

Task:- 2 Commands In SQL

DDL:-

DDL (Data definition Languages in SQL) is used to define and manage the structure of database object like tables, schemas and indexes. DDL Commands deal with how the data is stored not the data itself.

Commands:-

CREATE, ALTER, DROP, TRUNCATE, RENAME.

* CREATE :-

Creates a new table, database, index, or other 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;

Deletes an existing object like a table on database permanently.

* DROP :-

* 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 DDILS

DML:-

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

Commands In DML:-

* INSERT

* UPDATE

* DELETE

STUDENTS

rollno

name

AGE

empty

STUDENTS

ROLLNO

Name

AGE

101

Rahul

*INSERT

Adds new rows (records) to or tables.

Examples:-

INSERT INTO STUDENTS (Roll No, Name)
VALUES (101, 'Rahul');

*UPDATE:-

Modifies Existing data in a table.

Ex:-

UPDATE outcomes SET Name = 'ROJ' where Roll No = 101;

*DELETE:-

Removes one (or) More rows from a table.

Ex:-

DELETE From students WHERE Roll No = 101;

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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 Employee1  
    Emp ID Number(5),  
    Name VARCHAR2(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 VARCHAR2(10)  
    UNIQUE);
```

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

STUDENTS**ROLLNO****Name****AGE**

empty

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 (
    Student ID Number(5)
    Primary key,
    Name VARCHAR(50)
);
```

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

4. Foreign Key constraint:-

Def :- 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 coursec
    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 IDs.

5) CHECK constraints:-

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 positive values are allowed for price. Negative or zero values will cause an error.

6) Default constraints:-

Def :- The default constraint assigns a default value to a column if no value is provided during insertion.

Student

Student_ID

empty

Name

Department

DeptID	Dept_Code
empty	

Oracle SQL Commands

```
create table order
order ID NUMBER(5)
status VARCHAR(20)
Default 'Pending'
);
```

Explanation:-

If station is not specified while inserting a row, oracle will automatically insert 'Pending'.

Result:- SQL Query command executed successfully.

VEL TECH - CSE	
EX NO.	2
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	85
RECORD (5)	5
TOTAL (20)	20
SIGN WITH DATE	nf