**Project SQL**

1. Display the last name and salary of employees earning more than $12,000

**SELECT last\_name**

**,salary**

**FROM employees**

**WHERE salary > 12000**

1. Display the last name and department number for employee number 176

**SELECT last\_name**

**,department\_id**

**FROM employees**

**WHERE employee\_id = 176**

1. Display the last name and salary for all employees whose salary is not in the range of $5,000 to $12,000

a)

**SELECT last\_name**

**,salary**

**FROM employees**

**WHERE salary < 5000**

**OR salary > 12000**

b)

**SELECT last\_name**

**,salary**

**FROM employees**

**WHERE salary NOT BETWEEN 5000**

**AND 12000**

1. Display the last name, job ID, and start date (hire date) for the employees with the last names of Matos and Taylor.Order the query in ascending order by start date.

**SELECT last\_name**

**,job\_id**

**,hire\_date**

**FROM employees**

**WHERE last\_name = 'Matos'**

**OR last\_name = 'Taylor'**

**ORDER BY hire\_date ASC**

1. Display the last name and department number of all employees in departments 20 or 50 in ascending alphabetical order by name.

a)

**SELECT last\_name**

**,department\_id**

**FROM employees**

**WHERE department\_id = 20**

**OR department\_id = 50**

**ORDER BY first\_name ASC**

b)

**SELECT last\_name**

**,department\_id**

**FROM employees**

**WHERE department\_id IN (**

**20**

**,50**

**)**

**ORDER BY first\_name ASC**

1. Display the last name and job title of all employees who do not have a manager.

**SELECT last\_name**

**,job\_id**

**FROM employees**

**WHERE manager\_id IS NULL**

1. Display the last name, salary, and commission for all employees who earn commissions. Sort data in descending.

**SELECT last\_name**

**,salary**

**,commission\_pct**

**FROM employees**

**WHERE commission\_pct IS NOT NULL**

**ORDER BY hire\_date DESC**

1. Find the highest, lowest, sum, and average salary of all employees. Label the columns Maximum, Minimum, Sum, and Average, respectively.

**SELECT MAX(salary) AS Maximum**

**,MIN(salary) AS Minimum**

**,SUM(salary) AS Sum**

**,AVG(salary) AS Average**

**FROM employees**

1. Display details of jobs where the minimum salary is greater than 10000.

**SELECT \***

**FROM jobs**

**WHERE min\_salary > 12000**

1. Display the first name and join date of the employees who joined between 2002 and 2005.

**SELECT first\_name**

**,hire\_date**

**FROM employees**

**WHERE hire\_date BETWEEN '2002'**

**AND '2005'**

1. Display first name and join date of the employees who is either IT Programmer or Sales Man.

**SELECT first\_name**

**,hire\_date**

**FROM employees**

**WHERE job\_id = 'IT\_PROG'**

**OR job\_id = 'SA\_MAN'**

1. Display employees who joined after 1st January 2008.

**SELECT \***

**FROM employees**

**WHERE hire\_date > '2008-01-01'**

1. Display details of employee with ID 150 or 160.

**SELECT \***

**FROM employees**

**WHERE employee\_id = 150**

**OR employee\_id = 160**

1. Display first name, salary, commission pct, and hire date for employees with salary less than 10000.

**SELECT first\_name**

**,salary**

**,commission\_pct**

**,hire\_date**

**FROM employees**

**WHERE salary < 10000**

1. Display job Title, the difference between minimum and maximum salaries for jobs with max salary in the range 10000 to 20000.

**SELECT job\_title**

**,DIFFERENCE('min\_salary', 'max\_salary') AS difference**

**FROM jobs**

**WHERE max\_salary BETWEEN 10000**

**AND 20000**

1. Display first name, salary, and round the salary to thousands.

**SELECT first\_name**

**,salary**

**,ROUND(salary, - 3) AS 'round\_salary'**

**FROM employees**

1. Display details of jobs in the descending order of the title.

**SELECT \***

**FROM jobs**

**ORDER BY job\_title DESC**

1. Display employees where the first name or last name starts with S.

**SELECT \***

**FROM employees**

**WHERE last\_name LIKE 'S%'**

**OR last\_name LIKE 'S%'**

1. Display employees who joined in the month of May.

**SELECT \***

**FROM employees**

**WHERE month(hire\_date) = 05**

1. Display details of the employees where commission percentage is null and salary in the range 5000 to 10000 and department is 30.

**SELECT \***

**FROM employees**

**WHERE commission\_pct = NULL**

**AND salary BETWEEN 5000**

**AND 10000**

**AND department\_id = 30**

1. Display first name and date of first salary of the employees.

SELECT first\_name, eomonth(hire\_date)

1. FROM employees

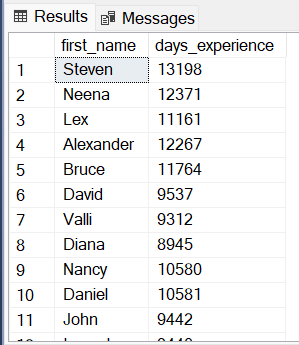
24. Display first name and experience of the employees.

**SELECT first\_name, DATEDIFF(day, hire\_date, '08-05-2023') AS days\_experience**

**FROM employees**

SELECT first\_name, DATEDIFF(YEAR, hire\_date, '08-05-2023') AS year\_experience

FROM employees

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25. Display first name of employees who joined in 2000.

**SELECT first\_name**

**FROM employees**

**WHERE year(hire\_date) = 2000**

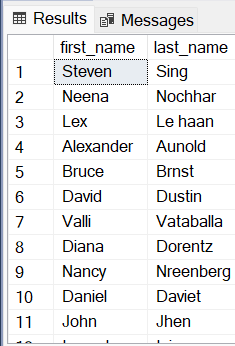


26. Display first name and last name after converting the first letter of each name to upper case and the rest to lower case.

