AY: 2024-25

Class:	**SE**	**Semester:**	**IV**
Course Code:	**CSL402**	**Course Name:**	**DBMS Lab**

Name of Student:	**Shravani Sandeep Raut**
Roll No. :	**48**
Experiment No.:	**3**
Title of the Experiment:	**Create a database using Data Definition Language(DDL) and apply integrity constraints for the specified system**
Date of Performance:	**05/02/2025**
Date of Submission:	**12/02/2025**

Evaluation

Performance Indicator	Max. Marks	Marks Obtained
Performance	5	
Understanding	5	
Journal work and timely submission	10	
Total	20	

Performance Indicator	Exceed Expectations (EE)	Meet Expectations (ME)	Below Expectations (BE)
Performance	4-5	2-3	1
Understanding	4-5	2-3	1
Journal work and timely submission	8-10	5-8	1-4

Checked by

Name of Faculty : Ms. Neha Raut

Signature :

Date:

Aim :- Write a query to create tables for each relation in the relational schema of experiment no.2. Apply drop and alter commands on those tables.

Objective :- To learn commands of Data Definition Language(DDL) to create and define databases, and also learn to apply integrity constraints for the specified system.

Theory:

DDL Commands & Syntax :-

Data Definition Language(DDL) is a subset of SQL and a part of DBMS(Database Management System). DDL consist of Commands to commands like CREATE, ALTER, TRUNCATE and DROP. These commands are used to create or modify the tables in SQL.

DDL Commands :

In this section, We will cover the following DDL commands as follows.

1. Create
2. Alter
3. truncate
4. drop
5. Rename

CREATE :

This command is used to create a new table in SQL. The user has to give information like table name, column names, and their data types.

Syntax –CREATE TABLE table_name

(

column_1 datatype,

column_2 datatype,

column_3 datatype,

....

);

ALTER :

This command is used to add, delete or change columns in the existing table. The user needs

to know the existing table name and can add, delete or modify tasks easily.

Syntax –

ALTER TABLE table_name

ADD column_name datatype;

TRUNCATE :

This command is used to remove all rows from the table, but the structure of the table still

exists.

Syntax –

TRUNCATE TABLE table_name;

DROP :

This command is used to remove an existing table along with its structure from the Database.

Syntax –

DROP TABLE table_name;

RENAME :

It is possible to change name of table with or without data in it using simple RENAME

command.We can rename any table object at any point of time.

Syntax –

RENAME TABLE <Table Name> To <New_Table_Name>;

Implementation:

```
create database if not exists student_management;
drop database if exists student_management;
create database if not exists Student_mangement;
use Student_mangement;

create table Student(
Student_ID int auto_increment primary key,
First_name varchar(20),
Middle_name varchar(20),
Last_name varchar(20),
DOB date,
Address varchar(100),
Stud_Email varchar(45)
);

create table Student_PhoneNumber(
Student_ID int,
PhoneNumber varchar(15),
foreign key (Student_ID) references Student(Student_ID)
);

create table Course(
Course_Id int primary key auto_increment,
Course_Name varchar(15),
Credits int
);
```

```
create table Marks(
Student_ID int,
Marks_Obtained int,
Total int,
Grade varchar(5),
Result varchar(10),
foreign key (Student_ID) references Student(Student_ID)
);

create table Department(
Dept_ID int primary key,
Dept_Name varchar(30),
Established_Year varchar(10)
);

create table Faculty(
Faculty_Id int primary key,
First_Name varchar(20),
Middle_name varchar(20),
Last_name varchar(20),
Dept_ID int,
foreign key (Dept_ID) references Department(Dept_ID),
Course_Id int,
foreign key (Course_Id) references Course(Course_Id),
Email varchar(20)
);

drop table Faculty;
```

```
create table Faculty(
Faculty_Id int primary key,
First_Name varchar(20),
Middle_name varchar(20),
Last_name varchar(20),
Dept_ID int,
foreign key (Dept_ID) references Department(Dept_ID),
Course_Id int,
foreign key (Course_Id) references Course(Course_Id),
Email varchar(20)
);

create table Faculty_Phone(
Faculty_Id int,
Phone varchar(15),
foreign key (Faculty_Id) references Faculty(Faculty_Id)
);

alter table Student
add column Course_Id int;

alter table Student
add foreign key (Course_Id) references Course(Course_Id);

alter table Course
add column Dept_ID int,
add foreign key (Dept_ID) references Department(Dept_ID);
```

```
rename table Marks to Student_Marks;


-- Disable foreign key checks
SET foreign_key_checks = 0;


-- Truncate the Department table
TRUNCATE TABLE Department;


-- Re-enable foreign key checks
SET foreign_key_checks = 1;
```

