



United International University (UIU)
Department of Computer Science and Engineering

Fall 2024

CT-2

CSE 3522: Database Management Systems Laboratory (Section: J)

Time: 60 Minutes

A local library needs a simple database system to track their books and borrowers. Your task is to design and implement a basic database solution using MySQL within 1 hour. The system should handle the following requirements:

1. Store information about books, including title, author, ISBN, publication year, and genre.
2. Keep track of library members, including their name, contact information, and membership ID.
3. Record book loans, including which member borrowed which book, the loan date, and the due date.

Your tasks:

- a) Design an appropriate database schema with at least three tables.
- b) Implement the schema in MySQL, including appropriate primary and foreign key constraints.
- c) Insert at least 5 sample records into each table.
- d) Write SQL queries to accomplish the following:
 - List all books by a specific author
 - Show all currently borrowed books and their borrowers
 - Find members who have overdue books
 - Display the most popular genre based on the number of times books in that genre have been borrowed
- e) Create a query that shows a summary of each member's borrowing history.
- f) Write a query to find the book that has been borrowed the most times.

Remember to consider the relationships between entities and use appropriate data types for each field. You have 1 hour to complete this task, so focus on creating a functional solution that addresses the core requirements.

You have to do everything using MySQL Queries, and you need to copy all the queries **sequentially** in a .txt file. Upload the .sql file and the .txt file in eLMS.