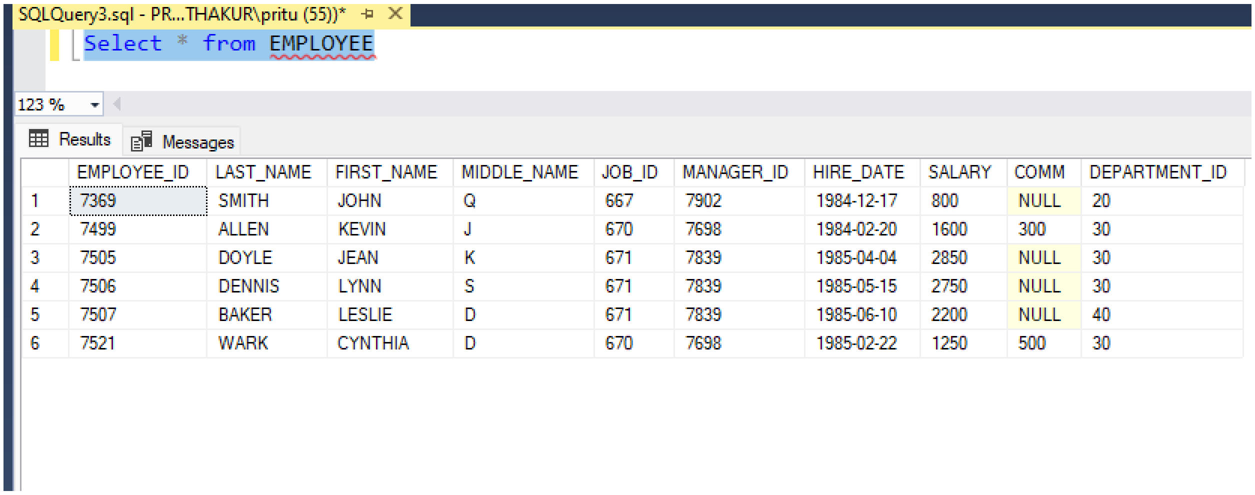
SQL_CaseStudy_2

Simple Queries

1. List all the employee details.

   Query:

   Select * from EMPLOYEE



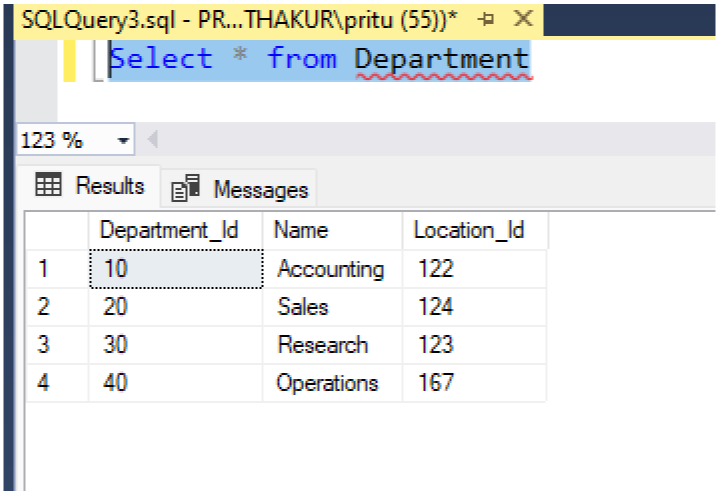
```
Select * from EMPLOYEE
```

	EMPLOYEE_ID	LAST_NAME	FIRST_NAME	MIDDLE_NAME	JOB_ID	MANAGER_ID	HIRE_DATE	SALARY	COMM	DEPARTMENT_ID
1	7369	SMITH	JOHN	Q	667	7902	1984-12-17	800	NULL	20
2	7499	ALLEN	KEVIN	J	670	7698	1984-02-20	1600	300	30
3	7505	DOYLE	JEAN	K	671	7839	1985-04-04	2850	NULL	30
4	7506	DENNIS	LYNN	S	671	7839	1985-05-15	2750	NULL	30
5	7507	BAKER	LESLIE	D	671	7839	1985-06-10	2200	NULL	40
6	7521	WARK	CYNTHIA	D	670	7698	1985-02-22	1250	500	30

2. List all the department details.

   Query:

   Select * from Department



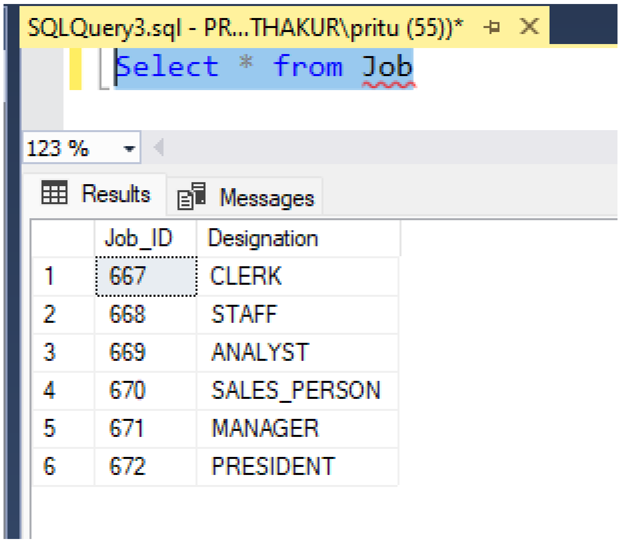
```
Select * from Department
```

	Department_Id	Name	Location_Id
1	10	Accounting	122
2	20	Sales	124
3	30	Research	123
4	40	Operations	167

3. List all job details.

   Query:

   Select * from Job



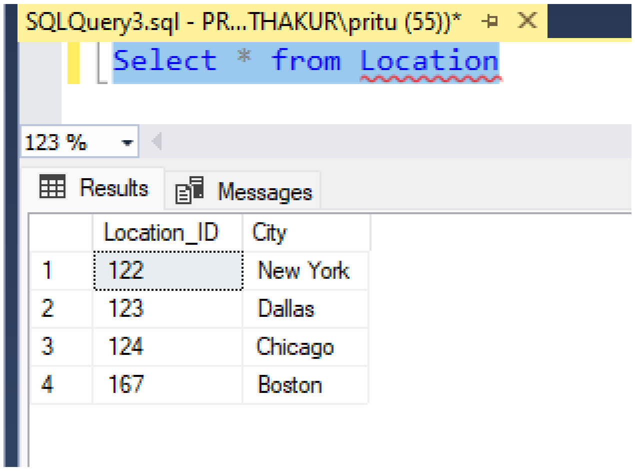
```
Select * from Job
```

	Job_ID	Designation
1	667	CLERK
2	668	STAFF
3	669	ANALYST
4	670	SALES_PERSON
5	671	MANAGER
6	672	PRESIDENT

4. List all the locations.

   Query:

   Select * from Location



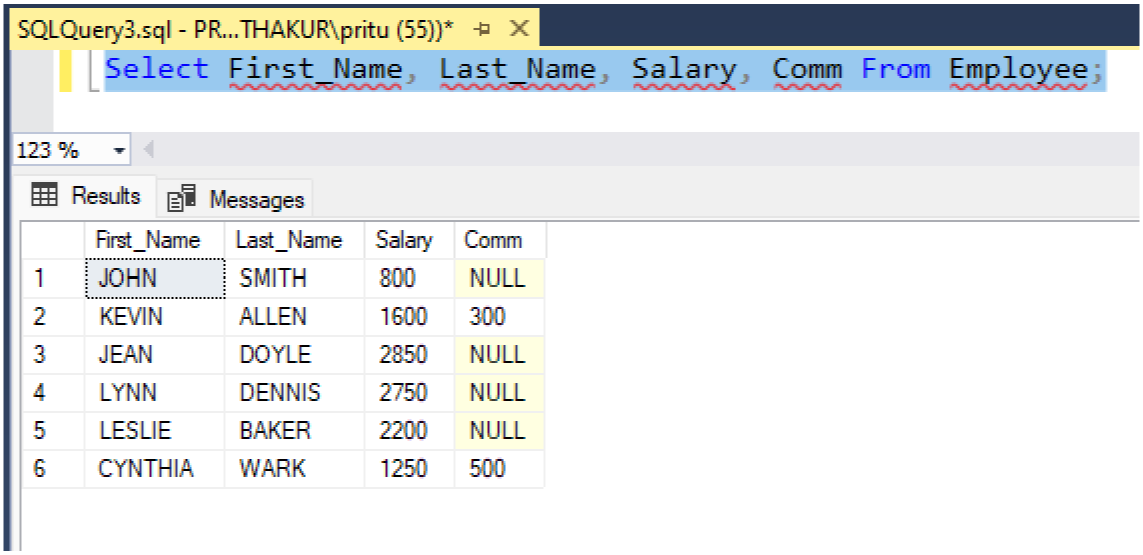
```
Select * from Location
```

	Location_ID	City
1	122	New York
2	123	Dallas
3	124	Chicago
4	167	Boston

5. List out the First Name, Last Name, Salary, Commission for all Employees.

   Query:

   Select First_Name, Last_Name, Salary, Comm From Employee;

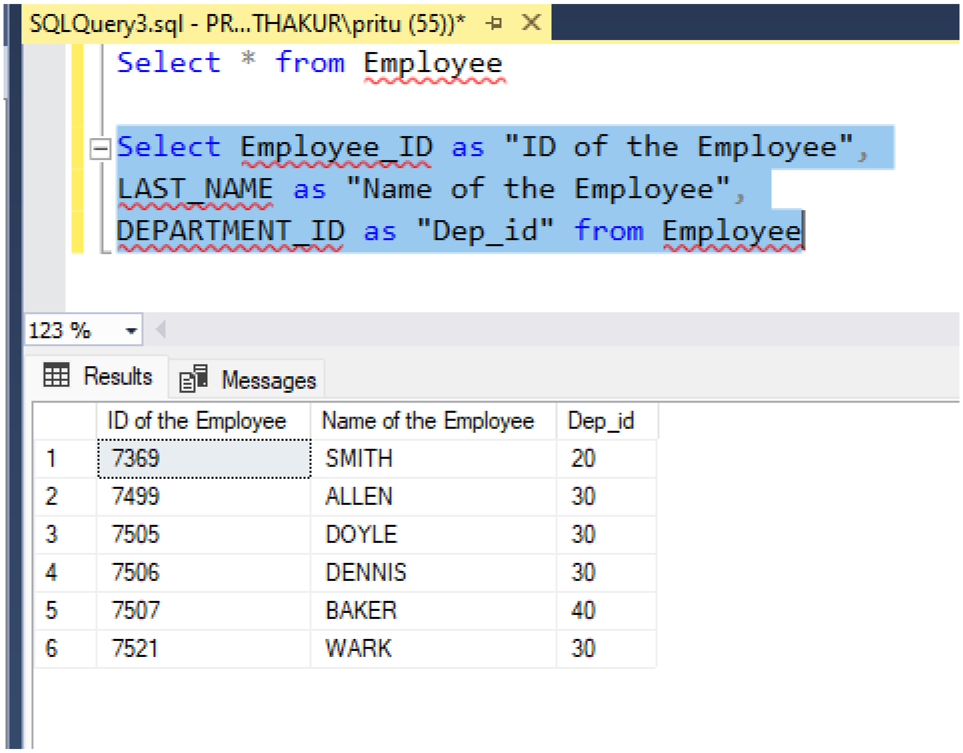


```sql
Select First_Name, Last_Name, Salary, Comm From Employee;
```

	First_Name	Last_Name	Salary	Comm
1	JOHN	SMITH	800	NULL
2	KEVIN	ALLEN	1600	300
3	JEAN	DOYLE	2850	NULL
4	LYNN	DENNIS	2750	NULL
5	LESLIE	BAKER	2200	NULL
6	CYNTHIA	WARK	1250	500

6. List out the Employee ID, Last Name, Department ID for all employees and alias Employee ID as "ID of the Employee", Last Name as "Name of the Employee", Department ID as "Dep_id".

   Query:
   Select Employee_ID as "ID of the Employee",
   LAST_NAME as "Name of the Employee",
   DEPARTMENT_ID as "Dep_id" from Employee



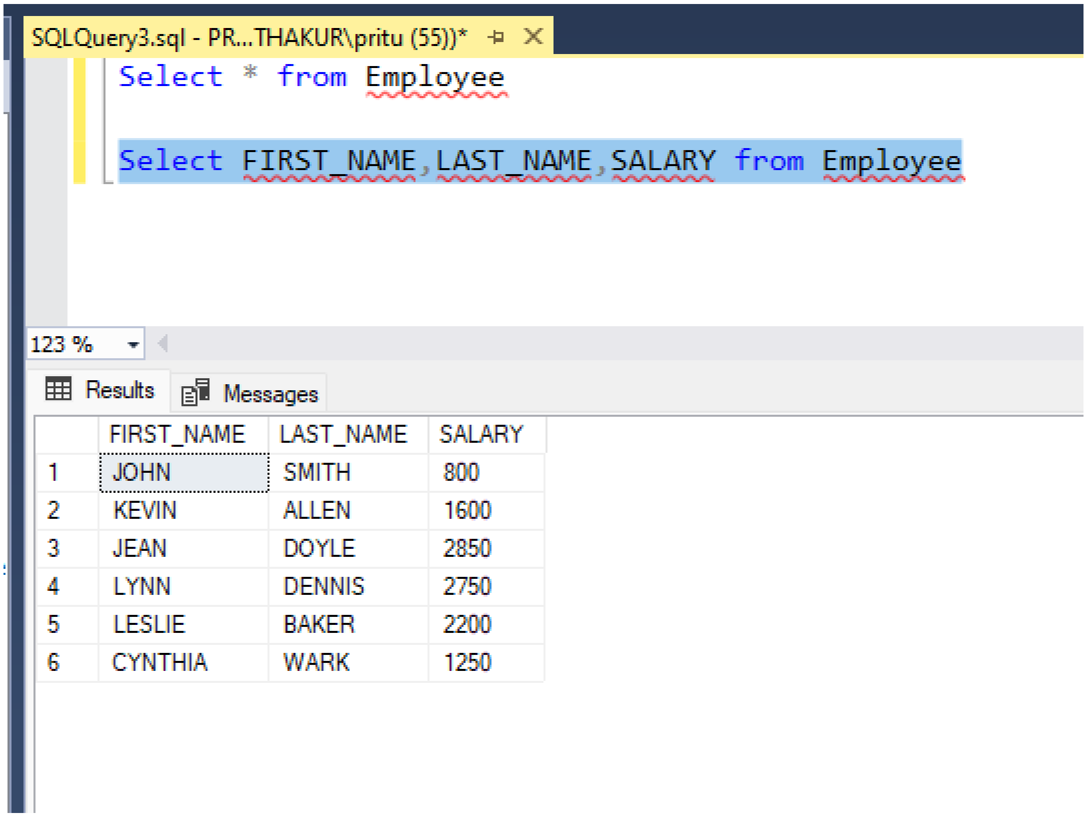
```
Select * from Employee

Select Employee_ID as "ID of the Employee",
LAST_NAME as "Name of the Employee",
DEPARTMENT_ID as "Dep_id" from Employee
```

	ID of the Employee	Name of the Employee	Dep_id
1	7369	SMITH	20
2	7499	ALLEN	30
3	7505	DOYLE	30
4	7506	DENNIS	30
5	7507	BAKER	40
6	7521	WARK	30

7. List out the annual salary of the employees with their names only.

Query:

Select FIRST_NAME,LAST_NAME,SALARY from Employee



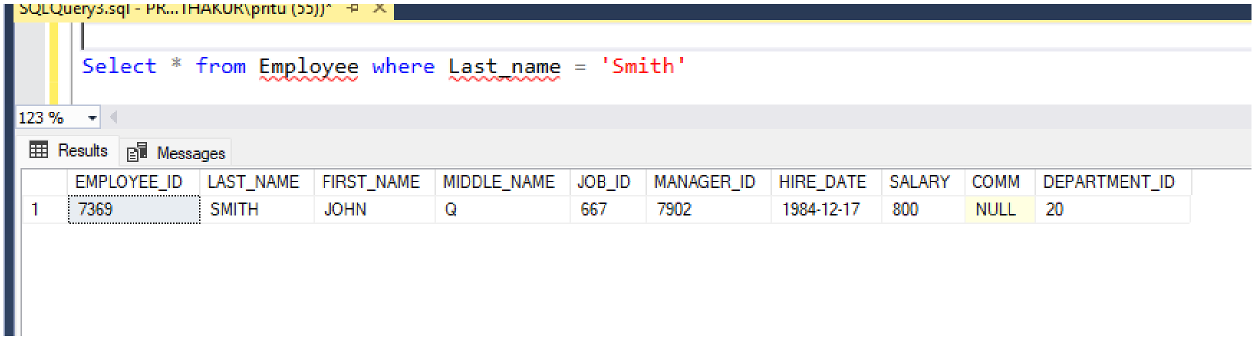
```sql
Select * from Employee

Select FIRST_NAME,LAST_NAME,SALARY from Employee
```

	FIRST_NAME	LAST_NAME	SALARY
1	JOHN	SMITH	800
2	KEVIN	ALLEN	1600
3	JEAN	DOYLE	2850
4	LYNN	DENNIS	2750
5	LESLIE	BAKER	2200
6	CYNTHIA	WARK	1250

Where Condition

1. List the details about "Smith".

Query: Select * from Employee where Last_name = 'Smith'

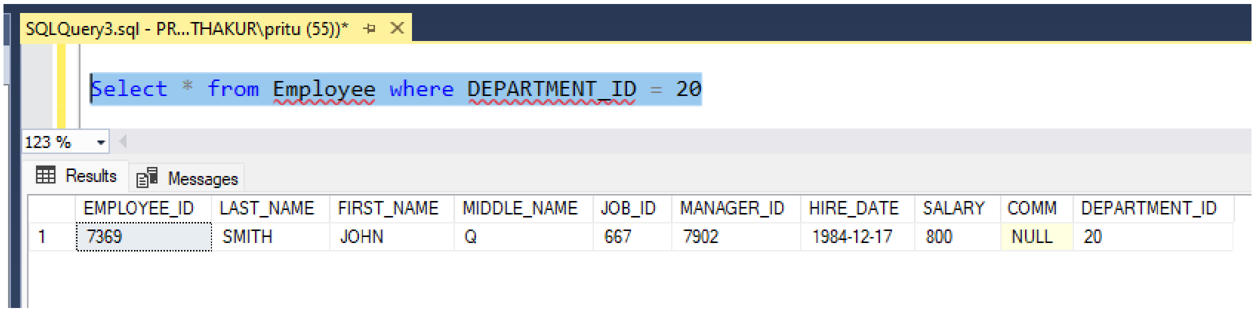


```sql
Select * from Employee where Last_name = 'Smith'
```

	EMPLOYEE_ID	LAST_NAME	FIRST_NAME	MIDDLE_NAME	JOB_ID	MANAGER_ID	HIRE_DATE	SALARY	COMM	DEPARTMENT_ID
1	7369	SMITH	JOHN	Q	667	7902	1984-12-17	800	NULL	20

