

Lab # 02

Data Definition Operations and to become familiar with datadefinition language.

DATA DEFINITION LANGUAGE (DDL): The Data Definition Language (DDL) is used to create and destroy databases and database objects. These commands will primarily be used by database administrators during the setup and removal phases of a database project. Let's take a look at the structure and usage of four basic DDL commands:

CREATE: This is used to create a new table.

Syntax: Create table tablename (column_name1 data_type constraints, column_name2 data_type constraints ...) **Example:** Create table dept (deptno NUMBER (2), dname VARCHAR2 (14), loc VARCHAR2(13));

ALTER: This is used to add and modify table. **Example:**

- Alter table emp add phone_no char (20);
- Alter table emp alter column phone_ no int;

DROP TABLE: This is used to delete the structure of a relation. It permanently deletes the records in the table. **Example:** drop table prog20; here prog20 is table name

TRUNCATE: This command will remove the data permanently. But structure will not be removed. **Syntax:** TRUNCATE TABLE <TABLE NAME>;

Example: Truncate table customer;

CONSTRAINTS:

In SQL, we have the following constraints:

NOT NULL - Indicates that a column cannot store NULL value

UNIQUE - Ensures that each row for a column must have a unique value

PRIMARY KEY - A combination of a NOT NULL and UNIQUE. Ensures that a column (or combination of two or more columns) have a unique identity which helps to find a particular record in a table more easily and quickly

FOREIGN KEY - Ensure the referential integrity of the data in one table to match values in another table

CHECK - Ensures that the value in a column meets a specific condition

Syntax: Create table <table-name> <column-name1> <type1> {<column-constraints1>},
<column-name2> <type2> {<column-constraints2>},<column-name>
<type>
{<column- constraints>}.

Example:

Create table emp(empno NUMBER (4), ename VARCHAR2 (10), deptno NUMBER (7,2) NOTNULL, constraint EMP_EMPNO_PK PRIMARY KEY (empno));

Create table emp (empno NUMBER(4), ename VARCHAR2 (10) NOT NULL, deptno NUMBER(7,2) NOT NUL,,,,,,,,, CONSTRAINT emp_deptno_fk FOREIGN KEY (deptno) REFERENCES dept (deptno));

Create table emp (empno NUMBER(4), ename VARCHAR2 (10) NOT NULL, deptno NUMBER(2), CONSTRAINT emp_deptno_ck CHECK (DEPTNO BETWEEN 10 And 99));

Assignments:

- Create a new table **Person** and insert at least 5 records.
- Create a new table **Customer** and insert at least 5 records.
- Create a new table **Order** and insert at least 5 records
- Add a new field in the Person table.
- Modify any field in the Person table.
- Use some constraints in your queries.