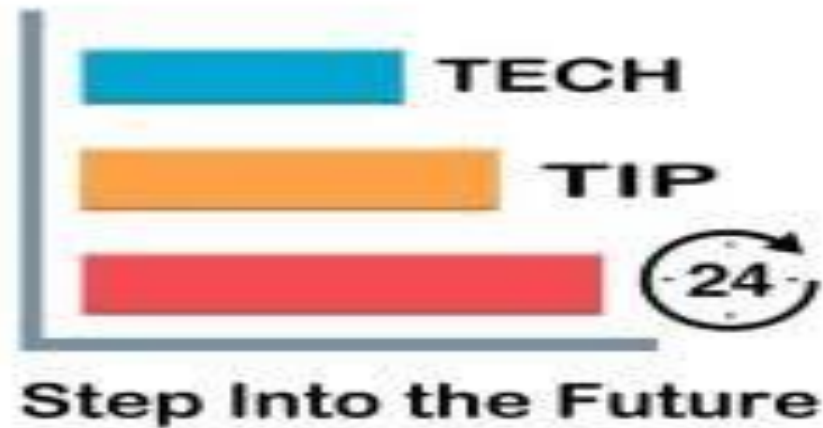


TECHTIP24 SQL PROJECT BY KOUSTAV BANERJEE



DETAILS OF THE PROJECT

PROJECT LINK-

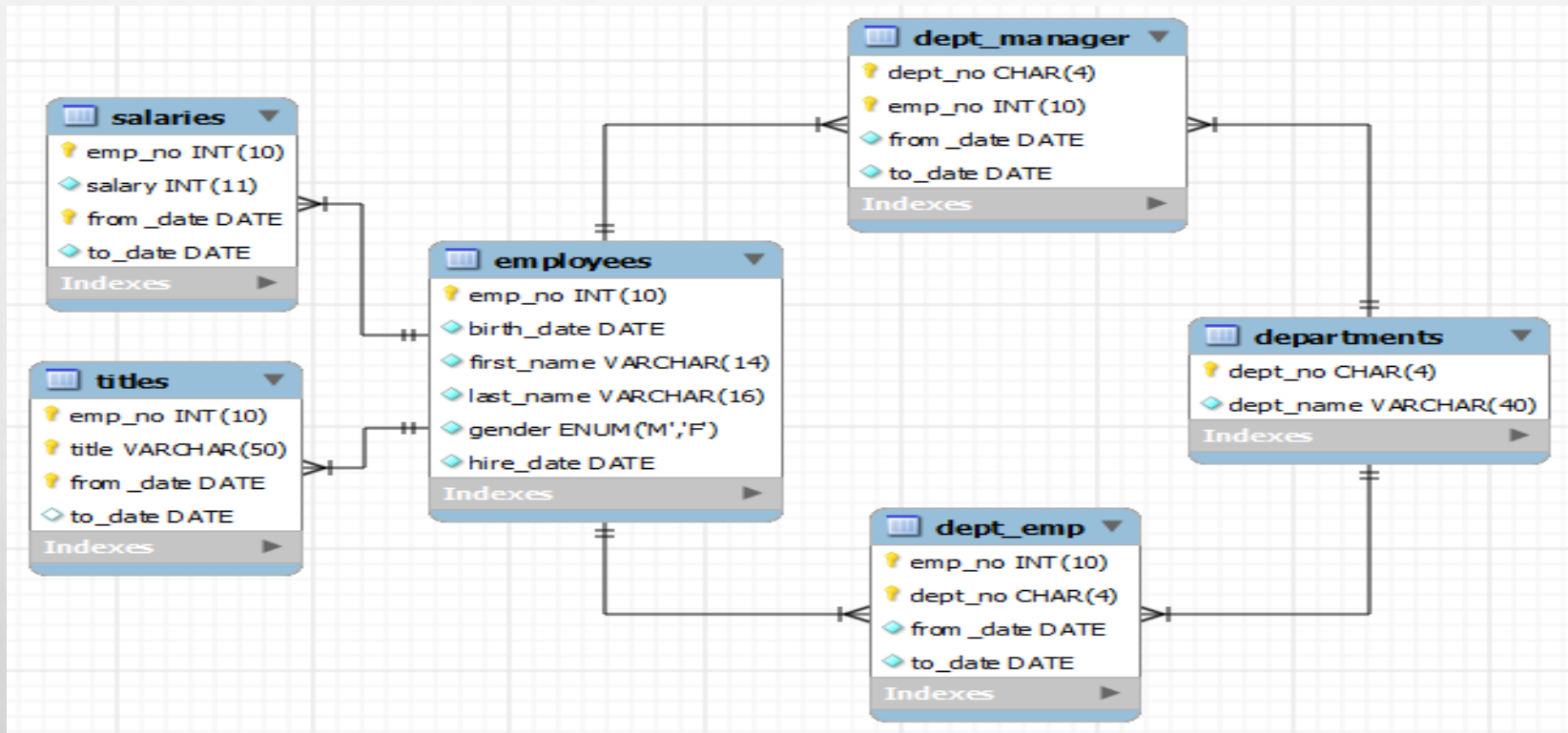
<https://github.com/Koustav1997/Koustav-Projects>

I USED THE EMPLOYEES DATABASE WHICH I DOWNLOADED FROM GIT HUB .THE DATABASE HERE CONSISTS OF DETAILS OF THE EMPLOYEES WORKING IN AN ORGANIZATION.IN THIS PROJECT I FOUND OUT THE INSIGHTS FROM THE DATA PRESENT IN THE EMPLOYEES DATA BASE USING MY SQL WORKBENCH AND FOR THE VISUALIZATIONS I USED TABLEAU DESKTOP.

