

Project :- 1 (Part_2)

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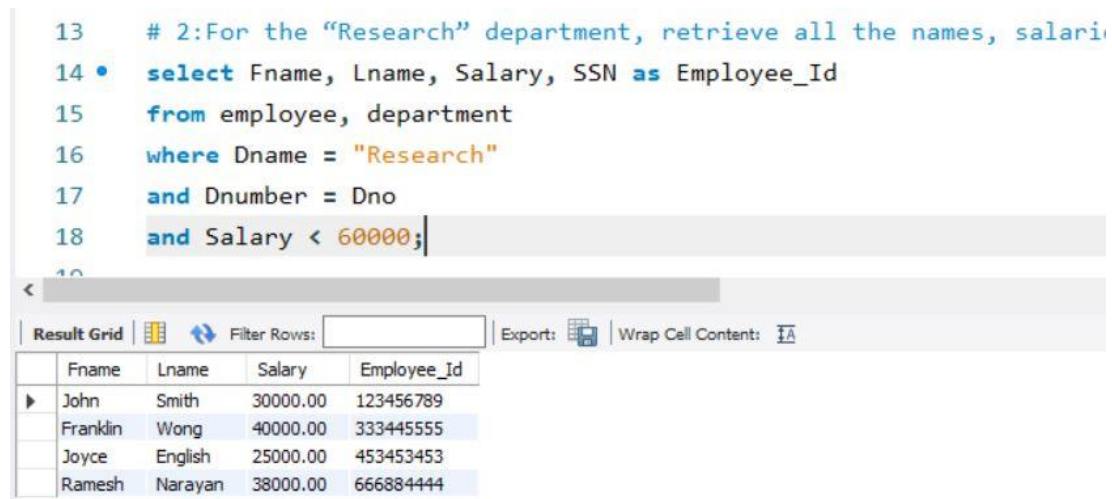
Write SQL queries OR use a simple Web interfaces to get the results of the following queries:

2. For the "Research" department, retrieve all the names, salaries and employees ID of all employees who work in that department and earn salary less than 60000.

Query:

```
select Fname, Lname, Salary, SSN as Employee_Id
from employee, department
where Dname = "Research"
and Dnumber = Dno
and Salary < 60000
```

Screenshot:



```
13 # 2:For the "Research" department, retrieve all the names, salaries and employees ID of all employees who work in that department and earn salary less than 60000.
14 • select Fname, Lname, Salary, SSN as Employee_Id
15 from employee, department
16 where Dname = "Research"
17 and Dnumber = Dno
18 and Salary < 60000;
```

Result Grid

	Fname	Lname	Salary	Employee_Id
▶	John	Smith	30000.00	123456789
	Franklin	Wong	40000.00	333445555
	Joyce	English	25000.00	453453453
	Ramesh	Narayan	38000.00	666884444

3. Enter a department name, and retrieve all the names and salaries of all employees who work in that department.

change value of var_department_name variable to retrieve output for desired department name.

Query:

```
set @var_department_name = "Administration";  
  
select Fname, Lname, Salary  
  
from employee, department  
  
where Dname = @var_department_name  
  
and Dnumber = Dno ;
```

Screenshot:

The screenshot shows a SQL query editor with the following code:

```
21 # 3:Enter a department name, and retrieve all the names and  
22 # change value of var_department_name variable to retrieve  
23 • set @var_department_name = "Administration";  
24 • select Fname, Lname, Salary  
25 from employee, department  
26 where Dname = @var_department_name  
27 and Dnumber = Dno ;  
28
```

Below the query editor is a "Result Grid" showing the output of the query. The grid has columns for Fname, Lname, and Salary. The results are as follows:

	Fname	Lname	Salary
▶	Cameron	Thirteen	80000.00
	Richard	Koelbel	85000.00
	Wilson	Holmes	72500.00
	Jennifer	Wallace	43000.00
	Ahmad	Jabbar	25000.00
	Alicia	Zelaya	25000.00

4. For the employee, whose last name is “Henderson” and first name is “Mike”, retrieve a list of projects names/hours per week that the employee works on.

