



# UNIVERSITY OF BARISHAL

## DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

2<sup>nd</sup> Year 1<sup>st</sup> Semester, Session: 2021-22

### LAB FINAL EXAMINATION

**Course Title: Database Management System LAB**

**Course Code: CSE-2102**

**Time: 1.00 hour**

**Marks: 15**

### PART A

Your task is to design a database system for a Digital Skills Training Program named **buedge** conducted by the Department of Computer Science and Engineering (CSE). The system will manage various aspects of the program including student enrollment, course offerings, trainer assignments, circulars for students' applications and trainer recruitments, class routines, and result announcements. Consider the following requirements to design a suitable database for this system:

- The program offers various courses such as computer fundamentals, web development, programming, etc.
- Each course has multiple batches, with each batch accommodating approximately 30 students. A student can enroll in only one training program at a time.
- Basic information of each student, including the courses they enroll in, needs to be stored.
- A trainer is assigned to each batch to oversee its operations. Trainers may conduct sessions for multiple batches, and different trainers can lead sessions for the same batch.
- Each trainer possesses skills such as programming, web development, mobile app development, etc. The database must store information regarding the skills, personal details, and roles of each trainer.
- The platform should allow students to apply for courses following a circular until the course reaches its capacity of 30 seats. Similarly, trainers should be able to apply for courses if they meet the circular's requirements.
- Students must receive notices, class schedules, and their results through the platform.

### Tasks:

1. Create an ER Diagram for this system. [3]
2. Extract the tables from ERD. [3]
3. Implement this database using MySQL Database. [4]
4. Use SQL for creating table, building relationship (such as foreign keys), and inserting data into tables. [5] (*First save each of the query in a SQL file using Notepad++, and after completing the database write down those in your answer script.*)

### Instructions:

*Write down the answer of the question 1, 2, & 4 in the provided answer script and I will check the database [answer of question 3] in your computer.*

**Good Luck!!!**