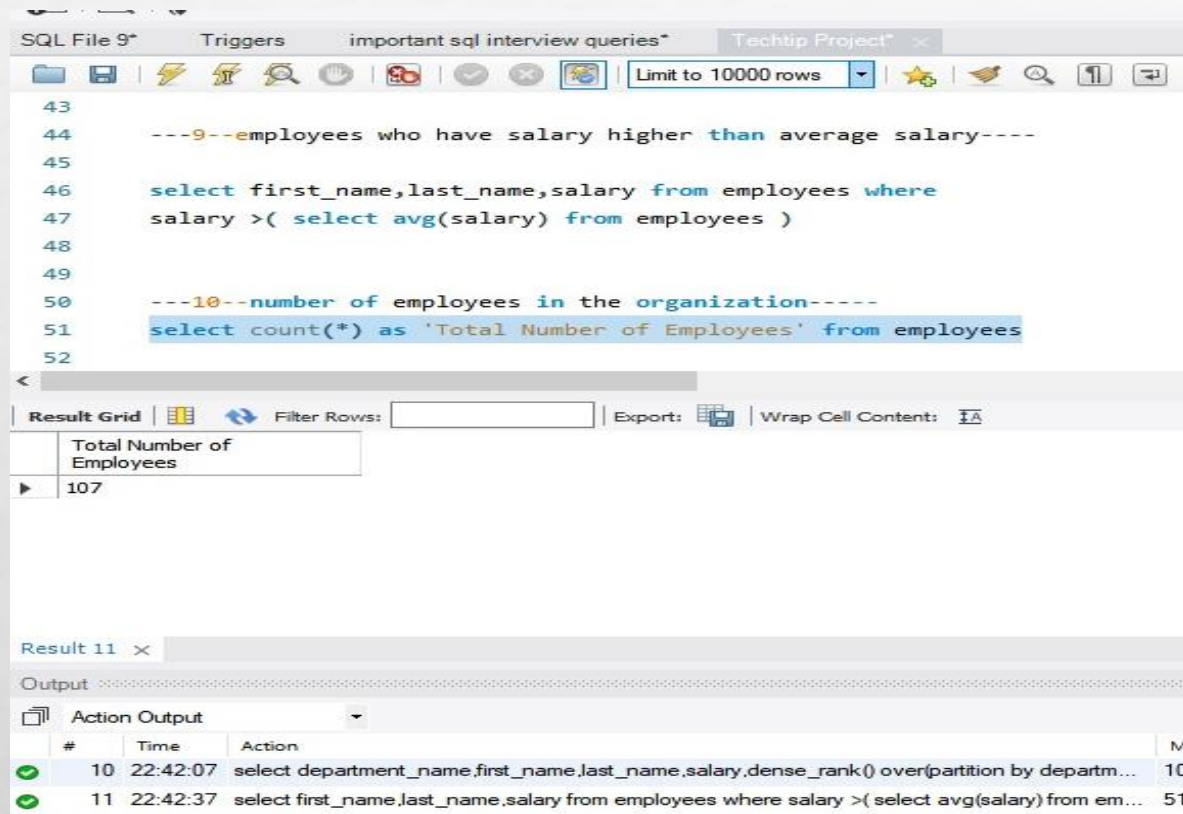
LINK OF THE DATABASE-

https://github.com/datacharmer/test_db/blob/master/employees.sql

TABLES IN THE DATA-BASE



TOTAL NUMBER OF EMPLOYEES



The screenshot shows the SQL Developer interface. The top pane contains a SQL query with two parts. The first part is a comment: `---9---employees who have salary higher than average salary----`. The second part is a query: `select first_name,last_name,salary from employees where salary >(select avg(salary) from employees)`. The third part is another comment: `---10---number of employees in the organization-----`. The fourth part is a query: `select count(*) as 'Total Number of Employees' from employees`. The bottom pane shows the 'Result Grid' with one row: 'Total Number of Employees' with a value of 107. The 'Output' pane shows the 'Action Output' table with two rows: row 10 at 22:42:07 for the first query, and row 11 at 22:42:37 for the second query.

```
43
44 ---9---employees who have salary higher than average salary----
45
46 select first_name,last_name,salary from employees where
47 salary >( select avg(salary) from employees )
48
49
50 ---10---number of employees in the organization-----
51 select count(*) as 'Total Number of Employees' from employees
52
```

Result Grid

	Total Number of Employees
▶	107

Result 11

Output

Action Output

#	Time	Action	Me
✓ 10	22:42:07	select department_name,first_name,last_name,salary,dense_rank() over(partition by departm...	106
✓ 11	22:42:37	select first_name,last_name,salary from employees where salary >(select avg(salary) from em...	51

TOTAL NUMBER OF EMPLOYEES IN THE ORGANIZATION=107

NUMBER OF EMPLOYEES IN EACH DEPARTMENT

SQL Query:

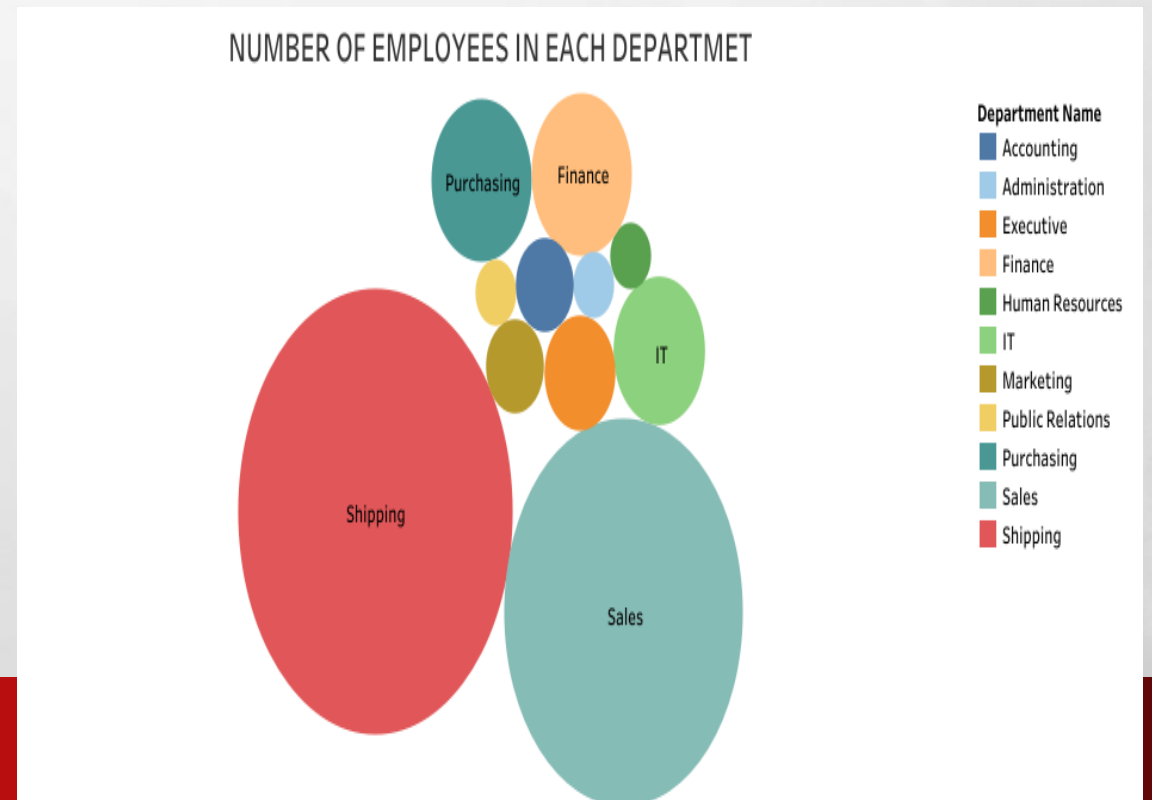
```
---1---number of employees as per department---
select departments.department_name,count(employees.employee_id) as 'Number of employees' from
departments join employees on departments.department_id=employees.department_id group by
departments.department_name order by count(employees.employee_id) desc
```

Result Grid:

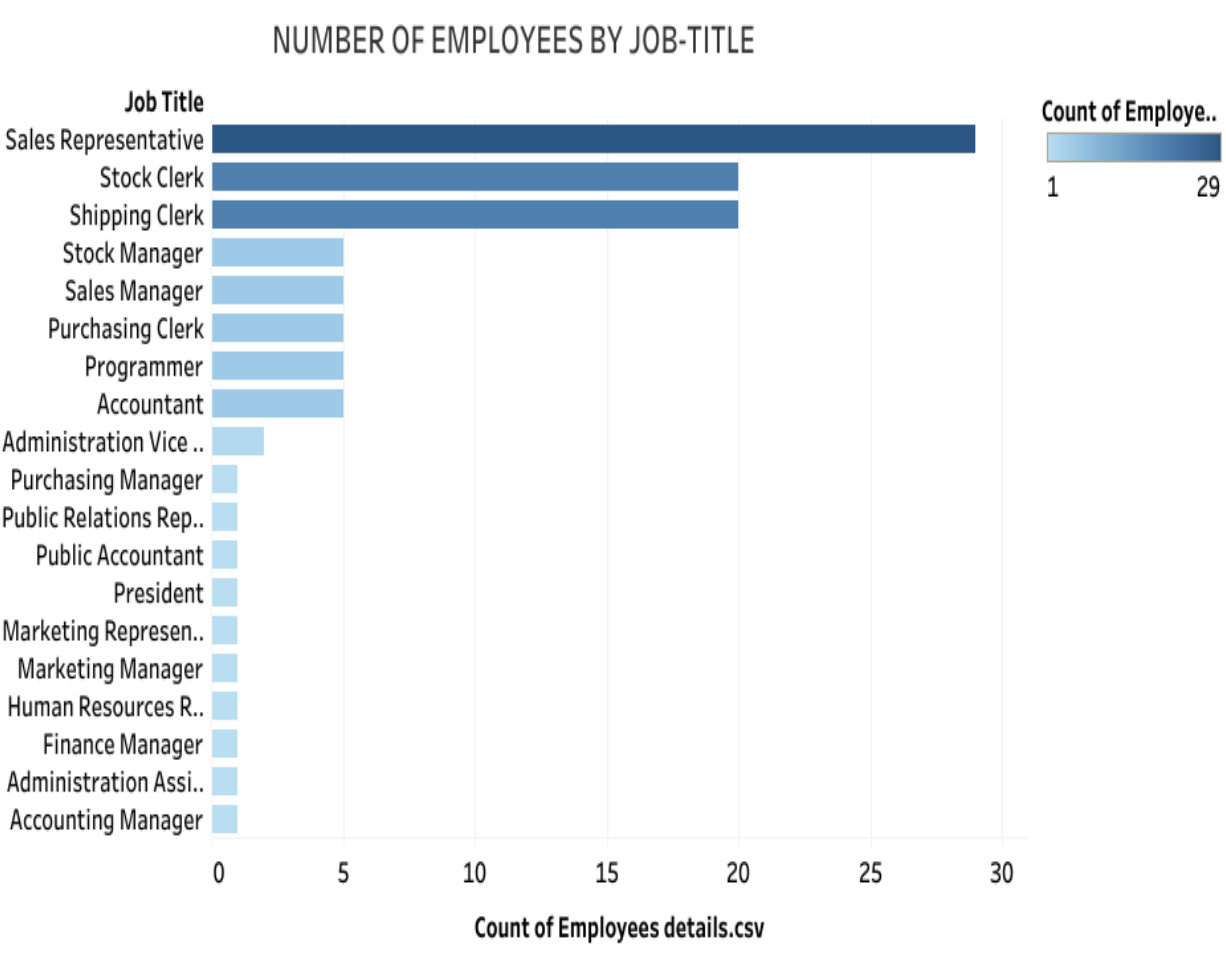
department_name	Number of employees
Shipping	45
Sales	34
Purchasing	6
Finance	6
IT	5
Executive	3
Marketing	2