Query:

```
select Pname as Project_names, Hours as Hours_per_week
from employee, works_on, project
where Lname = " Henderson"
and Fname = "Mike"
and ESSN = SSN
and Pnumber = Pno ;
```

Screenshot:

The screenshot shows a SQL query editor with the following code:

```
30 # 4:For the employee, whose last name is "Henderson" and first
31 • select Pname as Project_names, Hours as Hours_per_week
32 from employee, works_on, project
33 where Lname = " Henderson"
34 and Fname = "Mike"
35 and ESSN = SSN
36 and Pnumber = Pno ;
37
```

Below the query editor, there is a toolbar with options: Result Grid, Filter Rows, Export, and Wrap Cell Content. The Result Grid is active, displaying the following data:

	Project_names	Hours_per_week
▶	ProductX	15.0
	ProductZ	15.0
	Middleware	10.0

5. Enter an employee last name and first name and retrieve a list of projects names/hours per week that the employee works on.

change value of variables var_last_name & var_first_name to get output for a particular employee

Query:

```
set @var_last_name = " Borg";  
set @var_first_name = "James";  
  
select Pname as Project_names, Hours as Hours_per_week  
from employee, works_on, project  
where Lname = @var_last_name  
and Fname = @var_first_name  
and ESSN = SSN  
and Pnumber = Pno ;
```

Screenshot:

The screenshot shows a SQL query editor with the following code:

```
39 # 5:Enter an employee last name and first name and retrieve a l  
40 # change value of variables var_last_name & var_first_name to  
41 • set @var_last_name = " Borg";  
42 • set @var_first_name = "James";  
43 • select Pname as Project_names, Hours as Hours_per_week  
44 from employee, works_on, project  
45 where Lname = @var_last_name  
46 and Fname = @var_first_name  
47 and ESSN = SSN  
48 and Pnumber = Pno ;  
49
```

Below the query editor, there is a toolbar with options: Result Grid, Filter Rows, Export, and Wrap Cell Content. The results are displayed in a table:

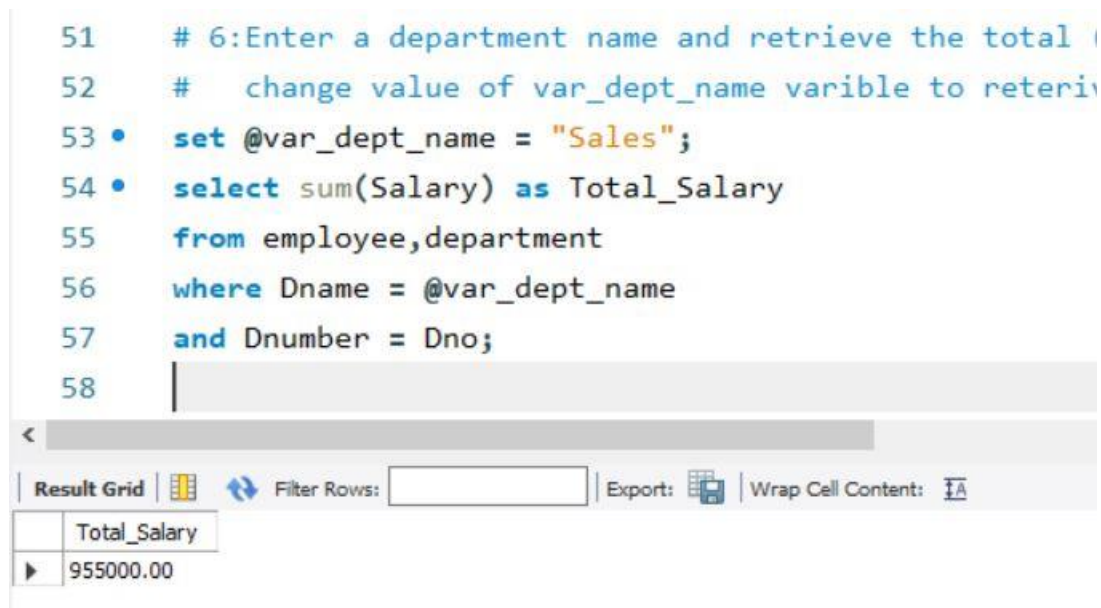
	Project_names	Hours_per_week
▶	Reorganization	5.0

6. Enter a department name and retrieve the total (sum) of all employee salaries who work in the department.
- # change value of var_dept_name variable to retrieve output for desired department name.

