

11/11/21 Task (2.2) :- DDL & DML Commands with constraints

Aim:- To Perform DDL and DML Commands with constraints in SQL.

CONSTRAINTS:

- NOT NULL
- UNIQUE
- PRIMARY KEY
- FOREIGN KEY
- CHECK.
- DEFAULT.

NOT NULL

It ensures a column cannot store NULL values.

SYNTAX

CREATE TABLE TABLE-NAME)

COLUMNNAME DATATYPE NOT NULL)

UNIQUE

It ensures all values in a column are unique.

SYNTAX

CREATE TABLE table name.

Column name data type UNIQUE);

PRIMARY KEY

It is the combination of NOT NULL & unique.

FOREIGN KEY

It ensures values in one table match values in another table.

SYNTAX

FOREIGN KEY (column name) REFERENCES another
table name (column name);
DEFAULT:

It provides a default value for a column when
none is specified.

Example:-

CREATE TABLE DEPARTMENT

DEPT-ID INT PRIMARY KEY,

DEPT-Name VARCHAR(20) UNIQUE NOT NULL

CREATE TABLE STUDENT

STU-ID INT PRIMARY KEY,

STU-NAME VARCHAR(30) NOT NULL,

STU-GENDER VARCHAR(6)

CHECK (STU-GENDER IN ('MALE', 'FEMALE'))

STU-PH-NO BIGINT UNIQUE

FOREIGN KEY (STU-DEPARTMENT) REFERENCES
DEPARTMENT (DEPT-ID)

INSERT INTO DEPARTMENT VALUES

(101, 'L (SE)');

(102, 'ECE');

(103, 'IT');

INSERT INTO STUDENT VALUES

(1, 'RAVI', 101, 'MALE', 987654321),

(2, 'ANITA', 102, 'FEMALE', 9876501234)

SELECT* from STUDENT- Before Performing ALTER Command.

S.NO	STU-ID	STU-NAME	DEPART STU-NAME	STU- GENDER	STU-PH-NO
1	1	RAVI	101	MALE	997654 3210
2	2	ANITA	101	FEMALE	98765012 34

SELECT* from DEPARTMENT- Before Performing ALTER Command.

S.NO	STU-ID	STU-NAME
1	101	CSE
2	102	ECE
3	103	IT

SELECT* from STUDENT- - after update Command.

S.NO	STU-ID	STU-NAME	STU-DEPART MENT	STU-GENDER	STU-PH-NO	STU-Email
1	1	RAVI	101	MALE	997654 3210	NULL
2	2	ANITA	103	FEMALE	987650 1234	NULL

SELECT* from STUDENT- - after Performing delete Command.

S.NO	STU-ID	STU-NAME	STU- DEPART MENT	STU-GEND ER	STU-PH-NO	STU-Email
1	1	RAVI	101	MALE	997654 3210	NULL


```

SELECT * FROM DEPARTMENT;
SELECT * FROM STUDENT;

ALTER TABLE STUDENT
ADD 'STU-EMAIL VARCHAR(50) DEFAULT:
'vlteach@gmail.com';

```

SNO	STU-ID	STU-NAME	STU- DEPARTMENT	STU- GENDER	STU-PHNO	STU- EMAIL
1.	1	RAVI	101	MALE	9476543210	NULL
2.	2	ANITA	101	FEMALE	9876543210	NULL

```

UPDATE STUDENT
SET STU-DEPARTMENT=103
WHERE STU-NAME='ANITA'
DELETE FROM DEPARTMENT
WHERE DEPT-ID=103,
INSERT INTO STUDENT VALUES
(2, 'ANITA', 'FEMALE', 9876543210);
(2, 'Shrushta', 'FEMALE', 9876543210);

```

DROP TABLE DEPARTMENT;

----- Error -----

Could not drop object DEPARTMENT because it is referenced by foreign key constraint

To solve this first we have to drop student table after we have to drop department table.

SELECT * FROM STUDENT -- After inserting values.

SNO	STU-NAME	STU-DEPARTMENT	STU-GENDER	STU-PH-NO	STU-EMAIL
1	RAVI	101	MALE	9876543210	NULL
2	ANITA	101	FEMALE	9876501234	velteek@gmail.com
3	Shreshtha	101	MALE	9876501234	velteek@gmail.com

SELECT * FROM DEPARTMENT -- After inserting values.

SNO	DEPTID	DEPT-NAME
1	101	CSE
2	102	ECE
3	103	IT