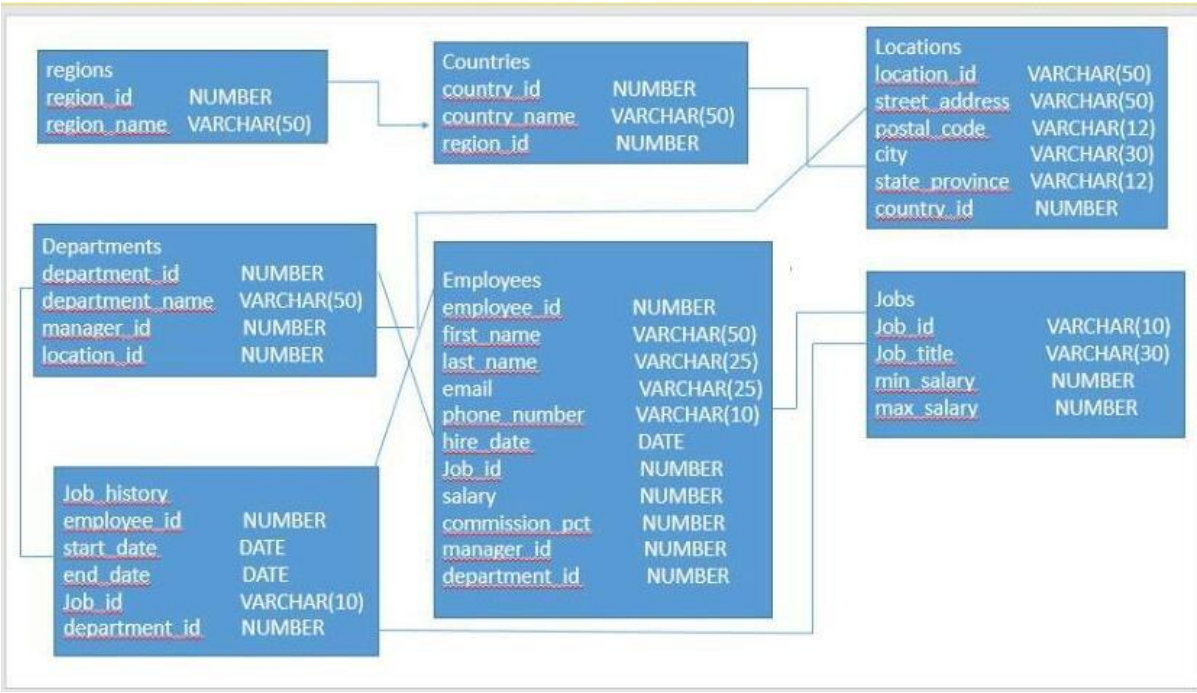
ASSIGNMENT OF POSTGRESQL

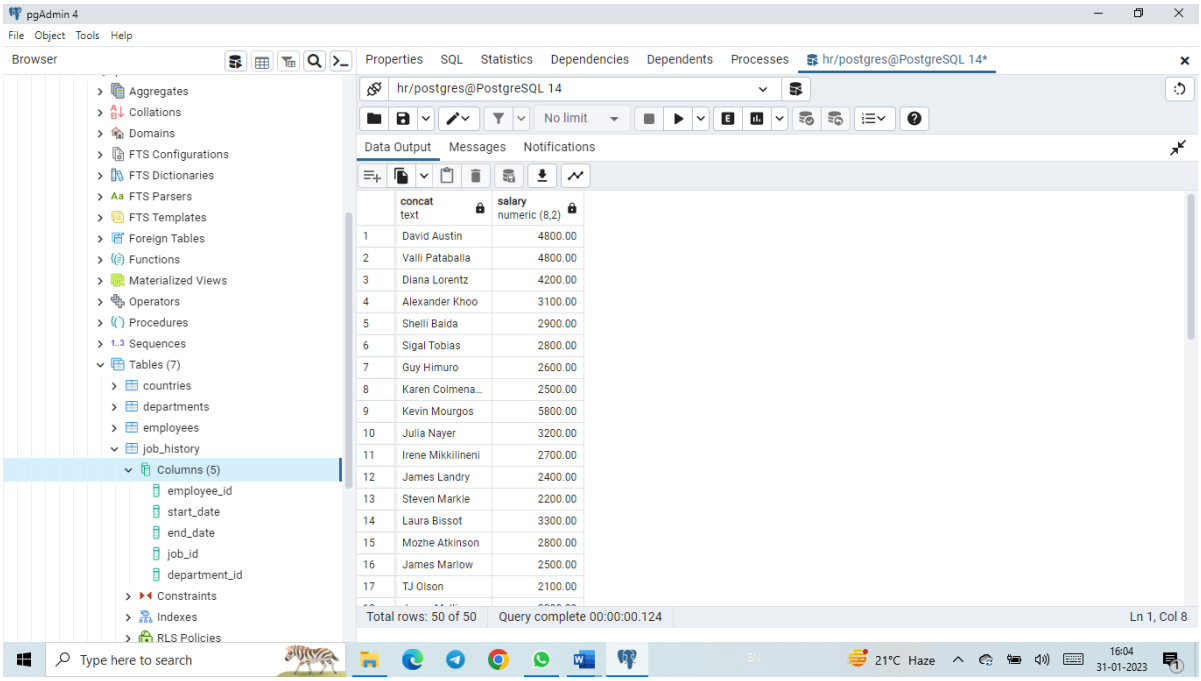
ER DIAGRAM



QUERIES

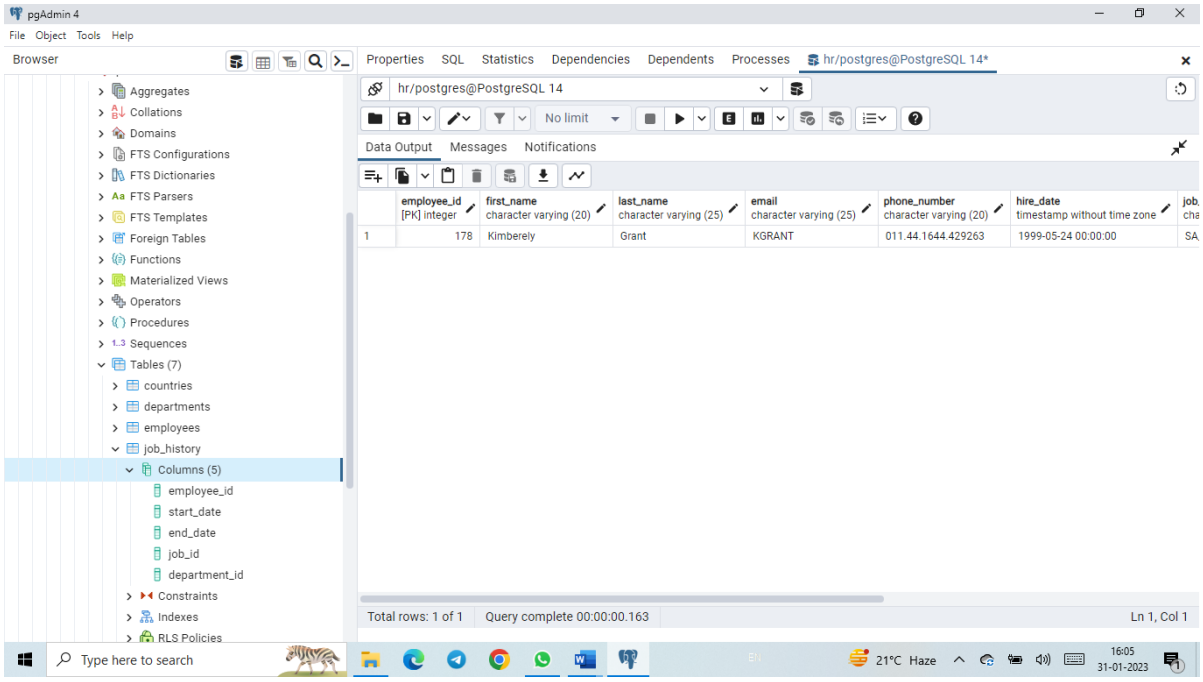
a. write a SQL query to find those employees whose salaries are less than 6000. Return full name (first and last name), and salary.

Solution - SELECT CONCAT(first_name,' ',last_name),salary FROM employees WHERE salary<6000;



