

**DBMS Lab 2021-22 Spring Semester**  
**Lab Test 2 (March 24, 2022) – 100 Marks Duration: 2:00 PM – 4:30 PM followed by 30 minutes (4:30 PM – 5:00 PM) for file submission. Moodle submission link closes at 5:00 PM. No extensions.**

It is your responsibility to ensure that the files you upload are correct and they are readable/legible. So, check them during submission. We will not let you submit them later under any circumstance.

**[Penalty for plagiarism/copying: You will be awarded 0 for this lab test if you are found involved in plagiarism/copying and an additional 5 marks will be deducted out of the total of 40 in Lab. All persons involved will be awarded the same penalty irrespective of who has copied from whom. Decision of the lab teachers is final in this respect.]**

**SET B**

Consider that there are three tables in a database: Department (Dept\_cd, Dept\_name, D3, D4), Subject (Subject\_cd, Subject\_name, S3, S4, S5) and Department\_Subject (Dept\_cd, Subject\_cd).

Department table contains department code and department name along with two additional columns D3 and D4.

Subject table contains subject code and subject name along with three additional columns S3, S4 and S5.

Department\_Subject table contains which department offers which subject. Note, a department can offer multiple subjects and the same subject may be offered jointly by multiple departments.

Choose appropriate realistic names for D3, D4 and S3, S4, S5. Choose appropriate data types for all the columns of the three tables.

On a piece of paper, draw the complete database schema clearly showing all the three tables with their columns and data types, primary keys and foreign keys. Write your roll number, name and put your signature on the page. Submit a scanned copy of this page. Submissions without signature will not be considered.

Create three appropriate browser-based user interfaces to insert data in the three tables. Also, develop a fourth interface, where a user can enter any substring of a department name and all departments whose names match that substring (case sensitive) will be displayed in a tabular form along with the subject(s) offered by them, one in each row. Each row should display all the four columns of the Department table and all the five columns of the Subject table. If a department offers more than one subject, each will be displayed in a separate row.

Note: No need to create any interface for login, registration, etc.

Through Moodle, submit the following:

- a. A scanned copy of your database schema in jpeg, png or pdf format (Name it as Labtest2\_<Roll\_no> with appropriate file type).
- b. A single zip file containing your complete source code and screenshots of your application. (Name it as Labtest2\_<Roll\_no>.zip).
- c. A text file containing link to a YouTube video of a demo of your application (Name it as Labtest2\_<Roll\_no>.txt). The demo should show insertion of data in all the three tables and retrieval of entered data from the tables. Video duration: Approx. 5 minutes.