## Lab Experiment 10

### Demonstration & Implementation of various SQL concepts to fetch data based on diverse requirements

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### Objectives

* Implementation of various SQL concepts

### Introduction

Consider the following tables in the database:

Table 1: Employees

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **EMPLOYEE\_ID** | **FIRST\_NAME** | **LAST\_NAME** | **SALARY** | **JOINING\_DATE** | **DEPARTMENT** |
| 1 | John | Abraham | 1000000 | 01-JAN-16 12.00.00 AM | Banking |
| 2 | Michael | Clarke | 800000 | 01-JAN-16 12.00.00 AM | Insurance |
| 3 | Roy | Thomas | 700000 | 01-FEB-16 12.00.00 AM | Banking |
| 4 | Tom | Jose | 600000 | 01-FEB-16 12.00.00 AM | Insurance |
| 5 | Jerry | Pinto | 650000 | 01-FEB-16 12.00.00 AM | Insurance |
| 6 | Philip | Mathew | 750000 | 01-JAN-16 12.00.00 AM | Services |
| 7 | TestName1 | 123 | 650000 | 01-JAN-16 12.00.00 AM | Services |
| 8 | TestName2 | Lname% | 600000 | 01-FEB-16 12.00.00 AM | Insurance |

Table 2: Incentives

|  |  |  |
| --- | --- | --- |
| Employee\_Ref\_ID | Incentive Date | Incentive Amount |
| 1 | 01-FEB-16 | 5000 |
| 2 | 01-FEB-16 | 3000 |
| 3 | 01-FEB-16 | 4000 |
| 1 | 01-JAN-16 | 4500 |
| 2 | 01-JAN-16 | 3500 |

Answer the following questions:

1. Get all employee details from the employee table
2. Get First\_Name,Last\_Name from employee table
3. Get First\_Name from employee table using alias name “Employee Name”
4. Get First\_Name from employee table in upper case
5. Get First\_Name from employee table in lower case
6. Get unique DEPARTMENT from employee table
7. Select first 3 characters of FIRST\_NAME from EMPLOYEE
8. Get position of 'o' in name 'John' from employee table
9. Get FIRST\_NAME from employee table after removing white spaces from right side
10. Get FIRST\_NAME from employee table after removing white spaces from left side
11. Get length of FIRST\_NAME from employee table
12. Get First\_Name from employee table after replacing 'o' with '$'
13. Get First\_Name and Last\_Name as single column from employee table separated by a '\_'
14. Get FIRST\_NAME ,Joining year,Joining Month and Joining Date from employee table
15. Get all employee details from the employee table order by First\_Name Ascending
16. Get all employee details from the employee table order by First\_Name descending
17. Get all employee details from the employee table order by First\_Name Ascending and Salary descending
18. Get employee details from employee table whose employee name is “John”
19. Get employee details from employee table whose employee name are “John” and “Roy”
20. Get employee details from employee table whose employee name are not “John” and “Roy”
21. Get employee details from employee table whose first name starts with 'J'
22. Get employee details from employee table whose first name contains 'o'
23. Get employee details from employee table whose first name ends with 'n'
24. Get employee details from employee table whose first name ends with 'n' and name contains letters
25. Get employee details from employee table whose first name starts with 'J' and name contains letters
26. Get employee details from employee table whose Salary greater than 600000
27. Get employee details from employee table whose Salary less than 800000
28. Get employee details from employee table whose Salary between 500000 and 800000
29. Get employee details from employee table whose name is 'John' and 'Michael'
30. Get employee details from employee table whose joining year is “2016”
31. Get employee details from employee table whose joining month is “January”
32. Get employee details from employee table who joined before January 1st 2016
33. Get employee details from employee table who joined after January 31st
34. Get Joining Date and Time from employee table
35. Get Joining Date, Time including milliseconds from employee table
36. Get difference between JOINING\_DATE and INCENTIVE\_DATE from employee and incentives table
37. Get database date
38. Get names of employees from employee table who has '%' in Last\_Name. Tip : Escape character for special characters in a query.
39. Get Last Name from employee table after replacing special character with white space
40. Get department, total salary with respect to a department from employee table.
41. Get department, total salary with respect to a department from employee table order by total salary descending
42. Get department, no of employees in a department, total salary with respect to a department from employee table order by total salary descending
43. Get department wise average salary from employee table order by salary ascending
44. Get department wise maximum salary from employee table order by salary ascending
45. Get department wise minimum salary from employee table order by salary ascending
46. Select no of employees joined with respect to year and month from employee table
47. Select department, total salary with respect to a department from employee table where total salary greater than 800000 order by Total\_Salary descending
48. Select first\_name, incentive amount from employee and incentive table for those employees who have incentives
49. Select first\_name, incentive amount from employee and incentives table for those employees who have incentives and incentive amount greater than 3000
50. Select first\_name, incentive amount from employee and incentives table for all employes even if they didn't get incentives
51. Select first\_name, incentive amount from employee and incentives table for all employees even if they didn't get incentives and set incentive amount as 0 for those employees who didn't get incentives.
52. Select first\_name, incentive amount from employee and incentives table for all employees who got incentives using left join
53. Select max incentive with respect to employee from employee and incentives table using sub query
54. Select TOP 2 salary from employee table
55. Select TOP N salary from employee table
56. Select 2nd Highest salary from employee table
57. Select Nth Highest salary from employee table
58. Select First\_Name,LAST\_NAME from employee table as separate rows
59. What is the difference between UNION and UNION ALL?
60. Select employee details from employee table if data exists in incentive table?
61. How to fetch data that are common in two query results?
62. Get Employee ID's of those employees who didn't receive incentives without using sub query?
63. Select 20 % of salary from John , 10% of Salary for Roy and for other 15 % of salary from employee table
64. Delete employee data from employee table who got incentives in incentive table
65. Insert into employee table Last Name with " ' " (Single Quote - Special Character)
66. Select Last Name from employee table which contain only numbers
67. Write a query to rank employees based on their incentives for a month
68. Update incentive table where employee name is 'John'
69. Write create table query for employee table

**Rubric for Lab Assessment**

|  |  |  |  |
| --- | --- | --- | --- |
| **The student performance for the assigned task during the lab session was:** | | | |
| Excellent | The student completed assigned tasks without any help from the instructor and showed the results appropriately. | 4 |  |
| Good | The student completed assigned tasks with minimal help from the instructor and showed the results appropriately. | 3 |  |
| Average | The student could not complete all assigned tasks and showed partial results. | 2 |  |
| Worst | The student did not complete assigned tasks. | 1 |  |

**Instructor Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**