1. Use the countries table. Write a sql query that returns the number of countries in each region.
   1. Find out the regions that have exactly 6 countries.

SELECT Region\_ID, Count(country\_ID)

FROM Countries

GROUP BY Region\_ID

HAVING Count(Country\_ID) =6;

1. Use the departments table. Write a sql query which returns the number of departments in each location.

2.1. Find out locations that have more than one table.

SELECT Location\_ID, Count(Department\_Name)

FROM Departments

GROUP BY Location\_ID

HAVING COUNT(Department\_Name) > 1;

1. Use the employees table. Write a sql query which returns the number of employees each manager manages.

3.1. Find out the managers who manage more than 10 people

3.2. Find out the managers who manage exactly 6 people

SELECT Manager\_ID, Count(Employee\_ID)

FROM Employees

GROUP BY Manager\_ID

HAVING COUNT(Employee\_ID) > 10;

--3.2

SELECT Manager\_ID, Count(Employee\_ID)

FROM Employees

GROUP BY Manager\_ID

HAVING COUNT(Employee\_ID) = 6;

1. Extract the first 3 digits of the employees phone number as area\_code from the employees table.

4.1. Find out how many employees in each area code.

SELECT SUBSTR(phone\_number,1,3) AS area\_code, COUNT(\*)

FROM employees

GROUP BY SUBSTR(phone\_number,1,3);

1. Find out how many employees were hired each year.

( Hint: to get the year SUBSTR(hire\_date, 8,2) or EXTRACT(YEAR FROM hire\_date) )

SELECT EXTRACT(YEAR FROM hire\_date), COUNT(employee\_id)

FROM employees

GROUP BY EXTRACT(YEAR FROM hire\_date);

1. Find out how many employees were hired in July.

( Hint: hire\_date LIKE '%JULY%' or SUBSTR(hire\_date ,4,3)= 'JUL' or EXTRACT(MONTH FROM E.hire\_date) = 7)

SELECT COUNT(employee\_id)

FROM employees

WHERE EXTRACT(MONTH FROM hire\_date)=7;

1. Use the employees table

7.1. Find out the sum of all salary for each department

SELECT department\_id, SUM(salary)

FROM employees

GROUP BY department\_id;

7.2. Find out the average of all salary for each id

SELECT department\_id, AVG(salary)

FROM employees

GROUP BY department\_id;

7.3. Find out the minimum salary of each department

SELECT department\_id, MIN(salary)

FROM employees

GROUP BY department\_id;

7.4. Find out the max salary of the following departments: 50, 90, and 100.

SELECT department\_id, MAX(salary)

FROM employees

WHERE department\_id IN (50, 90, 100)

GROUP BY department\_id;

1. Write a sql query which returns how many employees have salaries more than $3,000 and how many have less than equal to $3,000 for each job id in the employees table.

SELECT job\_id

, COUNT(CASE WHEN salary > 3000 THEN 'more\_than\_mw' END) AS more\_than\_mw\_count

, COUNT(CASE WHEN salary <= 3000 THEN 'less\_than\_mw'  END) AS less\_than\_mw\_count

FROM employees

GROUP BY job\_id;

1. Write a sql query which returns how many employees started the job before June and how many started after June for each department id in the employees table. (Hint: EXTRACT(MONTH FROM E.hire\_date))

SELECT E.department\_id

, COUNT(CASE WHEN EXTRACT(MONTH FROM E.hire\_date) < 6 THEN 'before\_june' END) AS before\_june\_Count

, COUNT(CASE WHEN EXTRACT(MONTH FROM E.hire\_date) > 6 THEN 'before\_june' END) AS after\_june\_Count

FROM employees E

GROUP BY department\_id;

1. Write a sql query which returns the number of employees whose job ids contains ‘IT’ and the number of employees whose job ids contain ‘REP’ for each department in the employees table.

SELECT E.department\_id

, COUNT(CASE WHEN job\_id LIKE '%IT%' THEN 'it\_job' END) AS it\_job\_Count

, COUNT(CASE WHEN job\_id LIKE '%REP%' THEN 'rep\_job' END) AS rep\_job\_Count

FROM employees E

GROUP BY department\_id;