Output:

#	Time	Action	Message
1	18:39:33	use hr	0 row(s) affected
2	18:39:44	show tables	8 row(s) returned
3	20:29:54	select departments.department_name,count(employees.employee_id) as 'Number of employees'...	11 row(s) returned



NUMBER OF EMPLOYEES BY JOB-TITLE



Server Tools Scripting Help

SQL File 9* Triggers important sql interview queries* Techtip Project* x

Limit to 10000 rows

```
17  ---3---number of employees with respect to job title-----
18
19  select jobs.job_title,count(employees.employee_id) from jobs
20  join employees on jobs.job_id=employees.job_id group by jobs.job_title order by count(employees.employee_id)
21  desc
22
23  ---4---average salary as per job title -----
24
25  select jobs.job_title,avg(employees.salary) from jobs
26  join employees on jobs.job_id=employees.job_id group by jobs.job_title order by avg(employees.salary)
```

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

job_title	count(employees.employee_id)
Sales Representative	30
Shipping Clerk	20
Stock Clerk	20
Accountant	5
Programmer	5
Purchasing Clerk	5
Sales Manager	5
Stock Manager	5

Result 4 x

Output

AVERAGE SALARY OF EACH DEPARTMENT

SQL File 9* Triggers important sql interview queries* Techtip Project* x

Limit to 10000 rows

```
11  
12      ---2---average salary of employees as per department-----  
13      select departments.department_name,avg(employees.salary) as 'average salary' from  
14      employees join departments on employees.department_id=departments.department_id  
15      group by departments.department_name order by avg(employees.salary) desc  
16  
17      ---3---number of employees with respect to job title-----  
18  
19      select jobs.job_title,count(employees.employee_id) from jobs  
20      join employees on jobs.job_id=employees.job_id group by jobs.job_title order by count
```

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

department_name	average salary
Executive	19333.333333
Accounting	10150.000000
Public Relations	10000.000000
Marketing	9500.000000
Sales	8955.882353
Finance	8600.000000
Human Resources	6500.000000

Result 3 x



AVERAGE SALARY BY JOB-TITLE

Server Tools Scripting Help

L File 9* Triggers important sql interview queries* Techtp Project x SQL

Limit to 10000 rows

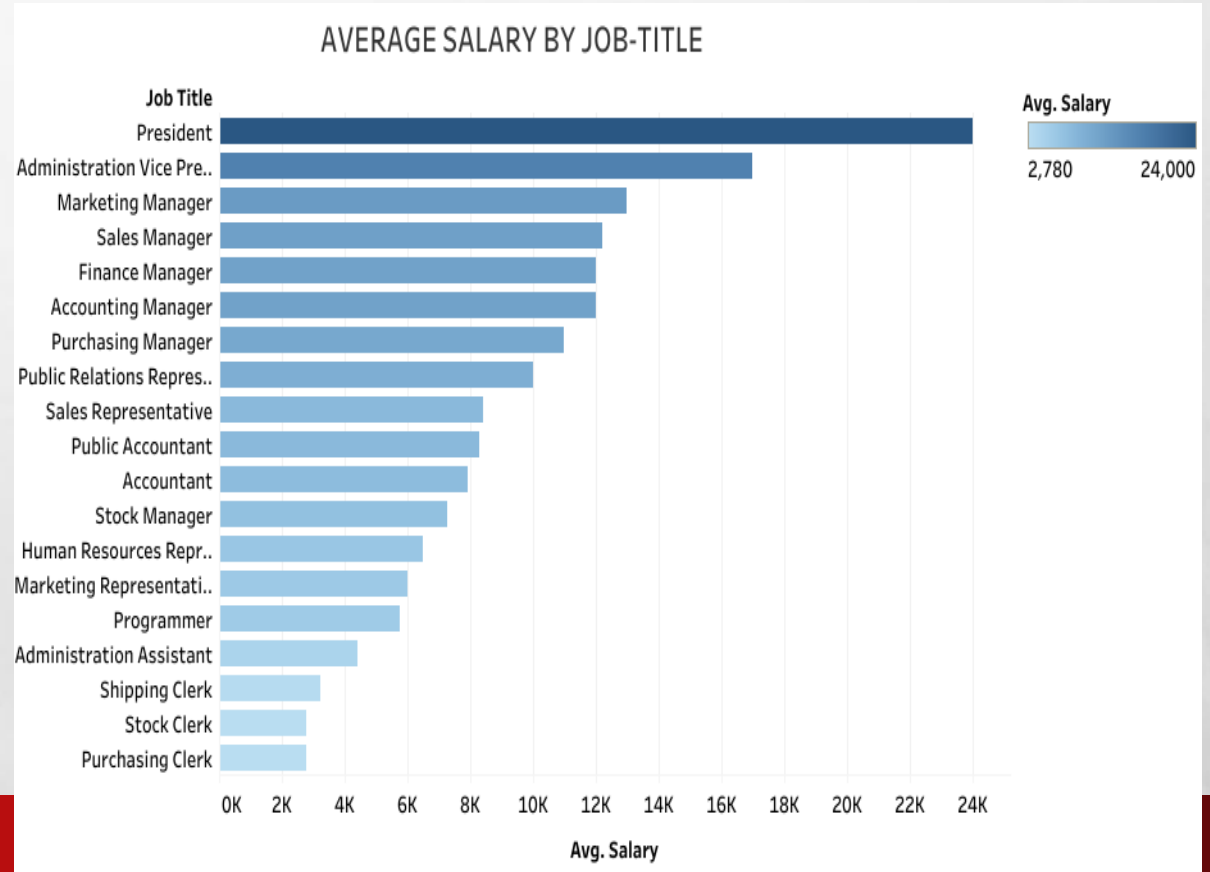
```
--4-----average salary as per job title -----
select jobs.job_title,avg(employees.salary) from jobs
join employees on jobs.job_id=employees.job_id group by jobs.job_title order by avg(employees.salary)
desc

--5--number of employees by country---
```

