Ex. No : 01 **DDL COMMANDS**
Date :

AIM:

To create a database and write SQL queries to retrieve information from the database.

DESCRIPTION:

Data Definition Language

DDL (Data Definition Language) statements are used to create, change the objects of a database. Typically a database administrator is responsible for using DDL statements or production databases in a large database system. The commands used are:

- Create - It is used to create a table.
- Alter - This command is used to add a new column, modify the existing column definition and to include or drop integrity constraint.
- Drop - It will delete the table structure provided the table should be empty.
- Truncate - If there is no further use of records stored in a table and the structure has to be retained, and then the records alone can be deleted.
- Desc - This is used to view the structure of the table.

PROCEDURE:

Step 1: Create table by using create table command with column name, data type and size.

Step 2: Display the table by using desc command.

Step 3: Add any new column with the existing table by alter table command.

Step 4: Modify the existing table with modify command.

Step 5: Delete the records in files by truncate command.

Step 6: Delete the Entire table by drop command

Create Table
Syntax:

Create table tablename
(
column_name1 datatype(size),
column_name2 datatype(size),
column_name3 datatype(size),……);

Example:

SQL> Create table Student(Stud_name char(20), Stud_id varchar2(10), Stud_dept varchar2(20), Stud_age number(5));

Table created.

SQL> desc Student;

Name	Null? Type
STUD_NAME	CHAR(20)
STUD_ID	VARCHAR(10)
STUD_DEPT	VARCHAR(20)
STUD_AGE	NUMBER(5)

Alter Table
Syntax:

Alter table tablename add (column_name datatype(size));
Alter table tablename modify (column_name datatype(size));
Alter table tablename drop (column_name);

Example:

SQL> Alter table Student add (Stud_addr varchar2 (20));
Table altered.

SQL> desc Student;

Name	Null? Type
STUD _ NAME	CHAR(20)
STUD_ID	VARCHAR(10)
STUD_DEPT	VARCHAR(20)
STUD_AGE	VARCHAR(10)
STUD_ADDR	VARCHAR(20)

SQL> Alter table Student modify (Stud_age number(10));
Table altered.

SQL> desc Student;

Name	Null? Type
STUD _ NAME	CHAR(20)
STUD_ID	VARCHAR(10)
STUD_DEPT	VARCHAR(20)
STUD_AGE	NUMBER(10)
STUD_ADDR	VARCHAR(20)

SQL> Alter table Student drop (Stud_age number(10));
Table altered.

SQL> desc Student;

Name	Null? Type
STUD_NAME	CHAR(20)
STUD_ID	VARCHAR(10)
STUD_DEPT	VARCHAR(20)
STUD_ADDR	VARCHAR(20)

Truncate Table
Syntax:

Truncate table table_name;

Example:

SQL> Truncate table Student;

Table truncated.

SQL> desc Student

Name	Null? Type
STUD_NAME	CHAR(20)
STUD_ID	VARCHAR(10)
STUD_DEPT	VARCHAR(20)
STUD_AGE	NUMBER(10)
STUD_ADDR	VARCHAR(20)

Rename
Syntax

Alter table table_name rename new_table_name

SQL> alter table student rename student1;

SQL> desc student1;

Name	Null? Type
STUD_NAME	CHAR(20)
STUD_ID	VARCHAR(10)
STUD_DEPT	VARCHAR(20)
STUD_AGE	NUMBER(10)
STUD_ADDR	VARCHAR(20)

Drop Table
Syntax:

Drop table tablename;
Example:

SQL> Drop table Student1;

Table dropped.

SQL> desc Student1;

ERROR: ORA-04043: object Student1 does not exist

DML COMMANDS

AIM:

To Study and Practice Insertion, Deletion, Modifying, Altering, Updating and Viewing records based on conditions in RDBMS.

DESCRIPTION:

Data Manipulation Language

DML commands are the most frequently used SQL commands and is used to query and manipulate the existing database objects. Some of the commands are

- Insert
- Select
- Update
- Delete

PROCEDURE:

Step 1: Create table by using create table command.
Step 2: Insert values into the table
Step 3: Delete any records from the table
Step 4: Update any values in the table.
Step 5: Display the values from the table by using select command.

SQL> Create table Student(Stud_name char(20), Stud_id varchar2(10), Stud_ dept varchar2(20), Stud_age number(5));

Table created.

SQL> desc Student;

Name	Null?	Type
STUD_NAME		CHAR(20)
STUD_ID		VARCHAR(10)
STUD_DEPT		VARCHAR(20)
STUD_AGE		NUMBER(5)

Insert:
This is used to add one or more rows to a table. The values are separated by commas and the data types char and date are enclosed in apostrophes. The values must be entered in the same order as they are defined.

Syntax:
insert into tablename values(
'&column_name1',
'&column_name2', '
'&column_name3',…..);

Example:

SQL> Insert into Student1 values(‘&stud_name’, ‘&stud_id’, ‘&stud_dept’, ‘&stud_rollno’);

Insert into Student1 values (‘Ram’, ‘101’, ‘MECH’, ‘104’)

1 row created.

Insert into Student1 values (‘Vicky’, ‘102’, ‘EEE’, ‘105’)

1 row created.

Insert into Student1 values (‘Saddiq’, ‘102’, ‘CSE’, ‘101’)

1 row created.

Insert into Student1 values (‘David’, ‘104’, ‘EEE’, ‘103’)

1 row created.

Select Command:
It is used to retrieve information from the table. It is generally referred to as querying the table. We can either display all columns in a table or only specify column from the table.

Syntax:

Select * from table_name;

Example:
SQL> select * from Student1;

STUD_NAME	STUD_ID	STUD_DEPT	STUD_ROLLNO
Ram	101	MECH	104
Vicky	102	EEE	105
Saddiq	103	CSE	101
David	104	EEE	103

4 rows selected

Update Command:
It is used to alter the column values in a table. A single column may be updated or more than one column could be updated.

Syntax:

Update table_name set column_name=’value’ where condition;

Example:

SQL> Update Student1 set stud_id='109' where stud_name='Saddiq';

SQL> select * from Student1;

STUD_NAME	STUD_ID	STUD_DEPT	STUD_ROLLNO
Ram	101	MECH	104
Vicky	102	EEE	105
Saddiq	103	CSE	101
David	104	EEE	103

1 row updated.

Delete Command:

After inserting row in a table we can also delete them if required. The delete command consists of a from clause followed by an optional where clause. Syntax:

Delete from table_name where condition;

Example:

SQL> Delete from Student1 where stud_dept='CSE';
1 row deleted.

SQL> select * from Student1;

STUD_NAME	STUD_ID	STUD_DEPT	STUD_ROLLNO
Ram	101	MECH	104
Vicky	102	EEE	105
David	104	EEE	103

RESULT:

Thus the Insertion, Deletion, Modifying, Altering, Updating and Viewing records based on conditions using SQL commands were executed and verified successfully.