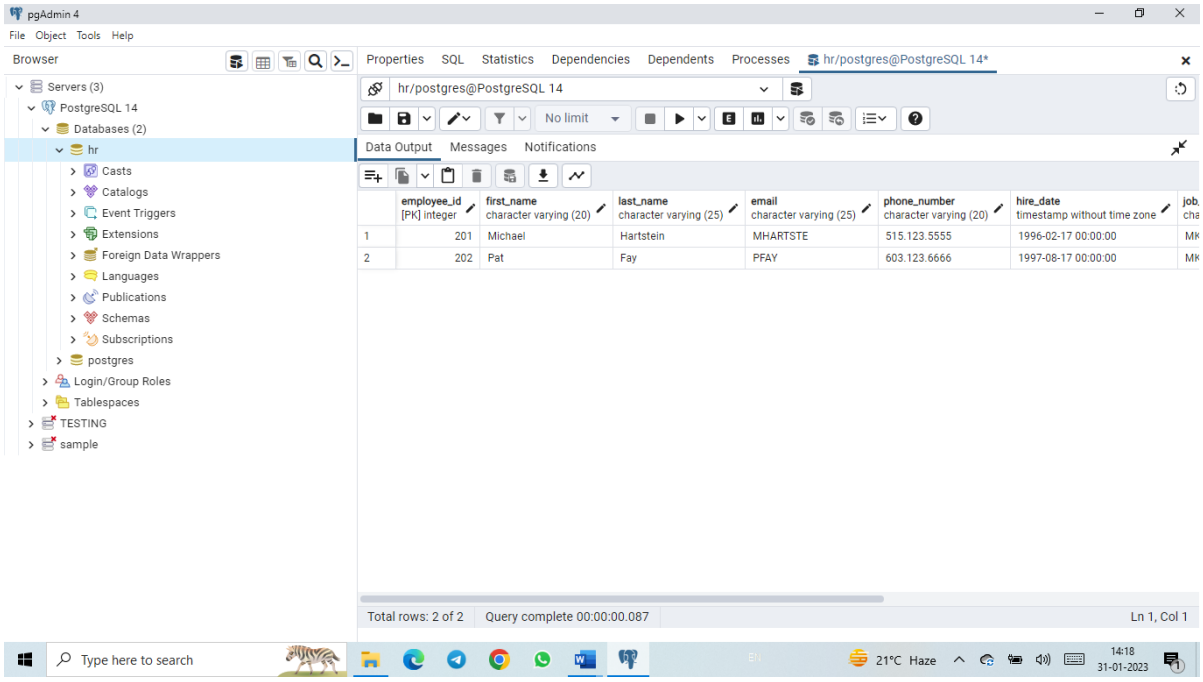
b. write a SQL query to identify employees who do not have a department number. Return employee_id, first_name, last_name, email, phone_number, hire_date, job_id, salary,commission_pct, manager_id and department_id

solution - SELECT * FROM employees WHERE department_id IS NULL;