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

job_title	avg(employees.salary)
President	24000.000000
Administration Vice President	17000.000000
Marketing Manager	13000.000000
Sales Manager	12200.000000
Accounting Manager	12000.000000
Finance Manager	12000.000000
Purchasing Manager	11000.000000
Public Relations Representative	10000.000000

Result Grid Form Editor Read Only



TOP 10 EMPLOYEES HAVING HIGHEST SALARY

SQL File 9* Triggers important sql interview queries* Techtip Project* x SQL

Limit to 10000 rows

```
30 select country_name,count(employee_id) as 'Number of employees' from emp_details_view group by country_name
31
32 ----6--salary of employees with respect to experience---
33 select year(curdate())- year(hire_date) as 'Experience' ,avg(salary) as 'average salry' from employees
34 group by year(curdate())- year(hire_date) order by avg(salary) desc
35
36 ----7----top 10 employees with highest salaries----
37 select concat(first_name, " ,last_name) as 'full name',salary from employees
38 order by salary desc limit 10
39
```

Result Grid

full name	salary
Steven King	24000.00
Neena Kochhar	17000.00
Lex De Haan	17000.00
John Russell	14000.00
Karen Partners	13500.00
Michael Hartstein	13000.00
Shelley Higgins	12000.00
Nancy Greenberg	12000.00

Result 8 x

Output



EMPLOYEES RECEIVING THE HIGHEST SALARY IN EACH DEPARTMENT

The screenshot displays the SQL Enterprise Manager interface. The left pane shows a tree view of schemas with 'Administration' and 'Schemas' selected. The main pane shows a SQL script with three queries. The first query, 'top 10 employees with highest salaries', is highlighted. The second query, 'top3 employees by salary of each department', is also highlighted. The third query, 'employees who have salary higher than average salary', is not highlighted. The 'Result Grid' shows the results of the first query, displaying columns: department_name, first_name, last_name, salary, and rank. The results are as follows:

department_name	first_name	last_name	salary	rank
Accounting	Shelley	Higgins	12000.00	1
Accounting	William	Gietz	8300.00	2
Administration	Jennifer	Whalen	4400.00	1
Executive	Steven	King	24000.00	1
Executive	Neena	Kochhar	17000.00	2
Executive	Lex	De Haan	17000.00	2
Finance	Nancy	Greenberg	12000.00	1
Finance	Daniel	Faviet	9000.00	2

The 'Output' pane shows the execution of the queries. The first query, 'select year(curdate())-year(hire_date) as 'Experience', avg(salary) as 'average salary' from emp...', returned 12 row(s). The second query, 'select concat(first_name, " ", last_name) as 'full name', salary from employees order by salary desc limit 10', returned 10 row(s).

EMPLOYEES WHO EARN HIGHER THAN AVERAGE SALARY

MySQL Workbench

Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

Navigator: SQL File 9* Triggers important sql interview queries* Techtip Project* x

SCHEMAS

Filter objects

a
assmt
b
banerjee
barca
car_sales
cars

Administration Schemas

Information: No object selected

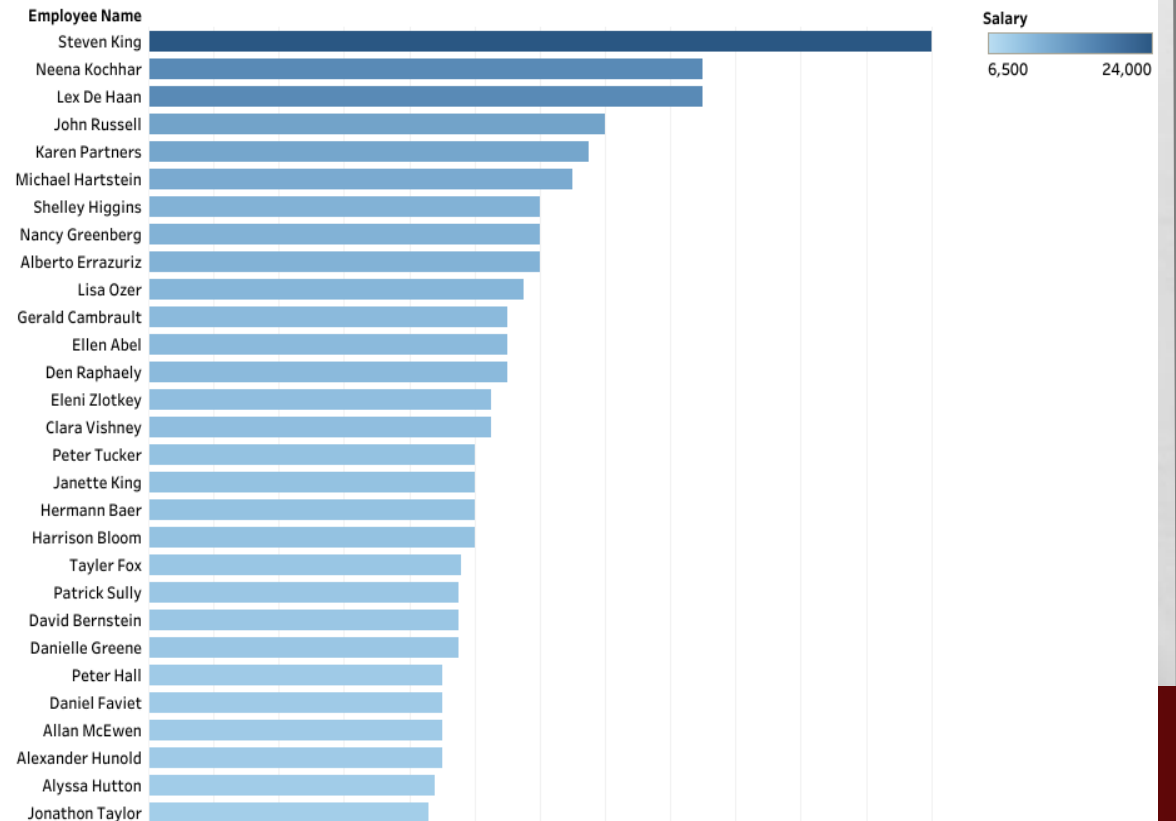
```
41 select department_name,first_name,last_name,salary,dense_rank() over(partition by department_
42 as 'rank' from emp_details_view
43
44 ---9---employees who have salary higher than average salary---
45
46 select first_name,last_name,salary from employees where
47 salary >( select avg(salary) from employees )
48
49
50 ---10---number of employees in the organization-----
51 select count(*) as 'Total Number of Employees' from employees
52
53
```

