Assignment 1

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);
employees table
; INSERT INTO employees V
## 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);
```

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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);

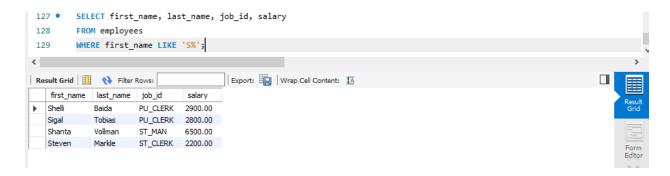
INSERT INTO employees VALUES (127, 'James', 'Landry', 'JLANDRY',
'650.124.1334', '1999-01-02', 'ST_CLERK', 2400, NULL, 120, 90);

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

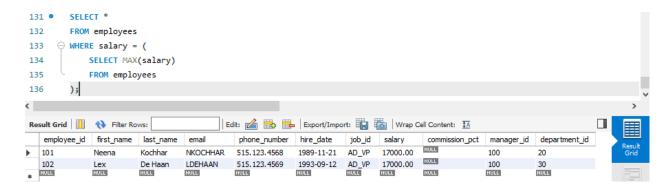
INSERT INTO employees VALUES (130, 'Mozhe', 'Atkinson', 'MATKINSO', '650.124.6234', '1997-10-12', 'ST_CLERK', 2800, NULL, 121, 110);
```

Solve SQL Exercises

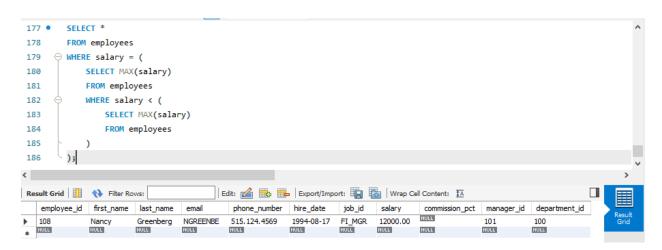
1. Select employees first name, last name, job_id and salary whose first name starts with alphabet S



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



3. Select employee with the second highest salary



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

```
mysql> SELECT
-> e.employee_id AS employee_id,
-> e.first_name AS employee_first_name,
-> e.last_name AS employee_last_name,
-> e.salary AS employee_salary,
-> m.employee_id AS manager_id,
-> m.first_name AS manager_first_name,
-> m.last_name AS manager_last_name,
-> m.salary AS manager_last_name,
-> employees e
-> ERDM
-> employees e
-> LEFT_DIN
-> employees m ON e.manager_id = m.employee_id;
```

	employee first name	+				t	+
emproyee_ru	employee_first_name	employee_last_name	employee_salary	manager_id	manager_tirst_name	manager_rast_name	manager_salary
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
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 employee id,
-> e.first_name AS employee_first_name,
-> e.last_name AS employee_first_name,
-> e.salary AS employee_salary,
-> m.employee_id AS manager_id,
-> m.first_name AS manager_first_name,
-> m.last_name AS manager_last_name,
-> m.salary AS manager_salary
-> FROM
-> employees e
-> LEFT_JOIN
-> employees m ON e.manager_id = m.employee_id;
```

employee_id	employee_first_name	employee_last_name	employee_salary		manager_first_name	manager_last_name	manager_salary
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 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 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

6. Create a view for the above query

```
mysql> CREATE VIEW employee_manager_view AS

-> SELECT
-> e.employee_id AS employee_id,
-> e.first_name AS employee_first_name,
-> e.last_name AS employee_last_name,
-> e.salary AS employee_salary,
-> m.employee_id AS manager_id,
-> m.first_name AS manager_ifst_name,
-> m.salary AS manager_first_name,
-> m.salary AS manager_fast_name,
-> m.salary AS manager_salary
-> FROM
-> employees e
-> LEFT_JOIN
-> employees e
-> LEFT_JOIN
-> employees m ON e.manager_id = m.employee_id;
Query OK, 0 rows affected (11.40 sec)
```

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

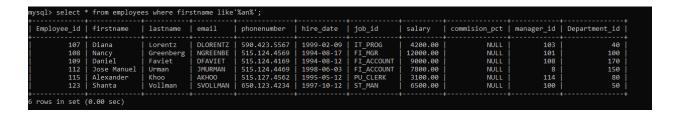
```
mysql> SELECT
          manager_id,
          manager_first_name,
        manager_first_name
manager_last_name,
   -> COUNT(employee_id) AS num_employees
   -> FROM
   -> employee manager view
   -> GROUP BY
   -> manager id, manager first name, manager last name
   -> ORDER BY
   -> num_employees DESC;
 manager_id | manager_first_name | manager_last_name | num_employees
       NULL | NULL
                                   NULL
                                                                  13
                                  Raphaely
        114 | Den
        120 | Matthew
                                 Weiss
                                                                   4
        108 | Nancy
                                  Greenberg
        101 Neena
                                  Kochhar
5 rows in set (0.07 sec)
mysql>
```

8. Find the count of employees in each department

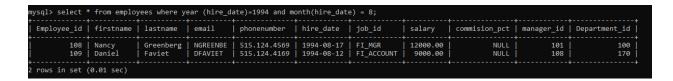
9. Get the count of employees hired year wise

```
ysql> 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
        1991
       1993
1994
1994
1994
       1995
1995
        1996
       1997
1997
1997
       1997
1997
1997
       1998
1998
        1998
        1998
        1999
        1999
        1999
        2000
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"



- 12. Select employee first name and the corresponding phone number in the format (_ _ _)-(_ _ _)-(_ _ _)
- 13. Find the employees who joined in August, 1994.



14. Find the maximum salary from each department.

mysql> select dep	
-> max(salary	y) as max_salary
-> from emplo	oyees
-> group by 6	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

ployee_id	firstname	lastname	email	phonenumber	hire_date	job_id	salary	commision_pct	manager_id	Department_io
128	Steven	Markle	SMARKLE	650.124.1434	2000-03-04	ST CLERK	2200.00	NULL	120	56
127	James	Landry	JLANDRY	650.124.1334	1999-01-02	ST_CLERK	2400.00	NULL	120	9
119	Karen	Colmenares	KCOLMENA	515.127.4566	1999-04-08	PU_CLERK	2500.00	NULL	114	13
118	Guy	Himuro	GHIMURO	515.127.4565	1998-01-02	PU_CLERK	2600.00	NULL	114	6
126	Irene	Mikkilineni	IMIKKILI	650.124.1224	1998-11-12	ST_CLERK	2700.00	NULL	120	5

16. Find the employees hired in the 80s

mysql> select *	from employ	yees where y	year (hire_c	date)>=1980 and	year(hire_dat	e)<=1990				
Employee_id	firstname	lastname	email	phonenumber	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 (6	0.00 sec)									

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

mployee_id	firstname	lastname	email	phonenumber	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