

11/8/25

TASK 2 : Commands In SQL

DDL :

DDL in 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 itself.

Command :

CREATE, ALTER, DROP, TRUNCATE, RENAME

• CREATE

Creates a new table, database, index or objects.

• Example :

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

• ALTER :

Modifies an existing database object, such as adding (or) deleting columns in a table.

• Example :

ALTER TABLE Students ADD AGE INT;

• DROP :

Deletes an existing object like a table (or) database permanently.

• Example :

DROP TABLE Students;

• TRUNCATE :

Removes all rows from a table without deleting 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.

Commands In DML :

- INSERT
- UPDATE
- DELETE

STUDENTS

rollno

name

AGE

empty

STUDENTS

ROLLNO

Name

AGE

empty

• INSERT:
Adds new rows (records) to or tables.
Example: `INSERT INTO STUDENTS(ROLLNO,NAME)
VALUES(101,'Rahul');`

• UPDATE:
Modifies existing data in a table.
Eg: `UPDATE outcome SET NAME='ROT' WHERE
ROLL NO = 1001;`

• DELETE:
Removes one (or) more rows from a table.
Eg: `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 VARCHAR (50)  
    NOT NULL  
) ;
```

Explanation: The Name column must always have a value. If you try to insert a row without a name, Oracle will throw an error.

2. Unique constraint:

Definition: The unique constraint ensures that all values in a 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 VARCHAR(10)  
    UNIQUE ) ;
```

STUDENTS

ROLLNO	Name	AGE
101	Rahul	

Explanation: No two departments can have the same Dept code. It helps maintain data uniqueness in columns like email, Username etc.

3. Primary Key constraint:

Def: The primary key constraint uniquely identifies each record in a table. It is a combination of NOT NULL and UNIQUE. A table can have only one primary key.

Oracle SQL Code:

```
Create Table student(
    StudentID Number(5)
        Primary key,
    Name VARCHAR2(50)
);
```

Explanation: The student ID must be unique and not null. It's the main identifier for each student.

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

Oracle SQL Code:

```
Create Table course(
    CourseID Number(5)
        Primary key,
    CourseName VARCHAR2(50)
);
```

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

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(
    ProductID Number(5)
    Price Number(8,2)
        CHECK (Price > 0)
);
```

Student

Student_ID

empty

Name

Department

DeptID	Dept_Code
empty	

Explanation: only positive 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(  
    OrderID NUMBER(5),  
    Status VARCHAR(20)  
    Default('pending')  
);
```

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

Result: Thus, the SQL command line executed successfully.

VEL TECH-CSE	
EX NO.	2
PERFORMANCE (5)	5
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VIVA VOCE (5)	5
RECORD (5)	5
TOTAL (20)	20
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