Task-5.1 - Study of SQL Joins:-

→ Joins are used to combine data from two (or) more tables based on ~~are~~ related Column.

Types of SQL Joins (with simple examples using Employee and Department New employee):-

(1) Inner Join:- Returns only matching rows from both tables

SELECT e.EmpName, e.Dpt, d. Manager Name. FROM Employee e INNER JOIN Department d ON e. Dept = d. Dept;

(2) LEFT JOIN:- Returns all rows from the left table and matching rows from the right table (NULL if not match).

SELECT e.EmpName, e.Dept, n. city FROM Employee e LEFT JOIN New Employee n. ON e.EmpID = n. Emp ID;

(3) RIGHT JOIN:- Returns all rows from the right table, and matching rows from the left.

SELECT e.EmpName, n.city FROM Employee e RIGHT JOIN New Employee n ON e. EmpID = n. EmpID;

(4) FULL OUTER JOIN:- SELECT e.EmpName, n.city FROM Employee e LEFT JOIN NewEmployee n ON e. EmpID = n. EmpID UNION SELECT e.EmpName, n.city FROM Employee e RIGHT JOIN NewEmployee n ON e.EmpID = n.EmpID;

(5) CROSS JOIN:- Cartesian Product (every row with every row)

SELECT e.Emp-Name, n. Emp Name FROM Employeee CROSS JOIN NewEmployee n;

TASK - 5.2 - Performing Advanced Query Processing:-

(1) Find top 3 highest-paid Employees.

SELECT EmpName, Salary FROM Employee ORDER BY Salary DESC LIMIT 3;

(2) Find the department with the highest average Salary

SELECT Dept FROM Employee GROUP By DPT ORDER BY AVG(Salary) DECS LIMIT 1;

(3) Find employees who have the same Salary as some one else (duplicate Salaries).

SELECT EmpName, Salary FROM Employee WHERE Salary IN(SELECT Salary FROM Employee GROUP BY Salary HAVI-NG COUNT(*)>1);

(4) Find employees who earn more than all HR employees

SELECT EmpName, Salary FROM Employee WHERE Salary > ALL(SELECT Salary FROM Employee WHERE Dept ='HR');

(5) List departments and their highest-paid employee.

SELECT e.Dept, e.EmpName, e.Salary FROM Employee e WHERE Salary =(SELECT MAX(salary) FROM Employee WHERE Dept = e.Dept);

⑥ Find employees who joined earliest in each department

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SELECT e.Dept, e.EmployeeName, e.Joiningdate FROM Employee
e WHERE Joining Date = (SELECT MIN (Joining Date)
FROM Employee WHERE Dept = e.Dept);
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RESULT:- Hence, Study of SQL Joins and performing Advanced Query processing done successfully.

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