Result Grid

first_name	last_name	salary
Steven	King	24000.00
Neena	Kochhar	17000.00
Lex	De Haan	17000.00
Alexander	Hunold	9000.00
Nancy	Greenberg	12000.00

employees 1 x

EMPLOYEES WHO EARN HIGHER THAN AVERAGE SALARY



NUMBER OF EMPLOYEES FROM DIFFERENT COUNTRIES

SQL Workbench

Local instance MySQL80 x

Edit View Query Database Server Tools Scripting Help

SQL File 9* Triggers important sql interview queries* Techtip Project x

Limit to 10000 rows

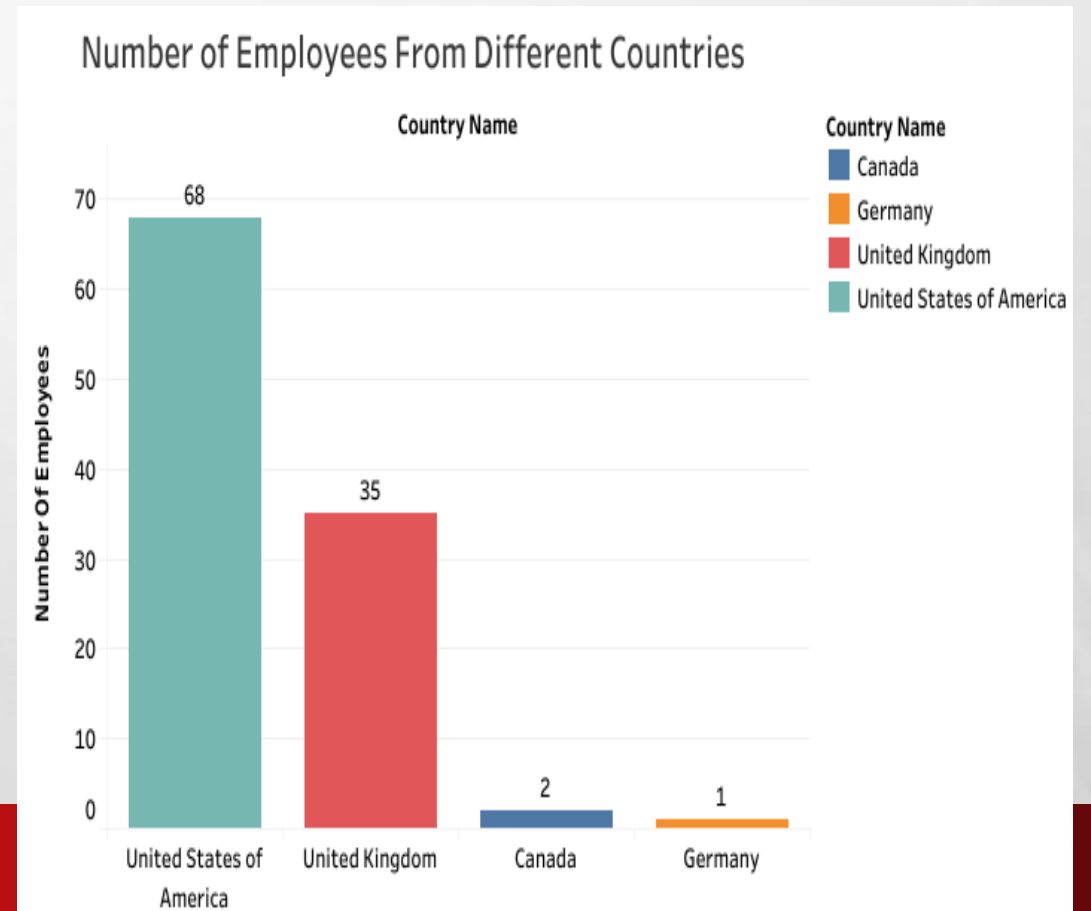
```
26 join employees on jobs.job_id=employees.job_id group by jobs.job_title order by avg(employees.salary)
27 desc
28
29 --5--number of employees by country---
30 select country_name,count(employee_id) as 'Number of employees' from emp_details_view group by country_name
31
32 ----6--salary of employees with respect to experience---
33 select year(curdate())- year(hire_date) as 'Experience' ,avg(salary) as 'average salary' from employees
34 group by year(curdate())- year(hire_date) order by avg(salary) desc
35
```

Result Grid

country_name	Number of employees
United States of America	68
Canada	2
United Kingdom	35
Germany	1