**SELECT UPPER(LEFT(first\_name, 1)) + LOWER(SUBSTRING(first\_name, 2, len(first\_name))) AS first\_name**

**,UPPER(LEFT(first\_name, 1)) + LOWER(SUBSTRING(last\_name, 2, len(last\_name))) AS last\_name**

**FROM employees**



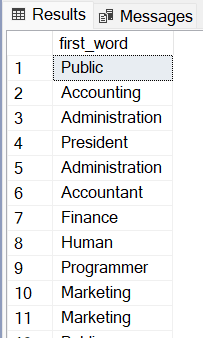
27. Display the first word in job title.

**SELECT SUBSTRING(job\_title, 1, CHARINDEX(' ', job\_title + ' ') - 1) AS first\_word**

**FROM jobs**

SELECT SUBSTRING(job\_title, 1, 1) AS first\_word

FROM jobs



28. Display the length of first name for employees where last name contain character ‘b’ after 3rd position.

SELECT LEN(first\_name), \*

FROM employees where SUBSTRING(last\_name, 4, 1) = 'b'

29. Display first name in upper case and email address in lower case for employees where the first name and email address are same irrespective of the case.

**SELECT upper(first\_name)**

**,lower(email)**

**FROM employees**

30. Display employees who joined in the current year.

**SELECT \***

**FROM employees**

**WHERE year(hire\_date) = year(current\_timestamp)**

31. Display the number of days between system date and 1st January 2011.

32. Display how many employees joined in each month of the current year.

SELECT COUNT(EMPLOYEE\_ID) as NumberOfEmployees , DATEPART(month, HIRE\_DATE) as Month FROM EMPLOYEES

where DATEPART(year, HIRE\_DATE) = 1998

group by DATEPART(month, HIRE\_DATE)

select \* from employees where DATEPART(YEAR, HIRE\_DATE) = 1998

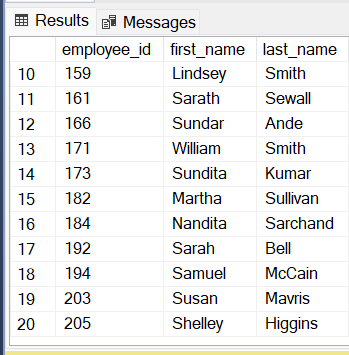
34. Display Employees Where The First Name Or Last Name Starts With S.

**SELECT \***

**FROM employees**

**WHERE first\_name LIKE 'S%'**

**OR last\_name LIKE 'S%'**



35. From The Employees Table Select The Last Name And The Job Id. Using The Case Statement, Give A Detailed Description To The Job Id. For Example: If Job Id Is ‘Ad\_Vp’ Then Display ‘Administrative Vice President’, If The Job Id Is ‘Ad\_Asst’ Then Display ‘Administrative Assistant’; Otherwise Display ‘Unknow Job Id’ (nie czyta as)

select last\_name, job\_id as 'Administrative Vice President' from employees where (job\_id = 'AD\_VP')

41. Display Manager Id And Number Of Employees Managed By The Manager.

**SELECT manager\_id**

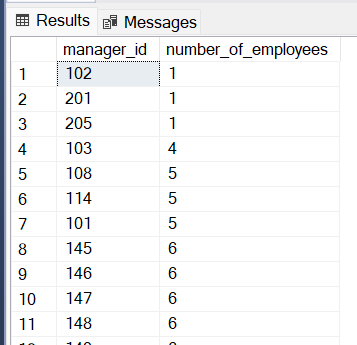
**,count(employee\_id) AS 'number\_of\_employees'**

**FROM employees**

**WHERE manager\_id IS NOT NULL**

**GROUP BY manager\_id**

**ORDER BY COUNT(employee\_id)**



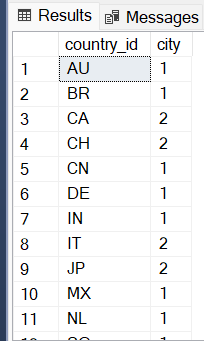
42. Display The Country Id And Number Of Cities We Have In The Country.

**SELECT country\_id**

**,count(city) AS city**

**FROM locations**

**GROUP BY country\_id**



43. Display Average Salary Of Employees In Each Department Who Have Commission Percentage.

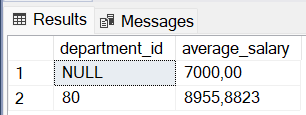
**SELECT department\_id**

**,AVG(salary) AS average\_salary**

**FROM employees**

**WHERE commission\_pct IS NOT NULL**

**GROUP BY department\_id**

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44. Display Job Id, Number Of Employees, Sum Of Salary, And Difference Between Highest Salary And Lowest Salary Of The Employees Of The Job.

Select Job\_Id, Count (\*), Sum(Salary), (Max(Salary)-Min(Salary)) As Difference From Employees

Group By Job\_Id

45. Display Job Id For Jobs With Average Salary More Than 10000.

select job\_id, AVG(salary) from employees group by job\_id

having AVG(salary) > 10000

46. Display Departments In Which More Than Five Employees Have Commission Percentage.

select department\_id, count(commission\_pct) as employee from employees where commission\_pct is not NULL group by department\_id

having count(commission\_pct) > 5

select department\_id from employees where commission\_pct is not NULL

47. Display Employee Id For Employees Who Did More Than One Job In The Past.

select employee\_id, count(\*) from job\_history group by employee\_id

having count(\*) > 1

48. Change Salary Of Employee 115 To 8000 If The Existing Salary Is Less Than 6000.

**UPDATE employees**

**SET salary = 8000**

**WHERE employee\_id = 116**

**AND salary < 6000**