Query:

```
set @var_dept_name = "Sales";  
  
select sum(Salary) as Total_Salary  
  
from employee,department  
  
where Dname = @var_dept_name  
  
and Dnumber = Dno;
```

Screenshot:



The screenshot shows a SQL query editor with the following code:

```
51 # 6:Enter a department name and retrieve the total  
52 # change value of var_dept_name variable to retrieve  
53 • set @var_dept_name = "Sales";  
54 • select sum(Salary) as Total_Salary  
55 from employee,department  
56 where Dname = @var_dept_name  
57 and Dnumber = Dno;  
58
```

Below the editor is a toolbar with options: Result Grid, Filter Rows, Export, and Wrap Cell Content. The Result Grid shows the following data:

Total_Salary
955000.00


7. For each department Located in Texas, retrieve the department name and the number (count) employees who work in that department. Order the result by number of employees in descending order.

Query:

```
select Dname, count(SSN) as Number_of_Employees
from employee, department, dept_locations
where employee.Dno = department.Dnumber
and department.Dnumber =
(select dept_locations.Dnumber
where dept_locations.Dlocation in (' Houston', ' Dallas',' Arlington',' Austin'))
group by Dname
order by count(SSN) desc;
```

Screenshot:

```
60 # 7:For each department Located in Texas, retrieve the department name and the number
61 • select Dname, count(SSN) as Number_of_Employees
62 from employee, department, dept_locations
63 where employee.Dno = department.Dnumber
64 and department.Dnumber =
65 (select dept_locations.Dnumber
66 where dept_locations.Dlocation in (' Houston', ' Dallas',' Arlington',' Austin'))
67 group by Dname
68 order by count(SSN) desc;
```



The screenshot shows a database query editor with a SQL query and its results. The query is as follows:

```
select Dname, count(SSN) as Number_of_Employees
from employee, department, dept_locations
where employee.Dno = department.Dnumber
and department.Dnumber =
(select dept_locations.Dnumber
where dept_locations.Dlocation in (' Houston', ' Dallas',' Arlington',' Austin'))
group by Dname
order by count(SSN) desc;
```

The results are displayed in a table with the following data:

Dname	Number_of_Employees
Sales	19
HR	7
Research	7
Headquarters	2





- For each department, retrieve the department name and the number (count) of employees who work in that department. and have a salary greater or equal to 50000. Order the result by number of employees in descending order.

Query:

```
select Dname, count(SSN) as Number_of_Employees
from employee, department
where employee.Dno = department.Dnumber
and Salary >= 50000
group by Dname
order by count(SSN) desc;
```

Screenshot:

```
81  # 8:For each department, retrieve the department name and the numl
82  • select Dname, count(SSN) as Number_of_Employees
83  from employee, department
84  where employee.Dno = department.Dnumber
85  and Salary >= 50000
86  group by Dname
87  order by count(SSN) desc;
88
```

<   Filter Rows: | Export:  | Wrap Cell Content: 

	Dname	Number_of_Employees
▶	Hardware	11
	Software	7
	Sales	6
	HR	4
	Administration	3
	Research	3
	Networking	1
	Headquarters	1

9. For each department, retrieve the following information: the department name; the first and last name of the employee who manages the department; the number (count) of employees who work in the department; the total (sum of) salaries of the employees who work in that

department; and the highest and lowest salary of the employees who work in that department. Order the result alphabetically by department name.

Query:

```
select Dname,E.Fname,E.Lname,
count(employee.SSN) as Number_of_Employees,
sum(employee.Salary) as Total_Salary,
max(employee.Salary) as Highest_Salary,
min(employee.Salary) as Lowest_Salary
from department,employee as E,employee
where E.SSN = department.Mgr_SSN
and employee.Dno = department.Dnumber
group by Dname
order by Dname asc;
```

```
90  # 9:For each department, retrieve the following information: the d
91 •  select Dname,E.Fname,E.Lname,
92      count(employee.SSN) as Number_of_Employees,
93      sum(employee.Salary) as Total_Salary,
94      max(employee.Salary) as Highest_Salary,
95      min(employee.Salary) as Lowest_Salary
96      from department,employee as E,employee
97      where E.SSN = department.Mgr_SSN
98      and employee.Dno = department.Dnumber
99      group by Dname
100     order by Dname asc;
101
```

Result Grid							
		Filter Rows:		Export:		Wrap Cell Content:	
	Dname	Fname	Lname	Number_of_Employees	Total_Salary	Highest_Salary	Lowest_Salary
▶	Administration	Jennifer	Wallace	6	330500.00	85000.00	25000.00
	Hardware	Alex	Freed	14	949500.00	95000.00	43000.00
	Headquarters	James	Borg	2	70000.00	55000.00	15000.00
	HR	Juan	Linda	7	317500.00	65000.00	12000.00
	Networking	Sunil	Gupta	1	80000.00	80000.00	80000.00
	Research	Franklin	Wong	7	346500.00	75000.00	25000.00
	Sales	John	James	19	955000.00	96000.00	29000.00
	Software	Jared	James	18	869000.00	85000.00	17000.00