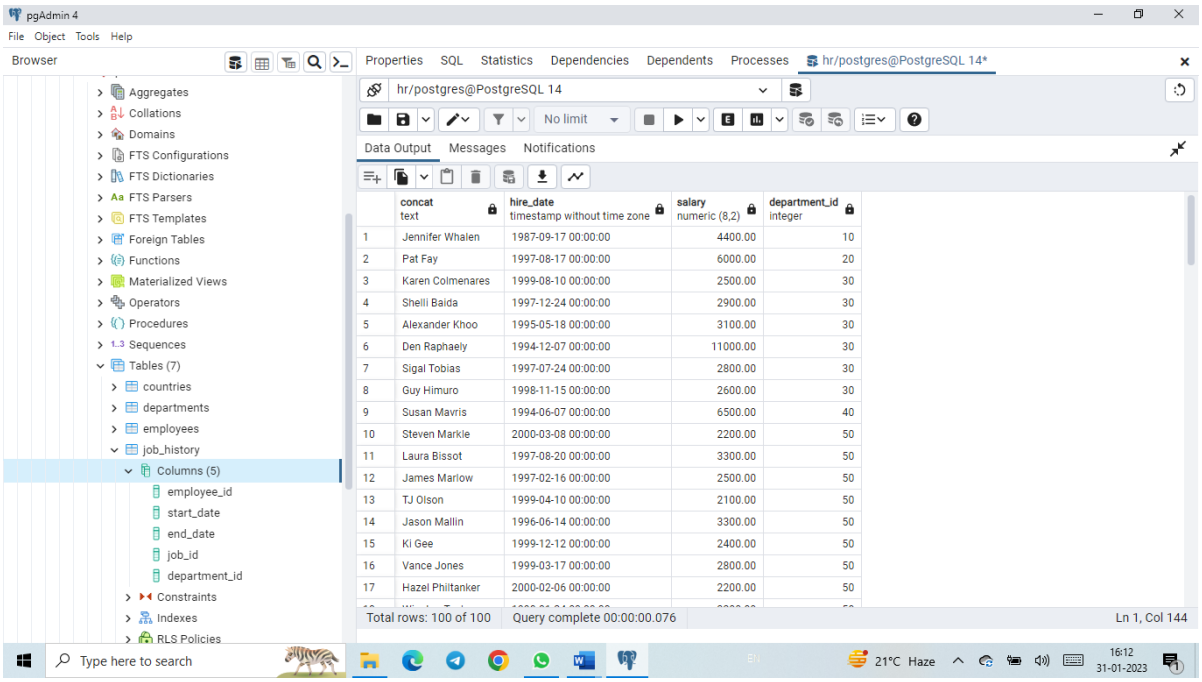
c. write a SQL query to find the details of 'Marketing' department. Return all fields

solution - SELECT * FROM employees WHERE department_id IN (SELECT department_id FROM departments WHERE department_name = 'Marketing');



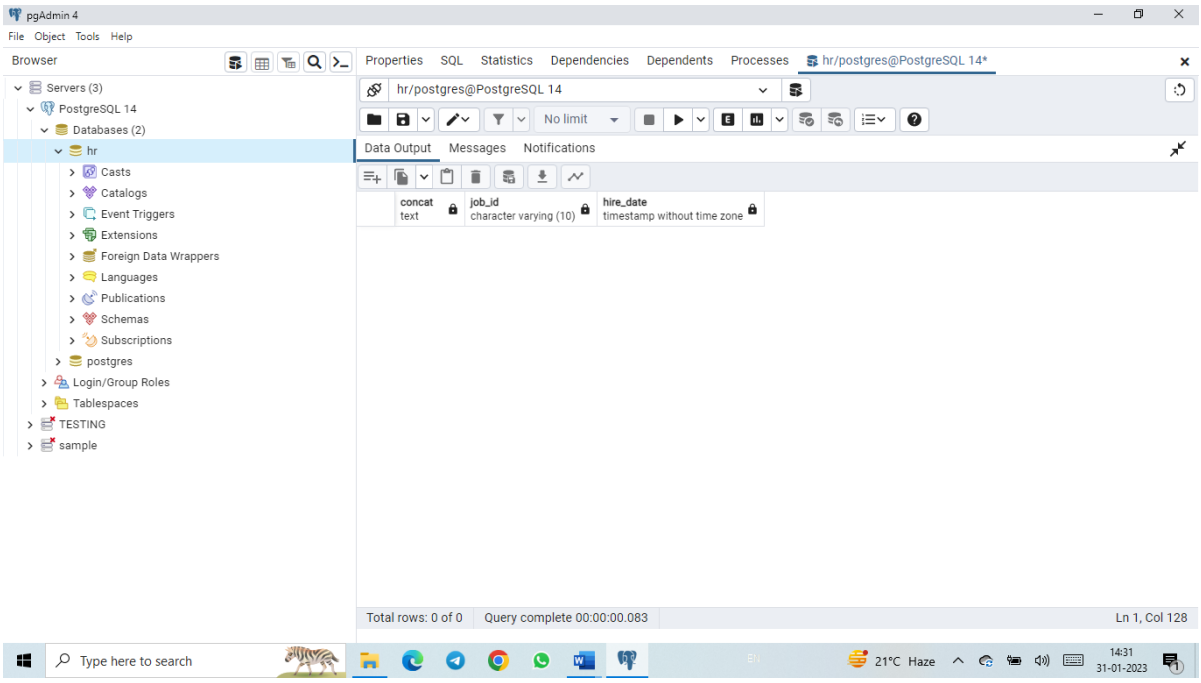
d. write a SQL query to find those employees whose first name does not contain the letter ‘M’. Sort the result-set in ascending order by department ID. Return full name (first and last name together), hire_date, salary and department_id

solution - SELECT CONCAT(first_name,' ' , last_name) , hire_date , salary , department_id FROM employees WHERE first_name NOT LIKE '%M%' ORDER BY department_id;



