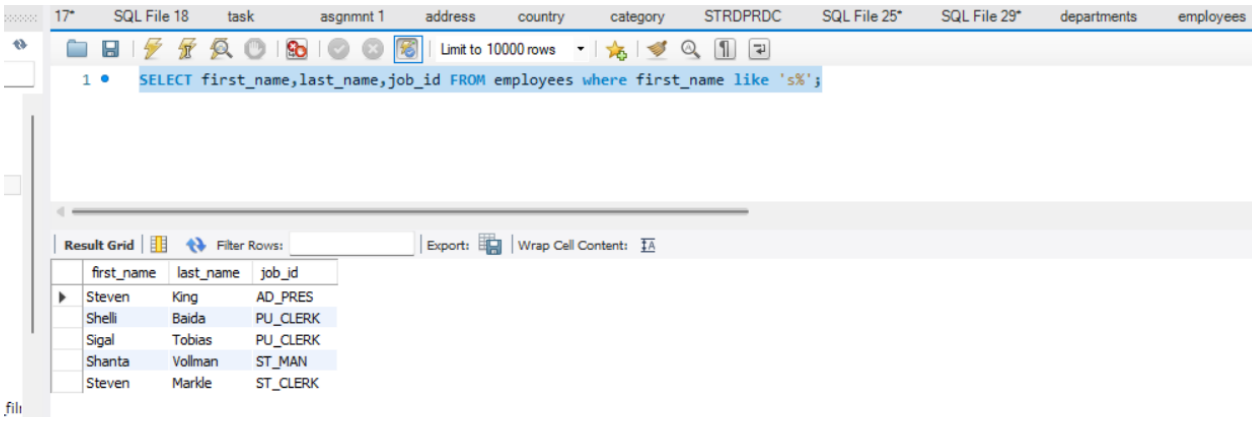
Assignment 2

SQL Exercises

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

SELECT first_name,last_name,job_id FROM employees where first_name like 's%';

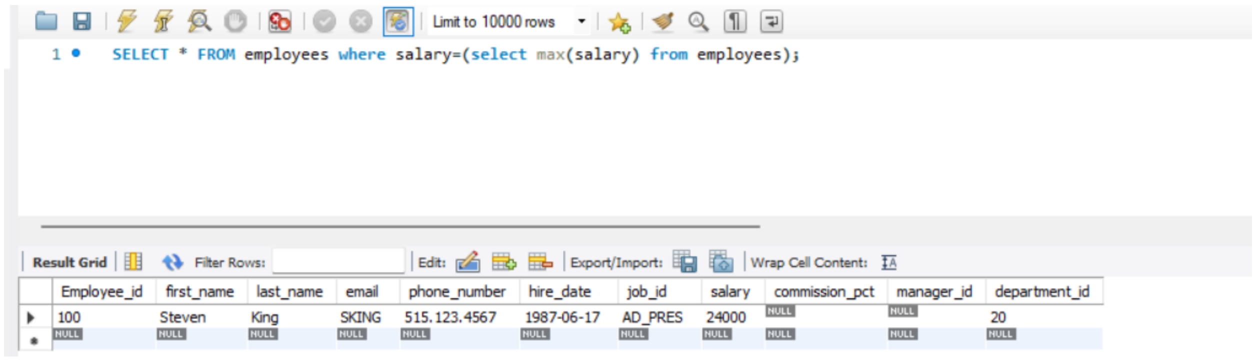


```
SELECT first_name,last_name,job_id FROM employees where first_name like 's%';
```

first_name	last_name	job_id
Steven	King	AD_PRES
Shelli	Baida	PU_CLERK
Sigal	Tobias	PU_CLERK
Shanta	Vollman	ST_MAN
Steven	Markle	ST_CLERK

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

SELECT * FROM employees where salary=(select max(salary) from employees);

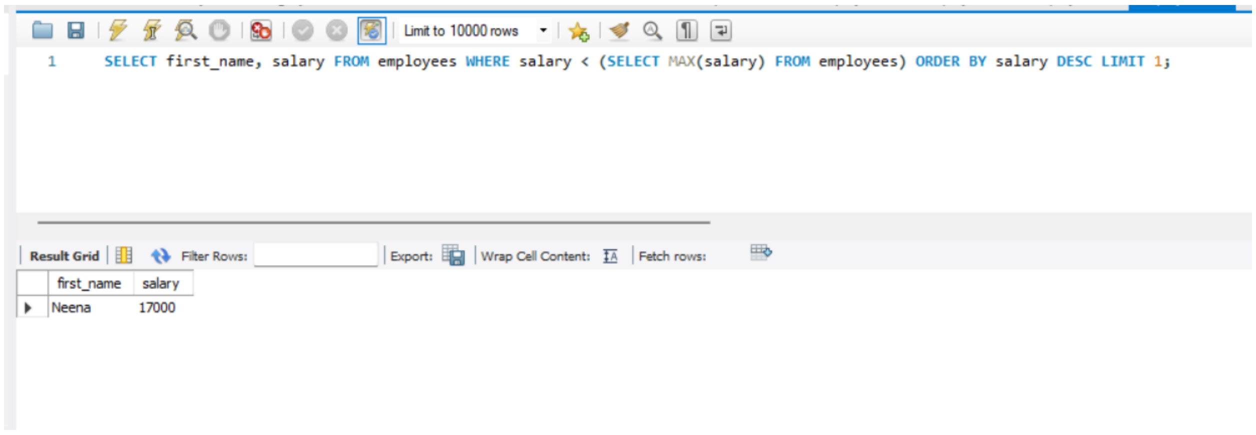


```
SELECT * FROM employees where salary=(select max(salary) from employees);
```

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	NULL	NULL	20
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

3.Select employee with the second highest salary

select first_name, salary from employees where salary < (select max(salary) from employees) order by salary desc limit 1;