Conclusion:

1. **Explain DDL commands with syntax.**

   DDL (Data Definition Language) is a subset of SQL (Structured Query Language) used to define, manage, and modify the structure of database objects like tables, indexes, views, and schemas. DDL commands allow you to create, alter, and drop database objects

   1. CREATE

   The CREATE command is used to create new tables, databases, indexes, or views.

```
CREATE Object_Type Object_Name (
   column1 datatype,
   column2 datatype,
   ...
);
```

   2. ALTER

   The ALTER command is used to modify an existing database object, such as adding or deleting columns from a table, changing a column's datatype, or modifying constraints.

ALTER Object_Type Object_Name
[Modification];

Add a Column to a Table:
ALTER TABLE Employee
ADD Email VARCHAR(100);

3. DROP

The DROP command is used to delete an existing database object.

DROP Object_Type Object_Name;

4. TRUNCATE

The TRUNCATE command is used to remove all rows from a table, but it does not remove the table structure itself.

TRUNCATE TABLE Table_Name;

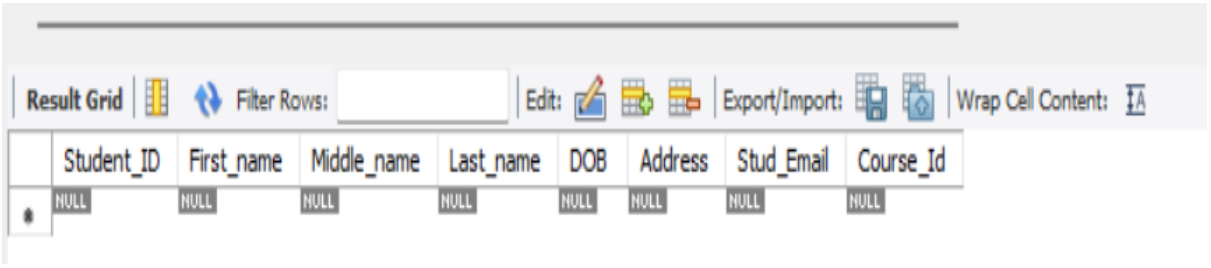
5. RENAME

The RENAME command is used to rename an existing database object (such as a table).

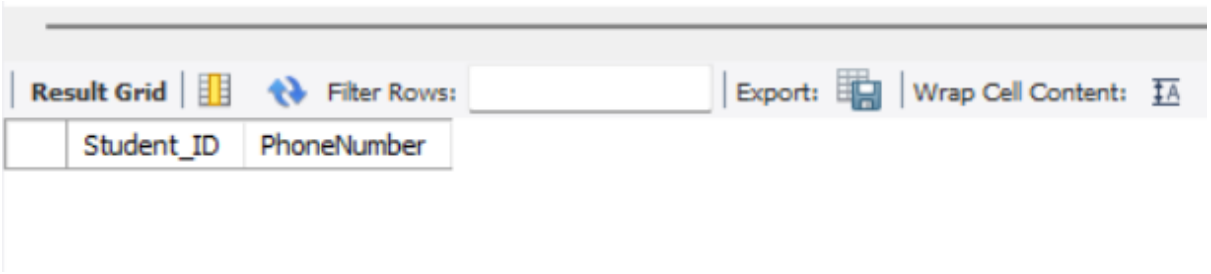
RENAME old_object_name TO new_object_name;