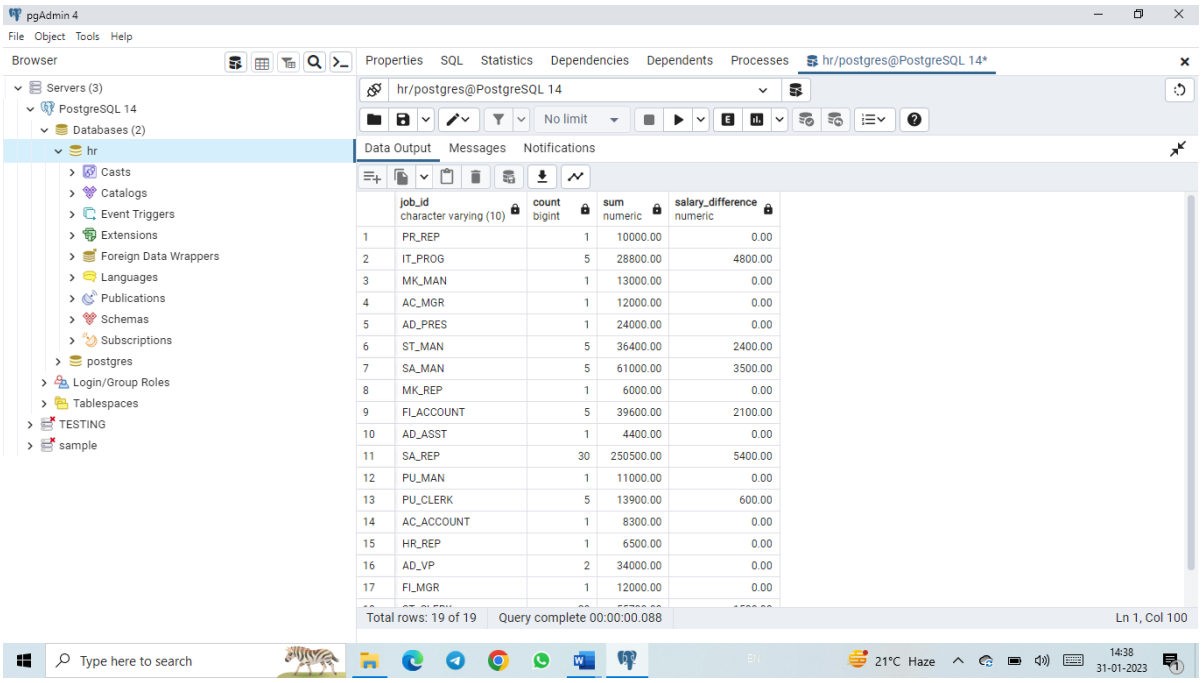
e. write a SQL query to find those employees who were hired between November 5th, 2007 and July 5th, 2009. Return full name (first and last), job id and hire date

solution - SELECT CONCAT(first_name,' ',last_name),job_id,hire_date FROM employees WHERE hire_date BETWEEN DATE '2007-11-05'AND DATE '2009-07-05';



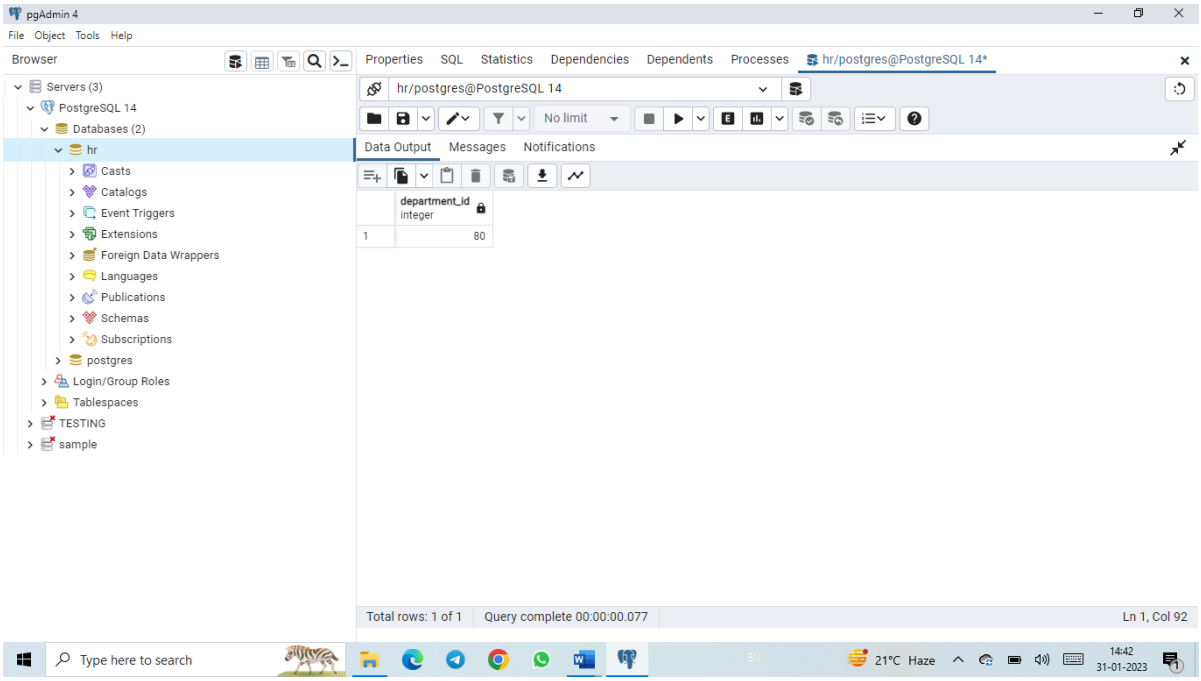
f. write a SQL query to count the number of employees, the sum of all salary, and difference between the highest salary and lowest salaries by each job id. Return job_id, count, sum, salary_difference.