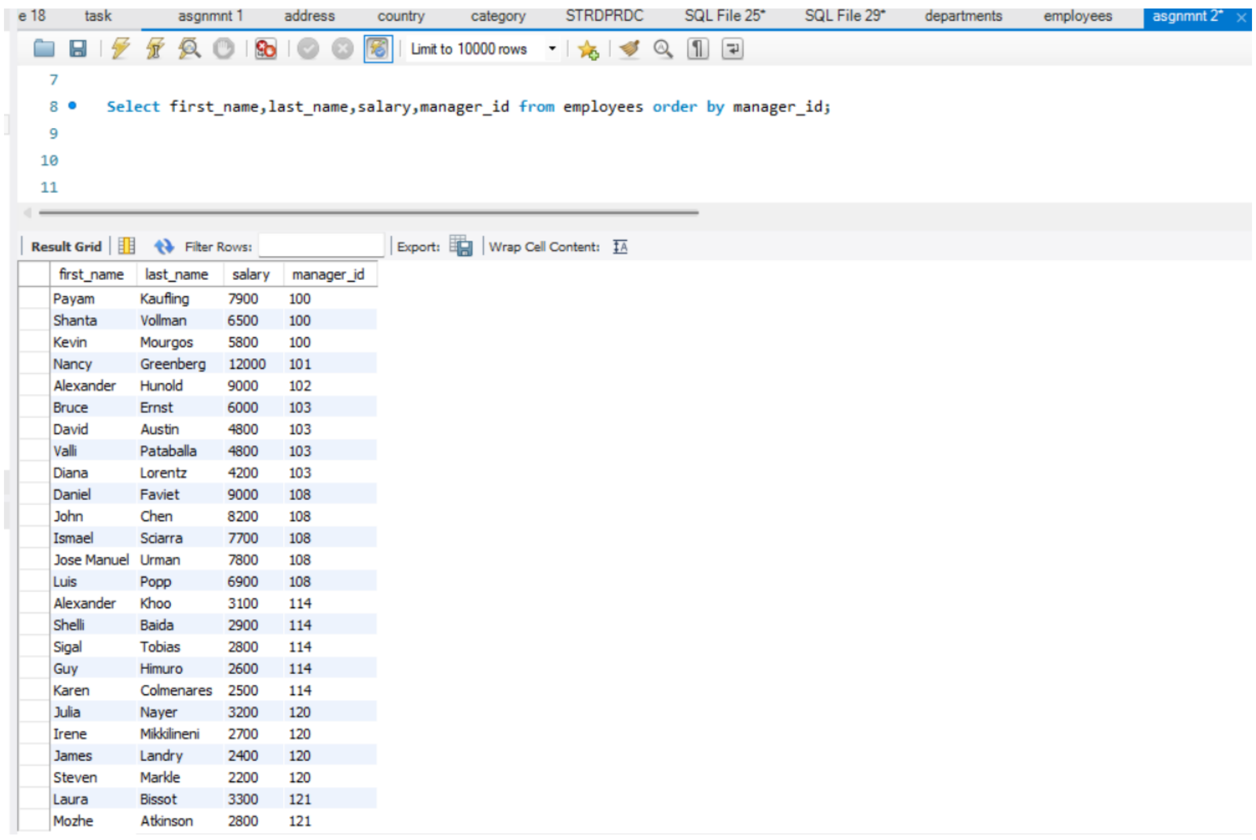


```sql
SELECT first_name, salary FROM employees WHERE salary < (SELECT MAX(salary) FROM employees) ORDER BY salary DESC LIMIT 1;
```

first_name	salary
Neena	17000

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

Select first_name, last_name,salary,manager_id from employees order by manager_id;

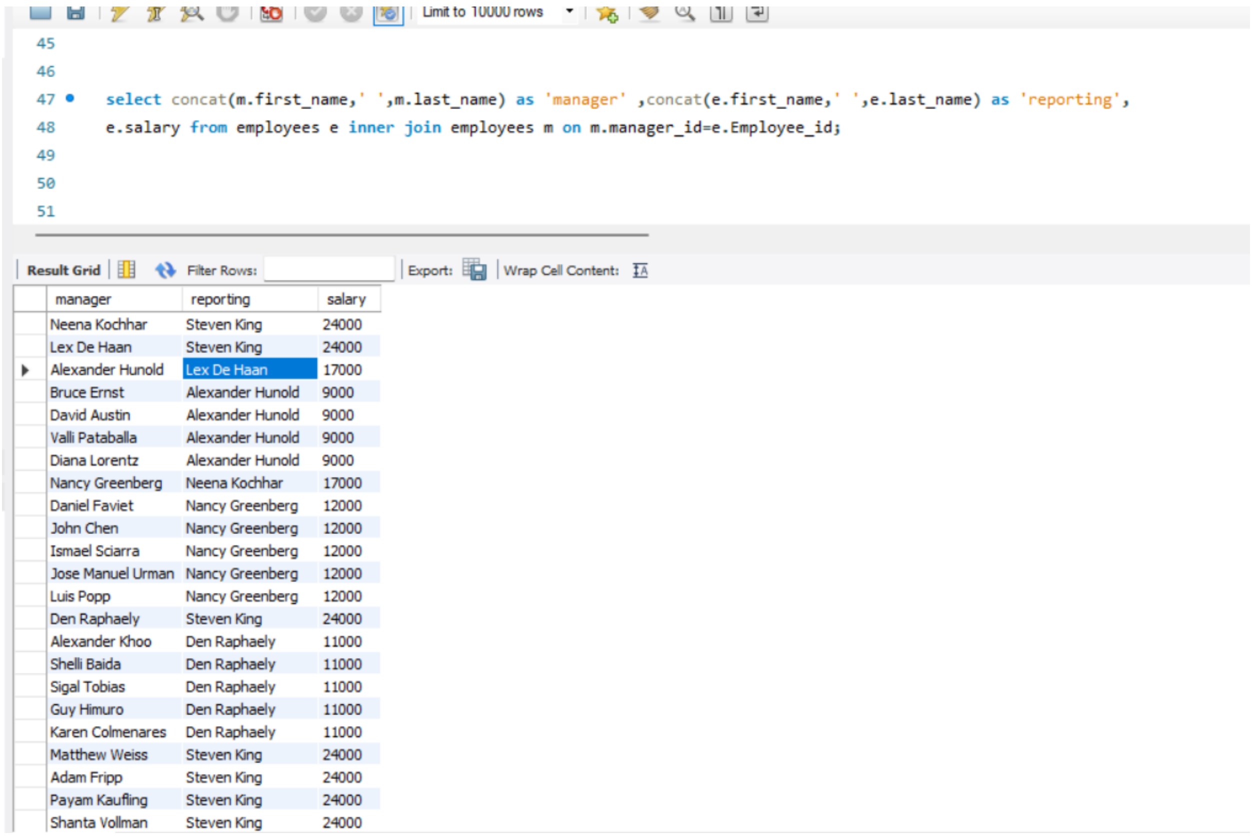


```sql
Select first_name,last_name,salary,manager_id from employees order by manager_id;
```

first_name	last_name	salary	manager_id
Payam	Kaufling	7900	100
Shanta	Vollman	6500	100
Kevin	Mourgos	5800	100
Nancy	Greenberg	12000	101
Alexander	Hunold	9000	102
Bruce	Ernst	6000	103
David	Austin	4800	103
Valli	Pataballa	4800	103
Diana	Lorentz	4200	103
Daniel	Faviet	9000	108
John	Chen	8200	108
Ismael	Sciarra	7700	108
Jose Manuel	Urman	7800	108
Luis	Popp	6900	108
Alexander	Khoo	3100	114
Shelli	Baida	2900	114
Sigal	Tobias	2800	114
Guy	Himuro	2600	114
Karen	Colmenares	2500	114
Julia	Nayer	3200	120
Irene	Mikkilineni	2700	120
James	Landry	2400	120
Steven	Markle	2200	120
Laura	Bissot	3300	121
Mozhe	Atkinson	2800	121