2. List out the employees who are working in department 20.

Query: Select * from Employee where DEPARTMENT_ID = 20

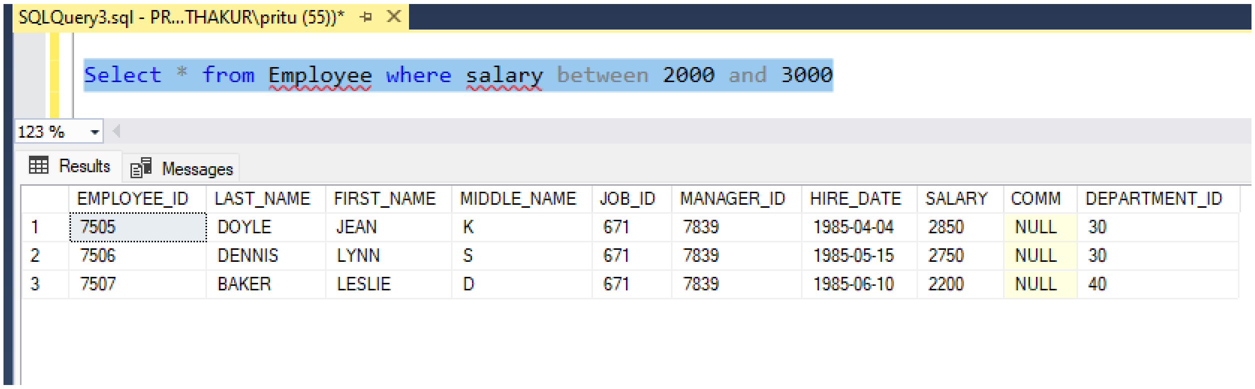


```sql
Select * from Employee where DEPARTMENT_ID = 20
```

	EMPLOYEE_ID	LAST_NAME	FIRST_NAME	MIDDLE_NAME	JOB_ID	MANAGER_ID	HIRE_DATE	SALARY	COMM	DEPARTMENT_ID
1	7369	SMITH	JOHN	Q	667	7902	1984-12-17	800	NULL	20

3. List out the employees who are earning salary between 2000 and 3000.

Query: Select * from Employee where salary between 2000 and 3000

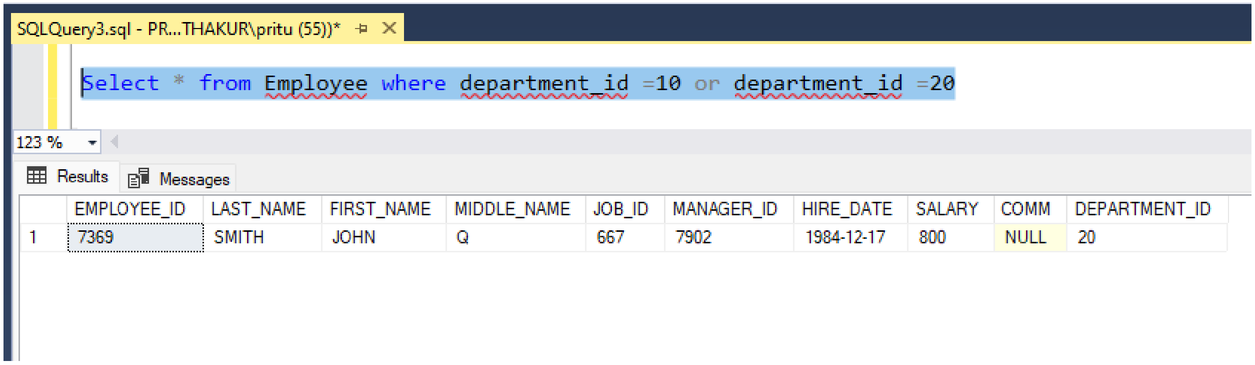


```sql
Select * from Employee where salary between 2000 and 3000
```

	EMPLOYEE_ID	LAST_NAME	FIRST_NAME	MIDDLE_NAME	JOB_ID	MANAGER_ID	HIRE_DATE	SALARY	COMM	DEPARTMENT_ID
1	7505	DOYLE	JEAN	K	671	7839	1985-04-04	2850	NULL	30
2	7506	DENNIS	LYNN	S	671	7839	1985-05-15	2750	NULL	30
3	7507	BAKER	LESLIE	D	671	7839	1985-06-10	2200	NULL	40

4. List out the employees who are working in department 10 or 20.

Query: Select * from Employee where department_id =10 or department_id =20

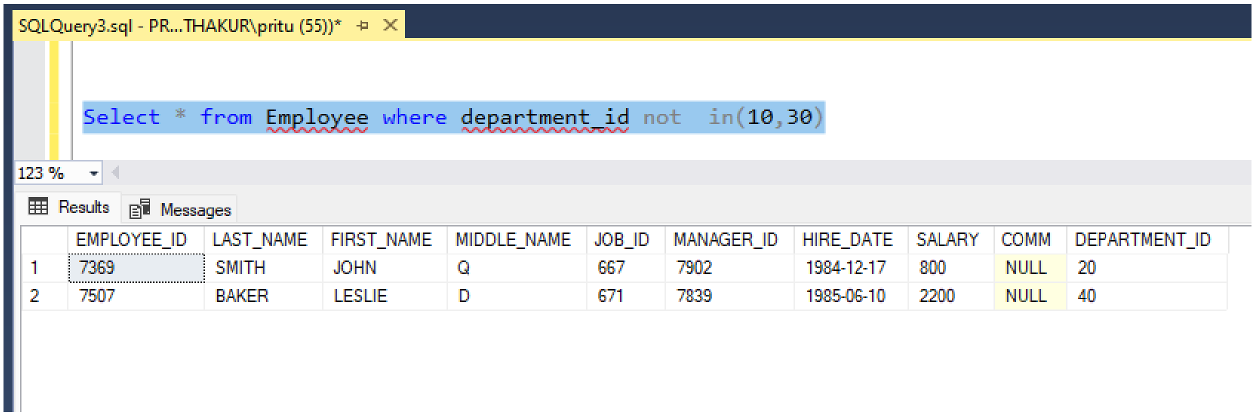


```
Select * from Employee where department_id =10 or department_id =20
```

	EMPLOYEE_ID	LAST_NAME	FIRST_NAME	MIDDLE_NAME	JOB_ID	MANAGER_ID	HIRE_DATE	SALARY	COMM	DEPARTMENT_ID
1	7369	SMITH	JOHN	Q	667	7902	1984-12-17	800	NULL	20

5. Find out the employees who are not working in department 10 or 30.

Query: Select * from Employee where department_id not in(10,30)

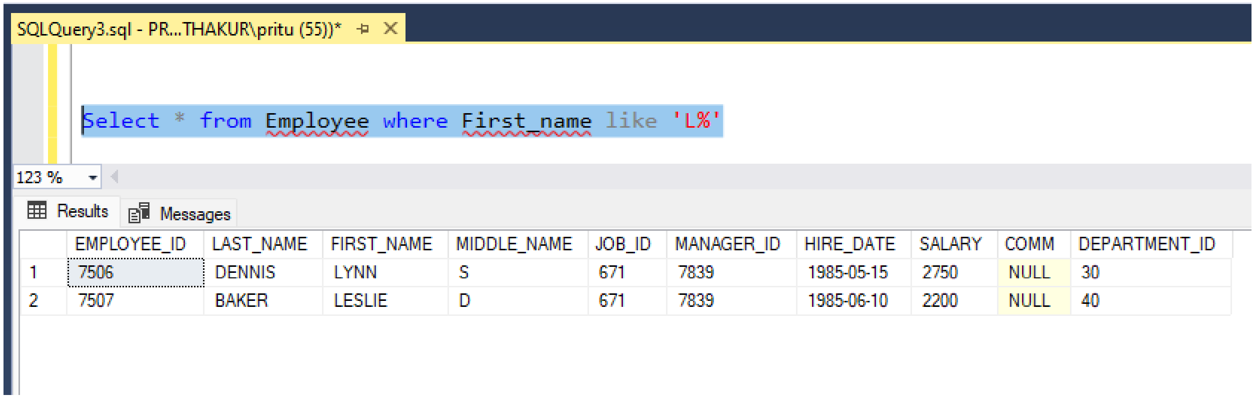


```
Select * from Employee where department_id not  in(10,30)
```

	EMPLOYEE_ID	LAST_NAME	FIRST_NAME	MIDDLE_NAME	JOB_ID	MANAGER_ID	HIRE_DATE	SALARY	COMM	DEPARTMENT_ID
1	7369	SMITH	JOHN	Q	667	7902	1984-12-17	800	NULL	20
2	7507	BAKER	LESLIE	D	671	7839	1985-06-10	2200	NULL	40

6. List out the employees whose name starts with 'L'.

Query: Select * from Employee where First_name like 'L%'

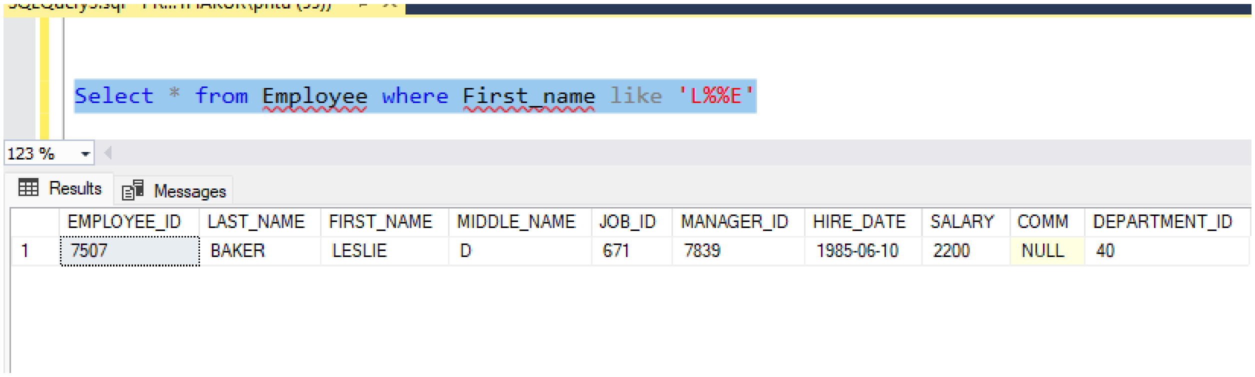


```sql
Select * from Employee where First_name like 'L%'
```

	EMPLOYEE_ID	LAST_NAME	FIRST_NAME	MIDDLE_NAME	JOB_ID	MANAGER_ID	HIRE_DATE	SALARY	COMM	DEPARTMENT_ID
1	7506	DENNIS	LYNN	S	671	7839	1985-05-15	2750	NULL	30
2	7507	BAKER	LESLIE	D	671	7839	1985-06-10	2200	NULL	40

7. List out the employees whose name starts with 'L' and ends with 'E'.

Query: Select * from Employee where First_name like 'L%%E'

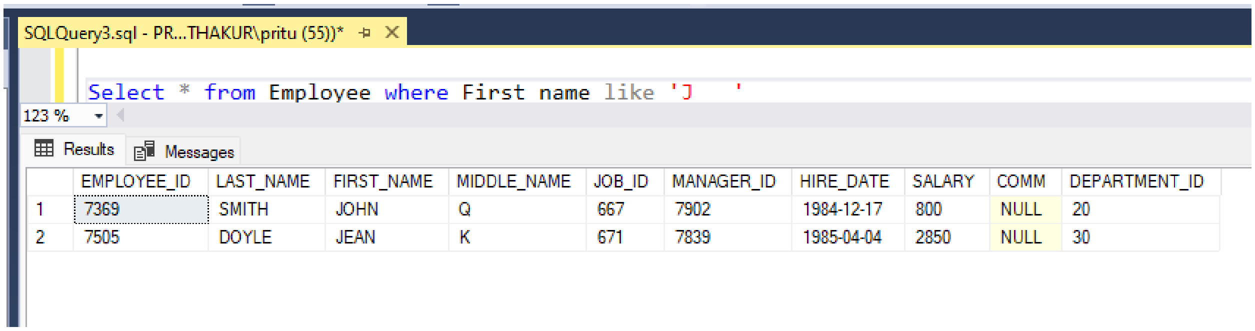


```sql
Select * from Employee where First_name like 'L%%E'
```

	EMPLOYEE_ID	LAST_NAME	FIRST_NAME	MIDDLE_NAME	JOB_ID	MANAGER_ID	HIRE_DATE	SALARY	COMM	DEPARTMENT_ID
1	7507	BAKER	LESLIE	D	671	7839	1985-06-10	2200	NULL	40

8. List out the employees whose name length is 4 and start with 'J'.

Query: Select * from Employee where First_name like 'J___'

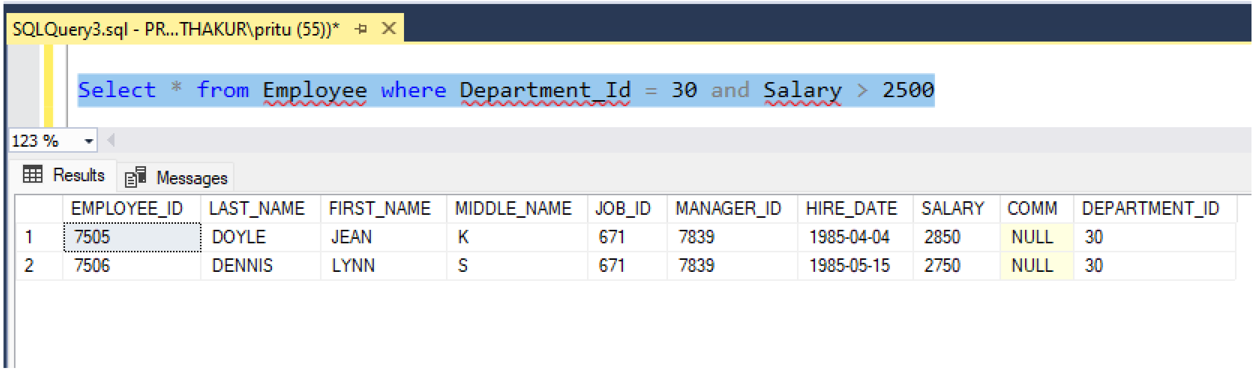


```
Select * from Employee where First name like 'J   '
```

	EMPLOYEE_ID	LAST_NAME	FIRST_NAME	MIDDLE_NAME	JOB_ID	MANAGER_ID	HIRE_DATE	SALARY	COMM	DEPARTMENT_ID
1	7369	SMITH	JOHN	Q	667	7902	1984-12-17	800	NULL	20
2	7505	DOYLE	JEAN	K	671	7839	1985-04-04	2850	NULL	30

9. List out the employees who are working in department 30 and draw the salaries more than 2500.

Query: Select * from Employee where Department_Id = 30 and Salary > 2500

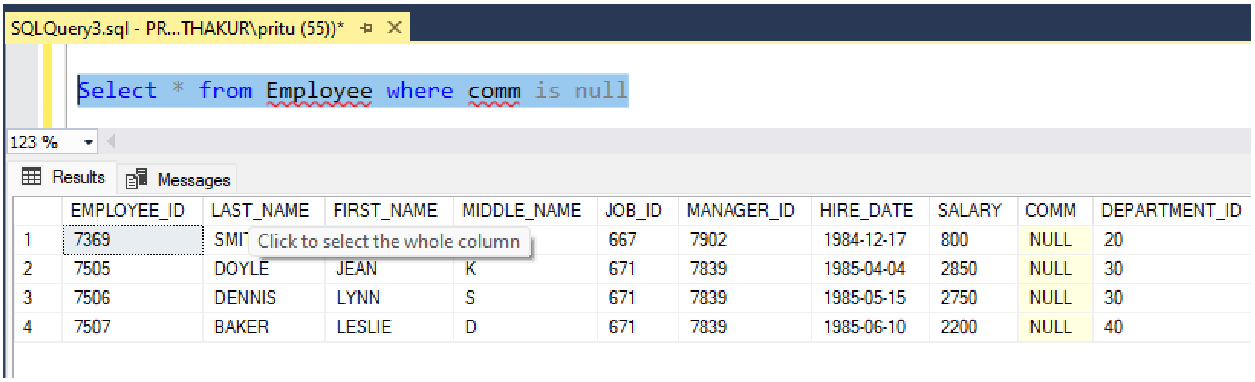


```
Select * from Employee where Department_Id = 30 and Salary > 2500
```

	EMPLOYEE_ID	LAST_NAME	FIRST_NAME	MIDDLE_NAME	JOB_ID	MANAGER_ID	HIRE_DATE	SALARY	COMM	DEPARTMENT_ID
1	7505	DOYLE	JEAN	K	671	7839	1985-04-04	2850	NULL	30
2	7506	DENNIS	LYNN	S	671	7839	1985-05-15	2750	NULL	30

10. List out the employees who are not receiving commission.

Query: Select * from Employee where comm is null


SQLQuery3.sql - PR...THAKUR\pritu (55))*
123 %
Results
Messages
Click to select the whole column

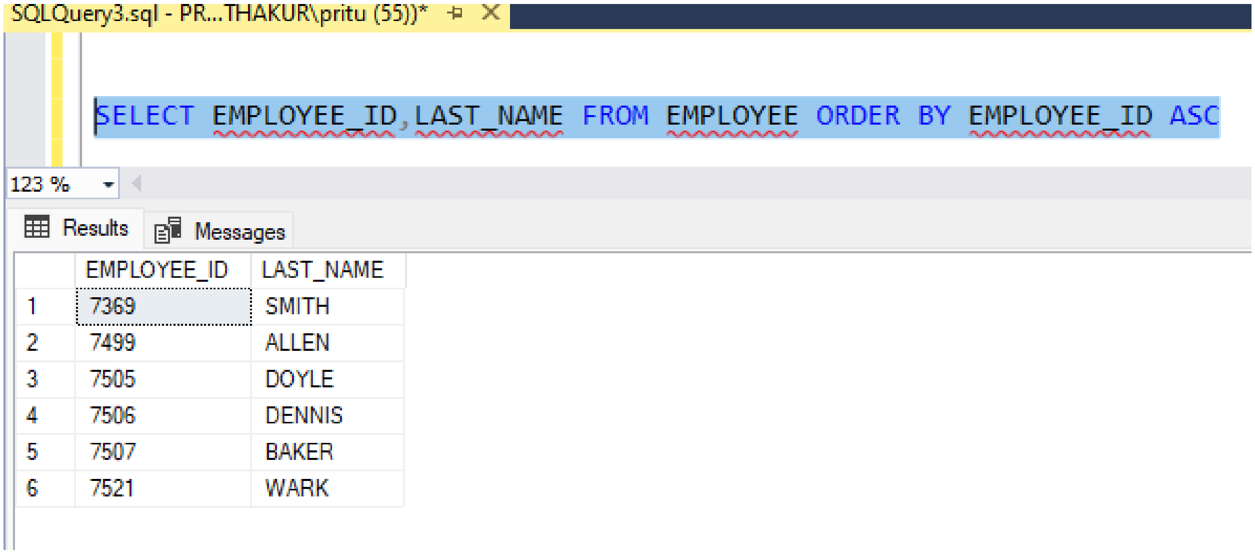
```
Select * from Employee where comm is null
```

	EMPLOYEE_ID	LAST_NAME	FIRST_NAME	MIDDLE_NAME	JOB_ID	MANAGER_ID	HIRE_DATE	SALARY	COMM	DEPARTMENT_ID
1	7369	SMI			667	7902	1984-12-17	800	NULL	20
2	7505	DOYLE	JEAN	K	671	7839	1985-04-04	2850	NULL	30
3	7506	DENNIS	LYNN	S	671	7839	1985-05-15	2750	NULL	30
4	7507	BAKER	LESLIE	D	671	7839	1985-06-10	2200	NULL	40

ORDER BY Clause:

1. List out the Employee ID and Last Name in ascending order based on the Employee ID.

Query: SELECT EMPLOYEE_ID,LAST_NAME FROM EMPLOYEE ORDER BY EMPLOYEE_ID ASC

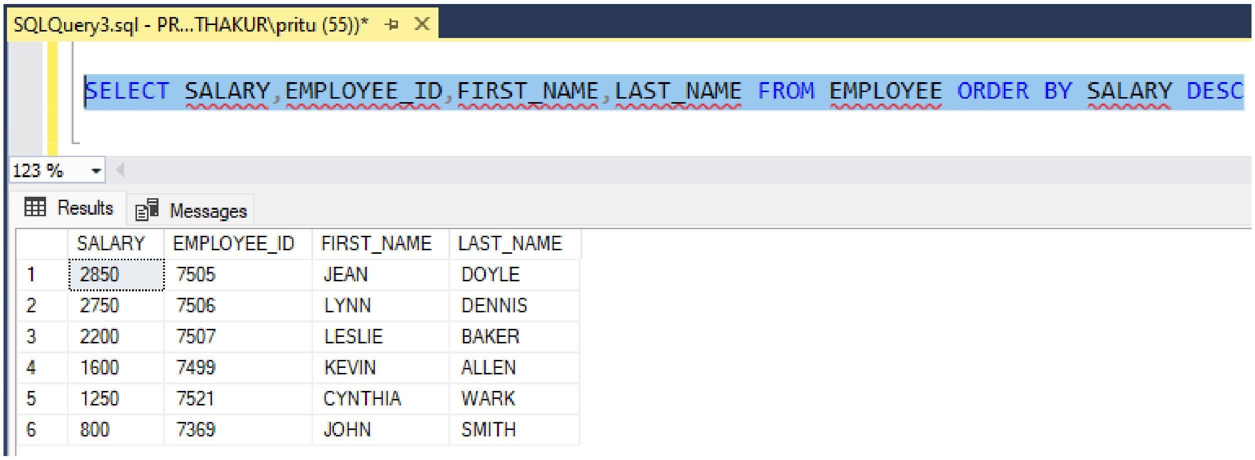


```
SELECT EMPLOYEE_ID,LAST_NAME FROM EMPLOYEE ORDER BY EMPLOYEE_ID ASC
```

	EMPLOYEE_ID	LAST_NAME
1	7369	SMITH
2	7499	ALLEN
3	7505	DOYLE
4	7506	DENNIS
5	7507	BAKER
6	7521	WARK

2. List out the Employee ID and Name in descending order based on salary.

Query: SELECT SALARY,EMPLOYEE_ID,FIRST_NAME,LAST_NAME FROM EMPLOYEE ORDER BY SALARY DESC

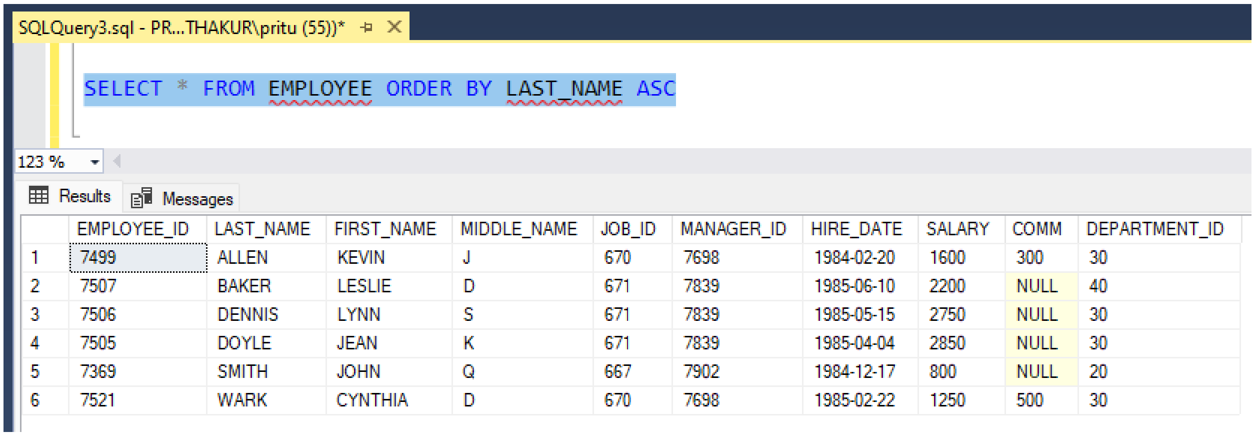


```
SELECT SALARY,EMPLOYEE_ID,FIRST_NAME,LAST_NAME FROM EMPLOYEE ORDER BY SALARY DESC
```

	SALARY	EMPLOYEE_ID	FIRST_NAME	LAST_NAME
1	2850	7505	JEAN	DOYLE
2	2750	7506	LYNN	DENNIS
3	2200	7507	LESLIE	BAKER
4	1600	7499	KEVIN	ALLEN
5	1250	7521	CYNTHIA	WARK
6	800	7369	JOHN	SMITH

3. List out the employee details according to their Last Name in ascending-order.

Query: SELECT * FROM EMPLOYEE ORDER BY LAST_NAME ASC



```
SELECT * FROM EMPLOYEE ORDER BY LAST_NAME ASC
```

	EMPLOYEE_ID	LAST_NAME	FIRST_NAME	MIDDLE_NAME	JOB_ID	MANAGER_ID	HIRE_DATE	SALARY	COMM	DEPARTMENT_ID
1	7499	ALLEN	KEVIN	J	670	7698	1984-02-20	1600	300	30
2	7507	BAKER	LESLIE	D	671	7839	1985-06-10	2200	NULL	40
3	7506	DENNIS	LYNN	S	671	7839	1985-05-15	2750	NULL	30
4	7505	DOYLE	JEAN	K	671	7839	1985-04-04	2850	NULL	30
5	7369	SMITH	JOHN	Q	667	7902	1984-12-17	800	NULL	20
6	7521	WARK	CYNTHIA	D	670	7698	1985-02-22	1250	500	30

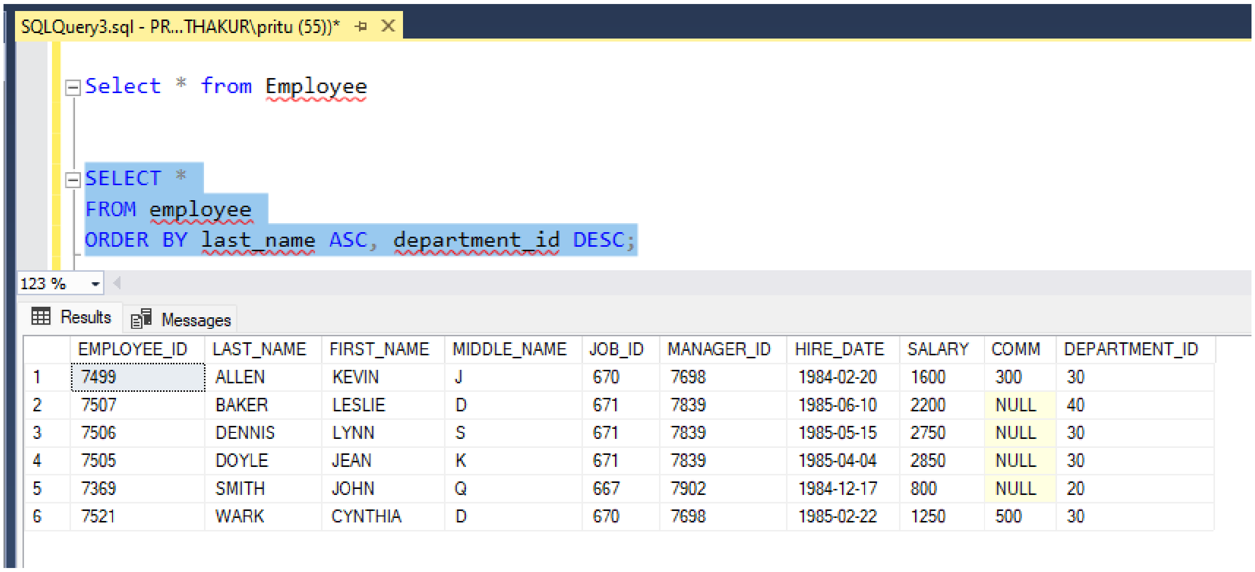
4. List out the employee details according to their Last Name in ascending order and then Department ID in descending order.

Query: SELECT * FROM employee

ORDER BY last_name ASC, department_id DESC;

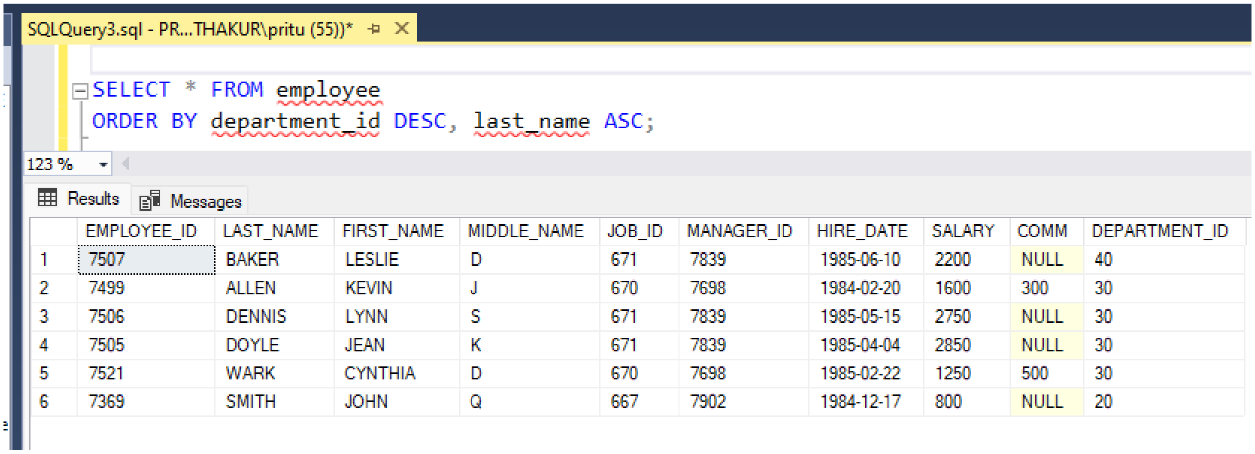
SELECT * FROM employee

ORDER BY department_id DESC, last_name ASC;



```
Select * from Employee


SELECT *
FROM employee
ORDER BY last_name ASC, department_id DESC;
```

	EMPLOYEE_ID	LAST_NAME	FIRST_NAME	MIDDLE_NAME	JOB_ID	MANAGER_ID	HIRE_DATE	SALARY	COMM	DEPARTMENT_ID
1	7499	ALLEN	KEVIN	J	670	7698	1984-02-20	1600	300	30
2	7507	BAKER	LESLIE	D	671	7839	1985-06-10	2200	NULL	40
3	7506	DENNIS	LYNN	S	671	7839	1985-05-15	2750	NULL	30
4	7505	DOYLE	JEAN	K	671	7839	1985-04-04	2850	NULL	30
5	7369	SMITH	JOHN	Q	667	7902	1984-12-17	800	NULL	20
6	7521	WARK	CYNTHIA	D	670	7698	1985-02-22	1250	500	30



```
SELECT * FROM employee
ORDER BY department_id DESC, last_name ASC;
```

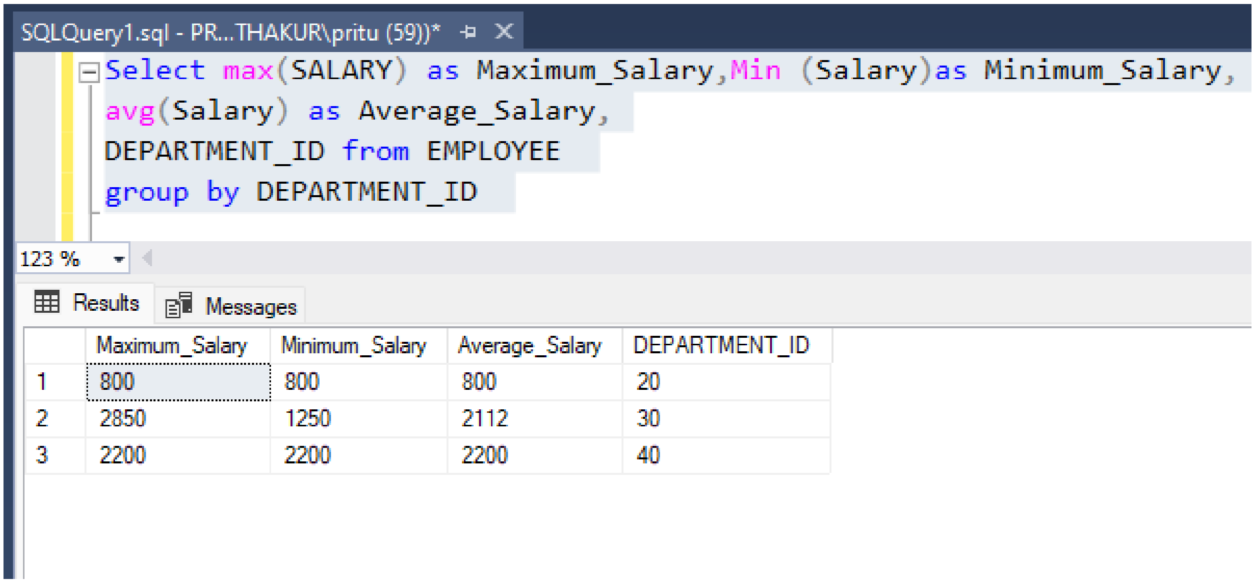
	EMPLOYEE_ID	LAST_NAME	FIRST_NAME	MIDDLE_NAME	JOB_ID	MANAGER_ID	HIRE_DATE	SALARY	COMM	DEPARTMENT_ID
1	7507	BAKER	LESLIE	D	671	7839	1985-06-10	2200	NULL	40
2	7499	ALLEN	KEVIN	J	670	7698	1984-02-20	1600	300	30
3	7506	DENNIS	LYNN	S	671	7839	1985-05-15	2750	NULL	30
4	7505	DOYLE	JEAN	K	671	7839	1985-04-04	2850	NULL	30
5	7521	WARK	CYNTHIA	D	670	7698	1985-02-22	1250	500	30
6	7369	SMITH	JOHN	Q	667	7902	1984-12-17	800	NULL	20

GROUP BY and HAVING Clause:

1. List out the department wise maximum salary, minimum salary, and average salary of the employees.

Query: Select max(SALARY) as Maximum_Salary,Min (Salary)as Minimum_Salary,avg(Salary) as Average_Salary,DEPARTMENT_ID from EMPLOYEE

group by DEPARTMENT_ID



```
Select max(SALARY) as Maximum_Salary,Min (Salary)as Minimum_Salary,
avg(Salary) as Average_Salary,
DEPARTMENT_ID from EMPLOYEE
group by DEPARTMENT_ID
```

	Maximum_Salary	Minimum_Salary	Average_Salary	DEPARTMENT_ID
1	800	800	800	20
2	2850	1250	2112	30
3	2200	2200	2200	40

2. List out the job wise maximum salary, minimum salary and average salary of the employees.

Query: Select JOB_ID,

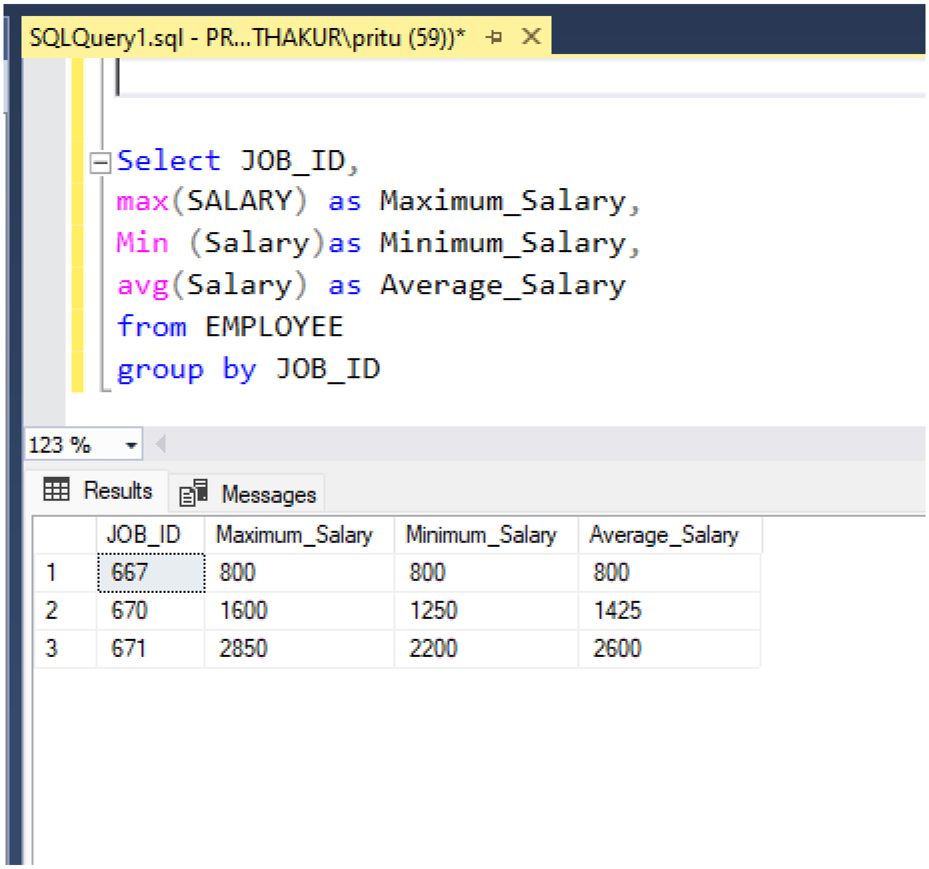
max(SALARY) as Maximum_Salary,

Min (Salary)as Minimum_Salary,

avg(Salary) as Average_Salary

from EMPLOYEE

group by JOB_ID



```
Select JOB_ID,
max(SALARY) as Maximum_Salary,
Min (Salary)as Minimum_Salary,
avg(Salary) as Average_Salary
from EMPLOYEE
group by JOB_ID
```

	JOB_ID	Maximum_Salary	Minimum_Salary	Average_Salary
1	667	800	800	800
2	670	1600	1250	1425
3	671	2850	2200	2600

3. List out the number of employees who joined each month in ascending order.

Query:

SELECT

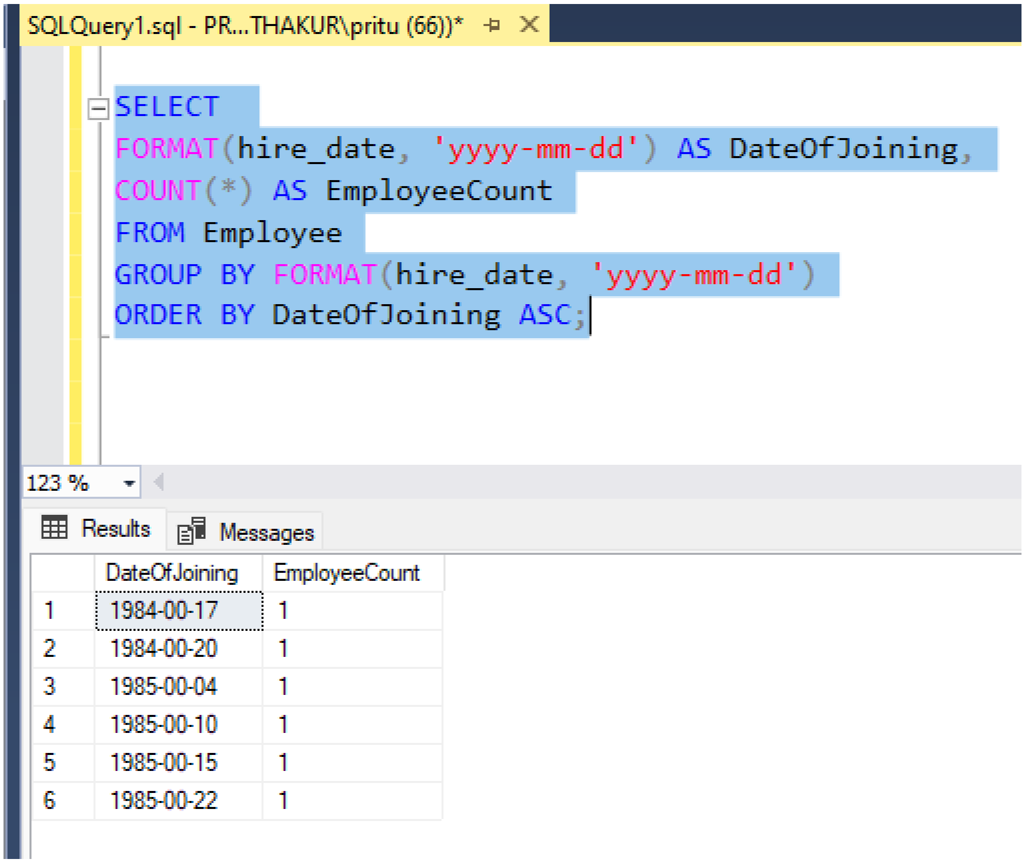
FORMAT(hire_date, 'yyyy-mm-dd') AS DateOfJoining,