Solution – SELECT DISTINCT (job_id) , COUNT (employee_id) , SUM(salary) , MAX(salary)-MIN(salary) AS salary_difference FROM employees GROUP BY job_id;



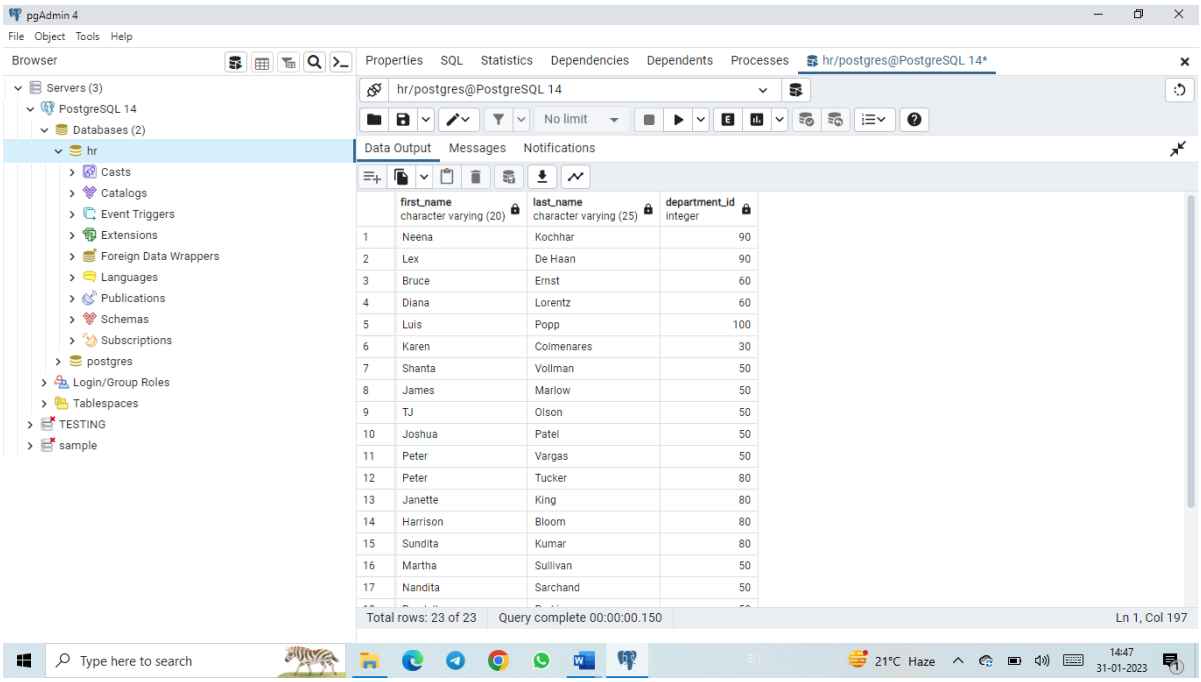
g. write a SQL query to find the departments where more than ten employees receive commissions. Return department id

solution - SELECT department_id FROM employees GROUP BY department_id HAVING COUNT(commission_pct)>10;



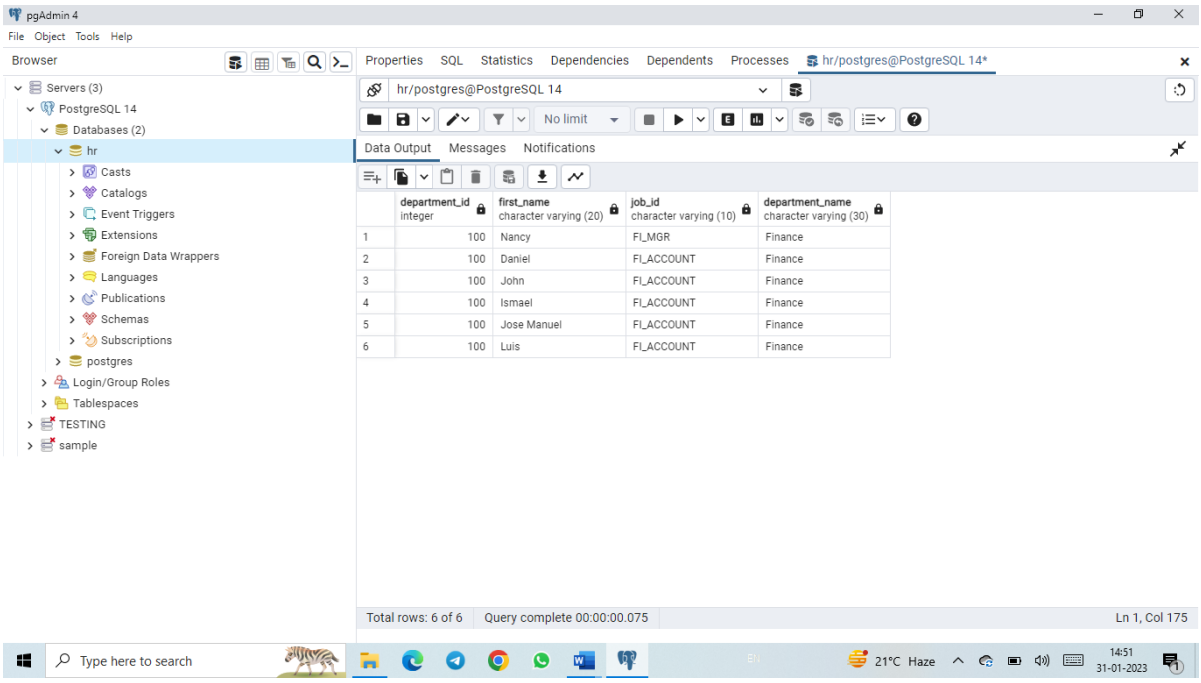
h. write a SQL query to find those employees whose salary matches the lowest salary of any of the departments. Return first name, last name and department ID