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

select concat(m.first_name,' ',m.last_name) as 'manager' ,concat(e.first_name,' ',e.last_name) as 'reporting', e.salary from employees e inner join employees m on m.manager_id=e.Employee_id;



```
select concat(m.first_name,' ',m.last_name) as 'manager' ,concat(e.first_name,' ',e.last_name) as 'reporting',
e.salary from employees e inner join employees m on m.manager_id=e.Employee_id;
```

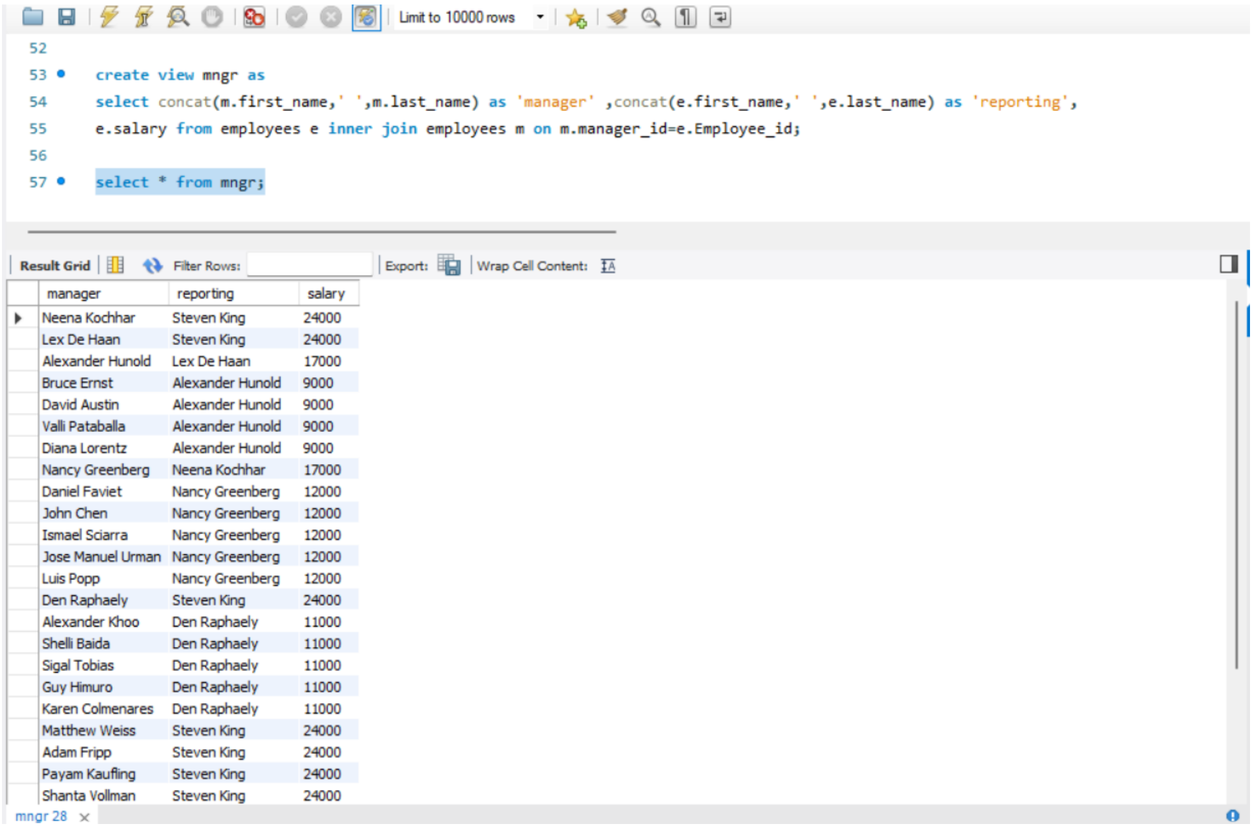
manager	reporting	salary
Neena Kochhar	Steven King	24000
Lex De Haan	Steven King	24000
Alexander Hunold	Lex De Haan	17000
Bruce Ernst	Alexander Hunold	9000
David Austin	Alexander Hunold	9000
Valli Pataballa	Alexander Hunold	9000
Diana Lorentz	Alexander Hunold	9000
Nancy Greenberg	Neena Kochhar	17000
Daniel Faviet	Nancy Greenberg	12000
John Chen	Nancy Greenberg	12000
Ismael Sciarra	Nancy Greenberg	12000
Jose Manuel Urman	Nancy Greenberg	12000
Luis Popp	Nancy Greenberg	12000
Den Raphaely	Steven King	24000
Alexander Khoo	Den Raphaely	11000
Shelli Baida	Den Raphaely	11000
Sigal Tobias	Den Raphaely	11000
Guy Himuro	Den Raphaely	11000
Karen Colmenares	Den Raphaely	11000
Matthew Weiss	Steven King	24000
Adam Fripp	Steven King	24000
Payam Kaufling	Steven King	24000
Shanta Vollman	Steven King	24000

6. Create a view for the above query

create view mngr as

select concat(m.first_name,' ',m.last_name) as 'manager' ,concat(e.first_name,' ',e.last_name) as 'reporting', e.salary from employees e inner join employees m on m.manager_id=e.Employee_id;

select * from mngr;