COUNT(*) AS EmployeeCount

FROM Employee

GROUP BY FORMAT (hire_date, 'yyyy-mm-dd')

ORDER BY DateOfJoining ASC;



```sql
SELECT
FORMAT(hire_date, 'yyyy-mm-dd') AS DateOfJoining,
COUNT(*) AS EmployeeCount
FROM Employee
GROUP BY FORMAT(hire_date, 'yyyy-mm-dd')
ORDER BY DateOfJoining ASC;
```

	DateOfJoining	EmployeeCount
1	1984-00-17	1
2	1984-00-20	1
3	1985-00-04	1
4	1985-00-10	1
5	1985-00-15	1
6	1985-00-22	1

4. List out the number of employees for each month and year in ascending order based on the year and month.

Query: SELECT

YEAR(HIRE_DATE) AS Year,

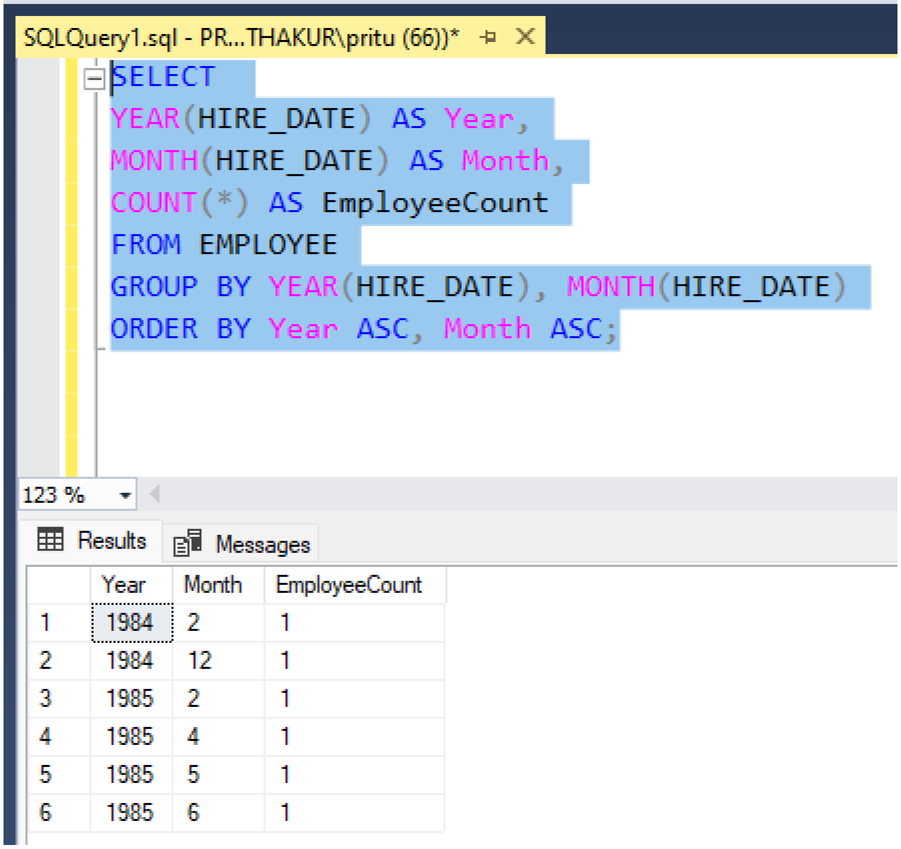
MONTH(HIRE_DATE) AS Month,

COUNT(*) AS EmployeeCount

FROM EMPLOYEE

GROUP BY YEAR(HIRE_DATE), MONTH(HIRE_DATE)

ORDER BY Year ASC, Month ASC;



```
SELECT
YEAR(HIRE_DATE) AS Year,
MONTH(HIRE_DATE) AS Month,
COUNT(*) AS EmployeeCount
FROM EMPLOYEE
GROUP BY YEAR(HIRE_DATE), MONTH(HIRE_DATE)
ORDER BY Year ASC, Month ASC;
```

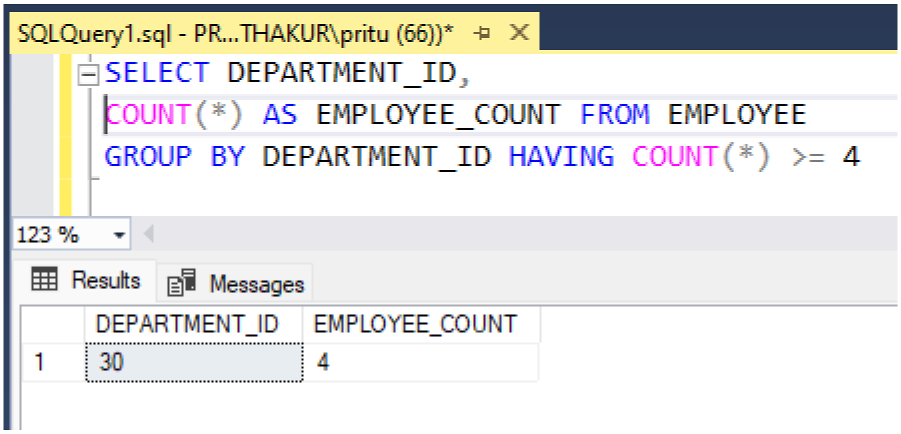
	Year	Month	EmployeeCount
1	1984	2	1
2	1984	12	1
3	1985	2	1
4	1985	4	1
5	1985	5	1
6	1985	6	1

6. List out the Department ID having at least four employees.

Query:

SELECT DEPARTMENT_ID,COUNT(*) AS EMPLOYEE_COUNT FROM EMPLOYEE

GROUP BY DEPARTMENT_ID HAVING COUNT(*) >= 4



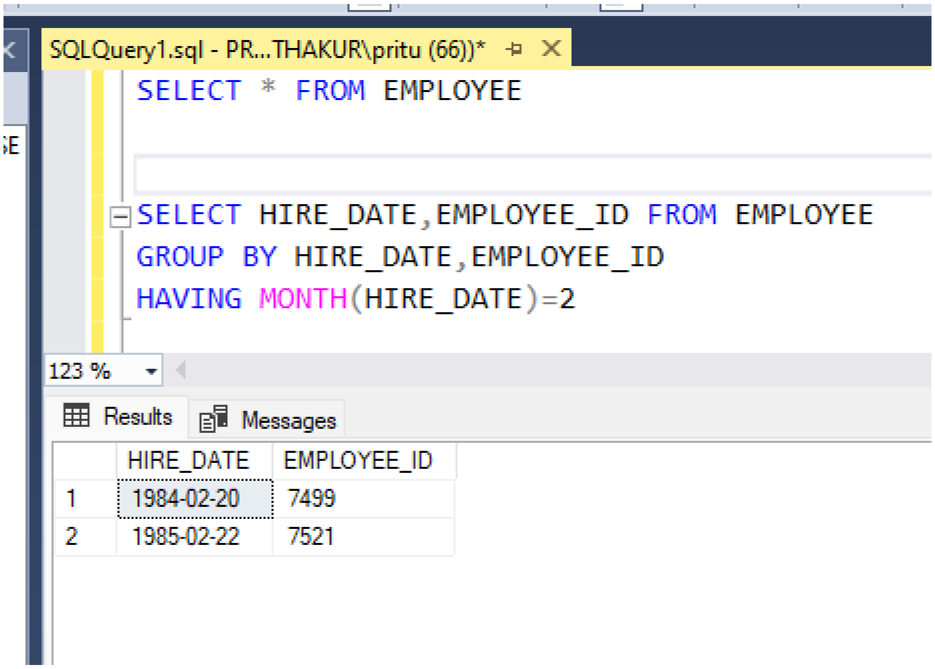
```
SELECT DEPARTMENT_ID,
COUNT(*) AS EMPLOYEE_COUNT FROM EMPLOYEE
GROUP BY DEPARTMENT_ID HAVING COUNT(*) >= 4
```

	DEPARTMENT_ID	EMPLOYEE_COUNT
1	30	4

6. How many employees joined in February month.

Query:

SELECT HIRE_DATE,EMPLOYEE_ID FROM EMPLOYEE GROUP BY HIRE_DATE,EMPLOYEE_ID HAVING MONTH(HIRE_DATE)=2



```
SELECT * FROM EMPLOYEE


SELECT HIRE_DATE,EMPLOYEE_ID FROM EMPLOYEE
GROUP BY HIRE_DATE,EMPLOYEE_ID
HAVING MONTH(HIRE_DATE)=2
```

	HIRE_DATE	EMPLOYEE_ID
1	1984-02-20	7499
2	1985-02-22	7521

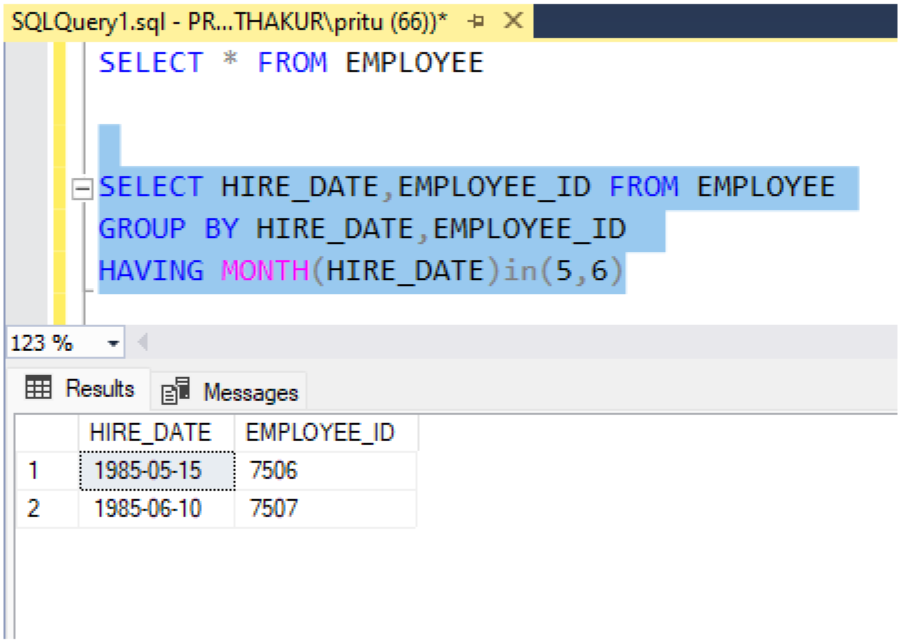
7. How many employees joined in May or June month.

Query:

SELECT HIRE_DATE,EMPLOYEE_ID FROM EMPLOYEE

GROUP BY HIRE_DATE,EMPLOYEE_ID

HAVING MONTH(HIRE_DATE)in(5,6)



```
SELECT * FROM EMPLOYEE


SELECT HIRE_DATE,EMPLOYEE_ID FROM EMPLOYEE
GROUP BY HIRE_DATE,EMPLOYEE_ID
HAVING MONTH(HIRE_DATE)in(5,6)
```

	HIRE_DATE	EMPLOYEE_ID
1	1985-05-15	7506
2	1985-06-10	7507

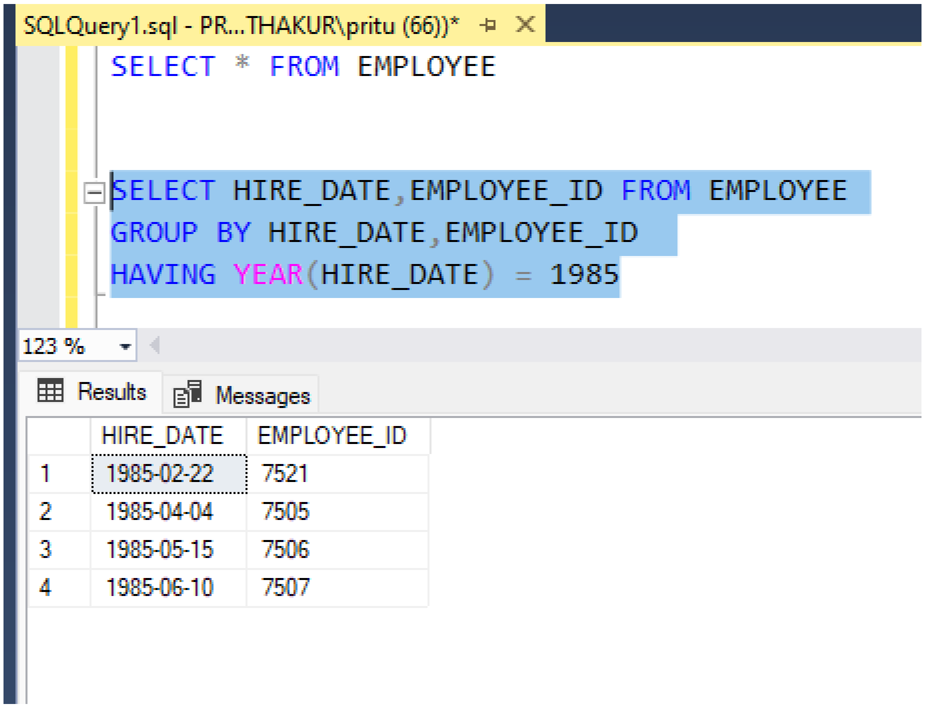
8. How many employees joined in 1985?

Query:

SELECT HIRE_DATE,EMPLOYEE_ID FROM EMPLOYEE

GROUP BY HIRE_DATE,EMPLOYEE_ID

HAVING YEAR(HIRE_DATE) = 1985



```sql
SELECT * FROM EMPLOYEE


SELECT HIRE_DATE,EMPLOYEE_ID FROM EMPLOYEE
GROUP BY HIRE_DATE,EMPLOYEE_ID
HAVING YEAR(HIRE_DATE) = 1985
```

	HIRE_DATE	EMPLOYEE_ID
1	1985-02-22	7521
2	1985-04-04	7505
3	1985-05-15	7506
4	1985-06-10	7507

9. How many employees joined each month in 1985?

Query:

SELECT

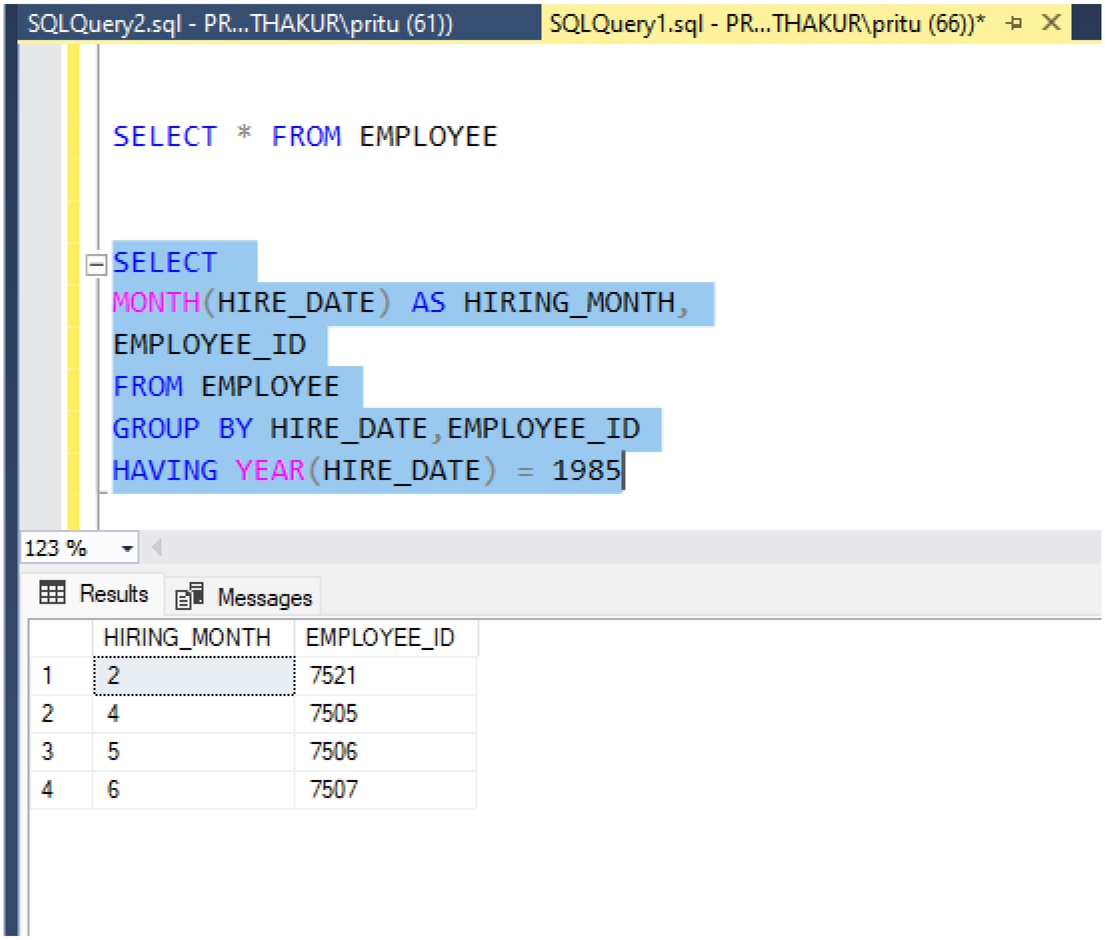
MONTH(HIRE_DATE) AS HIRING_MONTH,

EMPLOYEE_ID

FROM EMPLOYEE

GROUP BY HIRE_DATE,EMPLOYEE_ID

HAVING YEAR(HIRE_DATE) = 1985


SQLQuery2.sql - PR...THAKUR\pritu (61))
SQLQuery1.sql - PR...THAKUR\pritu (66))*
123 %
Results
Messages

```
SELECT * FROM EMPLOYEE


SELECT
MONTH(HIRE_DATE) AS HIRING_MONTH,
EMPLOYEE_ID
FROM EMPLOYEE
GROUP BY HIRE_DATE,EMPLOYEE_ID
HAVING YEAR(HIRE_DATE) = 1985
```

	HIRING_MONTH	EMPLOYEE_ID
1	2	7521
2	4	7505
3	5	7506
4	6	7507

10. How many employees were joined in April 1985?

Query:

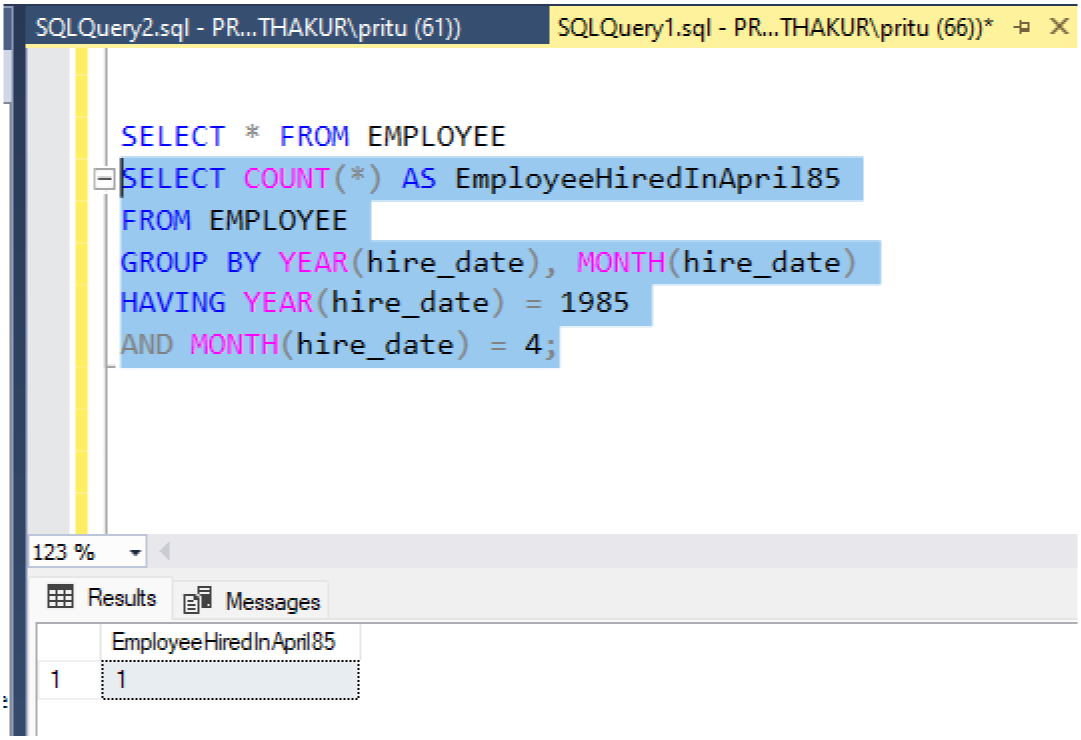
SELECT COUNT(*) AS EmployeeHiredInApril85

FROM EMPLOYEE

GROUP BY YEAR(hire_date), MONTH(hire_date)

HAVING YEAR(hire_date) = 1985

AND MONTH(hire_date) = 4;


SQLQuery2.sql - PR...THAKUR\pritu (61))
SQLQuery1.sql - PR...THAKUR\pritu (66))*
123 %
Results
Messages

```
SELECT * FROM EMPLOYEE
SELECT COUNT(*) AS EmployeeHiredInApril85
FROM EMPLOYEE
GROUP BY YEAR(hire_date), MONTH(hire_date)
HAVING YEAR(hire_date) = 1985
AND MONTH(hire_date) = 4;
```

	EmployeeHiredInApril85
1	1

11. Which is the Department ID having greater than or equal to 3 employees joining in April 1985?

Query:

SELECT DEPARTMENT_ID,

COUNT(*) AS EmployeeCount

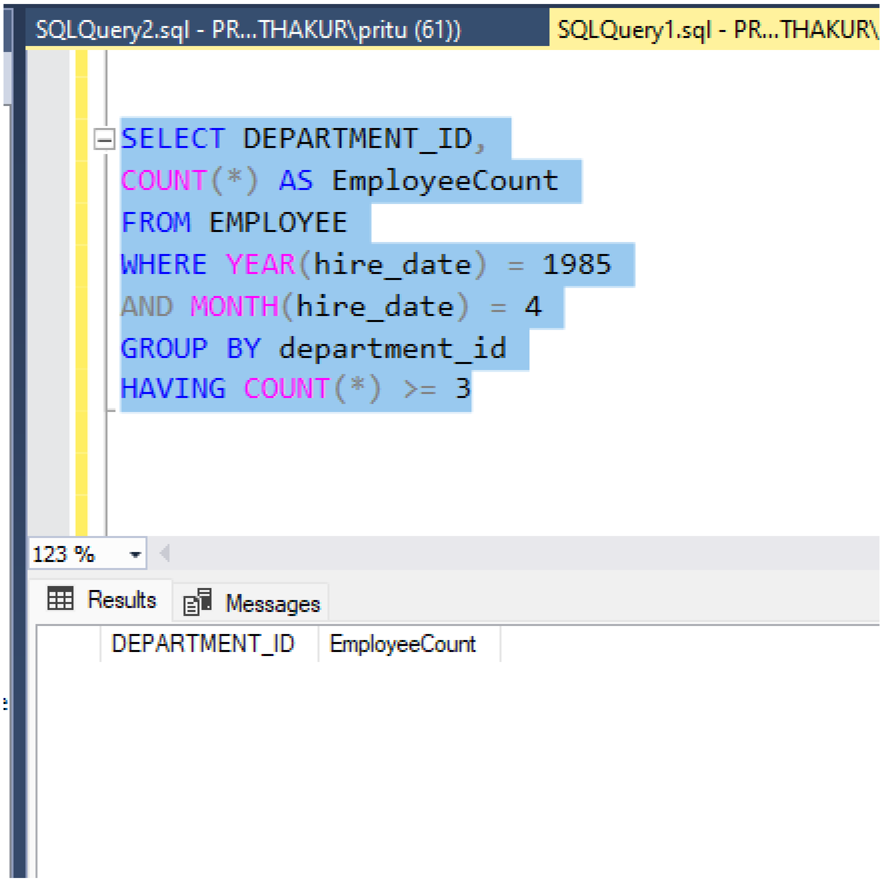
FROM EMPLOYEE

WHERE YEAR(hire_date) = 1985

AND MONTH(hire_date) = 4

GROUP BY department_id

HAVING COUNT(*) >= 3



SQLQuery2.sql - PR...THAKUR\pritu (61))
SQLQuery1.sql - PR...THAKUR\
123 %
Results
Messages

```
SELECT DEPARTMENT_ID,
COUNT(*) AS EmployeeCount
FROM EMPLOYEE
WHERE YEAR(hire_date) = 1985
AND MONTH(hire_date) = 4
GROUP BY department_id
HAVING COUNT(*) >= 3
```

DEPARTMENT_ID	EmployeeCount

Joins:

1. List out employees with their department names.

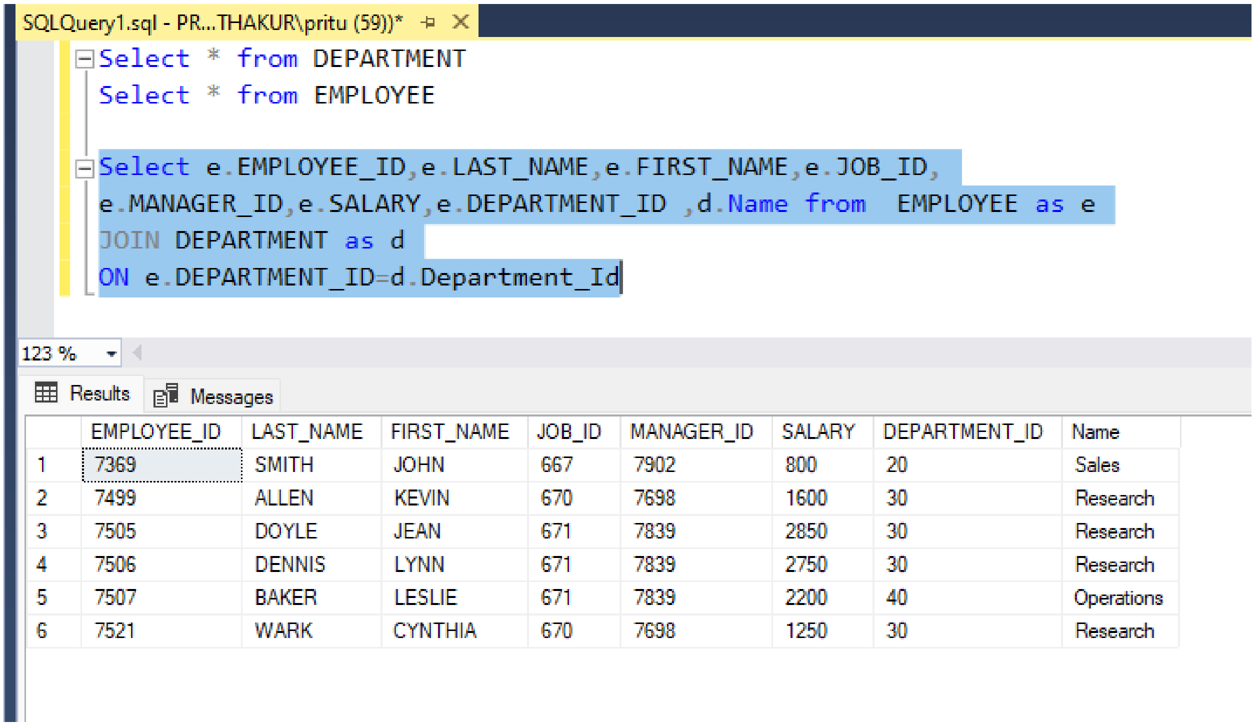
Query:

Select e.EMPLOYEE_ID,e.LAST_NAME,e.FIRST_NAME,e.JOB_ID,

e.MANAGER_ID,e.SALARY,e.DEPARTMENT_ID ,d.Name from EMPLOYEE as e

JOIN DEPARTMENT as d

ON e.DEPARTMENT_ID=d.Department_Id



```
Select * from DEPARTMENT
Select * from EMPLOYEE

Select e.EMPLOYEE_ID,e.LAST_NAME,e.FIRST_NAME,e.JOB_ID,
e.MANAGER_ID,e.SALARY,e.DEPARTMENT_ID ,d.Name from  EMPLOYEE as e
JOIN DEPARTMENT as d
ON e.DEPARTMENT_ID=d.Department_Id
```

	EMPLOYEE_ID	LAST_NAME	FIRST_NAME	JOB_ID	MANAGER_ID	SALARY	DEPARTMENT_ID	Name
1	7369	SMITH	JOHN	667	7902	800	20	Sales
2	7499	ALLEN	KEVIN	670	7698	1600	30	Research
3	7505	DOYLE	JEAN	671	7839	2850	30	Research
4	7506	DENNIS	LYNN	671	7839	2750	30	Research
5	7507	BAKER	LESLIE	671	7839	2200	40	Operations
6	7521	WARK	CYNTHIA	670	7698	1250	30	Research

2. Display employees with their designations.

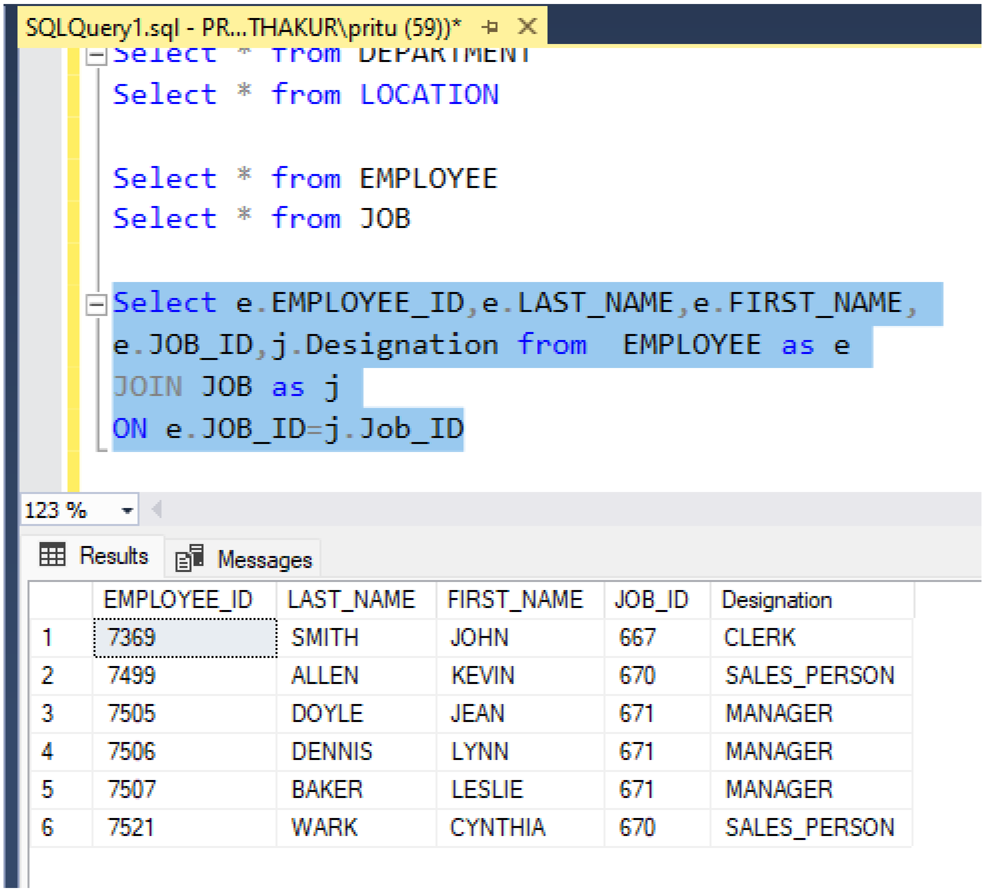
Query:

Select e.EMPLOYEE_ID,e.LAST_NAME,e.FIRST_NAME,

e.JOB_ID,j.Designation from EMPLOYEE as e

JOIN JOB as j

ON e.JOB_ID=j.Job_ID



```
Select * from DEPARTMENT
Select * from LOCATION

Select * from EMPLOYEE
Select * from JOB

Select e.EMPLOYEE_ID,e.LAST_NAME,e.FIRST_NAME,
e.JOB_ID,j.Designation from  EMPLOYEE as e
JOIN JOB as j
ON e.JOB_ID=j.Job_ID
```

	EMPLOYEE_ID	LAST_NAME	FIRST_NAME	JOB_ID	Designation
1	7369	SMITH	JOHN	667	CLERK
2	7499	ALLEN	KEVIN	670	SALES_PERSON
3	7505	DOYLE	JEAN	671	MANAGER
4	7506	DENNIS	LYNN	671	MANAGER
5	7507	BAKER	LESLIE	671	MANAGER
6	7521	WARK	CYNTHIA	670	SALES_PERSON

3. Display the employees with their department names and city.

Query:

Select E.EMPLOYEE_ID,E.LAST_NAME,E.FIRST_NAME,

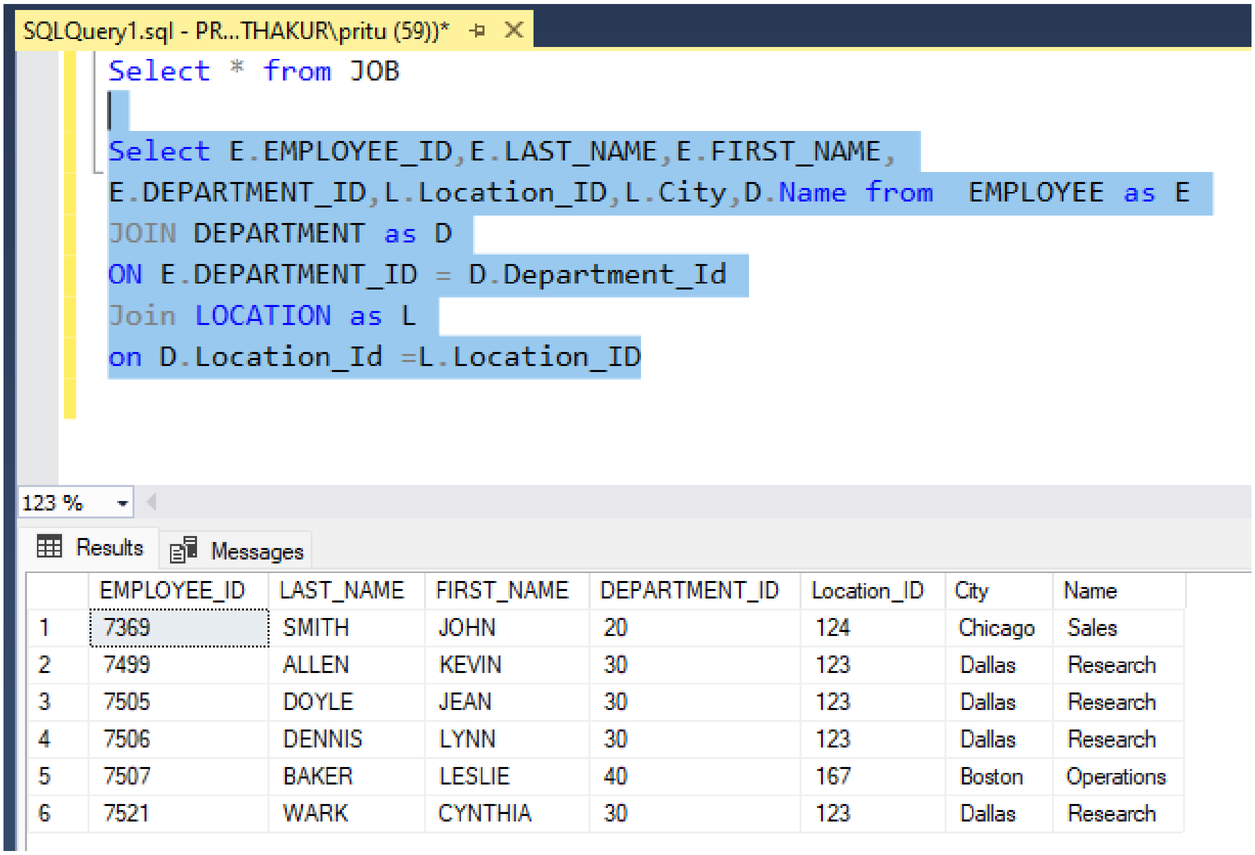
E.DEPARTMENT_ID,L.Location_ID,L.City,D.Name from EMPLOYEE as E

JOIN DEPARTMENT as D

ON E.DEPARTMENT_ID = D.Department_Id

Join LOCATION as L

on D.Location_Id =L.Location_ID



```
Select * from JOB

Select E.EMPLOYEE_ID,E.LAST_NAME,E.FIRST_NAME,
E.DEPARTMENT_ID,L.Location_ID,L.City,D.Name from  EMPLOYEE as E
JOIN DEPARTMENT as D
ON E.DEPARTMENT_ID = D.Department_Id
Join LOCATION as L
on D.Location_Id =L.Location_ID
```

	EMPLOYEE_ID	LAST_NAME	FIRST_NAME	DEPARTMENT_ID	Location_ID	City	Name
1	7369	SMITH	JOHN	20	124	Chicago	Sales
2	7499	ALLEN	KEVIN	30	123	Dallas	Research
3	7505	DOYLE	JEAN	30	123	Dallas	Research
4	7506	DENNIS	LYNN	30	123	Dallas	Research
5	7507	BAKER	LESLIE	40	167	Boston	Operations
6	7521	WARK	CYNTHIA	30	123	Dallas	Research

4. How many employees are working in different departments? Display with department names.

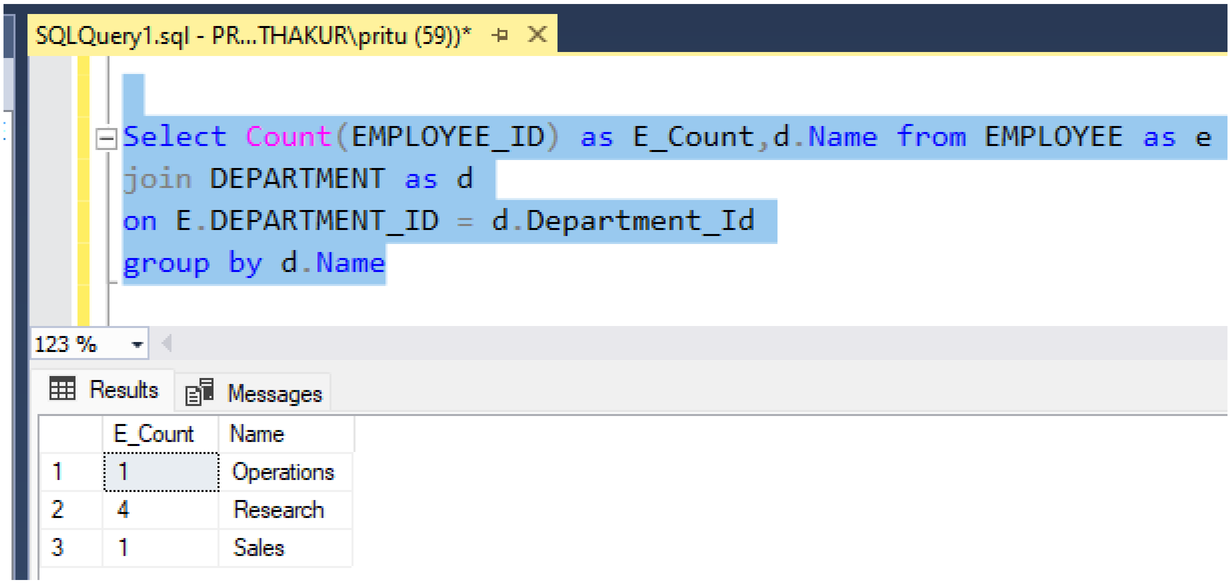
Query:

