Task 2:- Commands In SQL Date: 1/8/25

DDL -

DDL is SQL is used to define and manage the structure of database objects like tables, Schema and indexes. DDL commands deal with how the data is stored, not the data it self

command :-

CREATE, ALTER, DROP, TRUNCATE, RENAME

- CREATE

creates a new table, database, indexes objects

- Example :-

CREATE TABLE STUDENTS (ROLL NO INT, Name VARCHAR (50));

- ALTER:-

Modifies an existing data base object such as adding (or) deleting columns in a table

- TRUNCATE

Removes all rows from a tables without deletes the table structure

Example :-

TRUNCATE TABLE STUDENTS;

- RENAME -

changes the name of a database

Example:

RENAME TABLE STUDENT TO

DML -

DML commands are used to manipulate the data stored in the database. These commands work on the row of a table

STUDENTS

roll no name AGE

empty

STUDENTS

ROLLNO Name AGE

empty

Commands in DML :-

1) INSERT
2) UPDATE
3) DELETE

1) INSERT:

Adds new Rows (records) to a table

Example:- INSERT INTO STUDENTS (Roll No, NAME) VALUES (101, 'Rahul');

2) UPDATE :-

Modifies existing data in a table

Syn :- UPDATE table_name SET NAME=
'ROY' WHERE Roll No = 101;

3) DELETE :-

Removes one or more rows from a table

Syn :- DELETE FROM students WHERE
Roll No = 101;

2 (c)

1. NOT NULL constraint:-

Definition :- The NOT NULL constraint ensures that a column cannot contain NULL values. It enforces the rule that every row must have a value in this column

Oracle SQL code :-

CREATE TABLE Employee(
Emp ID Number (5),
Name VAR CHAR (50)
NOT NULL
);

Explanation :- The Name column must always have a value. If you try to insert a

STUDENTS

ROLLNO	Name	AGE
101	Rahul	

row without a name, oracle will throw an error

2. Unique constraint:

Definition :- The unique constraint ensures that all values in an column are different. It allows NULL values, but only one if the column has a single UNIQUE constraint

oracle SQL code :

```
create Table Department (
    Dept ID NUMBER (5),
    Dept code VARCHAR2 (10)
    UNIQUE);
```

Explanation:- No two departments can have the same Dept code. It helps maintain data uniqueness in colums like email, user name etc

3. Foreign key constraint :- The foreign key constraint is used to link two tables. It enforces a relationship between the foreign key column and the primary key in another table.

oracle SQL code :

```
create Table course
course ID Number(5)
primary key,
course Name VARCHAR2(50)
```

Explanation :- The course ID in Enrollment must exist in the course table. You cannot insert invalid course ID

Student

Student - ID Name

empty

5. Check constraint

The CHECK constraint limits the values that can be inserted into a column. It ensures data follows specific rules.

Oracle SQL code:

```
Create Table product
    product_id Number(5)
    price Number(8,2)
    CHECK (price > 0)
);
```

Explanation: only position values are allowed for price. Negative or zero values will cause an error

6. Default constraint.

Def: The Default constraint assign a default value to a column if no value is provided during insertion

Oracle SQL code:-

```
Create Table orders(
    order_ID NUMBER(5),
    status VAR CHAR(20)
Default 'Pending'
);
```

Explanation: If status is not specified while inserting a row oracle will automatically insert 'pending'.

Result: The above SQL command executed successfully

Department

Dept ID

empty

Dept_code