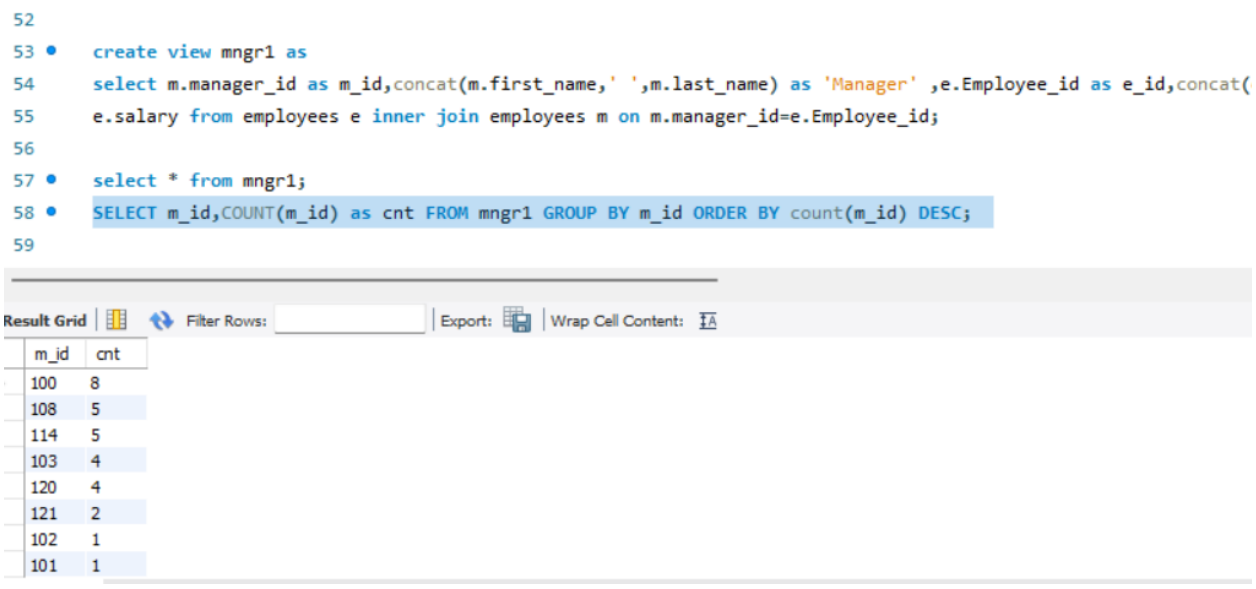


```
create view mngr as
select concat(m.first_name,' ',m.last_name) as 'manager' ,concat(e.first_name,' ',e.last_name) as 'reporting',
e.salary from employees e inner join employees m on m.manager_id=e.Employee_id;

select * from mngr;
```

manager	reporting	salary
Neena Kochhar	Steven King	24000
Lex De Haan	Steven King	24000
Alexander Hunold	Lex De Haan	17000
Bruce Ernst	Alexander Hunold	9000
David Austin	Alexander Hunold	9000
Valli Pataballa	Alexander Hunold	9000
Diana Lorentz	Alexander Hunold	9000
Nancy Greenberg	Neena Kochhar	17000
Daniel Faviet	Nancy Greenberg	12000
John Chen	Nancy Greenberg	12000
Ismael Sciarra	Nancy Greenberg	12000
Jose Manuel Urman	Nancy Greenberg	12000
Luis Popp	Nancy Greenberg	12000
Den Raphaely	Steven King	24000
Alexander Khoo	Den Raphaely	11000
Shelli Baida	Den Raphaely	11000
Sigal Tobias	Den Raphaely	11000
Guy Himuro	Den Raphaely	11000
Karen Colmenares	Den Raphaely	11000
Matthew Weiss	Steven King	24000
Adam Fripp	Steven King	24000
Payam Kaufling	Steven King	24000
Shanta Vollman	Steven King	24000

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

SELECT m_id,COUNT(m_id) as cnt FROM mngr1 GROUP BY m_id ORDER BY count(m_id) DESC;



