1. Write a query to find employees whose name contains the letter 'A' anywhere in the name, and order the result by their hire date.

* Select empname, hiredate

From employee

Where empname LIKE ‘%A%’

Order by hiredate;

1. Write a query to find employees whose name starts with 'M' and whose job is 'SALESMAN'.

* Select empname, job

From employee

Where empname LIKE ‘M%’ AND job = salesman;

1. Write a query to find employees whose name ends with 'R', whose job is either 'SALESMAN' or 'MANAGER', and display their salaries.

* Select empname, job, sal

From employee

Where empname LIKE '%R' AND JOB IN ('SALESMAN','MANAGER');

1. Write a query to find employees whose name has exactly 6 letters, and display their names, jobs, and salaries.

* Select empname, job, sal

From employee

Where empname LIKE '\_\_\_\_\_\_';

1. Write a query to find employees whose name contains the letter 'S' in the second position and display their names, jobs, and hire dates.

* Select empname, job, hiredate

From employee

Where empname LIKE ‘\_S%’;

1. Write a query to find employees ordered by their hire date in ascending order, but if two employees have the same hire date, order by their salary in descending order.

* Select \*

From employee

Order by hiredate asc, sal desc;

1. Write a query to find employees ordered by their commission in descending order, and then by their job.

* Select \*

From employee

Order by comm desc, job;

1. Write a query to find employees in department 30, ordered by their job title in ascending order and then by salary in descending order.

* Select \*

From employee

Where deptno = 30

Order by job asc, sal desc;

1. Write a query to find employees whose salary is between 1000 and 3000, ordered by their hire date and then by their job in descending order.

select \* from employee

Where sal between 1000 and 3000

Order by hiredate asc, job desc;

1. Write a query to find employees in departments 10 and 20, ordered by their hire date, and if the hire date is the same, order by their name in ascending order.

Select \* from employee

Where deptno in (10,20)

Order by hiredate asc, empname asc;

1. Write a query to display the top 5 employees with the highest commission who work as a SALESMAN.

* Select empname,comm

From employee

Where job = ‘salesman’

Order by comm desc

Limit 5;

1. Write a query to display the top 3 employees with the earliest hire dates in department 30.

* Select empname, hiredate

From employee

Where deptno=30

Order by hiredate asc

Limit 3;

1. Write a query to find the top 5 employees who have the lowest salary and display their names, jobs, and salaries.

* Select empname, job, sal

From employee

Order by sal asc

Limit 5;

1. Write a query to display the first 3 employees in terms of salary from department 20, ordered by salary in ascending order.

Select empname, sal

From employee

Where deptno=20

Order by sal asc

Limit 3;

1. Write a query to display the bottom 3 employees (by salary) in departments 10 and 20, ordered by salary in descending order.

Select empname, sal

From employee

Where deptno in (10,20)

Order by sal desc

Limit 3;

* HAVING CLAUSE:

It is used to filter records based on aggregate functions(count(), sum(),……)

Purpose:

* It filters the grouped data based on a condition.
* While where clause filters the rows before grouping.
* Having clause filters the group after aggregation
* It is used in conjunction with group by clause to filter grouped data
* Having clause is used after the group by clause
* We can use aggregate functions in having clause

Ex. Get the departments where total salary is more than 9000.

Select deptno,sum(sal) AS total\_salary

From employee

Group by deptno

Having sum(sal) > 9000;

Explanation:

* The data is grouped by department
* The sum(sal) for each department is calculated
* Only groups where total salary is more than 9000 will be in resultset.

Ex. To get departments with more than 5 employees.

Select deptno, count(\*) AS employee\_count

From employee

Group by deptno

Having count(\*) > 5;

Ex. To get the departments where total salary is more than 9200 and the maximum salary is less than 10000.

Select deptno, sum(sal) as Total\_salary, max(sal) as max\_salary

From employee

Group by deptno

Having sum(sal) > 9200 AND max(sal) < 10000;

(Recheck)

D5 assignment

1. Write a query to display all distinct job titles from the emp table.

Select distinct job

From employee;

1. Write a query to display distinct commission (COMM) values that employees earn.

Select distinct comm

From employee;

1. Write a query to find how many distinct managers (MGR) are present in the emp table.

Select count(distinct mgr) AS distinct\_manager

From employee;

1. Write a query to display distinct combinations of salary (SAL) and commission (COMM).

Select distinct sal,comm

From employee;

1. Write a query to display distinct department number (DEPTNO) and job title (JOB) combinations.

Select distinct deptno, job

From employee;

1. Write a query to display the total and average salary (SAL) for each job title (JOB).

Select job, sum(sal) as total\_salary, avg(sal) as average\_salary

From employee

Group by job;

1. Write a query to find the highest salary (SAL) among employees who have non-null commission (COMM).

Select max(sal) as highest\_sal

From employee

Where comm is not null;

1. Write a query to count the number of employees earning more than the average salary.

Select count(\*) as employee\_count

From employee

Where sal > (Select avg(sal) from employee);

To calculate the average salary of employees:

Select avg(sal) from employee;

1. Write a query to calculate the total salary for employees under manager (MGR = 7839).

Select sum(sal) as total\_salary

From employee

Where mgr=7839;

1. Write a query to find the earliest hire date (HIREDATE) for each department.

Select deptno, min(hiredate) as earliest\_hiredates

From employee

Group by deptno;

1. Write a query to count the number of employees for each department (DEPTNO) and job (JOB).

Select deptno,job, count(\*) as employee\_count

From employee

Group by deptno, job;

1. Write a query to calculate the total salary of employees working under each manager (MGR).

Select mgr, sum(sal) as total\_salary

From employee

Group by mgr;

1. Write a query to display the average salary by job for departments that have more than 3 employees.

Select deptno, job, avg(sal) as average\_salary

From employee

Group by deptno, job

Having count(\*) >3;

1. Write a query to find the departments where the maximum salary is greater than 2000.

Select deptno

From employee

Group by deptno

Having max(sal) > 3000;

1. Write a query to find the total salary and employee count by manager (MGR).

Select mgr, sum(sal) as total\_salary, count(\*) as employee\_count

From employee

Group by mgr;

Subquery

1. Single row subquery: returns a single value
2. Multi-row subquery : returns multiple rows
3. Correlated queries: dependes on outer query for execution

Ex. Find the name of employee who earns the highest salary

Select empname

From employee

Where sal = (select max(sal) from employee);

Ex. Find all employees who work in the same department as employees earning more than 3500.\*