Subject: Database Management Systems

SQL Statements (DML)

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DML STATEMENTS

- **Data Manipulation Language:**

  - Select
    - FROM clause
    - WHERE clause
    - ORDER By clause

SQL SELECT Statement

- **Syntax of SQL SELECT Statement:**
- SELECT *column_list* FROM *table-name*

  [WHERE Clause]

  [GROUP BY clause]

  [HAVING clause]

  [ORDER BY clause];

- *table-name* is the name of the table from which the information is retrieved.
- *column_list* includes one or more columns from which data is retrieved.
- The code within the brackets is optional.

SQL SELECT Statement contd..

- SELECT * from employee ;
- Result table:

ID	NAME	DEPT	AGE	SALARY	LOCATION
105	Srinath	Mech	27	50000	Bangalore
106	Kapil	Mech	30	50000	Bangalore

- SELECT ID, name from employee ;
- Result table:

ID	NAME
105	Srinath
106	Kapil

SQL SELECT Statement contd..

- **For Example:** If you want to select all **distinct** department names from employee table, the query would be:

```
SELECT DISTINCT dept FROM employee;

DEPT
----------
FINANCE
IT
MECH
```

- select distinct * from temp_employee;

```
 ID NAME                DEPT       AGE      SALARY LOCATION    EMP_ADD
----- -------------------- ---------- ---------- ---------- ---------- --------
  101 ajay                IT         25       40000      mysore
  105 vijay               MECH       26       50000      mysore
  106 payal               FINANCE 30       10000      mysore
```

SQL SELECT Statement contd..

In a SQL SELECT statement only SELECT and FROM statements are mandatory. Other clauses like WHERE, ORDER BY, GROUP BY, HAVING are optional.

- **SQL WHERE Clause**
- **For Example:** To find the name of a employee with id 105, the query would be like:

```
SELE CT * from employee where id = 105;
```

SQL WHERE Clause

Expressions can also be used in the WHERE clause of the SELECT statement.

For example: Lets consider the employee table. If you want to display employee name, current salary, and a 20% increase in the salary for only those products where the percentage increase in salary is greater than 30000, the SELECT statement can be written as shown below

```
SELECT name, salary, salary*1.2 AS new_salary FROM employee
WHERE salary*1.2 > 30000;
```

NAME	SALARY	NEW_SALARY
ajay	40000	48000
Srinath	50000	60000
SNEHA	50000	60000
Geetika	60000	72000
Parag	50000	60000

SQL ORDER BY

- The ORDER BY clause is used in a SELECT statement to sort results either in ascending or descending order. Oracle sorts query results in **ascending order by default.**

- **For Example:** If you want to sort the employee table by salary of the employee, the sql query would be.

```
SELECT name, salary FROM employee ORDER BY salary;
```

NAME	SALARY
payal	10000
ajay	40000
vijay	50000

SQL ORDER BY

- **For Example:** If you want to sort the employee table by salary of the employee in descending order, the sql query would be.

```
SELECT name, salary FROM employee ORDER BY salary DESC;
```

NAME	SALARY
vijay	50000
ajay	40000
payal	10000

SQL ORDER BY

```
SELECT  id, name from employee order by dept, age;
```

ID	NAME	DEPT	AGE	SALARY	LOCATION
101	ajay	IT	25	40000	pune
105	vijay	MECH	26	50000	banglore
106	payal	FINANCE	30	10000	pune
107	akshay	FINANCE	31	20000	delhi

Actual Table

ID	NAME
106	payal
107	Akshay
101	ajay
105	vijay

Result Table

Thank You