Select Count(EMPLOYEE_ID) as E_Count,d.Name from EMPLOYEE as e

join DEPARTMENT as d

on E.DEPARTMENT_ID = d.Department_Id

group by d.Name



```sql
Select Count(EMPLOYEE_ID) as E_Count,d.Name from EMPLOYEE as e
join DEPARTMENT as d
on E.DEPARTMENT_ID = d.Department_Id
group by d.Name
```

	E_Count	Name
1	1	Operations
2	4	Research
3	1	Sales

5. How many employees are working in the sales department?

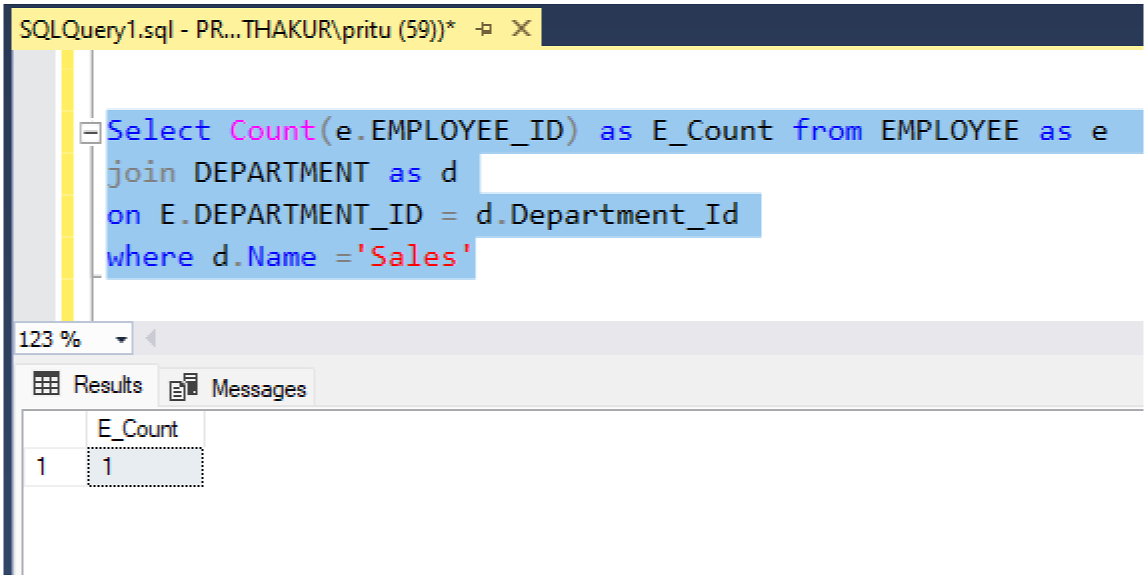
Query;

Select Count(e.EMPLOYEE_ID) as E_Count from EMPLOYEE as e

join DEPARTMENT as d

on E.DEPARTMENT_ID = d.Department_Id

where d.Name ='Sales'



```sql
Select Count(e.EMPLOYEE_ID) as E_Count from EMPLOYEE as e
join DEPARTMENT as d
on E.DEPARTMENT_ID = d.Department_Id
where d.Name ='Sales'
```

	E_Count
1	1

6. Which is the department having greater than or equal to 3 employees and display the department names in ascending order.

Query:

Select Count(E.EMPLOYEE_ID) as Employee_Count,D.Name from Employee as E

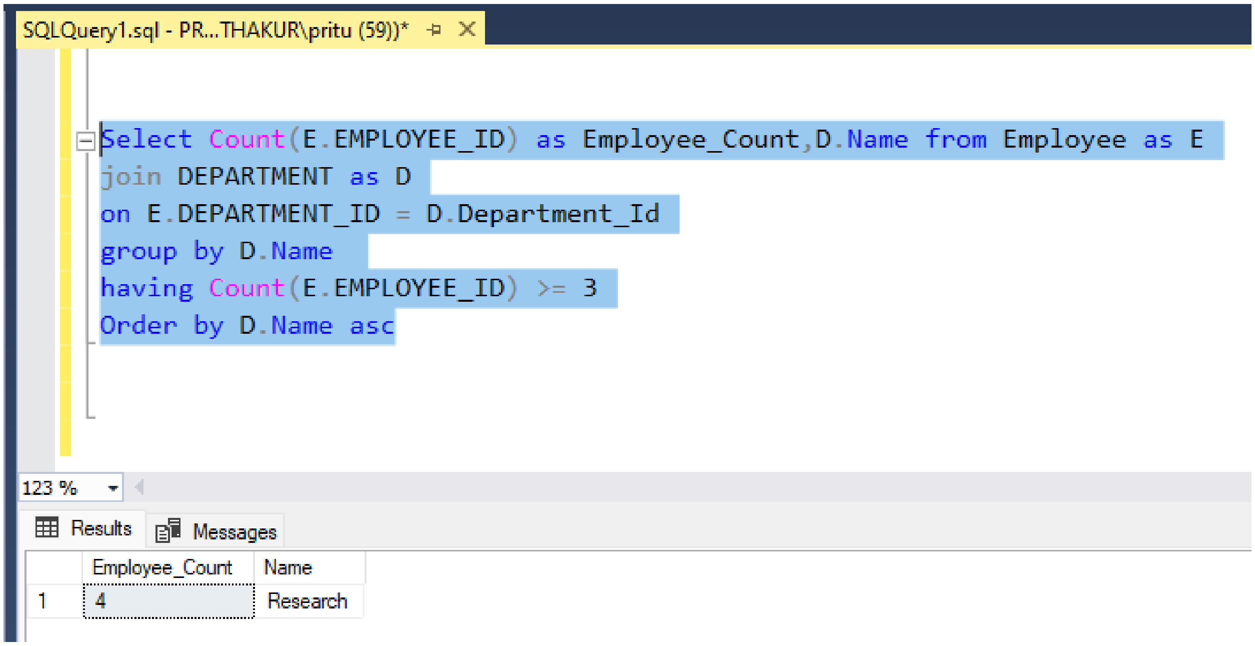
join DEPARTMENT as D

on E.DEPARTMENT_ID = D.Department_Id

group by D.Name

having Count(E.EMPLOYEE_ID) >= 3

Order by D.Name asc



```
Select Count(E.EMPLOYEE_ID) as Employee_Count,D.Name from Employee as E
join DEPARTMENT as D
on E.DEPARTMENT_ID = D.Department_Id
group by D.Name
having Count(E.EMPLOYEE_ID) >= 3
Order by D.Name asc
```

	Employee_Count	Name
1	4	Research

7. How many employees are working in 'Dallas'?

Query:

Select Count(E.EMPLOYEE_ID) as Employee_Count, L.City from Employee as E join DEPARTMENT as D

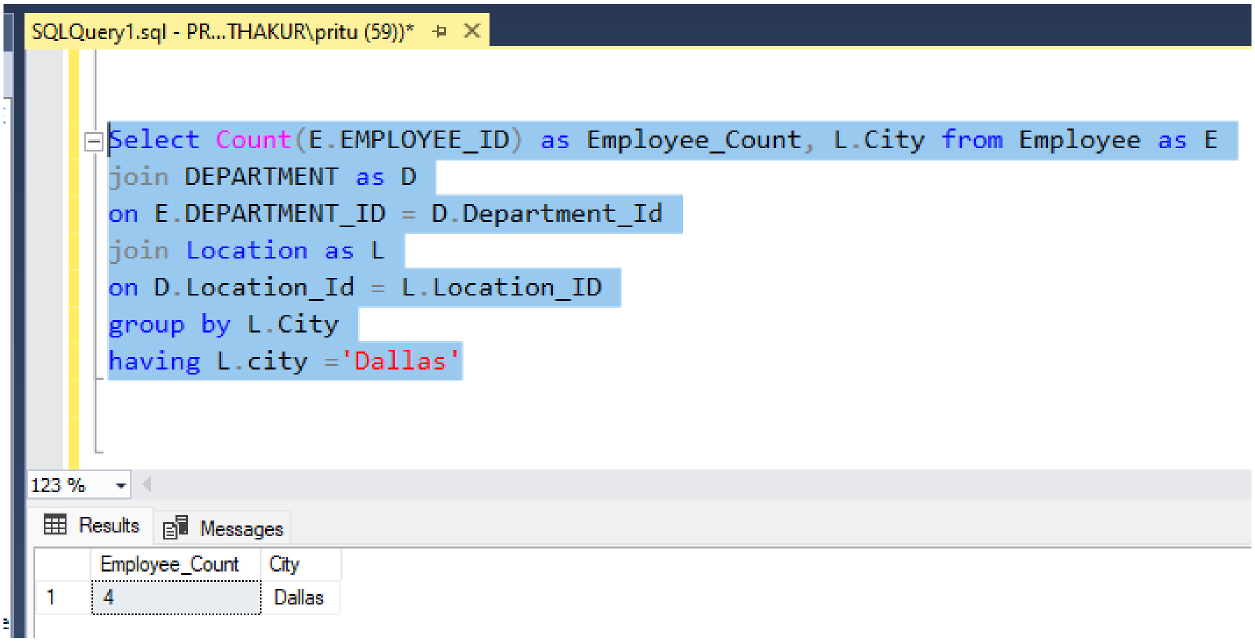
on E.DEPARTMENT_ID = D.Department_Id

join Location as L

on D.Location_Id = L.Location_ID

group by L.City

having L.city ='Dallas'

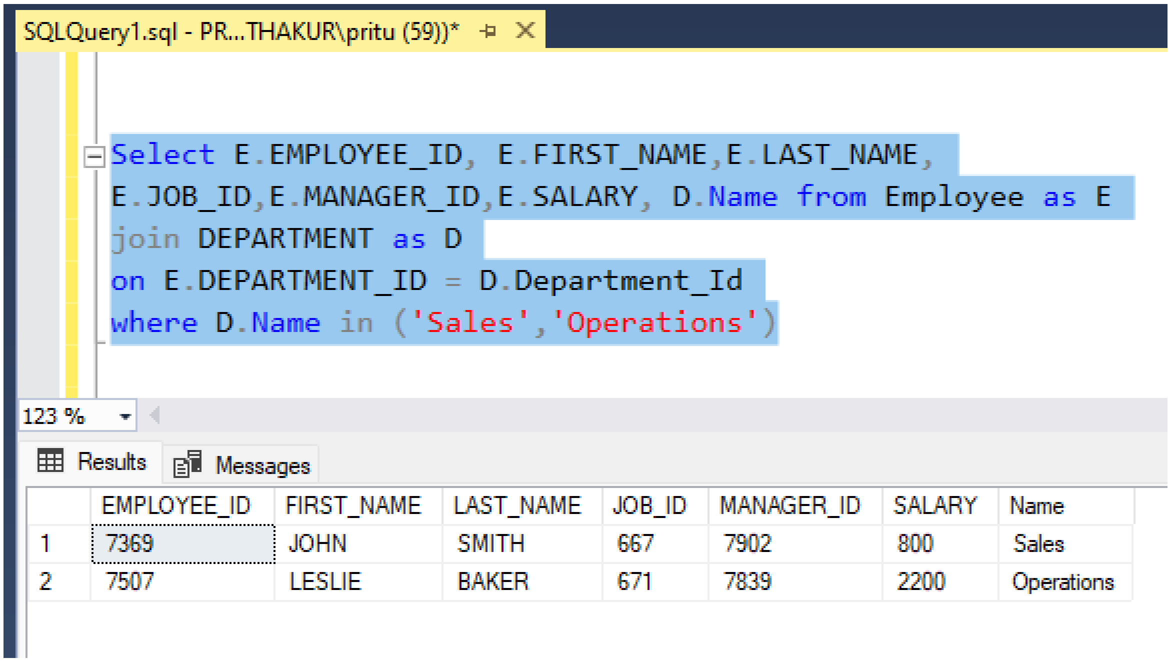


```
Select Count(E.EMPLOYEE_ID) as Employee_Count, L.City from Employee as E
join DEPARTMENT as D
on E.DEPARTMENT_ID = D.Department_Id
join Location as L
on D.Location_Id = L.Location_ID
group by L.City
having L.city ='Dallas'
```

	Employee_Count	City
1	4	Dallas

8. Display all employees in sales or operation departments.

Query:
Select E.EMPLOYEE_ID, E.FIRST_NAME,E.LAST_NAME,
E.JOB_ID,E.MANAGER_ID,E.SALARY, D.Name from Employee as E
join DEPARTMENT as D
on E.DEPARTMENT_ID = D.Department_Id
where D.Name in ('Sales','Operations')



```sql
Select E.EMPLOYEE_ID, E.FIRST_NAME,E.LAST_NAME,
E.JOB_ID,E.MANAGER_ID,E.SALARY, D.Name from Employee as E
join DEPARTMENT as D
on E.DEPARTMENT_ID = D.Department_Id
where D.Name in ('Sales','Operations')
```

	EMPLOYEE_ID	FIRST_NAME	LAST_NAME	JOB_ID	MANAGER_ID	SALARY	Name
1	7369	JOHN	SMITH	667	7902	800	Sales
2	7507	LESLIE	BAKER	671	7839	2200	Operations

CONDITIONAL STATEMENT

1. Display the employee details with salary grades. Use conditional statement to create a grade column.

Query:

Select EMPLOYEE_ID,FIRST_NAME,LAST_NAME,SALARY,

CASE

When Salary>= 2500 Then 'A'

When Salary>= 2000 Then 'B'

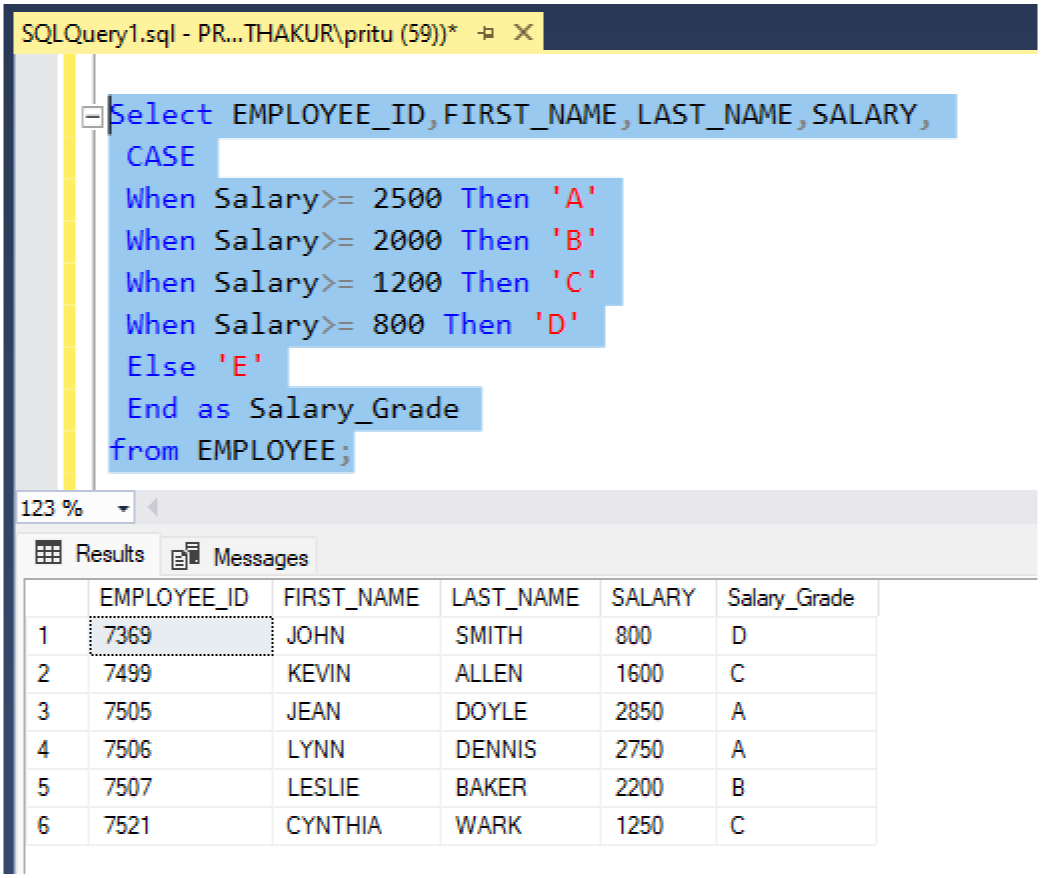
When Salary>= 1200 Then 'C'

When Salary>= 800 Then 'D'

Else 'E'

End as Salary_Grade

from EMPLOYEE;



```
Select EMPLOYEE_ID,FIRST_NAME,LAST_NAME,SALARY,
 CASE
 When Salary>= 2500 Then 'A'
 When Salary>= 2000 Then 'B'
 When Salary>= 1200 Then 'C'
 When Salary>= 800 Then 'D'
 Else 'E'
 End as Salary_Grade
from EMPLOYEE;
```

	EMPLOYEE_ID	FIRST_NAME	LAST_NAME	SALARY	Salary_Grade
1	7369	JOHN	SMITH	800	D
2	7499	KEVIN	ALLEN	1600	C
3	7505	JEAN	DOYLE	2850	A
4	7506	LYNN	DENNIS	2750	A
5	7507	LESLIE	BAKER	2200	B
6	7521	CYNTHIA	WARK	1250	C

2. List out the number of employees grade wise. Use conditional statement to create a grade column.

Query: Select

 CASE

 When Salary>= 2500 Then 'A'

 When Salary>= 2000 Then 'B'

