Practical List: 03	Enrollment No.:	Name:

Problem Definition

After the activation of database "UTU", create the following tables:

tblCity			
Column name	**Data type**	**Size**	**Constraints**
cid	int		Primary Key Auto Increment
Name	varchar	20	Not Null

tblStudent_details			
Column name	**Data type**	**Size**	**Constraints**
Enro	int		Primary Key
Fname	varchar	20	Not Null
Lname	varchar	20	Not Null
Cityid	int		Foreign Key
Gender	char	1	Not Null
Dob	date		Not Null
Contactno	bigint	10	Unique

- Display the structure of both the tables.
- Insert at least 5 cities in the "tblCity" table and 10 records in "tblStudent_details" table.

Using the database "UTU", create the following tables:

tblInstitute			
Column name	**Data type**	**Size**	**Constraints**
iid	int		Primary Key Auto Increment
Name	varchar	100	Not Null

tblDepartment			
Column name	**Data type**	**Size**	**Constraints**
did	int		Primary Key
Name	varchar	50	Not Null
Instituteid	int		Foreign Key

- Display the structure of both the tables.
- Insert at least 5 institutes in the "tblInstitute" table and 10 records in "tblDepartment" table.

Consider the above tables and perform the following operations:

1. Add a column named "percentage" of datatype "float" and size "4,2" in "tblStudent_details", by applying constraint for the value of the percentage, that must not be greater than 100.

2. Add a column named "emailid" of datatype "varchar" and size "30" in "tblStudent_details" after "contactno", by applying constraint for ignoring the duplication.
3. Insert the record (99, Shrey, Manotra, 2, M, 21/07/2001, 8888899999) in the table "tblStudent_details".
4. Link the table "tblStudent_details" with "tblDepartment" using appropriate constraint.
5. Complete all the table's field's records, if any record in any table is incomplete.
6. Retrieve the student's city and department along with the student first name and last name.
7. Arrange all the student's department wise.
8. Save all the transactions and perform following operations:
    a. Insert the record (56, Kush, Parmar, Surat, Male, 15/05/2000, 7200072000, kush@gmail.com, 86) in the table "tblStudent_details".
    b. Update the contactno, emailid and percentage of "Shrey" as "9988776655", "shrey@yahoo.in" and "82" respectively.
    c. Remove all the details of students whose city is "Bardoli".
9. Display all the details of students.
10. Restore all the database tables and view the details of students.
11. Count the number of "MSC IT" students in the table.

Objective(s)	To understand and implement the concept of Data Definition Language and Constraints in SQL; Data Manipulation Language, Data Query Language and Data Control Language.
Pre-requisites	Mathematics for Computer Applications
Duration for Completion	4 Hours
PEO(s) to be achieved	To provide quality practical skill of tools and technologies to solve industry problems.
PO(s) to be achieved	Ability to use the techniques, skills and modern tools as necessary for software development.
CO(s) to be achieved	CO7: Use data definition and manipulation statements over one or more tables using SQL to store and retrieve data.
Solution must contain	Query and output screen shots
Nature of submission	Handwritten
References for solving the problem	--
Post Laboratory questions	1. What is the use of constraints? 2. List all the various levels of constraints in SQL. 3. Explain all the SQL constraints in one line. 4. Give one example of DEFAULT constraint. 5. How to control truncations in MySQL?

Assessment		
Faculty Name and Signature		
Date		