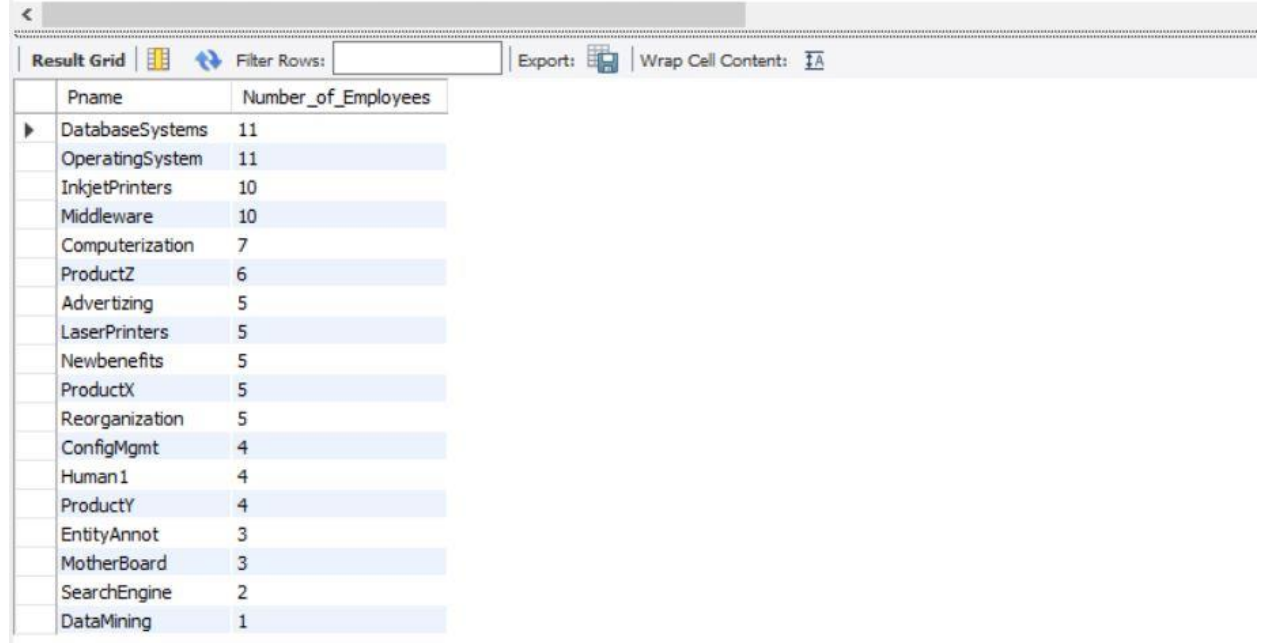
10. For each project, retrieve the project name and the number (count) of employees who are working on that project. Order the result in descending order by number of employees.

Query:

```
select Pname, count(works_on.ESSN) as Number_of_Employees
from project, works_on
where project.Pnumber = works_on.Pno
group by Pname
order by count(works_on.ESSN) desc;
```

Screenshot:

```
103  # 10:For each project, retrieve the project name and the number (count) of
104
105  • select Pname, count(works_on.ESSN) as Number_of_Employees
106  from project, works_on
107  where project.Pnumber = works_on.Pno
108  group by Pname
109  order by count(works_on.ESSN) desc;
```



The screenshot shows a database query result in a table format. The table has two columns: 'Pname' and 'Number_of_Employees'. The results are ordered by the number of employees in descending order. The table contains 20 rows of data.

