4/8/25 Task:2 DDL and DML Generating design of Commands other traditional database model

Aim:-
To perform DDL data definition language and DML Data Manipulation language commands.

DDL Commands:
-> Create
-> Drop
-> Alter
-> Truncate
-> rename

DML Commands:
-> Insert
-> update
-> Delete
-> select

DDL Commands:

Create:
* Creating a table by using Create commands.

```
Create table student (
        stu_id int,
        stu_name varchar (30),
        stu_department varchar (30),
        stu_gender varchar (5),
        stu_ph_no int );
```

After Alter table

desc student;

STU_ID	INT
STU_NAME	~~INT~~ VARCHAR(30)
STU_DEPARTMENT	VARCHAR(30)
STU_GENDER	VARCHAR(15)
STU_PH_NO	INT
STU_DEPART_ID	INT

After inserting into table.

Select * from student;

SNo	Stu_ID	Stu_Name	Stu_depart	Stu_gender
1.	30628	Shravan	CSE.	Male
2.	28800	Mirile	ESE	Male

Stu_ph_no.	Stu_depart_id
8688058	1225
123456	1485

* Using Alter c
remove the
Syntax:
Alter table
id int;

Drop

* Drop comman
Completely.
Drop table

Truncate

* Truncate co
all data bot
Truncate ta

DML COMMA

Insert

* Insert comma
values to th
Insert into
(30628, 'Shr
(28800, 'Ra

Update

* update com
existing v
Update
SET Stu
Where

* Using Alter command we can add or remove the column.

Syntax:

Alter table student ADD column stu-depart_id int;

Drop

* Drop command is used to drop the table completely.

Drop table student

Truncate

* Truncate command is used to remove all data but keep structure.

Truncate table student

DML COMMANDS

Insert

* Insert command is used to insert the values to the table.

Insert into student values
(30628, 'shravan', 'CSE', 'Male', '8688056')
(28800, 'Radesh', 'ECE', 'Male', '123456');

Update

* update command is used to update the existing records.

Update student
SET stu-name = 'Mohith'
where stu-ID = 28800;

After updating the table

Select * from student

S.No.	Stu-Id	Stu-Name	Stu-department	Stu-gender
1.	30628	Shravan	CSE	Male
2.	28800	mohith	ECE	Male

Stu-phone-No	Stu-depart-id
8688056	1225
123456	1425

DELETE:

* DELETE Command is used delete a record.

```
DELETE from student
where stu-ID = 28800;
```

SELECT

* Select Command is used to retrive the records form table.

```
SELECT * from student
```

so.	Stu-ID	Stu-Name	Stu-department	Stu-gender	Stu-phone-no
1.	28923	Radesh	CSE	Male	8688056

Ex:-

```
Create table students (
    Roll-no INT,
    Name Varchar (30),
    Age INT,
    Course Varchar (30));
Alter table students ADD
  Email Varchar (50);
INsert into students Values
(1, 'Shravan', 19, 'Btech', 'Mshravan@gmail.com');
(2, 'Roy', 20, 'Btech', 'apple@gmail.com)
(3, 'Joy', 21, 'Btech', 'joy@gmail.com);

Update students
SET Email = vtu30628@gmail.com
Where Roll_no = 1;
```

DELETE from students
where Roll-no = 2;

Select * from students;

Sno	Rollno	Name	Age	Course	Email
1.	1	Shravan	19	B tech	VTU30628@gmail.com
2.	3	Joy	21	B tech	joy@gmail.com

Select name from students;

S.no	Name
1.	T. Radesh
2.	Sarath

Select * from students
where Name = 'shravan';

S.no	Rollno	Name	Age	Course	Email
1.	1	Shravan	19	Btech	Vtu30628@gmail.com

VEL TECH	
EX No.	2.1
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	4
RECORD (5)	-
TOTAL (20)	14
SIGN WITH DATE	4/8/25

Thus,
Result:- All the DDL and DML Commands are in SQL are ~~Soccessfully~~ executed successfully.

11/08/2025

Task 2.2

DDL and DML Commands with constraints

Aim:- To perform DDL and DML comands with constraints in SQL.

Constraints
→ NOT & NULL
→ UNIQUE
→ PRIMARY KEY
→ foREIGN KEY
→ CHECK
→ DEFAULT

NOTNULL
It ensures a coloumn cannot store NULL values.

SYNTAX
```
CREATE TABLE TABLE NAME(
        COLUMNNAME DATATYPE NOTNULL);
```

UNIQUE
It ensure all values in a column are unique.