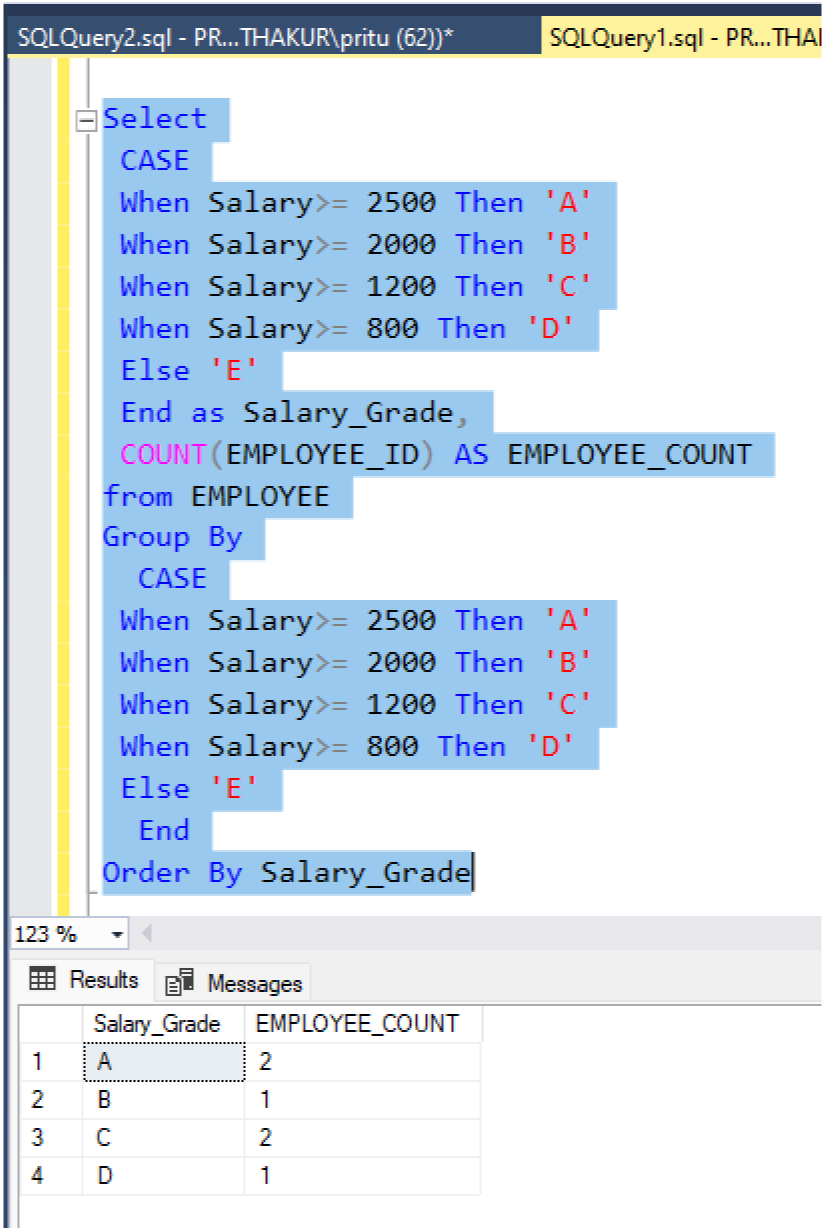
 When Salary>= 1200 Then 'C'

 When Salary>= 800 Then 'D'

 Else 'E'

 End as Salary_Grade,

```
 COUNT(EMPLOYEE_ID) AS EMPLOYEE_COUNT
from EMPLOYEE
Group By
  CASE
 When Salary>= 2500 Then 'A'
 When Salary>= 2000 Then 'B'
 When Salary>= 1200 Then 'C'
 When Salary>= 800 Then 'D'
 Else 'E'
  End
Order By Salary_Grade
```


SQLQuery2.sql - PR...THAKUR\pritu (62))*
SQLQuery1.sql - PR...THAI
123 %
Results
Messages

```sql
Select
 CASE
 When Salary>= 2500 Then 'A'
 When Salary>= 2000 Then 'B'
 When Salary>= 1200 Then 'C'
 When Salary>= 800 Then 'D'
 Else 'E'
 End as Salary_Grade,
 COUNT(EMPLOYEE_ID) AS EMPLOYEE_COUNT
from EMPLOYEE
Group By
  CASE
 When Salary>= 2500 Then 'A'
 When Salary>= 2000 Then 'B'
 When Salary>= 1200 Then 'C'
 When Salary>= 800 Then 'D'
 Else 'E'
  End
Order By Salary_Grade
```

	Salary_Grade	EMPLOYEE_COUNT
1	A	2
2	B	1
3	C	2
4	D	1

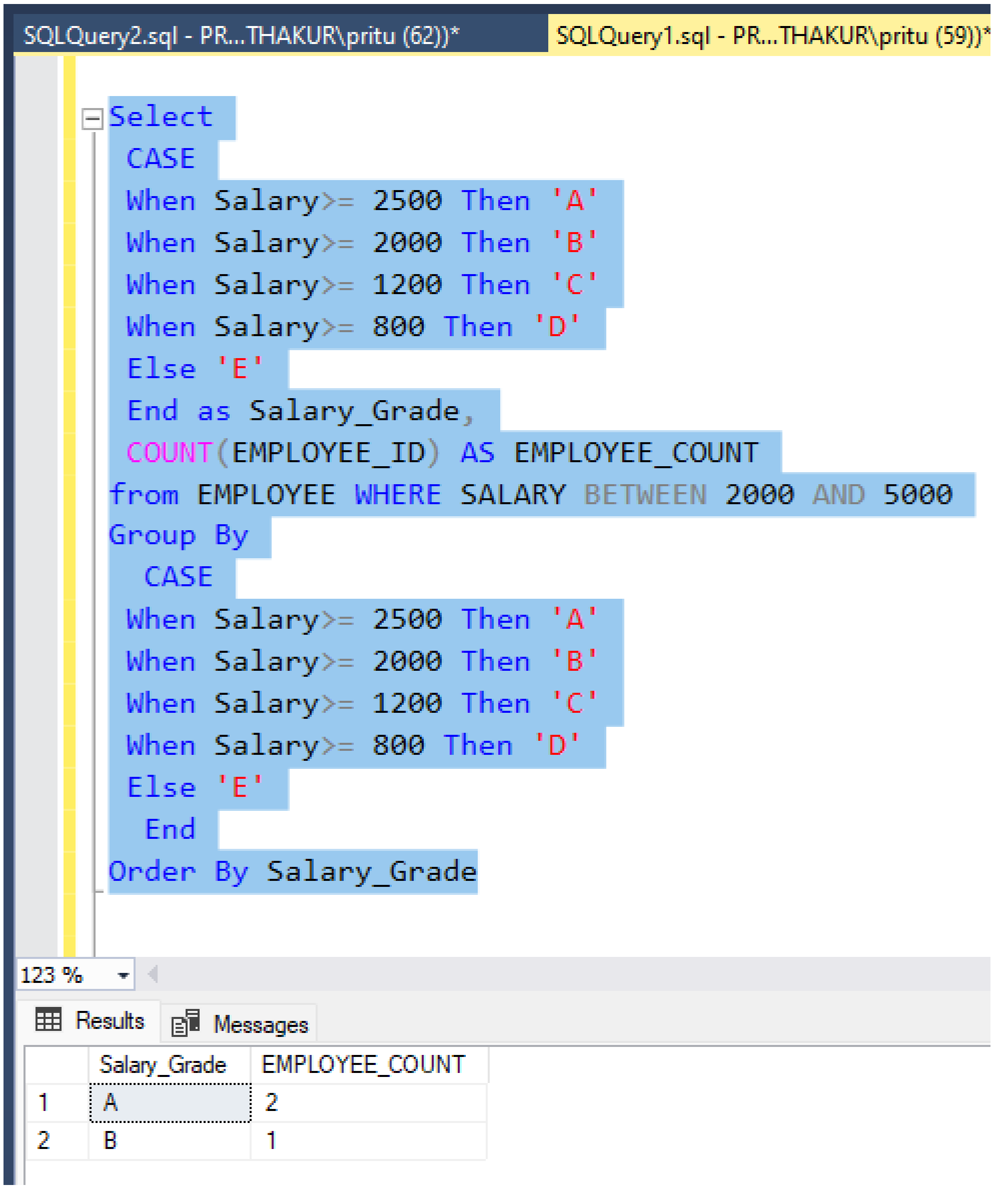
3. Display the employee salary grades and the number of employees between 2000 to 5000 range of salary.

Query:

Select

 CASE

```
 When Salary>= 2500 Then 'A'
 When Salary>= 2000 Then 'B'
 When Salary>= 1200 Then 'C'
 When Salary>= 800 Then 'D'
 Else 'E'
 End as Salary_Grade,
 COUNT(EMPLOYEE_ID) AS EMPLOYEE_COUNT
from EMPLOYEE WHERE SALARY BETWEEN 2000 AND 5000
Group By
  CASE
 When Salary>= 2500 Then 'A'
 When Salary>= 2000 Then 'B'
 When Salary>= 1200 Then 'C'
 When Salary>= 800 Then 'D'
 Else 'E'
  End
Order By Salary_Grade
```


SQLQuery2.sql - PR...THAKUR\pritu (62))*
SQLQuery1.sql - PR...THAKUR\pritu (59))*
123 %
Results
Messages

```
Select
 CASE
 When Salary>= 2500 Then 'A'
 When Salary>= 2000 Then 'B'
 When Salary>= 1200 Then 'C'
 When Salary>= 800 Then 'D'
 Else 'E'
 End as Salary_Grade,
 COUNT(EMPLOYEE_ID) AS EMPLOYEE_COUNT
from EMPLOYEE WHERE SALARY BETWEEN 2000 AND 5000
Group By
  CASE
 When Salary>= 2500 Then 'A'
 When Salary>= 2000 Then 'B'
 When Salary>= 1200 Then 'C'
 When Salary>= 800 Then 'D'
 Else 'E'
  End
Order By Salary_Grade
```

	Salary_Grade	EMPLOYEE_COUNT
1	A	2
2	B	1

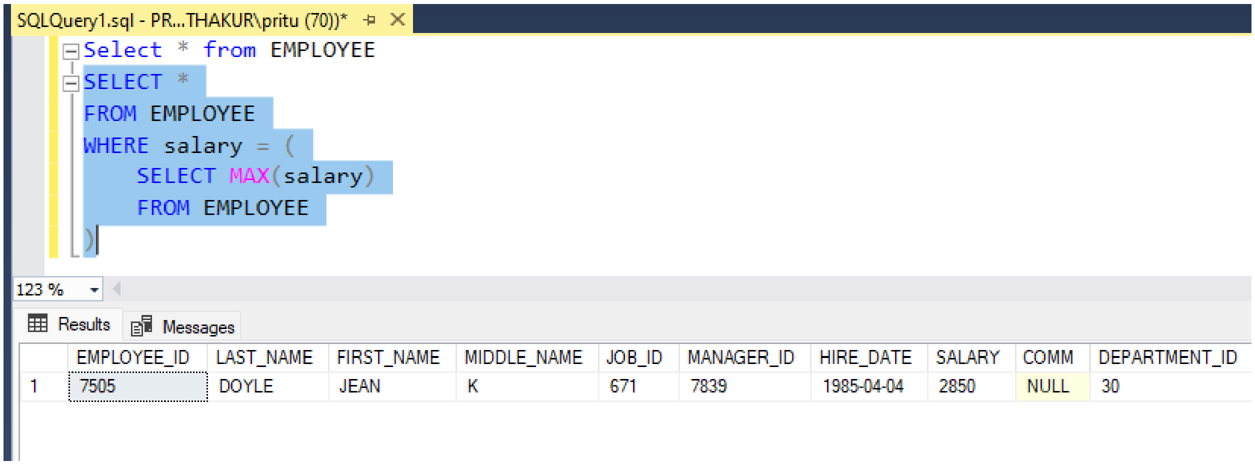
Subqueries:

1. Display the employees list who got the maximum salary.

Query: SELECT *

FROM EMPLOYEE

```
WHERE salary = (
    SELECT MAX(salary)
    FROM EMPLOYEE
)
```



SQLQuery1.sql - PR...THAKUR\pritu (70))*

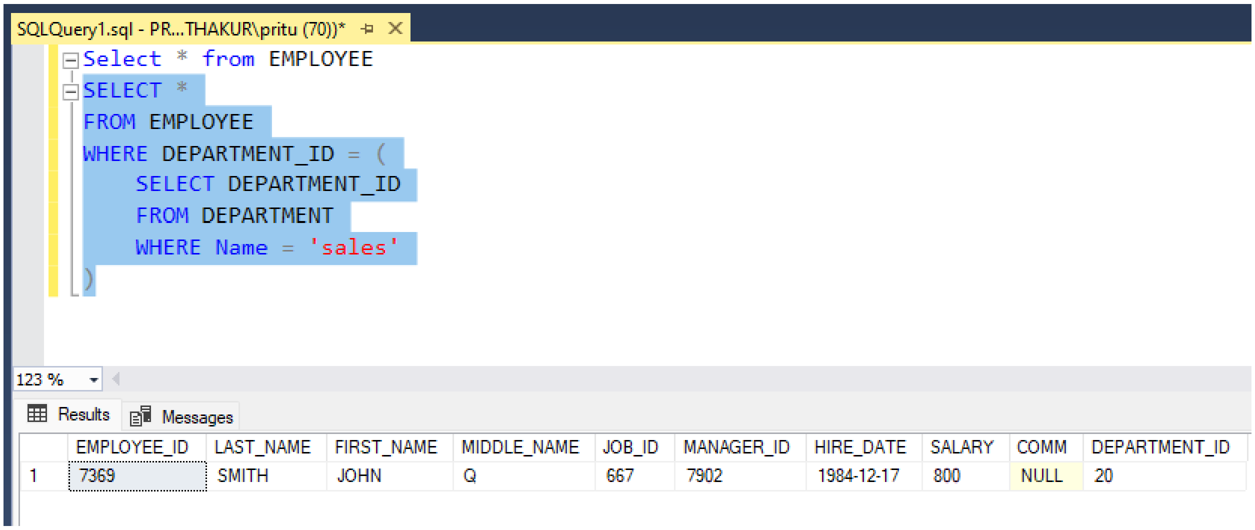
```
Select * from EMPLOYEE
SELECT *
FROM EMPLOYEE
WHERE salary = (
    SELECT MAX(salary)
    FROM EMPLOYEE
)
```

	EMPLOYEE_ID	LAST_NAME	FIRST_NAME	MIDDLE_NAME	JOB_ID	MANAGER_ID	HIRE_DATE	SALARY	COMM	DEPARTMENT_ID
1	7505	DOYLE	JEAN	K	671	7839	1985-04-04	2850	NULL	30

2. Display the employees who are working in the sales department.

Query: SELECT *

```
FROM EMPLOYEE
WHERE DEPARTMENT_ID = (
    SELECT DEPARTMENT_ID
    FROM DEPARTMENT
    WHERE Name = 'sales'
)
```



```
Select * from EMPLOYEE
SELECT *
FROM EMPLOYEE
WHERE DEPARTMENT_ID = (
    SELECT DEPARTMENT_ID
    FROM DEPARTMENT
    WHERE Name = 'sales'
)
```

	EMPLOYEE_ID	LAST_NAME	FIRST_NAME	MIDDLE_NAME	JOB_ID	MANAGER_ID	HIRE_DATE	SALARY	COMM	DEPARTMENT_ID
1	7369	SMITH	JOHN	Q	667	7902	1984-12-17	800	NULL	20

3. Display the employees who are working as 'Clerk'.

Query: SELECT *

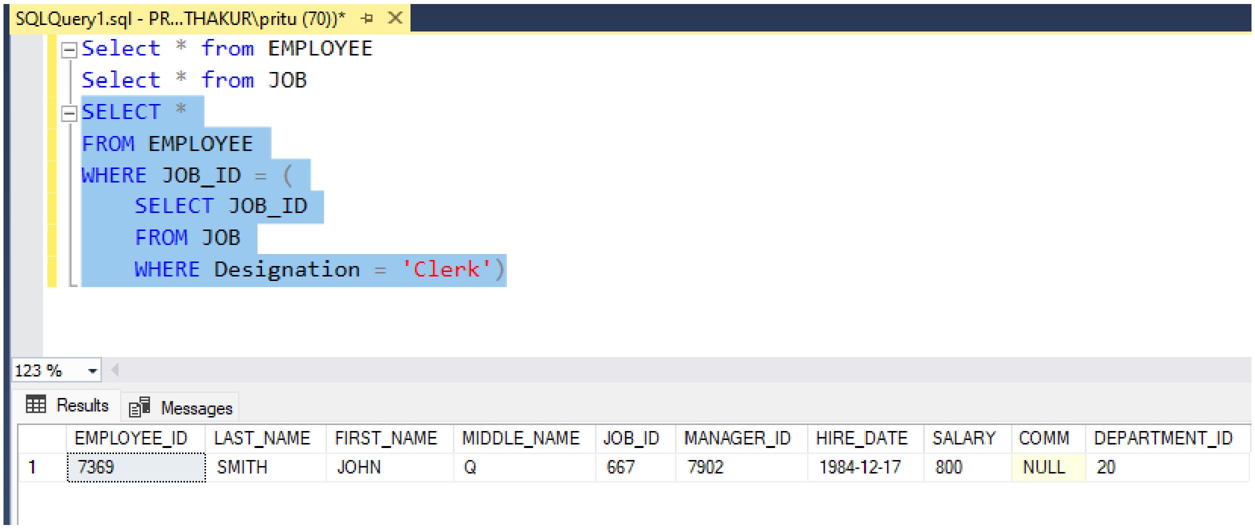
FROM EMPLOYEE

WHERE JOB_ID = (

    SELECT JOB_ID

    FROM JOB

    WHERE Designation = 'Clerk')



```
Select * from EMPLOYEE
Select * from JOB
SELECT *
FROM EMPLOYEE
WHERE JOB_ID = (
    SELECT JOB_ID
    FROM JOB
    WHERE Designation = 'Clerk')
```

	EMPLOYEE_ID	LAST_NAME	FIRST_NAME	MIDDLE_NAME	JOB_ID	MANAGER_ID	HIRE_DATE	SALARY	COMM	DEPARTMENT_ID
1	7369	SMITH	JOHN	Q	667	7902	1984-12-17	800	NULL	20

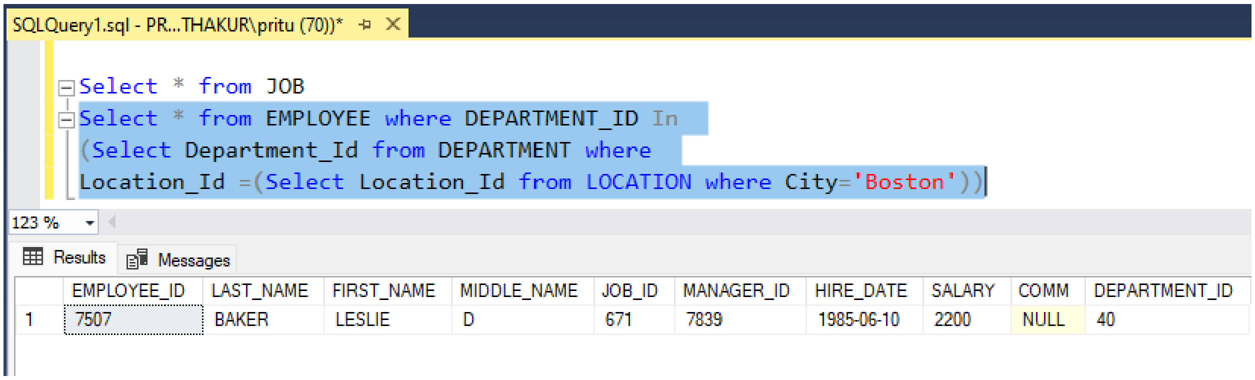
4. Display the list of employees who are living in 'Boston'.