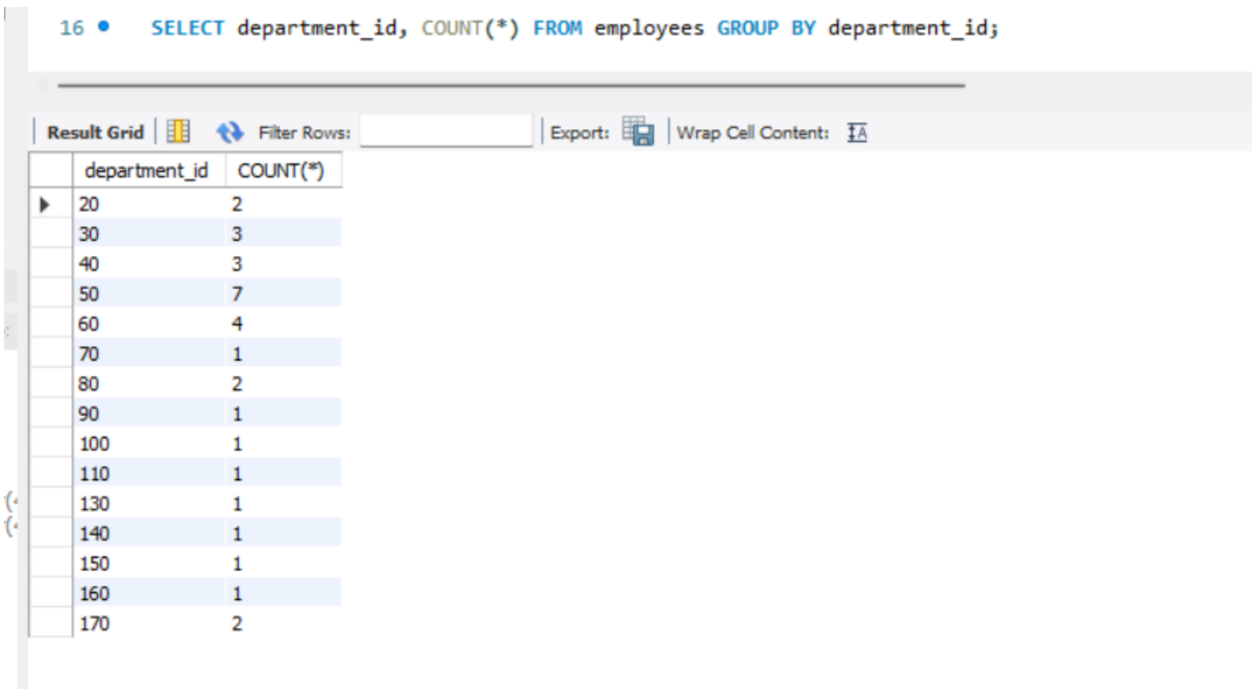
```sql
create view mngr1 as
select m.manager_id as m_id,concat(m.first_name,' ',m.last_name) as 'Manager' ,e.Employee_id as e_id,concat(
e.salary from employees e inner join employees m on m.manager_id=e.Employee_id;

select * from mngr1;
SELECT m_id,COUNT(m_id) as cnt FROM mngr1 GROUP BY m_id ORDER BY count(m_id) DESC;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

m_id	cnt
100	8
108	5
114	5
103	4
120	4
121	2
102	1
101	1

8. Find the count of employees in each department

SELECT department_id, COUNT(*) FROM employees GROUP BY department_id;



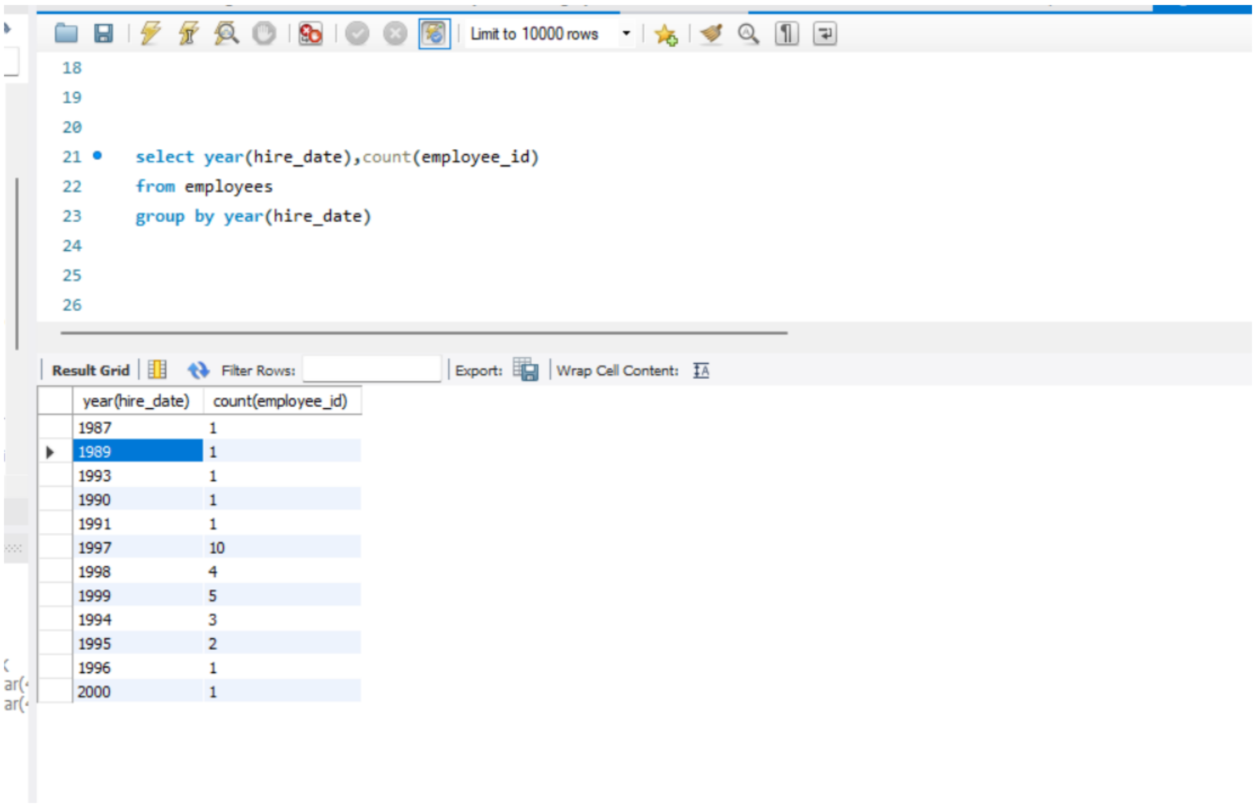
```sql
SELECT department_id, COUNT(*) FROM employees GROUP BY department_id;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

department_id	COUNT(*)
20	2
30	3
40	3
50	7
60	4
70	1
80	2
90	1
100	1
110	1
130	1
140	1
150	1
160	1
170	2

9. Get the count of employees hired year wise

select year(hire_date),count(employee_id) from employees group by year(hire_date)

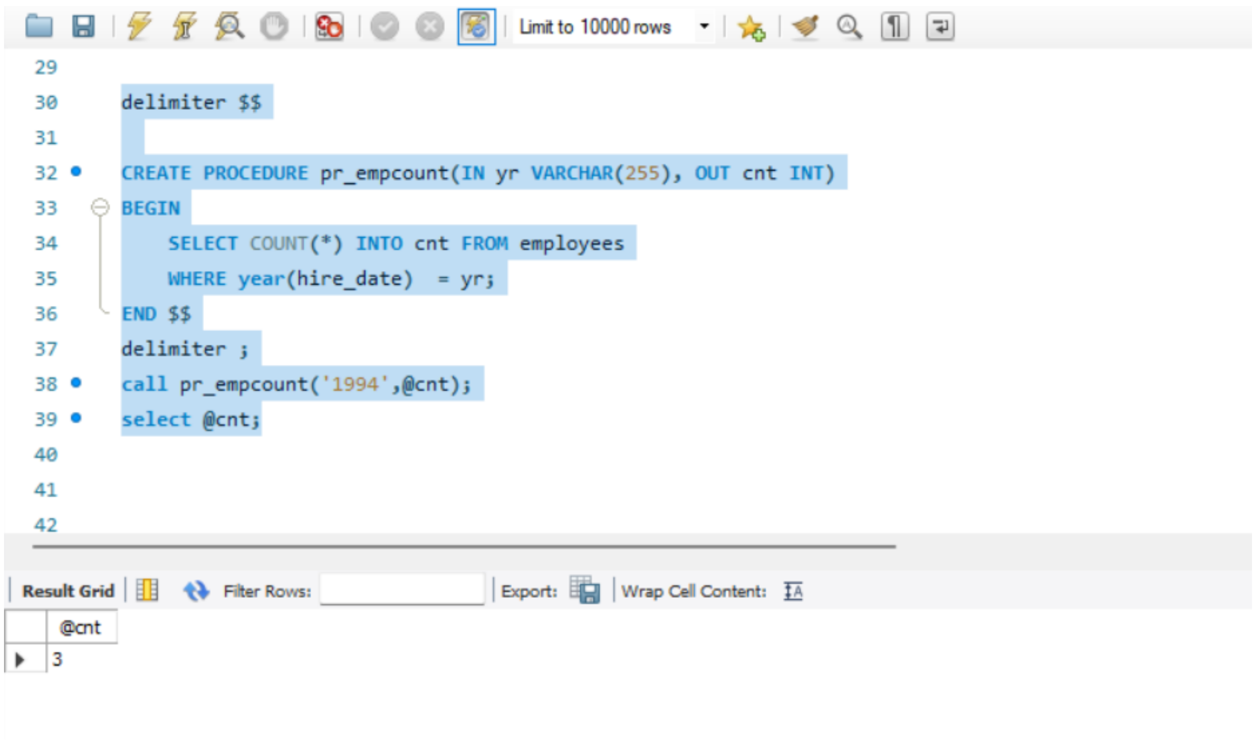


```
select year(hire_date),count(employee_id)
from employees
group by year(hire_date)
```

year(hire_date)	count(employee_id)
1987	1
1989	1
1993	1
1990	1
1991	1
1997	10
1998	4
1999	5
1994	3
1995	2
1996	1
2000	1

