**TOPIC 05: Aggregated Data and Group Functions**

**Exercises**

**\*\*\* This exercise is performed on HR Schema (HR database) \*\*\***

**\*\* This exercise may include some of the topics examined previously\*\***

1. Write a query in SQL to display the ID for those employees who did two or more jobs in the past (table: job\_history).

select e.employee\_id

from employees e

inner join job\_history jh on e.employee\_id= jh.employee\_id

group by e.employee\_id having count(\*)>=2;

1. Write a query in SQL to display job ID, number of employees, sum of salary, and difference between highest salary and lowest salary for a job (table: employees).

select job\_id "job\_id",SUM(salary) as "sum" ,count(\*) as count,(max(salary) - min(salary)) as “diff” from employees group by job\_id;

1. Write a query in SQL to display job ID for those jobs that were done by two or more for more than 300 days (table:job\_history).

select job\_id

from job\_history

where (sysdate - start\_date) > 300 group by job\_id having count(\*) > 1;

1. Write a query in SQL to display the country ID and number of cities in that country we have (table: locations).

select country\_id,count(city) as "cityNum"

from locations group by country\_id ;

1. Write a query in SQL to display the manager ID and number of employees managed by the manager (table:employees).

select e1.manager\_id,count(\*) as "emplNum"

from employees e1

join employees e2 on e1.manager\_id=e2.employee\_id

group by e1.manager\_id;

1. Write a query in SQL to display the details of jobs in descending sequence on job title (table: jobs).

select \* from jobs

order by job\_title desc;

1. Write a query in SQL to display the first and last name and date of joining of the employees who is either Sales Representative or Sales Man (table: employees).

select first\_name,last\_name,hire\_date

from employees e

inner join jobs j on e.job\_id = j.job\_id

where job\_title = 'salesMngr' or job\_title = 'salesRep' ;

1. Write a query in SQL to display the average salary of employees for each department who gets a commission percentage (table: employees).

select avg(salary) as "avgsalary"

from employees

where commission\_pct is not null group by department\_id;

1. Write a query in SQL to display those departments where any manager is managing 4 or more employees (table: employees).

select \* from departments

where manager\_id IN (select e1.manager\_id from employees e1 join employees e2 on e1.manager\_id=e2.employee\_id group by e1.manager\_id having count(\*)>4);

1. Write a query in SQL to display those departments where more than ten employees work who got a commission percentage (table: employees).

select department\_id

from employees

where commission\_pct is not null

group by department\_id having count(commission\_pct)>10;

1. Write a query in SQL to display those departments where any manager is managing 4 or more employees (table: employees).

select distinct department\_id

from employees

group by department\_id, manager\_id having count(employee\_id) >=4;

1. Write a query in SQL to display those departments where more than ten employees work who got a commission percentage (table: employees).

select department\_id

from employees

where commission\_pct is not null

group by department\_id having count(employee\_id)>10

1. Write a query in SQL to display the employee ID and the date on which he ended his previous job (table: job\_history).

select employee\_id, max(end\_date)

from job\_history

group by employee\_id;

1. Write a query in SQL to display the details of the employees who have no commission percentage and salary within the range 7000 to 12000 and works in that department which number is 50 (table: employees).

select \* from employees

where salary between 7000 and 12000 and commission\_pct is not null or department\_id in (50)

1. Write a query in SQL to display the job ID for those jobs which average salary is above 8000 (table:employees).

select job\_id,avg(salary)

from employees

group by job\_id having avg(salary) >8000

1. Write a query in SQL to display job Title, the difference between minimum and maximum salaries for those jobs which max salary within the range 12000 to 18000 (table: jobs).

select job\_title, max\_salary-min\_salary "salaryDiff"

from jobs where max\_salary between 12000 and 18000;

1. Write a query in SQL to display all those employees whose first name or last name starts with the letter D (table: employees).

select first\_name,last\_name

from employees

where (upper(first\_name) like 'D%') or (upper(last\_name) like 'D%');

1. Write a query in SQL to display the details of jobs which minimum salary is greater than 9000 (table: jobs).

select \* from jobs where min\_salary > 9000;

1. Write a query in SQL to display those employees who joined after 7th September, 1987 (table: employees).

select \* from employees

where hire\_date > '07-sep-1987';