Query:

Select * from EMPLOYEE where DEPARTMENT_ID In

(Select Department_Id from DEPARTMENT where

Location_Id =(Select Location_Id from LOCATION where City='Boston'))



```
Select * from JOB
Select * from EMPLOYEE where DEPARTMENT_ID In
(Select Department_Id from DEPARTMENT where
Location_Id =(Select Location_Id from LOCATION where City='Boston'))
```

	EMPLOYEE_ID	LAST_NAME	FIRST_NAME	MIDDLE_NAME	JOB_ID	MANAGER_ID	HIRE_DATE	SALARY	COMM	DEPARTMENT_ID
1	7507	BAKER	LESLIE	D	671	7839	1985-06-10	2200	NULL	40

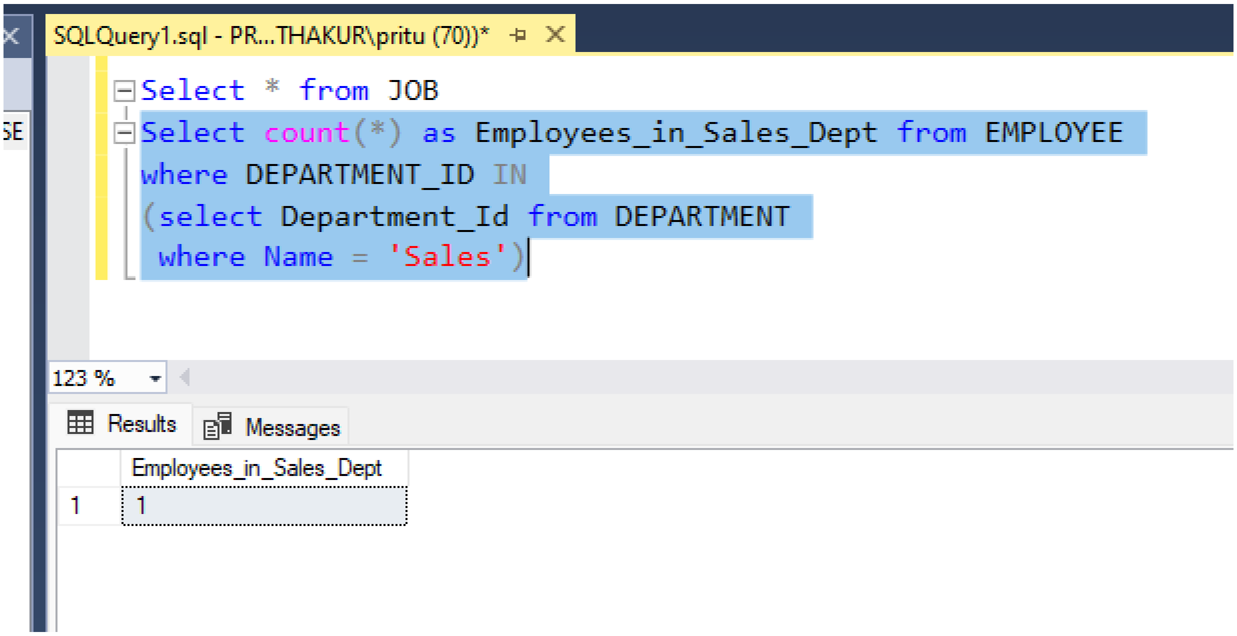
5. Find out the number of employees working in the sales department.

Query: Select count(*) as Employees_in_Sales_Dept from EMPLOYEE

where DEPARTMENT_ID IN

(select Department_Id from DEPARTMENT

where Name = 'Sales')



```
Select * from JOB
Select count(*) as Employees_in_Sales_Dept from EMPLOYEE
where DEPARTMENT_ID IN
(select Department_Id from DEPARTMENT
 where Name = 'Sales')
```

	Employees_in_Sales_Dept
1	1

6. Update the salaries of employees who are working as clerks on the basis of 10%.

Query: UPDATE EMPLOYEE

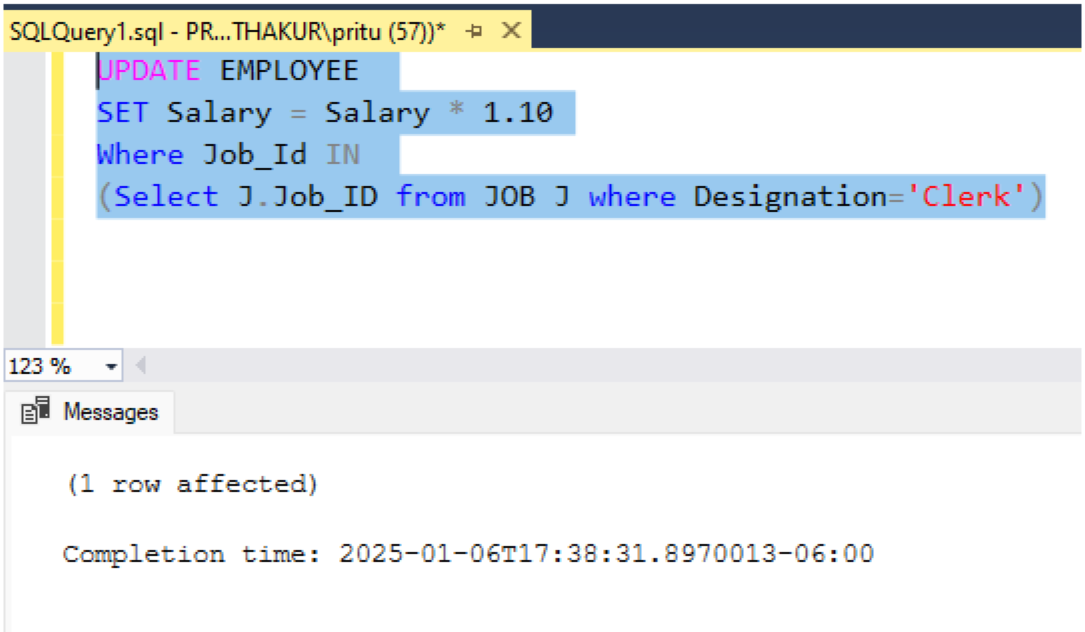
SET Salary = Salary *1.10

Where Job_Id IN

(Select J.Job_ID from JOB J where Designation='Clerk')

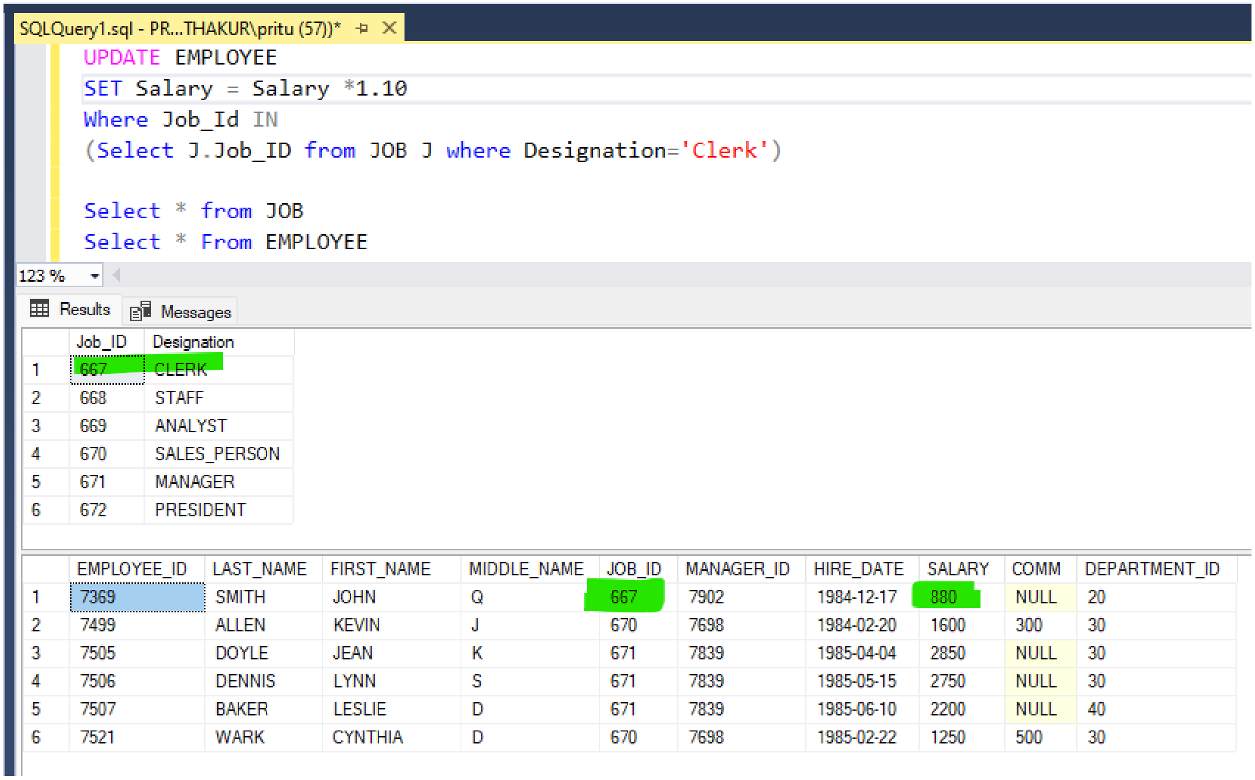
Select * from JOB

Select * From EMPLOYEE



```sql
UPDATE EMPLOYEE
SET Salary = Salary * 1.10
Where Job_Id IN
(Select J.Job_ID from JOB J where Designation='Clerk')
```

```
(1 row affected)

Completion time: 2025-01-06T17:38:31.8970013-06:00
```



```sql
UPDATE EMPLOYEE
SET Salary = Salary *1.10
Where Job_Id IN
(Select J.Job_ID from JOB J where Designation='Clerk')

Select * from JOB
Select * From EMPLOYEE
```

	Job_ID	Designation
1	667	CLERK
2	668	STAFF
3	669	ANALYST
4	670	SALES_PERSON
5	671	MANAGER
6	672	PRESIDENT

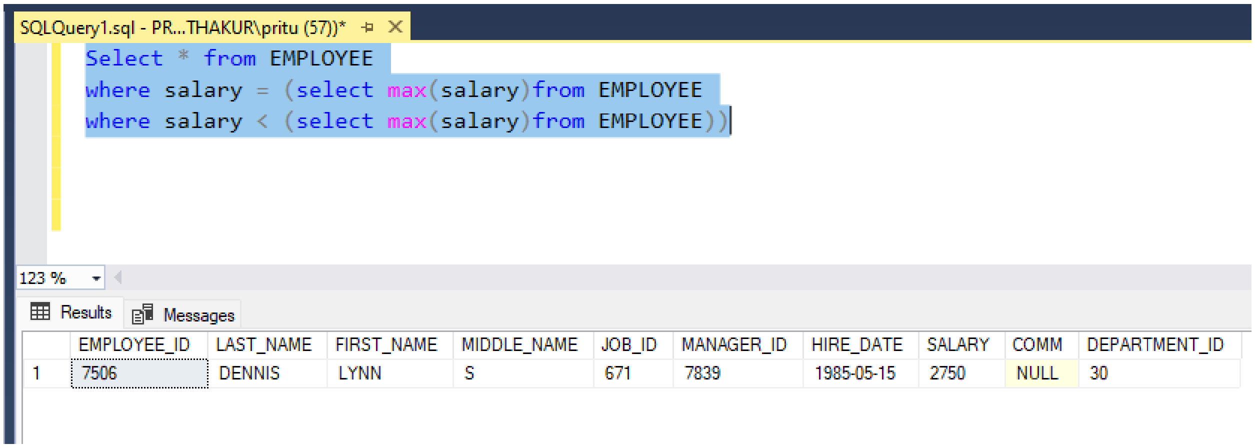
	EMPLOYEE_ID	LAST_NAME	FIRST_NAME	MIDDLE_NAME	JOB_ID	MANAGER_ID	HIRE_DATE	SALARY	COMM	DEPARTMENT_ID
1	7369	SMITH	JOHN	Q	667	7902	1984-12-17	880	NULL	20
2	7499	ALLEN	KEVIN	J	670	7698	1984-02-20	1600	300	30
3	7505	DOYLE	JEAN	K	671	7839	1985-04-04	2850	NULL	30
4	7506	DENNIS	LYNN	S	671	7839	1985-05-15	2750	NULL	30
5	7507	BAKER	LESLIE	D	671	7839	1985-06-10	2200	NULL	40
6	7521	WARK	CYNTHIA	D	670	7698	1985-02-22	1250	500	30

7. Display the second highest salary drawing employee details.

Query: Select * from EMPLOYEE

where salary = (select max(salary)from EMPLOYEE

where salary < (select max(salary)from EMPLOYEE))



```
Select * from EMPLOYEE
where salary = (select max(salary)from EMPLOYEE
where salary < (select max(salary)from EMPLOYEE))
```

	EMPLOYEE_ID	LAST_NAME	FIRST_NAME	MIDDLE_NAME	JOB_ID	MANAGER_ID	HIRE_DATE	SALARY	COMM	DEPARTMENT_ID
1	7506	DENNIS	LYNN	S	671	7839	1985-05-15	2750	NULL	30

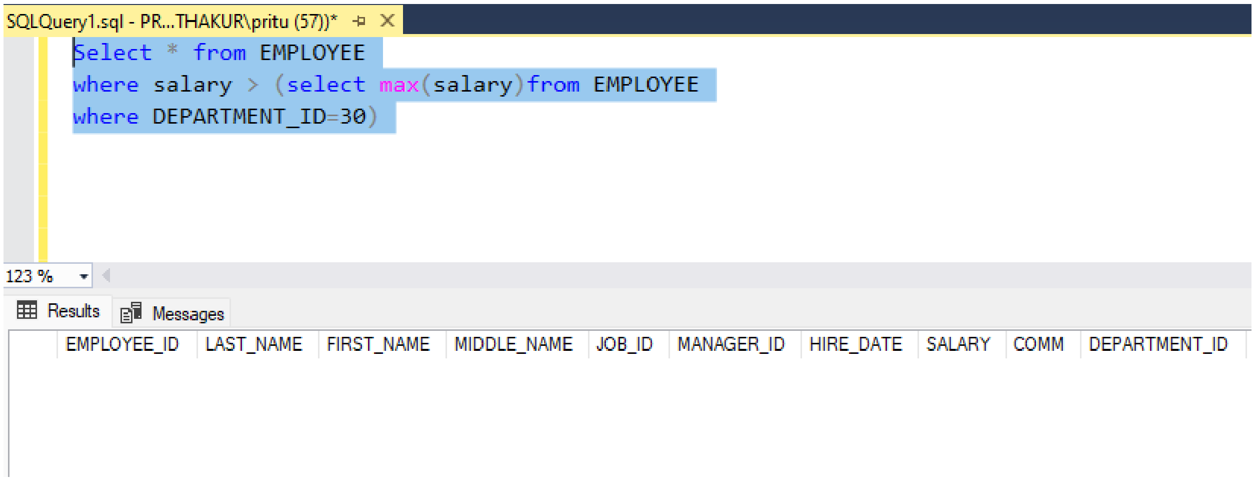
8. List out the employees who earn more than every employee in department 30.

Query:

Select * from EMPLOYEE

where salary > (select max(salary)from EMPLOYEE

where DEPARTMENT_ID=30)



```
Select * from EMPLOYEE
where salary > (select max(salary)from EMPLOYEE
where DEPARTMENT_ID=30)
```

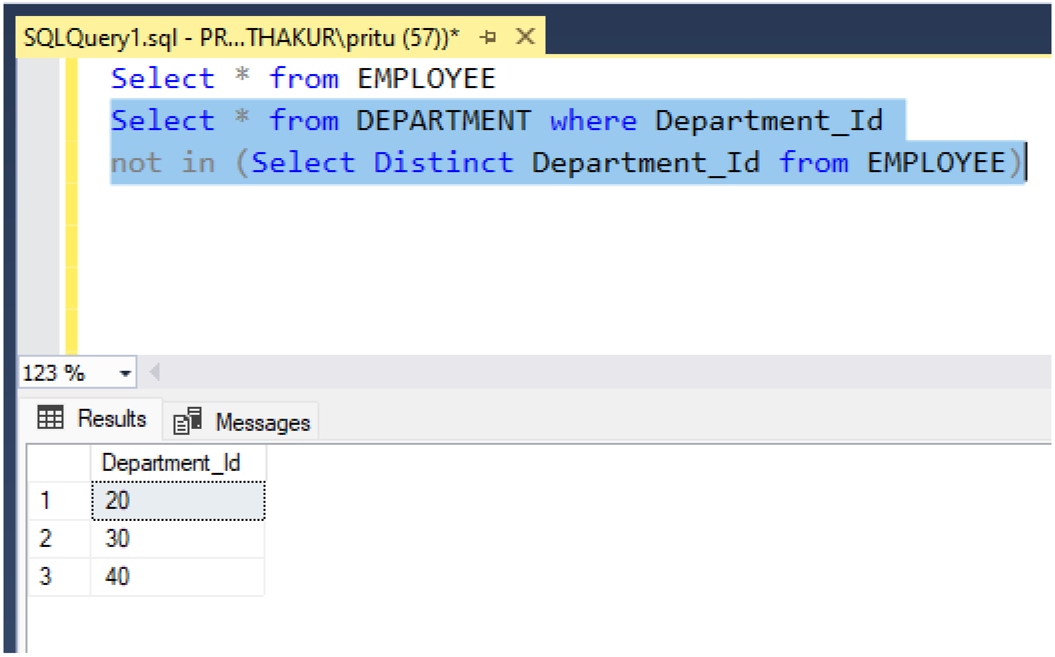
EMPLOYEE_ID	LAST_NAME	FIRST_NAME	MIDDLE_NAME	JOB_ID	MANAGER_ID	HIRE_DATE	SALARY	COMM	DEPARTMENT_ID

9. Find out which department has no employees.

Query:

Select * from DEPARTMENT where Department_Id

not in (Select Distinct Department_Id from EMPLOYEE)



```
Select * from EMPLOYEE
Select * from DEPARTMENT where Department_Id
not in (Select Distinct Department_Id from EMPLOYEE)
```

	Department_Id
1	20
2	30
3	40

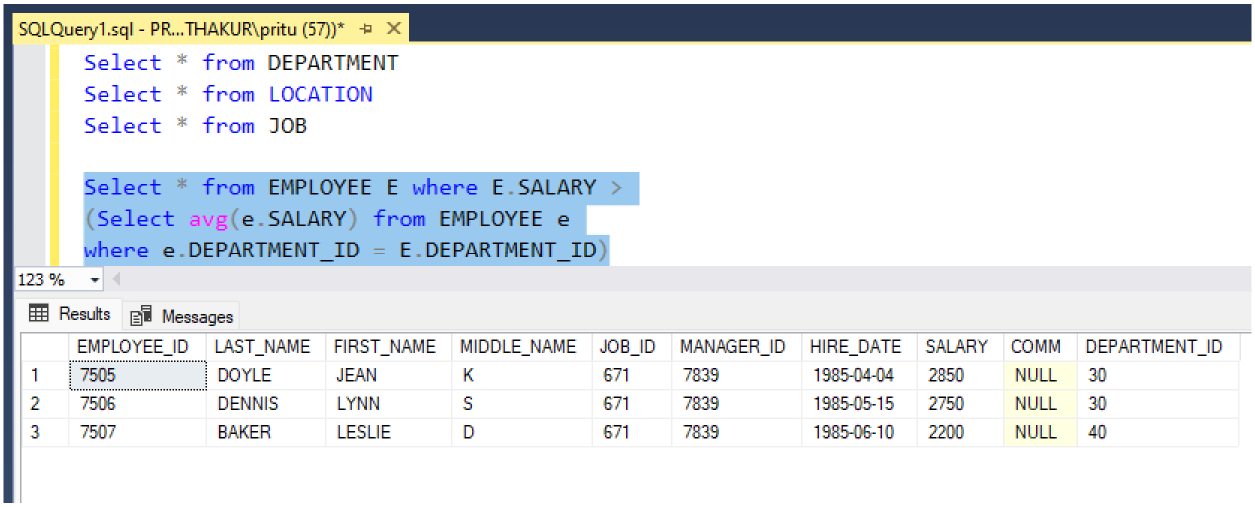
10. Find out the employees who earn greater than the average salary for their department.

Query:

Select * from EMPLOYEE E where E.SALARY >

(Select avg(e.SALARY) from EMPLOYEE e

where e.DEPARTMENT_ID = E.DEPARTMENT_ID)



```sql
Select * from DEPARTMENT
Select * from LOCATION
Select * from JOB

Select * from EMPLOYEE E where E.SALARY >
(Select avg(e.SALARY) from EMPLOYEE e
where e.DEPARTMENT_ID = E.DEPARTMENT_ID)
```

	EMPLOYEE_ID	LAST_NAME	FIRST_NAME	MIDDLE_NAME	JOB_ID	MANAGER_ID	HIRE_DATE	SALARY	COMM	DEPARTMENT_ID
1	7505	DOYLE	JEAN	K	671	7839	1985-04-04	2850	NULL	30
2	7506	DENNIS	LYNN	S	671	7839	1985-05-15	2750	NULL	30
3	7507	BAKER	LESLIE	D	671	7839	1985-06-10	2200	NULL	40