LAB -4

Operators, Aggregate functions, Group by and Having clause in SQL

Objective:

- To be familiar with different operators in SQL
- To be familiar with aggregate functions in SQL
- To be familiar with group by and having clause in SQL

Problem:

- **Create a table named employee with the following attributes by considering employee_id as primary key**

employee(empoyee_id,first_name,last_name, age,address, department,postion,salary)

create table employee(employee_id int PRIMARY KEY,first_name varchar(20),last_name varchar(20),age int,address varchar(30),department varchar(30), position varchar(30),salary float(12,4));

- **Now insert at least any 10 records of employee.**

employee_id	first_name	last_name	age	addresss	department	position	salary
1	anish	Sharma	26	Kathmandu	Finance	Manager	80000
2	roshan	pokhrel	28	Pokhara	Sales	Analyst	60000
3	aakriti	Bagale	30	Butwal	Purchase	Manager	95000
4	rojina	Karki	25	Pokhara	Marketing	Manager	85000
5	keshav	ghimire	35	Kathmandu	Purchase	Analyst	65000
6	roshan	Pandey	38	Chitwan	Operations	Analyst	70000
7	sita	pokhrel	23	Laltipur	Marketing	Analyst	68000
8	srijana	Bhattrai	29	Butwal	Finance	Analyst	62000
9	niraj	Acharya	40	Kathmandu	Sales	Manager	90000
10	nikita	Giri	15	Pokhara	Purchase	Secretary	25000

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insert into employee values(1,'anish','sharma',26,'kathmandu','finance','manager',80000);
insert into employee values(2,'roshan','pokhrel',28,'pokhara','sales','analyst',60000);
insert into employee values(3,'aakriti','bagale',30,'butwal','purchase','manager',95000);
insert into employee values(4,'rojina','karki',25,'pokhara','marketing','manager',85000);
insert into employee values(5,'keshav','ghimire',35,'kathmandu','purchase','analyst',65000);
insert into employee values(6,'roshan','pandey',38,'chitwan','operations','analyst',70000);
insert into employee values(7,'sita','pokhrel',23,'lalitpur','marketing','analyst',68000);
insert into employee values(8,'srijana','bhattrai',29,'butwal','finance','analyst',62000);
insert into employee values(9,'niraj','acharya',40,'kathmandu','sales','manager',90000);
insert into employee values(10,'nikita','giri',15,'pokhara','purchase','secretary',25000);
```

Now, Write a query to perform the following operations

Arithmetic, logical and relational operators

1. Display the first_name and last_name of employee whose deparment is finance
2. Display all the information of employee in employee table whose address is not kathmandu
3. Increment the salary of all employees by 15%
4. Decrease the salary of manager by 5%
5. Delete information of employee whose age is less than 18
6. Display the position of employee whose salary is greater than or equals to 50000
7. Display information of employee whose position is manager and address is kathmandu
8. Display information of employee whose positon is manager or address is kathmandu
9. Display information of employee who either live in pokhara or kathmandu but age is greater than 25
10. Display first_name,last_name and position of employee whose salary is in the range of 70000 to 80000
11. Display first_name,last_name and position of employee whose salary is not in the range of 70000 to 80000
12. Display the information of employee whose salary is equal to 69000,30000,35000,40000,71300,80500
13. Display information of employee whose department is (sales, purchase) but not salary equal to (69000, 71300,80500)

Like operator with wildcard characters

14. Display information of employees whose first_name starts with letter ‘a’
15. Display information of employees whose first_name starts with letter ‘ro’
16. Display information of employees whose last_name ends with letter ‘el’
17. Display information of employees whose first_name has exactly six characters
18. Display information of employees whose first_name starts with r and has exactly six characters
19. Display the information of employees which contains substring as ‘sha’
20. Display information of employees whose second position of first_name contains letter ‘o’
21. Display the information of employees whose third postion of first_name contains the letter ‘s’
22. Display information of employees which have first_name of at least six characters.
23. Display the information of employees whose first_name begins with a,k,m,s,r .
24. Display information of employees whose first_name begins with [a-s] and ends with l
25. Display information of employees that starts with d and not having c

Select distinct in SQL

26. Display the different position available for employee
27. List out the unique address available for employee table
28. List out the employee who have unique first_name and address

AS

29. Write a query to get first_name,last_name , SSF of all employees .SSF is calculated as 31% of salary

30. write a query to get the employee _id, name (first_name, last_name), location (address) from employee

ORDER BY

31. Display the information of employees in ascending order by address

32. Display the information of employees in descending order by address

33. Display the information of employees in ascending order by address and department

Aggregate functions

34. Count the number of employees

35. Count the number of unique first_name of employees

36. To get the number of different number of positions available for employees table

37.To get the total salaries payable to employees.

38. Find the average salary of employess

39. Find the minimum salary of employess

40. Display first_name, last_name of employees with highest salary

41. Display fist_name,last_name,department,postion whose salary is less than average salary of all employees

Group by and having clause

42. Find the average salary of employees in each department

43.Find the average salary of employees for each position

44.Find the name of department whose average salary is greater than 25000

45. Find the position of the employee whose average salary of position is greater than 50000