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

```
delimiter $$

CREATE PROCEDURE pr_empcount(IN yr VARCHAR(255), OUT cnt INT)

BEGIN

SELECT COUNT(*) INTO cnt FROM employees WHERE year(hire_date)  = yr;

END $$

delimiter ;

call pr_empcount('1994',@cnt);

select @cnt
```

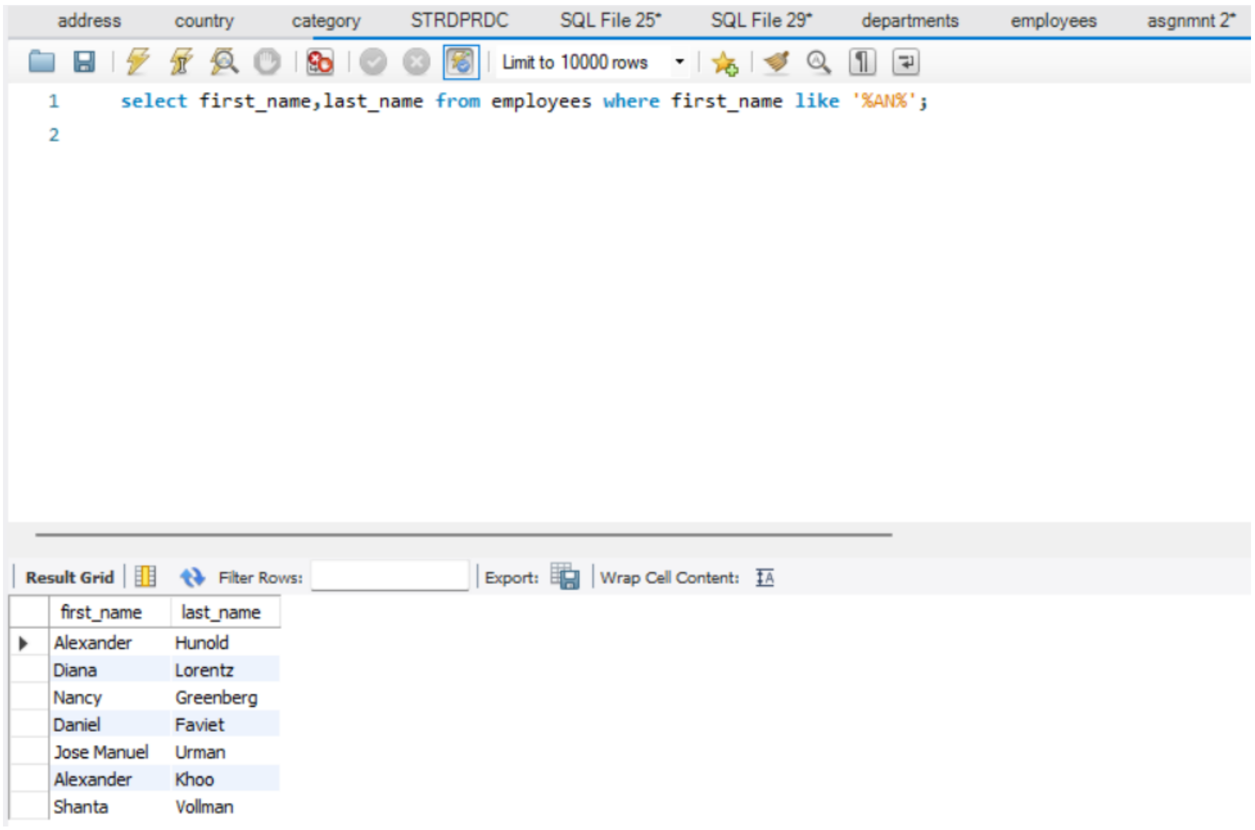


```
delimiter $$

CREATE PROCEDURE pr_empcount(IN yr VARCHAR(255), OUT cnt INT)
BEGIN
    SELECT COUNT(*) INTO cnt FROM employees
    WHERE year(hire_date)  = yr;
END $$
delimiter ;
call pr_empcount('1994',@cnt);
select @cnt;
```

	@cnt
▶	3

11.Select the employees whose first_name contains “an”

select first_name,last_name from employees where first_name like '%AN%';

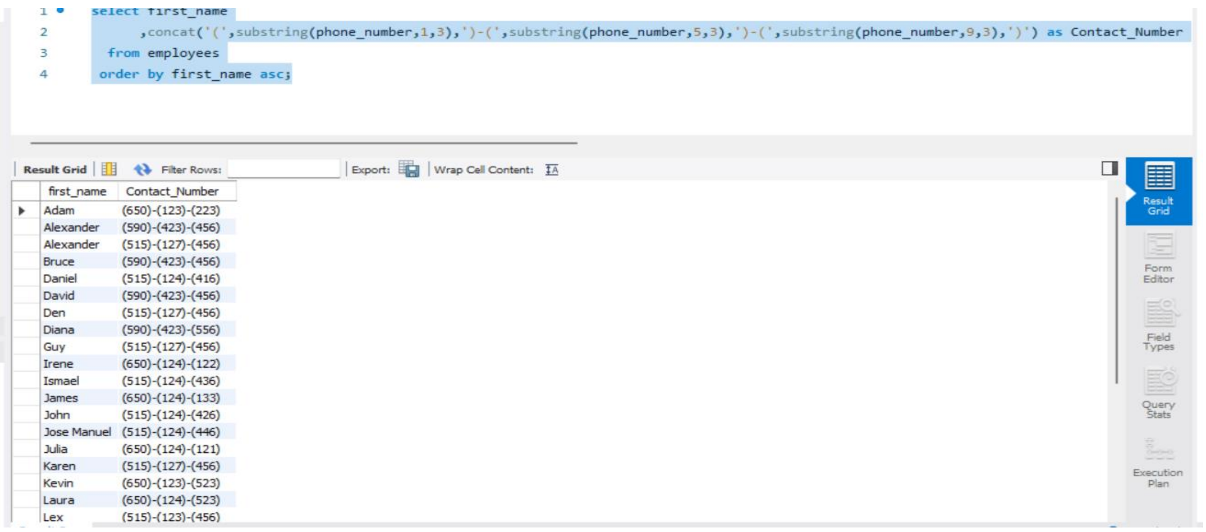


```
select first_name,last_name from employees where first_name like '%AN%';
```

first_name	last_name
Alexander	Hunold
Diana	Lorentz
Nancy	Greenberg
Daniel	Faviet
Jose Manuel	Urman
Alexander	Khoo
Shanta	Vollman

