in set (0.00 sec)

6. Create a view for the above query

```
mysql> create view employeemanagersalary as
-> select e.employee_id as employeeid,
-> e.firstname as employeefirstname,
-> e.lastname as employeeelastname,
-> e.salary as employeesalary,
-> m.employee_id as managerid,
-> m.firstname as managerfirstname,
-> m.lastname as managerlastname,
-> m.salary as managersalary
-> from employees e
-> left join employees m on e.manager_id=m.employee_id;
Query OK, 0 rows affected (0.03 sec)

mysql> select * from employeemanagersalary;
```

employeeid	employeefirstname	employeeelastname	employeesalary	managerid	managerfirstname	managerlastname	managersalary
101	Neena	Kochhar	17000.00	NULL	NULL	NULL	NULL
102	Lex	De Haan	17000.00	NULL	NULL	NULL	NULL
104	Bruce	Ernst	6000.00	NULL	NULL	NULL	NULL
105	David	Austin	4800.00	NULL	NULL	NULL	NULL
106	Valli	Pataballa	4800.00	NULL	NULL	NULL	NULL
107	Diana	Lorentz	4200.00	NULL	NULL	NULL	NULL
108	Nancy	Greenberg	12000.00	101	Neena	Kochhar	17000.00
109	Daniel	Faviet	9000.00	108	Nancy	Greenberg	12000.00
110	John	Chen	8200.00	108	Nancy	Greenberg	12000.00
111	Ismael	Sciarra	7700.00	108	Nancy	Greenberg	12000.00
112	Jose Manuel	Urman	7800.00	NULL	NULL	NULL	NULL
114	Den	Raphaely	11000.00	NULL	NULL	NULL	NULL
115	Alexander	Khoo	3100.00	114	Den	Raphaely	11000.00
116	Shelli	Baida	2900.00	114	Den	Raphaely	11000.00
117	Sigal	Tobias	2800.00	114	Den	Raphaely	11000.00
118	Guy	Himuro	2600.00	114	Den	Raphaely	11000.00
119	Karen	Colmenares	2500.00	114	Den	Raphaely	11000.00
120	Matthew	Weiss	8000.00	NULL	NULL	NULL	NULL
122	Payam	Kaufling	7900.00	NULL	NULL	NULL	NULL
123	Shanta	Vollman	6500.00	NULL	NULL	NULL	NULL
124	Kevin	Moungos	5800.00	NULL	NULL	NULL	NULL
125	Julia	Nayer	3200.00	120	Matthew	Weiss	8000.00
126	Irene	Mikkilineni	2700.00	120	Matthew	Weiss	8000.00
127	James	Landry	2400.00	120	Matthew	Weiss	8000.00
128	Steven	Markle	2200.00	120	Matthew	Weiss	8000.00
130	Mozhe	Atkinson	2800.00	NULL	NULL	NULL	NULL

7. Write a query to show the count of employees under each manager in descending order (from view)

```
mysql> select managerid,  
-> managerfirstname,  
-> managerlastname,  
-> count(employeeid) as employeecount  
-> from employeemanagersalary  
-> where managerid is not null  
-> group by managerid, managerfirstname, managerlastname  
-> order by employeecount desc;
```

managerid	managerfirstname	managerlastname	employeecount
114	Den	Raphaely	5
120	Matthew	Weiss	4
108	Nancy	Greenberg	3
101	Neena	Kochhar	1

4 rows in set (0.01 sec)

8. Find the count of employees in each department

```
mysql> select department_id, count(*) as employee_count from employees group by department_id order by employee_count;
```

department_id	employee_count
20	1
70	1
90	1
100	1
110	1
130	1
150	1
160	1
80	2
170	2
30	3
40	3
60	3
50	5

14 rows in set (0.00 sec)

9. Get the count of employees hired year wise

```
mysql> select year(hire_date) as hire_year, count(*) as employee_count from employees group by (hire_date) order by hire_year;
```

hire_year	employee_count
1989	1
1991	1
1993	1
1994	1
1994	1
1994	1
1995	1
1995	1
1996	1
1997	1
1997	1
1997	1
1997	1
1997	1
1997	2
1997	1
1998	1
1998	1
1998	1
1998	1
1999	1
1999	1
1999	1
1999	1
2000	1

25 rows in set (0.01 sec)

10 . create a stored procedure to get the “ Get the count of employees hired in the input year”(IN year , OUT count)

11.Select the employees whose first_name contains “an”

```
mysql> select * from employees where first_name like '%an%';
```

