

Lab 3

OBJECTIVE: To learn query execution in OLTP databases.

Task1:

SQL QUERIES:

1. Write An SQL Query To Fetch “FIRST_NAME” From Worker Table Using The Alias Name As <WORKER_NAME>.

Query: `SELECT FIRST_NAME AS WORKER_NAME from Worker;`

2. Write An SQL Query To Fetch “FIRST_NAME” From Worker Table In Upper Case.

Query: `SELECT UPPER(FIRST_NAME) FROM Worker;`

3. Write An SQL Query To Fetch Unique Values Of DEPARTMENT From Worker Table.

Query: `SELECT DISTINCT(DEPARTMENT) FROM WORKER;`

4. Write An SQL Query To Print Last Three Characters Of FIRST_NAME From Worker Table.

Query: `SELECT RIGHT(FIRST_NAME,3) FROM WORKER;`

5. Write An SQL Query To Print The FIRST_NAME From Worker Table After Removing White Spaces From The Left Side.

Query: `SELECT LTRIM(First_Name) FROM worker;`

6. Write An SQL Query To Print The FIRST_NAME From Worker Table After Replacing ‘a’ With ‘A’.

Query: `SELECT REPLACE(First_Name,'a','A') FROM worker;`

7. Write An SQL Query To Print All Worker Details From The Worker Table Order By FIRST_NAME Descending.

Query: `SELECT * FROM worker ORDER BY FIRST_NAME DESC;`

8. Write An SQL Query To Print Details For Workers With The First Name As “Vipul” And “Satish” From Worker Table.

Query: `SELECT * FROM worker WHERE FIRST_NAME='Satish' OR FIRST_NAME='Vipul';`

9. Write An SQL Query To Print Details Of Workers With DEPARTMENT Name As “Admin”.

Query: `SELECT * FROM worker WHERE DEPARTMENT='Admin';`

10. Write An SQL Query To Print Details Of The Workers Whose SALARY Lies Between 100000 And 500000.

Query: `SELECT * FROM worker WHERE SALARY BETWEEN 100000 AND 500000;`

11. Write An SQL Query To Print Details Of The Workers Who Have Joined In Jan'2014.

Query: `SELECT * FROM worker WHERE YEAR(JOINING_DATE)='2014' &&
MONTH(JOINING_DATE)='06';`

12. Write An SQL Query To Fetch The Count Of Employees Working In The Department 'Admin'.

Query: `SELECT COUNT(*) FROM worker WHERE DEPARTMENT='Admin';`

Write An SQL Query To Fetch The No. Of Workers For Each Department In The Ascending Order.

Query: `SELECT COUNT(*) AS 'No of Emp', DEPARTMENT FROM worker GROUP BY
DEPARTMENT ORDER BY 'No of Emp' ASC;`

14. Write An SQL Query To Fetch The List Of Employees With The Same Salary.

Query: `SELECT A.First_Name AS CustomerName1, B.First_Name AS
CustomerName2, A.Salary`

`FROM worker A, worker B`

`WHERE A.Worker_ID <> B.Worker_ID`

`AND A.Salary = B.Salary;`

15 Write An SQL Query To Show The Second Highest Salary From A Table.

Query: `SELECT MAX(SALARY) FROM worker WHERE SALARY < (SELECT MAX(SALARY) FROM worker)`

Task2:

Execute OLTP queries for the following scenario:

An organization has a main data table that lists events. Each event has a series of fields including duration, reason code and status.

The OLTP system has a table of statuses with attributes status code and Name and there is a common field between the main table (status code), which allows the organization to print the status name rather than the code.

There are four statuses (ready, delay, spare and down) and there are a range of reasons associated with each status with reason codes. It is possible for the same reason code to exist in two statuses (e.g. delay maintenance and down maintenance).

For some reason, the source database has four tables of reasons (one for each status). Each of these has a field which links to the main reason code.

The organization wishes to do the following:

When the main table record status is 'delay', then retrieve the name in the 'delay' table which corresponds to the main table delay code. When the status is 'down', do the same thing but look up the name in the 'down' table.

event_id	duration_hr	statusName	reasonName
1	3	ready	due to overhead
1	3	ready	due to security
1	3	ready	due to analyzing
1	3	ready	due to maintainance
2	2	delay	due to work
2	2	delay	due to processes
2	2	delay	due to checking
2	2	delay	due to testing
3	9	spare	due to implementation
3	9	spare	due to overhead
3	9	spare	due to designing
3	9	spare	due to development
4	7	down	due to feedback
4	7	down	due to load
4	7	down	due to managing
4	7	down	due to working