SYNTAX
```
CREATE TABLE tablename(
        columnname datatype UNIQUE);
```

PRIMARY KEY
It is the combination of NOTNULL & UNIQUE.

FOREIGN KEY
It ensure values in one table match values in another table.

SYNTAX:
FOREIGN KEY (Columnname) REFERENCE another table name (column name)

DEFAULT:
It provides a defallt value for a coloumn when none is specified.

Example:

```
CREATE TABLE DEPARTMENT(
        DEPT_ID INT PRIMARY KEY,
        DEPT_NAME VARCHAR(20) UNIQUE NOTNULL);
CREATE TABLE STUDENTC
        STU_ID INT PRIMARY KEY,
        STU_NAME VARCHAR(30) NOTNULL,
        STU_DEPARTMENT INT DEFAULT 101,
        STU_GENDER VARCHAR(6)
                CHECK(STU_GENDER IN('MALE','FEMALE')
        STU_PHNO BIGINT UNIQUE,
        FOREIGN KEY(STU_DEPARTMENT REFERENCES
                DEPARTMENT(DEPT_ID);

INSER INTO DEPARTMENT VALUES
        (101, 'CSE'),
        (102, 'ECE'),
        (103, 'IT'));
```

SELECT * from STUDENT – Before performing ALTER command

	STU-ID	STU_NAME	STU-DEPARTMENT	STU-GENDER	STU-Phone
1	1	RAVI	102	MALE	9876543210
2	2	ANITA	101	FEMALE	9701225393

SELECT * FROM DEPARTMENT – Before performing ALTER command.

	STU-ID	
1	101	CSE
2	102	ECE
3	103	I.T.

SELECT * from STUDENT -- after performing update command.

	STU-ID	STU-DEPARTMT	STU-NAME	STU-GENDER	STU-PHNO	STU-EMAIL
1	1	RAVI	102	MALE	9876543210	NULL
2	2	ANITA	103	FEMALE	9701225393	NULL

SELECT * from STUDENT -- after performing delete command.

	STU-ID	STU_NAME	STU-DEPARTMENT	STU-GENDER	STU-PHNO	STU-EMAIL
1	1	RAVI	102	MALE	9876543210	NULL

INSERT INTO
(1, 'RAVI
(2, 'ANIT

SELECT * from
SELECT * from

ALTER TABLE S
ADD STU-EMAIL
'veltech@gmail.c

	STU-ID	STU-NA
1.	1	RAVI
2.	2	ANITA

UPDATE STUDENT
SET STU-DEPARTM
WHERE STU-NAME

DELETE FROM D
WHERE DEPT-ID

INSERT INTO STU
(2, ANIT
(7, Shre

```
INSERT INTO STUDENT VALUES
(1, 'RAVI', 102, 'MALE', 9876543210),
(2, 'ANITA', 'FEMALE', 9701225393),
```

```
SELECT * from DEPARTMENT;
SELECT * from STUDENT;
```

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

	STU-ID	STU-NAME	STU-DEPARTMENT	STU-GENDER	STU-PHNO	STU-EMAIL
1.	1	RAVI	102	MALE	9876543210	NULL
2.	2	ANITA	101	FEMALE	9701225393	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);
(7,'Shresha','FEMALE',9701225393);
```

SELECT * from STUDENTS -- After inserting Values

	STU-NAME	STU-DEPARTMENT	STU-GENDER	STU-PHNO	STU-EMAIL
1	RAVI	102	MALE	9876543210	NULL
2	ANITA	101	FEMALE	9701225393	veltech@gmail-com
3	Shretha	101	FEMALE	6301703567	veltech@gmail-com

SELECT * from DEPARTMENT: -- After inserting values

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

DROP TA
--- Error--
Could not
it is refere

To solve thi
table after
table.

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

Result: Thus All
are with co
and executed

inserting Values.

STU-PHNO STU-EMAIL

[illegible] NULL

[illegible] veltech@gmail-com

[illegible] veltech@gmail-com.

After inserting values.

DROP TABLE DEPARTEMENT;

---Error---

Could not drop object 'DEPARTEMENT' because it is refered by a foreign KEY Constraint.

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

VEL TECH	
EX No.	2.2
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	5
TOTAL (20)	15
SIGN WITH DATE	

VEL TECH	
EX No.	
PERFORMANCE (5)	
RESULT AND ANALYSIS (3)	
VIVA VOCE (3)	
RECORD (4)	
TOTAL (15)	
SIGN WITH DATE	

Result:- Thus All the DDL and DML commands are with constraints are performed and executed successfully.