SEN2104 DATABASE MANAGEMENT SYSTEMS
PROJECT ASSIGNMENT

1. DEFINITION

Pick a project topic which is suitable for a database application. (<u>For example</u>: health care systems, inventory control, education, manufacturing, industry specific, etc.) Once you have decided on your topic, prepare a project report which includes the following parts:

a. Briefly explain your topic and state member-task responsibilities.

b. Design an E-R diagram based on your project topic.

   - There must be at least five strong entities in your diagram.

c. Draw a database schema diagram according to your E-R design. Show that every relation satisfies at least Boyce-Codd normal form.

d. Write necessary CREATE TABLE statements (including constraint definitions) for all relations in your schema.

e. Write 3 different INSERT INTO statements for each of your tables.

f. Write 8 different SQL queries with their descriptions for the database you created. You must write the queries based on the specified approaches below:

   - 2 joins (with conditions)
   - 2 nested queries
   - 2 set operations
   - 2 aggregate operations (must include joins)

2. PROJECT GROUPS

Students should form project groups consisting of **two or three** people. Each group will organize task responsibilities individually. Tasks must be shared equally between group members.

If a student leaves the group, rest of the members must cover his/her duties.

3. IMPORTANT DATES

a. <u>Creating Project Groups:</u> 26 March 2021 23:59

   - Submit your project topic and group members until the deadline.
   - Each project group needs to be formed with **two or three** students.
   - Students without a project group will be assigned to project groups randomly.

b. Project Submission Deadline: 28 May 2021 23:59

- Save your project report as a **PDF file**.

- Name the file with your student IDs. (e.g. 1234567-7654321-2345678.pdf)

c. Presentation Submission Deadline: 29 May 2021 23:59

- Record a video presentation about your project (in English).

  - You can prepare your project presentation by verbally explaining what you did while recording the screen or PowerPoint presentation.

  - Camera recording is not required.

- Each group member should present his/her own part of the project.

- Each group member has at most **five minutes**.

- If you do not make your presentation, your project grade **will be zero**. No excuses are accepted.

4. GRADING

Parts a-f: 90 pts.

Presentation: 10 pts.

5. SUBMISSION RULES

All submissions must be done on time. For each late submission, the grade will be reduced by 10% per day.

All submissions will be handled via itslearning. Reports sent via e-mail or Itslearning messaging system will not be accepted.

6. CHEATING AND PLAGIARISM

Detected cheating and plagiarism are subject to disciplinary action.