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

select first_name,concat('(',substring(phone_number,1,3),')-(',substring(phone_number,5,3),')-(',substring(phone_number,9,3),')') as Contact_Number from employees order by first_name asc;

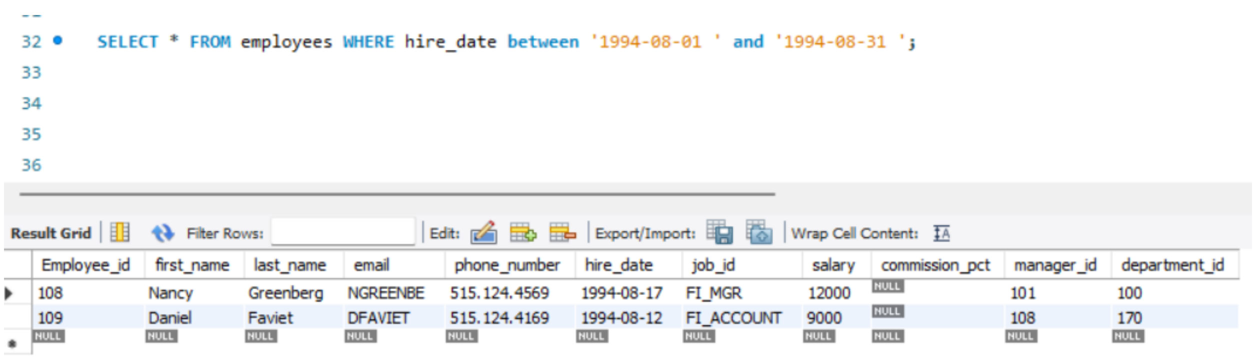


```
select first_name
      ,concat('(',substring(phone_number,1,3),')-(',substring(phone_number,5,3),')-(',substring(phone_number,9,3),')') as Contact_Number
  from employees
 order by first_name asc;
```

first_name	Contact_Number
Adam	(650)-(123)-(223)
Alexander	(590)-(423)-(456)
Alexander	(515)-(127)-(456)
Bruce	(590)-(423)-(456)
Daniel	(515)-(124)-(416)
David	(590)-(423)-(456)
Den	(515)-(127)-(456)
Diana	(590)-(423)-(556)
Guy	(515)-(127)-(456)
Irene	(650)-(124)-(122)
Ismael	(515)-(124)-(436)
James	(650)-(124)-(133)
John	(515)-(124)-(426)
Jose Manuel	(515)-(124)-(446)
Julia	(650)-(124)-(121)
Karen	(515)-(127)-(456)
Kevin	(650)-(123)-(523)
Laura	(650)-(124)-(523)
Lex	(515)-(123)-(456)

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

SELECT * FROM employees WHERE hire_date between '1994-08-01 ' and '1994-08-31 ';

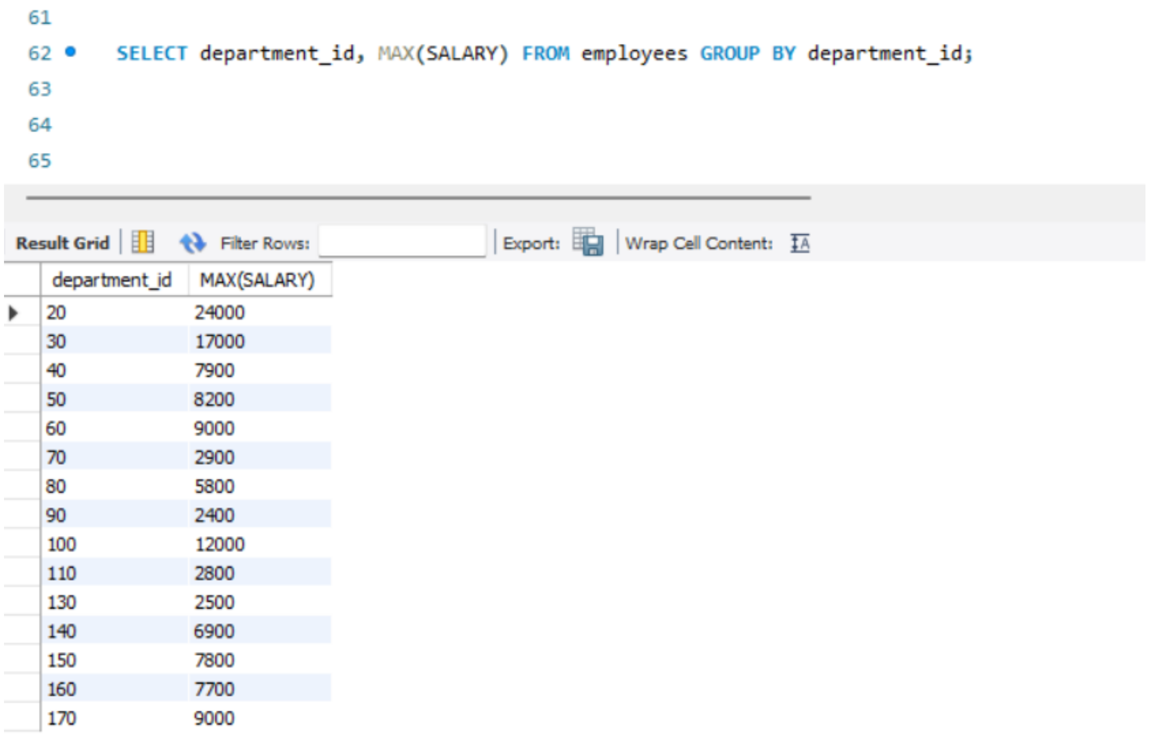


```
--
SELECT * FROM employees WHERE hire_date between '1994-08-01 ' and '1994-08-31 ';
```

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	NULL	101	100
109	Daniel	Faviet	DFAVIET	515.124.4169	1994-08-12	FI_ACCOUNT	9000	NULL	108	170
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

