DBs LabNo.6

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DATABASE SYSTEM

LAB No: 06

Objective of Lab No. 6:

After performing lab 6, students will be able to:

o Subqueries

o Single Row Subquery

o Multiple Row Subquery

o Multiple column subquery

o Correlated Subquery

o Nested Subqueries

o Using the EXISTS Operator

Lab Task

1. Display the first name and salary for all employees who earn more than employee number 103.

Query: Select first_name, salary From employees Where salary > (Select salary from employees Where employee_id = 103);

2. Display all the information of employees who are working in Sales or IT department.

Query: Select * from employees Where department_id in (Select department_id from departments Where department_name in ('Sales', 'IT'));

3. Write a query to display the first name and last name, salary, department id for those employees whose salary in average salary of any of departments.

Query: Select first_name , last_name,salary, department_id from employees WHERE Salary = Any (Select AVG(salary) From employees Group by department_id);

4. Write a query to display the first name, last name and hiredate for all employees, who are working in the same department as an employee whose last name is Fox. Exclude Fox.

Query: Select first_name, last_name, hire_date from employees Where department_id = (Select department_id from employees where last_name ="fox") and last_name != "fox";

5. Display the employee first name, last name and employee id, for all employees whose department location is London.

Query: Select first_name , last_name , employee_id from employees where department_id IN (Select department_id from departments Where location_id =(Select location_id from locations Where city = "London"));

6. Display the employee ID and Full name of all employees who works in same department where the employees having first name containing a letter 'Z'.

Query: Select employee_id, Concat(first_name, ' ', last_name) AS Full_name From employees Where department_id IN (Select department_id From employees Where first_name LIKE '%Z%');

7. Find out the names of all employees whose salary is greater than 50% of their department's total salary bill.

Query: Select first_name, last_name, salary FROM employees e1 Where salary > (Select SUM(salary) * 0.5 From employees e2 Where e1.department_id = e2.department_id);

8. Write a query to get the details of employees who are managers.

Query: Select * from employees where employee_id IN (Select Distinct manager_id from employees);

9. Display the employee id, name, salary, department name and city for all the employees who gets the salary as the salary earn by the employee which is maximum within the joining person January 1st, 1990 and December 31st, 1991.

Query: SELECT e.employee_id, e.first_name, e.last_name, e.salary, (SELECT d.department_name

FROM departments d WHERE d.department_id = e.department_id) AS department_name, (SELECT l.city FROM locations l WHERE l.location_id = (SELECT d.location_id FROM departments d WHERE d.department_id = e.department_id)) AS city FROM employees e WHERE e.salary = (SELECT MAX(salary) FROM employees WHERE hire_date BETWEEN '1990-01-01' AND '1991-12-31');

10. Find all departments that do not have any employees.

Query: Select department_id, department_name From departments Where department_id NOT IN (Select Distinct department_id From employees);

11. Write a query in SQL to show the details of employees of job type ST_CLERK, SA-REP, AD_ASST whose working location is Seattle.

Query: Select * From employees Where job_id IN ('ST_CLERK', 'SA-REP', 'AD_ASST') AND department_id IN (Select department_id From departments Where location_id = (Select location_id From locations Where city = 'Seattle'));

12. Find out the employees whose salaries are greater than the salaries of their managers.

Query: Select employee_id, Concat(first_name, ' ', last_name) AS employee_name, salary, manager_id From employees Where salary > (Select e.salary From employees e Where e.employee_id = employees.manager_id);

13. List the highest paid employees working under DEN.

Query: Select Concat(first_name, ' ', last_name) AS employee_name, salary From employees Where manager_id = (Select employee_id From employees Where last_name = 'Den');

14. Display the detail information of departments which starting salary is at least 8000.

Query: Select * From departments Where department_id IN (Select Distinct department_id From employees Where job_id IN (Select job_id From jobs Where min_salary >= 8000));

15. Display the full name of manager who is supervising 4 or more employees.

Query: Select e.first_name, e.last_name From employees e Where e.employee_id IN (Select manager_id From employees GROUP BY manager_id HAVING COUNT(*) >= 4);