Result 6 x

Read Only



NUMBER OF EMPLOYEES FROM DIFFERENT CITIES

SQL File 9* Triggers important sql interview queries* Techtip Project*

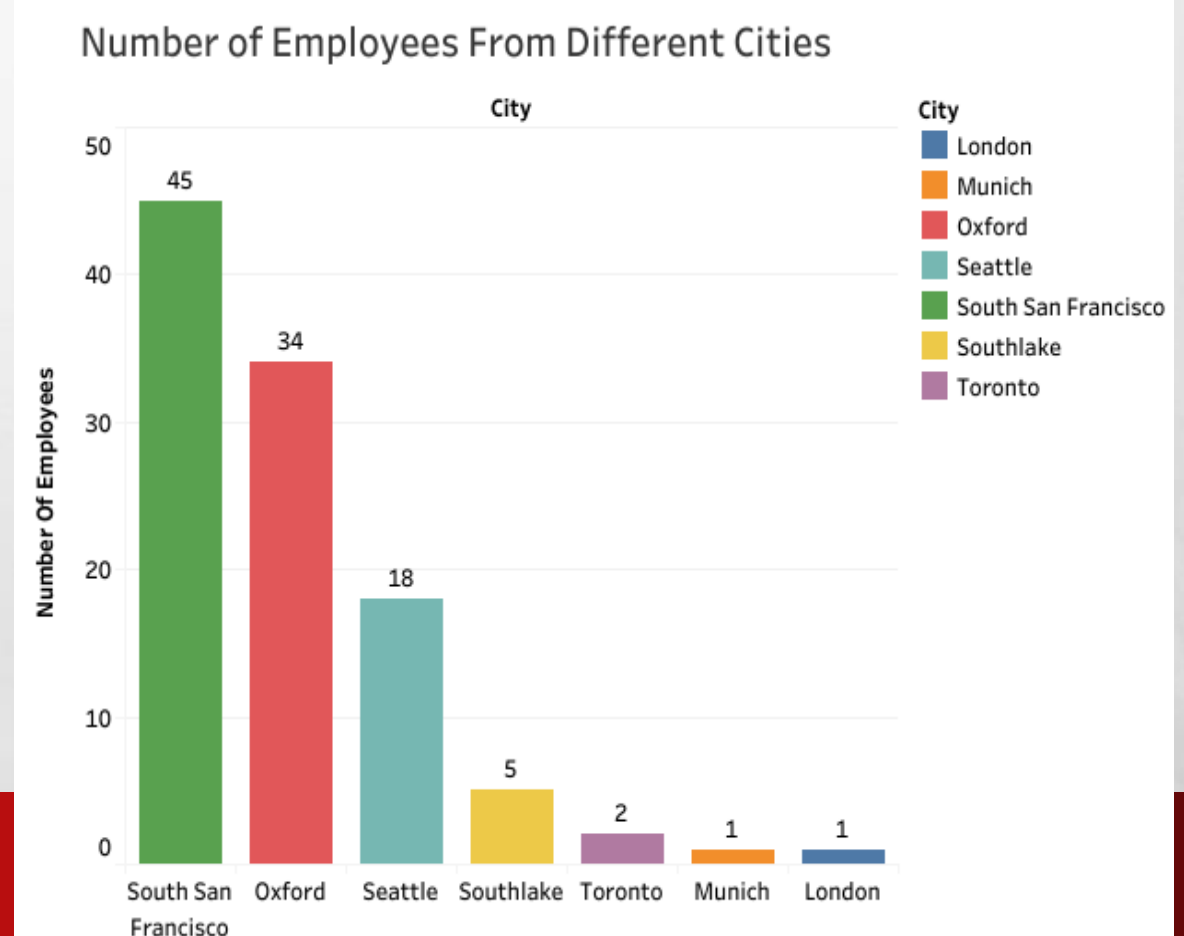
Limit to 10000 rows

```
53 -----11---number of employees by city---
54
55 select city,count(employee_id) as 'Number of Employees' from emp_details_view
56 group by city order by count(employee_id) desc
57
58 -----12---details of the employees who recieve commission-----
59
60 select * from employees where commission_pct is not null
61
```

Result Grid

city	Number of Employees
South San Francisco	45
Oxford	34
Seattle	18
Southlake	5
Toronto	2
London	1
Munich	1

Result 12 x



EMPLOYEES WHO ARE RECEIVING COMMISSION

The screenshot displays the SQL Developer interface with two SQL queries and their results.

Query 11: number of employees by city

```
select city, count(employee_id) as 'Number of Employees' from emp_details_view
group by city order by count(employee_id) desc
```

Query 12: details of the employees who receive commission

```
select * from employees where commission_pct is not null
```

