Ex.No. 2

SQL Data Manipulation Language Commands

Aim:

       To perform manipulate records of table using Data Manipulation Language (DML) Commands

DML

       A DML statement is executed when you:
• Add new rows to a table
• Modify existing rows in a table
• Remove existing rows from a table

       A transaction consists of a collection of DML statements that form a logical unit of work.

Data for EMP table

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	17-DEC-80	800		20
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30
7566	JONES	MANAGER	7839	02-APR-81	2975		20
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30
7698	BLAKE	MANAGER	7839	01-MAY-81	2850		30
7782	CLARK	MANAGER	7839	09-JUN-81	2450		10
7788	SCOTT	ANALYST	7566	19-APR-87	3000		20
7839	KING	PRESIDENT		17-NOV-81	5000		10
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30
7876	ADAMS	CLERK	7788	23-MAY-87	1100		20
7900	JAMES	CLERK	7698	03-DEC-81	950		30
7902	FORD	ANALYST	7566	03-DEC-81	3000		20
7934	MILLER	CLERK	7782	23-JAN-82	1300		10

Data for DEPT table

DEPTNO	DNAME	LOC
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON

INSERT STATEMENT

       Add new rows to a table by using the INSERT statement.

(i) INSERT INTO *table* VALUES*(value1, value2,..)*;
- Only one row is inserted at a time with this syntax.
- List values in the default order of the columns in the table
- Enclose character and date values within single quotation marks.
- Insert a new row containing values for each column

(ii) INSERT INTO *table(column1, column2,..)* VALUES*(value1, value2,..)*;

- Rows can be inserted with NULL values either
  - by omitting column from the column list or
  - by specifying NULL in the value field.

(iii) INSERT INTO *table(column1, column2,...)*
VALUES*(&value1,& value2,..);*

Substitution variable(&) helps us to write an interactive script for inserting rows

Q1) Insert the rows of DEPT table using syntax (i)

Q2) Insert first & second rows of EMP table using syntax (ii)

Q3) Insert the remaining rows of EMP table using syntax (iii)

Q4) Create a table MANAGER with the columns *mgr-id, name, salary* and *hiredate*

Q5)
Insert values into the table MANAGER by copying the values from EMP table where the designation of the employee is 'MANAGER'

UPDATE STATEMENT
- Modify existing rows with the UPDATE statement.
- Update more than one row at a time, if required.
- All rows in the table are modified if you omit the WHERE clause

UPDATE *table* **SET** *column = value*, *column = value, ….* **WHERE** *condition*;

Q6)
Change the LOC of all rows of DEPT table by 'NEW YORK'

Q7)
Change the LOC='DALLAS' for deptno=20 in DEPT table.

DELETE STATEMENT
ß You can remove existing rows from a table by using the DELETE statement.
ß All rows in the table are deleted if you omit the WHERE clause.

DELETE FROM *table* **WHERE** *condition*;

Q8) Delete the rows from EMP table whose employee name = 'PAUL'

SELECT STATEMENT
        To perform a query we use select statement

SELECT
[DISTINCT] {*, *column* [*alias*],...}
FROM
table;

o *Select* Clause determines what columns
o *From* Clause determines which table.
o *Where* Clause specifies the conditions

Q9) List all the columns and rows of the table DEPT

Q10) List the name of the employee and salary of EMP table

Q11) Without duplication, list all names of the department of DEPT table.

Q12) Find out the name of an employee whose EMPNO is 7788

Q13) As a copy of DEPT table, create DEPT1 table using select command.

Q14) List ename and sal of EMP table with the column headings NAME and SALARY