COMP3700
Software Design Project

- Week 1: The project topic will be discussed in class. Students will form project groups, and each team will elect a team-leader.
- Week 2: Each project team must submit a brief (one page) project description with the following information:
  - team name
  - project name
  - project leader's name
  - brief description of the project
  - list of roles and name(s) for team member(s).
- Each team member will submit confidential evaluations for all other team members. An evaluation work sheet will be provided. The evaluations from team leaders are weighted more heavily. Evaluation criteria includes the following:
  - Understanding of the Problem
  - Systematic Approach
  - Creativity
  - Data Collection
  - Discipline Specific Skills
  - Self Learning
  - Teaching Others in the Team
  - Learning From Others
  - Quality of Work
  - Ethical Conduct
  - Attendance to Meetings

Deliverables

Each team will be divided into subgroups (e.g., project management, analysis, architectural design, design, implementation) to work on the deliverables. This subgroup (or the individual) will lead the effort pertaining to specific phase (e.g., analysis, design, implementation) of the project, but each member of the group should contribute to each and every phase of the project. Detailed requirements for each deliverable will be provided by the instructor.

- **System Requirements Specification** (UML-based Analysis Document)
- **System Design Specification** (Architectural and Detailed Design Documentation using UML)
- **Implementation and demo**

A final document will be prepared for submission from these deliverables when the project is due.

Project Topics

The following is a list of topics from which you can choose. You are free to select and work on projects of your choice if they are confirmed by the instructor.

1. **LIBRARY INFORMATION SYSTEM:** Your task is create a web-based system that will allow a library to more smoothly conduct business with their patrons. Using today's advanced database technology, this system will be able to create a detailed report of every item that is checked out, reserved, late or lost, along with all vital information about the item (i.e.: Author, Title, etc.). The combination of this information with the ability for customers to view their personal status will create a much more self-aware library organization.
2. **UNIVERSITY REGISTRATION SYSTEM:** The project involves design of a web-enabled university registration system that is capable of handling add/drop requests, student class scheduling, student's registration status, class lists for instructors, enrollment summary, reports, etc.
3. **OBJECT-ORIENTED WORKPLACE LABORATORY (OWL):** A current trend in the building industry is to provide distributed services and control for the individual occupant as a strategy to correct the overreliance on large centralized systems that characterize office systems built in the last

30 years. At the Intelligent Workplace, workers will have more control over their environmental conditions - adjusting light level, temperature of their workspace, reducing glare, controlling speed and direction of air flow delivered to the workplace. In this project, you are asked to build a system called OWL that attempts to improve the way we deal with buildings.

4. **SOFTWARE PROJECT MANAGEMENT TOOL:** Design a computer-aided software engineering environment that keeps track software development management activities such as project costing, planning, scheduling, and monitoring. Given the time constraints on your project scale your design to a subset of activities that need to be supported to help software program managers.

5. **PERSONAL FINANCE MANAGER:** This might be a simplified system providing functions similar to the most basic operations of Quicken or Microsoft Money, scaled for the time constraints.

6. **HOME-SECURITY:** Your team is developing a home security system that will permit the homeowner to monitor the exterior and interior property directly through a PC or remotely via internet. Develop an attractive and valid concept for your approach and then provide a design proposal for your vision.

7. **MEDICAL INFORMATION MANAGEMENT SYSTEM:** Medical information management system (MIMS) is a database management system that provides the capabilities for doctors, nurses, laboratory testers and management personnel to access patient records and provide services. MIMS interacts with other ancillary computers in the network system across the nation. Links are provided to existing computer systems, such as those used by the pharmacy, laboratory, and radiology departments. The medical staff communicates electronically with these systems from MIMS and views appropriate actions taken on their behalf. For example, prescriptions generated in MIMS are instantly time-stamped and routed to the pharmacy computer system for dispensing. When the order is processed, the pharmacy computer system routes the information back to MIMS and the patient's electronic chart is updated. In this manner, MIMS provides seamless communication between health care providers and ancillary service areas across the network system.

8. **ROLE YOUR OWN.**