Employee_id	first_name	last_name	email	phone_number	hire_date	job_id	salary	commission_pct	manager_id	Department_id
107	Diana	Lorentz	DLORENTZ	590.423.5567	1999-02-09	IT_PROG	4200.00	NULL	103	40
108	Nancy	Greenberg	NGREENBE	515.124.4569	1994-08-17	FI_MGR	12000.00	NULL	101	100
109	Daniel	Faviet	DFAVIET	515.124.4169	1994-08-12	FI_ACCOUNT	9000.00	NULL	108	170
112	Jose Manuel	Urman	JMURMAN	515.124.4469	1998-06-03	FI_ACCOUNT	7800.00	NULL	8	150
115	Alexander	Khoo	AKHOO	515.127.4562	1995-05-12	PU_CLERK	3100.00	NULL	114	80
123	Shanta	Vollman	SVOLLMAN	650.123.4234	1997-10-12	ST_MAN	6500.00	NULL	100	50

6 rows in set (0.00 sec)

12. Select employee first name and the corresponding phone number in the format (_ _ _)-(_ _ _)-(_ _ _ _)

13. Find the employees who joined in August, 1994.

```
mysql> select * from employees where year(hire_date)=1994 and month(hire_date) = 8;
```

Employee_id	first_name	last_name	email	phone_number	hire_date	job_id	salary	commission_pct	manager_id	Department_id
108	Nancy	Greenberg	NGREENBE	515.124.4569	1994-08-17	FI_MGR	12000.00	NULL	101	100
109	Daniel	Faviet	DFAVIET	515.124.4169	1994-08-12	FI_ACCOUNT	9000.00	NULL	108	170

2 rows in set (0.01 sec)

14. Find the maximum salary from each department.

```
mysql> select department_id,  
-> max(salary) as max_salary  
-> from employees  
-> group by employee_id;
```

department_id	max_salary
20	17000.00
30	17000.00
60	6000.00
60	4800.00
40	4800.00
40	4200.00
100	12000.00
170	9000.00
170	8200.00
160	7700.00
150	7800.00
30	11000.00
80	3100.00
70	2900.00
30	2800.00
60	2600.00
130	2500.00
50	8000.00
40	7900.00
50	6500.00
80	5800.00
50	3200.00
50	2700.00
90	2400.00
50	2200.00
110	2800.00

26 rows in set (0.01 sec)

15. Write a SQL query to display the 5 least earning employees

```
mysql> select * from employees order by salary asc limit 5;
```

Employee_id	firstname	lastname	email	phonenumber	hire_date	job_id	salary	commision_pct	manager_id	Department_id
128	Steven	Markle	SMARKLE	650.124.1434	2000-03-04	ST_CLERK	2200.00	NULL	120	50
127	James	Landry	JLANDRY	650.124.1334	1999-01-02	ST_CLERK	2400.00	NULL	120	90
119	Karen	Colmenares	KCOLMENA	515.127.4566	1999-04-08	PU_CLERK	2500.00	NULL	114	130
118	Guy	Himuro	GHIMURO	515.127.4565	1998-01-02	PU_CLERK	2600.00	NULL	114	60
126	Irene	Mikkilineni	IMIKKILI	650.124.1224	1998-11-12	ST_CLERK	2700.00	NULL	120	50

5 rows in set (0.00 sec)

16. Find the employees hired in the 80s

```
mysql> select * from employees where year(hire_date)>=1980 and year(hire_date)<=1990;
```

Employee_id	firstname	lastname	email	phonenummer	hire_date	job_id	salary	commision_pct	manager_id	Department_id
101	Neena	Kochhar	NKOCHHAR	515.123.4568	1989-11-21	AD_VP	17000.00	NULL	100	20

```
1 row in set (0.00 sec)
```

17. Find the employees who joined the company after 15th of the month

```
mysql> select * from employees where day(hire_date)>15;
```

Employee_id	firstname	lastname	email	phonenummer	hire_date	job_id	salary	commision_pct	manager_id	Department_id
101	Neena	Kochhar	NKOCHHAR	515.123.4568	1989-11-21	AD_VP	17000.00	NULL	100	20
104	Bruce	Ernst	BERNST	590.423.4568	1991-05-21	IT_PROG	6000.00	NULL	103	60
105	David	Austin	DAUSTIN	590.423.4569	1997-06-25	IT_PROG	4800.00	NULL	103	60
108	Nancy	Greenberg	NGREENBE	515.124.4569	1994-08-17	FI_MGR	12000.00	NULL	101	100
120	Matthew	Weiss	MWEISS	650.123.1234	1996-07-18	ST_MAN	8000.00	NULL	100	50

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