solution - SELECT first_name,last_name,department_id FROM employees WHERE salary in (SELECT MIN(e.salary) FROM employees AS e JOIN departments AS d ON d.department_id=e.department_id GROUP BY department_name);



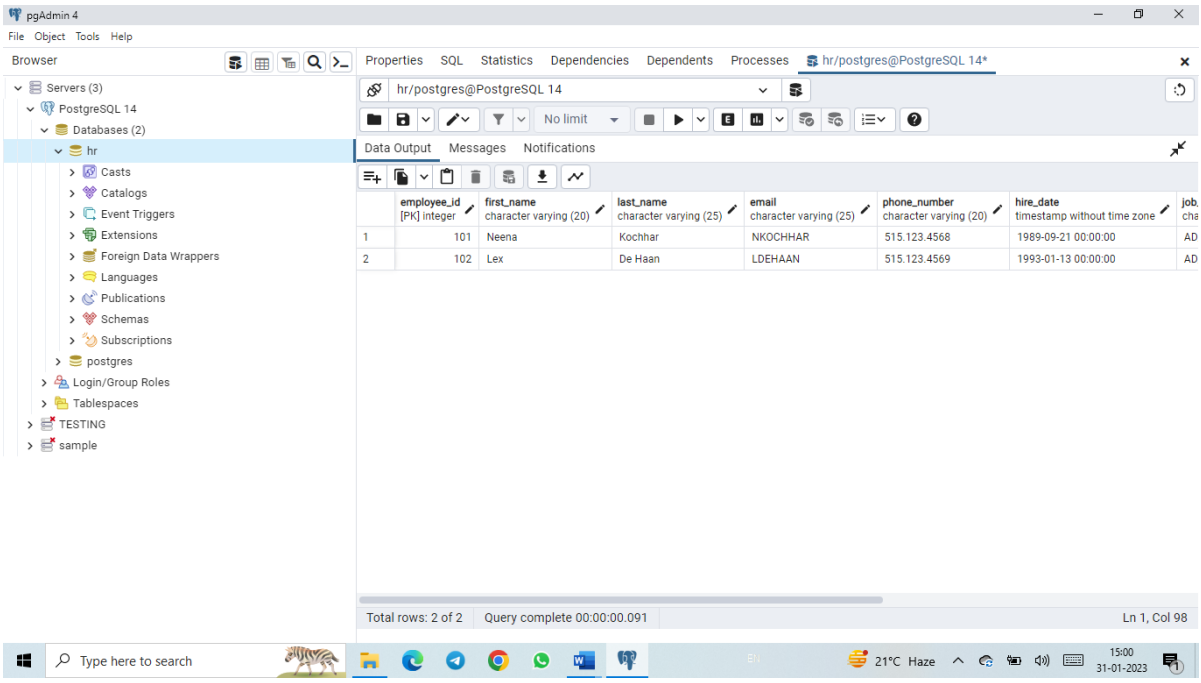
i. write a SQL query to find all those employees who work in the Finance department. Return department ID, name (first), job ID and department name

solution – SELECT e.department_id , e.first_name , e.job_id , d.department_name FROM employees AS e JOIN departments AS d ON e.department_id=d.department_id WHERE d.department_name='Finance';