2. **Show results of operations performed.**

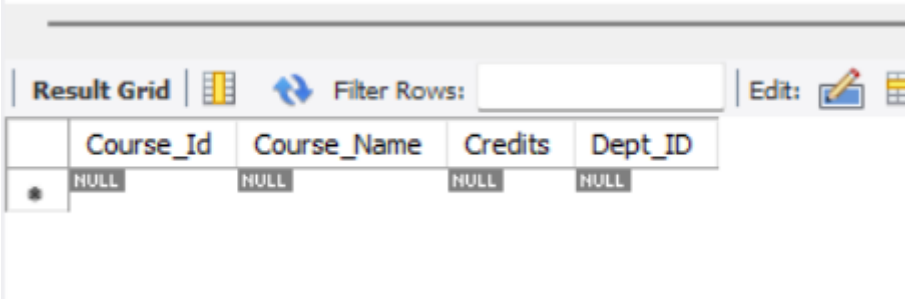
Student



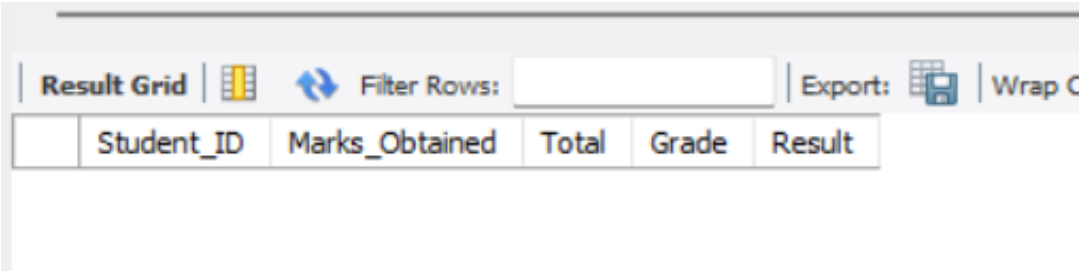
Student_PhoneNumber



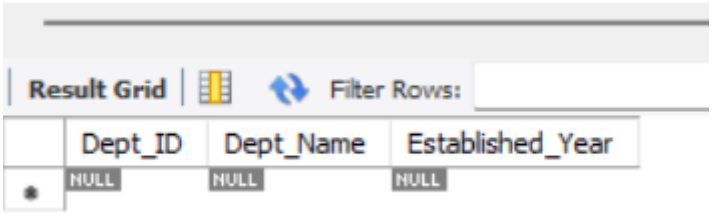
Course



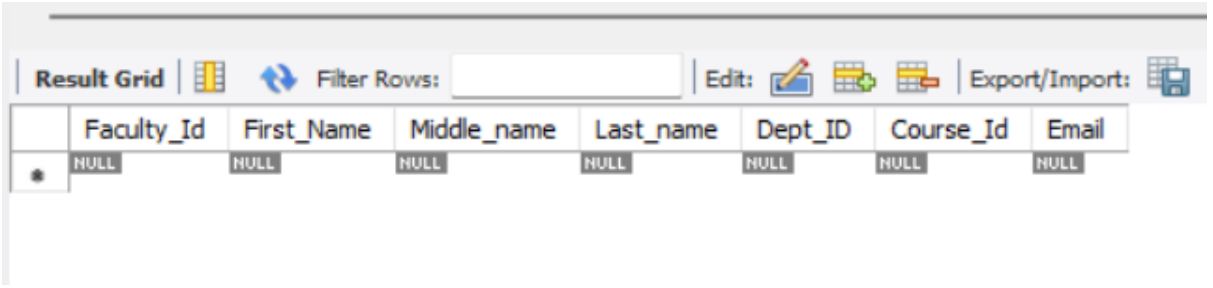
Student_Marks



Department



Faculty



Faculty_Phone