|  |  |  |
| --- | --- | --- |
| **Ex.No. 2** | **Working with Data Manipulation commands** | **Date :** |

# 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.

1. **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
2. **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.

1. **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)

# SQL>

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

# SQL>

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

# SQL>

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

## SQL> CREATE TABLE manager(mgr-id number(5) primary key, name varchar(20), sal number(5), hiredate date);

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

**SQL> INSERT INTO *manager* SELECT *empno,ename,sal,hiredate***

# FROM emp WHERE job=’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’

# SQL>

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

# SQL>

**DELETE STATEMENT**

* You can remove existing rows from a table by using the DELETE statement.
* 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’

# SQL>

**SELECT STATEMENT**

* To perform a query we use select statement

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

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

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

# SQL>

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

# SQL>

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

# SQL>

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

# SQL>

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

# SQL> CREATE TABLE dept1 AS SELECT \* FROM dept;

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

# SQL> SELECT ename as name, sal salary FROM emp;