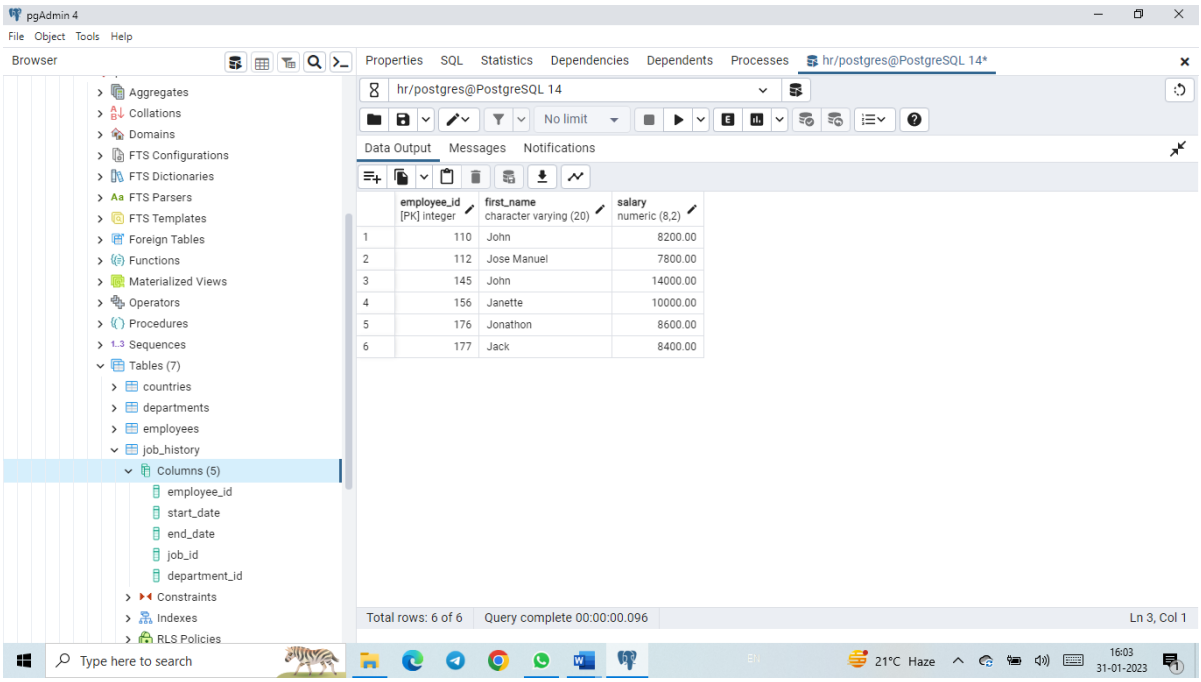
j. write a SQL query to find those employees who get second-highest salary. Return all the fields of the employees

solution - SELECT * FROM employees WHERE salary=(SELECT DISTINCT(salary) FROM employees ORDER BY salary DESC OFFSET 1 LIMIT 1);



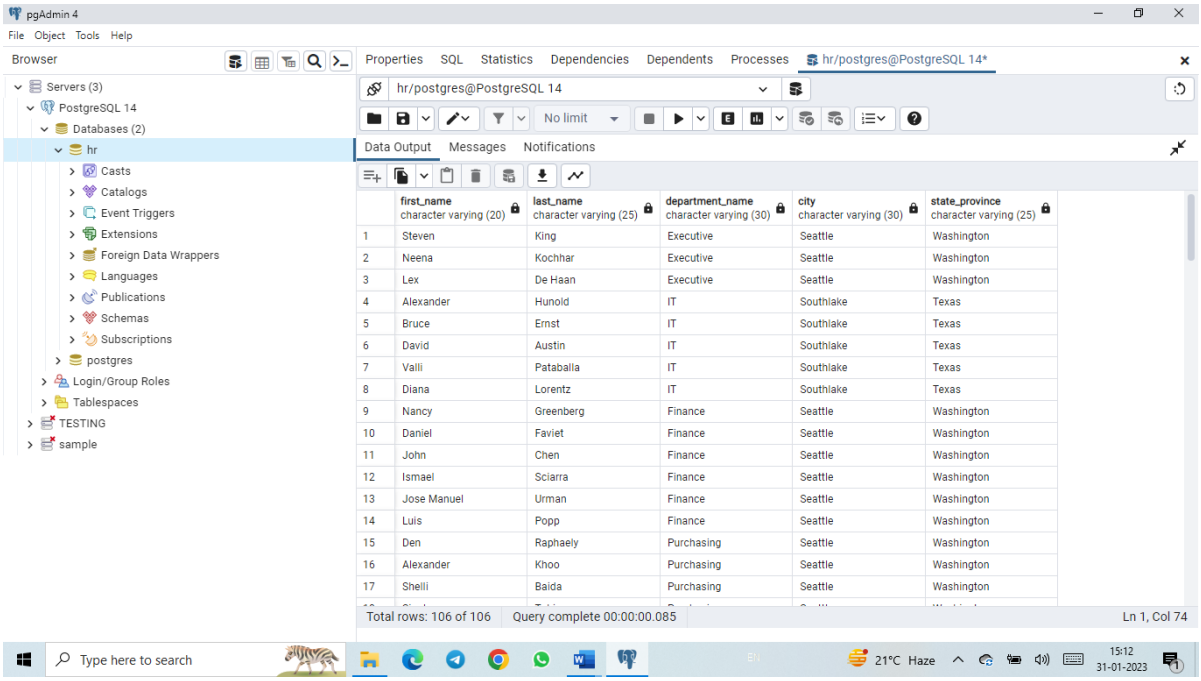
k. write a SQL query to find those employees who earn more than the average salary and work in the same department as an employee whose first name contains the letter 'J'. Return employee ID, first name and salary

solution - SELECT employee_id,first_name,salary FROM employees WHERE salary>(SELECT AVG(salary) FROM employees) AND department_id IN (SELECT department_id FROM departments GROUP BY department_id) AND first_name LIKE '%J%';