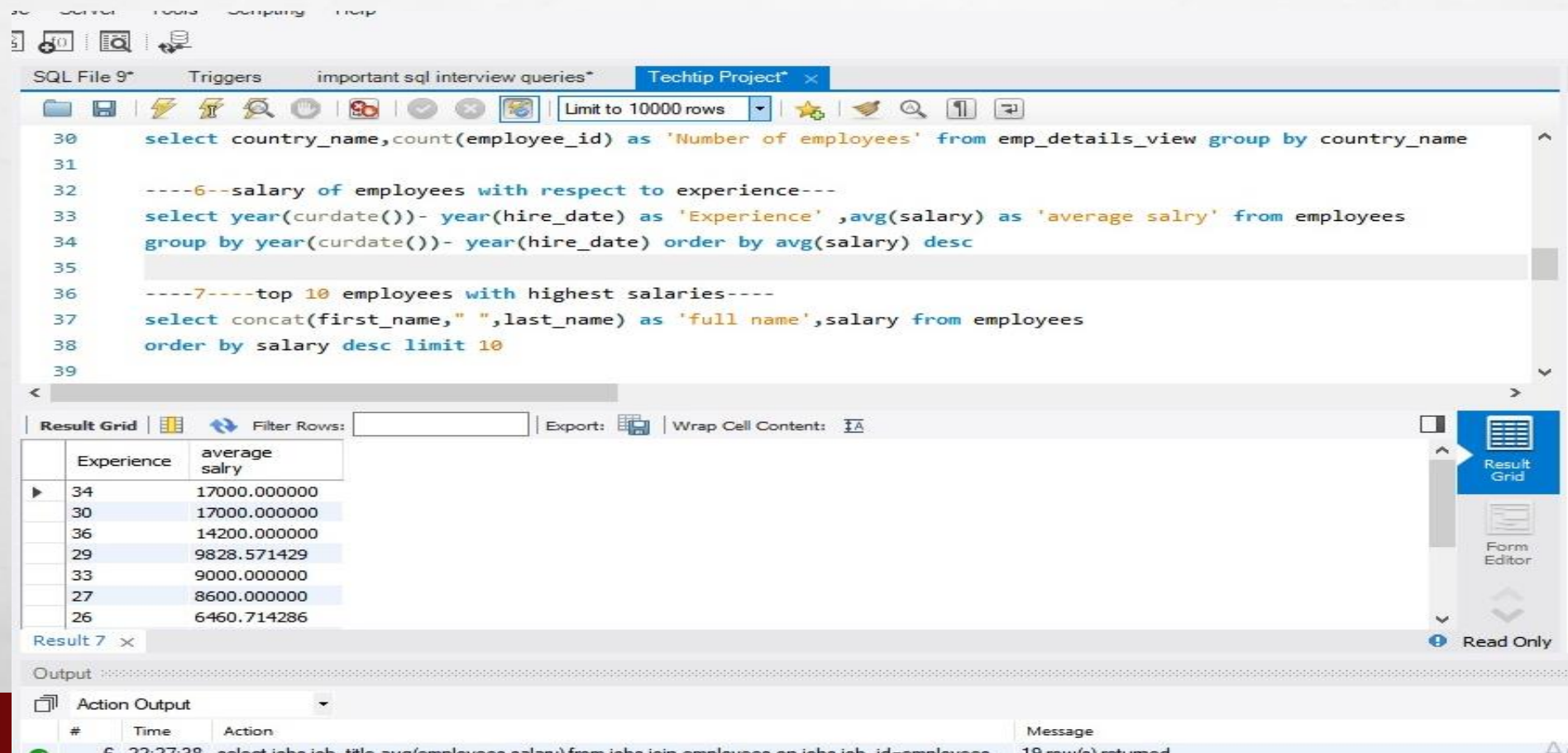
Result Grid:

employee_id	first_name	last_name	email	phone_number	hire_date	job_id	salary	commission_pct	manager_id
145	John	Russell	JRUSSEL	011.44.1344.429268	1996-10-01	SA_MAN	14000.00	0.40	100
146	Karen	Partners	KPARTNER	011.44.1344.467268	1997-01-05	SA_MAN	13500.00	0.30	100
147	Alberto	Errazuriz	AERRAZUR	011.44.1344.429278	1997-03-10	SA_MAN	12000.00	0.30	100
148	Gerald	Cambraut	GCAMBRAU	011.44.1344.619268	1999-10-15	SA_MAN	11000.00	0.30	100
149	Eleni	Zlotkey	EZLOTKEY	011.44.1344.429018	2000-01-29	SA_MAN	10500.00	0.20	100
150	Peter	Tucker	PTUCKER	011.44.1344.129268	1997-01-30	SA_REP	10000.00	0.30	145
151	David	Bernstein	DBERNSTE	011.44.1344.345268	1997-03-24	SA_REP	9500.00	0.25	145

Action Output:

#	Time	Action	Message
12	22:43:08	select count(*) as 'Total Number of Employees' from employees LIMIT 0, 10000	1 row(s) returned
13	22:43:47	select city, count(employee_id) as 'Number of Employees' from emp_details_view group by ...	7 row(s) returned

AVERAGE SALARY OF EMPLOYEES WITH EXPERIENCE



The screenshot displays the SQL Server Enterprise Manager interface. The 'SQL File 9*' window is open, showing a query script. The query is as follows:

```
30 select country_name,count(employee_id) as 'Number of employees' from emp_details_view group by country_name
31
32 ----6--salary of employees with respect to experience---
33 select year(curdate())- year(hire_date) as 'Experience' ,avg(salary) as 'average salry' from employees
34 group by year(curdate())- year(hire_date) order by avg(salary) desc
35
36 ----7----top 10 employees with highest salaries----
37 select concat(first_name," ",last_name) as 'full name',salary from employees
38 order by salary desc limit 10
39
```

The 'Result Grid' tab is active, showing the results of the query. The results are as follows:

Experience	average salry
34	17000.000000
30	17000.000000
36	14200.000000
29	9828.571429
33	9000.000000
27	8600.000000
26	6460.714286

The 'Output' tab is also visible, showing the execution of the query. The message indicates that 18 row(s) returned.

FINAL INSIGHTS

- **MOST OF THE EMPLOYEES OF THE ORGANIZATION ARE IN SHIPPING AND SALES DEPARTMENT**
- **EMPLOYEES IN EXECUTIVE AND ACCOUNTING DEPARTMENT RECEIVE MORE SALARY THAN EMPLOYEES IN OTHER DEPARTMENTS**
- **MOST OF THE EMPLOYEES ARE LIVING IN USA AND UK**
- **EMPLOYEES HAVING MORE EXPERIENCE EARN MORE THAN EMPLOYEES WITH LESS EXPERIENCE**
- **MOST EMPLOYEES ARE HAVING THE JOB TITLE SALES REPRESENTATIVE ,SHIPPING CLERK AND STOCK MARKET CLERK**
- **STEVEN KING,NEENA KOCCHAR, LEX DE HAAN ARE THE HIGHEST PAID EMPLOYEES**