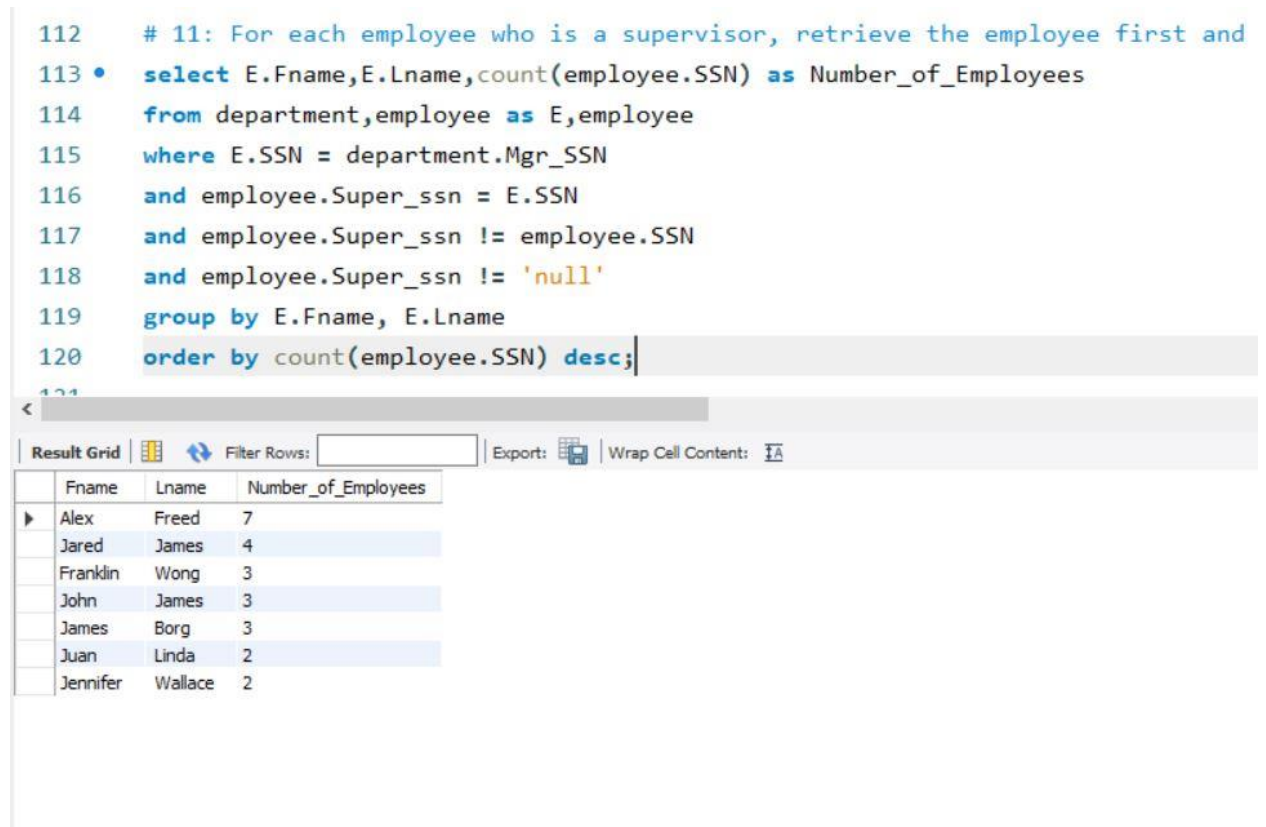
Pname	Number_of_Employees
DatabaseSystems	11
OperatingSystem	11
InkjetPrinters	10
Middleware	10
Computerization	7
ProductZ	6
Advertizing	5
LaserPrinters	5
Newbenefits	5
ProductX	5
Reorganization	5
ConfigMgmt	4
Human1	4
ProductY	4
EntityAnnot	3
MotherBoard	3
SearchEngine	2
DataMining	1

11. For each employee who is a supervisor, retrieve the employee first and last name and the number (count) of employees that are supervised. Order the result in descending order.

Query:

```
select E.Fname,E.Lname,count(employee.SSN) as Number_of_Employees
from department,employee as E,employee
where E.SSN = department.Mgr_SSN
and employee.Super_ssn = E.SSN
and employee.Super_ssn != employee.SSN
and employee.Super_ssn != 'null'
group by E.Fname, E.Lname
order by count(employee.SSN) desc;
```

Screenshot:



```
112 # 11: For each employee who is a supervisor, retrieve the employee first and
113 • select E.Fname,E.Lname,count(employee.SSN) as Number_of_Employees
114 from department,employee as E,employee
115 where E.SSN = department.Mgr_SSN
116 and employee.Super_ssn = E.SSN
117 and employee.Super_ssn != employee.SSN
118 and employee.Super_ssn != 'null'
119 group by E.Fname, E.Lname
120 order by count(employee.SSN) desc;
```

Result Grid

	Fname	Lname	Number_of_Employees
▶	Alex	Freed	7
	Jared	James	4
	Franklin	Wong	3
	John	James	3
	James	Borg	3
	Juan	Linda	2
	Jennifer	Wallace	2