14. Find the maximum salary from each department.

SELECT department_id, MAX(SALARY) FROM employees GROUP BY department_id;

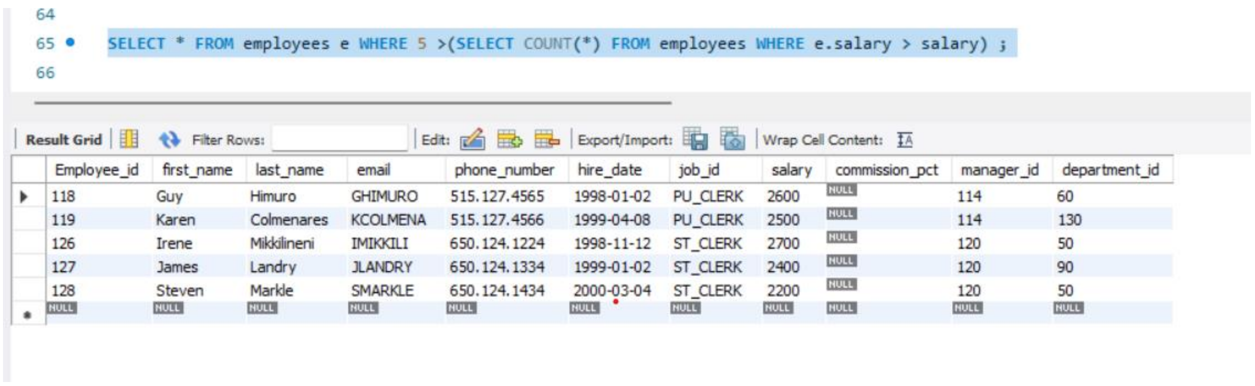


```
SELECT department_id, MAX(SALARY) FROM employees GROUP BY department_id;
```

department_id	MAX(SALARY)
20	24000
30	17000
40	7900
50	8200
60	9000
70	2900
80	5800
90	2400
100	12000
110	2800
130	2500
140	6900
150	7800
160	7700
170	9000

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

SELECT * FROM employees e WHERE 5 >(SELECT COUNT(*) FROM employees WHERE e.salary > salary) ;

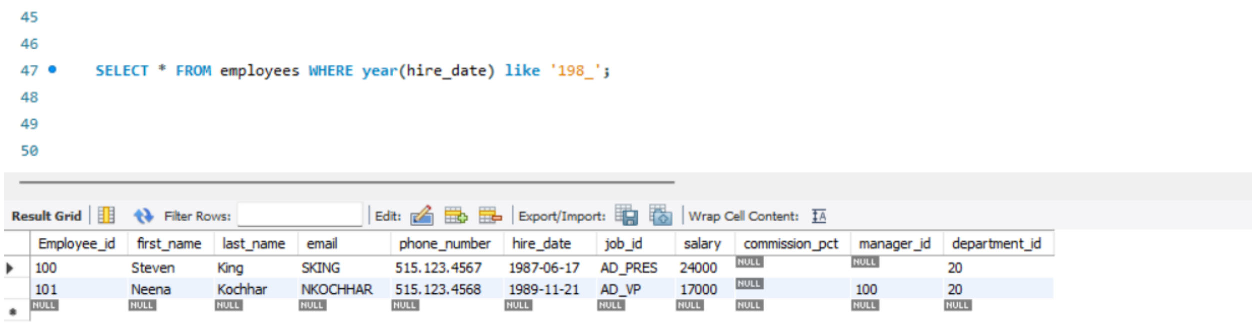


```
SELECT * FROM employees e WHERE 5 >(SELECT COUNT(*) FROM employees WHERE e.salary > salary) ;
```

Employee_id	first_name	last_name	email	phone_number	hire_date	job_id	salary	commission_pct	manager_id	department_id
118	Guy	Himuro	GHIMURO	515.127.4565	1998-01-02	PU_CLERK	2600	NULL	114	60
119	Karen	Colmenares	KCOLMENA	515.127.4566	1999-04-08	PU_CLERK	2500	NULL	114	130
126	Irene	Mikkilineni	IMIKKILI	650.124.1224	1998-11-12	ST_CLERK	2700	NULL	120	50
127	James	Landry	JLANDRY	650.124.1334	1999-01-02	ST_CLERK	2400	NULL	120	90
128	Steven	Markle	SMARKLE	650.124.1434	2000-03-04	ST_CLERK	2200	NULL	120	50
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

16. Find the employees hired in the 80s

SELECT * FROM employees WHERE year(hire_date) like '198_';

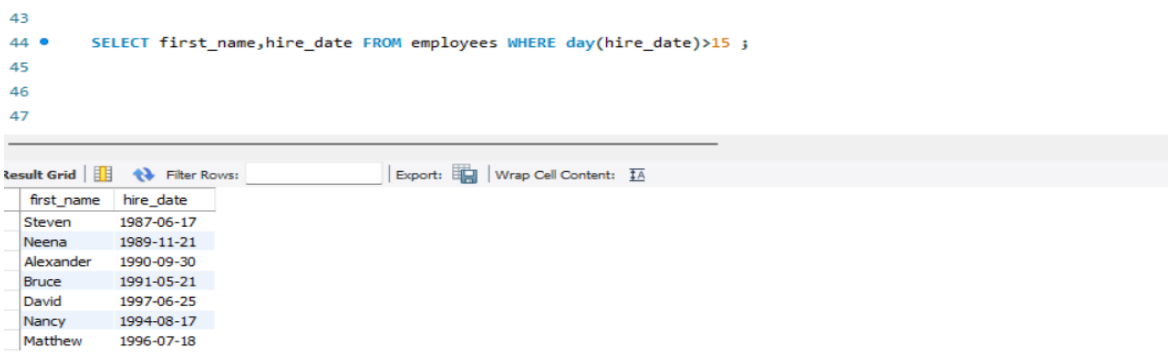


```
SELECT * FROM employees WHERE year(hire_date) like '198_';
```

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	NULL	NULL	20
101	Neena	Kochhar	NKOCHHAR	515.123.4568	1989-11-21	AD_VP	17000	NULL	100	20
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

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

SELECT first_name,hire_date FROM employees WHERE day(hire_date)>15 ;



```
SELECT first_name,hire_date FROM employees WHERE day(hire_date)>15 ;
```

first_name	hire_date
Steven	1987-06-17
Neena	1989-11-21
Alexander	1990-09-30
Bruce	1991-05-21
David	1997-06-25
Nancy	1994-08-17
Matthew	1996-07-18