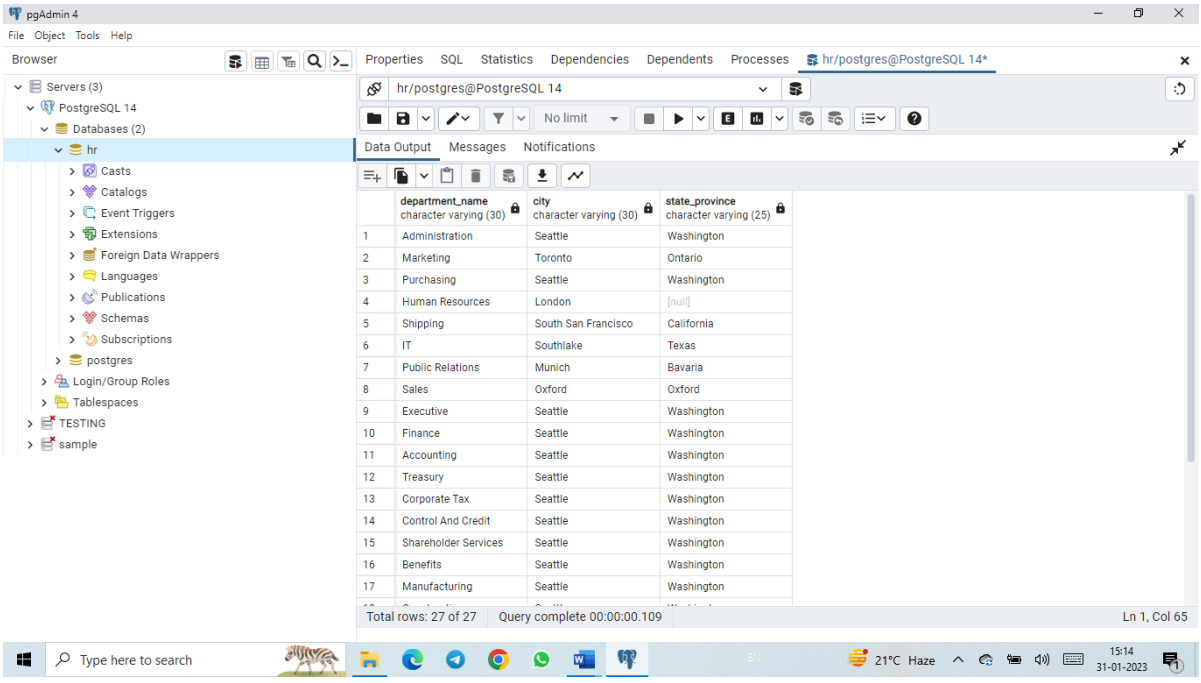
I. write a SQL query to find the first name, last name, department, city, and state province for each employee

solution - SELECT e.first_name , e.last_name , d.department_name , l.city , l.state_province FROM employees AS e JOIN departments AS d ON e.department_id = d.department_id JOIN locations as l ON l.location_id = d.location_id;



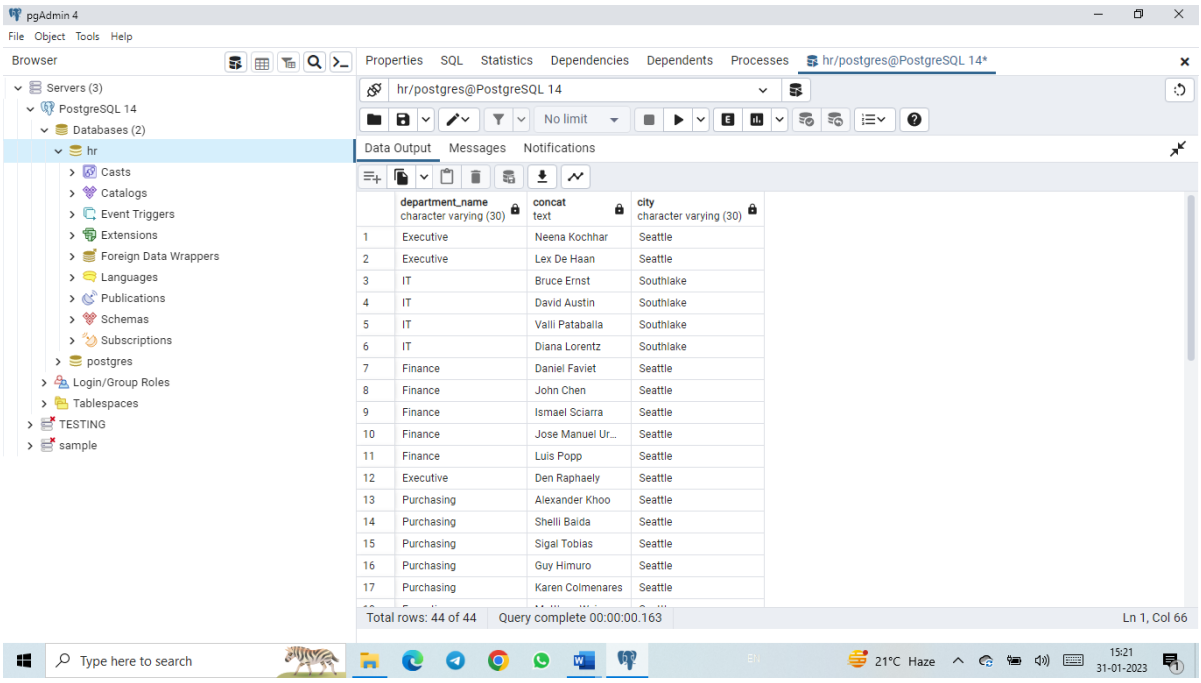
m. write a SQL query to display the department name, city, and state province for each department

solution - SELECT d.department_name,l.city,l.state_province FROM departments AS d JOIN locations as l ON l.location_id=d.location_id;



n. write a SQL query to find the department name, full name (first and last name) of the manager and their city

solution - SELECT d.department_name, CONCAT(first_name,' ',last_name),l.city FROM employees AS e JOIN departments AS d ON e.manager_id=d.manager_id JOIN locations as l ON l.location_id = d.location_id;



o. write a SQL query to calculate the number of days worked by employees in a department of ID 80. Return employee ID, job title, number of days worked

Solution - SELECT e.employee_id,j.job_title,jh.end_date-jh.start_date AS no_of_days_worked FROM employees AS e JOIN jobs AS j ON e.job_id = j.job_id JOIN job_history AS jh ON j.job_id=jh.job_id WHERE e.department_id=80;