Overview

Teams will undertake a term project in groups of 5 or 6 students. The term project will consist of proposing a software project, which includes developing an application consisting of a database, frontend, and backend processes, as well as documenting the development process. Students will be graded on their use of, and adherence to, software development methodology and tools for the project. The final project grade will consider the progress towards product delivery, the difficulty of the project, as well as the delivery of the materials required for each of the milestones for the project.

All documentation, code, and other materials related to this project will be stored in a GIT repository. It is expected that team members will frequently update the files in the repository. If pair-programming is used, both names of the pair must be included in the commit message to receive credit for participation in the project. Submissions for all milestones must be merged into the repository before the deadline or all members of the team will be penalized for late work.

The purpose of this project is to provide the basis for applying the tools and methods that are explored in the course. Group work is an essential part of computer science, both in academia and industry. This project will increase your skills in communications and teamwork, while providing hands-on use of many different tools.

Team Formation

Teams will be formed using a survey (link posted on Moodle), which takes your work schedule, work habits, experience with various technologies and other demographics into consideration when forming teams. We want to create groups according to similar work schedules and work habits, but maintain diversity across the other demographics.

Milestones

Of course, software projects often have deliverables and delivery schedules associated with the production of code. But successful product delivery depends on many other deliverables in addition to working code. Your group project will be graded based on the delivery of materials at seven milestones. All the milestones are due on Sunday evening at midnight in their respective weeks.

Milestone 1 Proposal – Due Sunday, February 18, 11:59 p.m.

The project proposal is the first document required from the team. All the information listed below must be included and tools should be in place by the due date.

Team Name	Moniker to be used in all presentations and documentation.
Members	List of team members, first & last name.
Description	A short (2-3 paragraphs) description of the project. Provide enough information to explain what value your product will provide to users of your product.
Vision Statement	A simple, one-sentence statement describing the clear and inspirational desired state resulting from your team's efforts to create your product.
Motivation	Describe the background and reasons for developing this product.
Risks	What are the known risks that may prevent your team from completing this project on time. Risks could include: the working environment, lack of experience of the team in the area of focus, lack of access to a specific resource, etc.
Risk Mitigation Plan	A detailed plan showing how the team will mitigate each stated risk. Describe how you will succeed given the stated risks.
Version Control	Describe the version control method and repository you will be using for the deliverables created for the project. Github is strongly recommended. Once a repository is determined, you must share access to the repository with your instructor, your TA, and all your project team members.
Development Method	Which software development methodology will your team follow? Describe the methodology and the features/steps you will follow. Common methodologies include waterfall, agile/scrum, iterative, spiral, etc.
Collaboration Tool	Select a collaboration tool for team members to utilize for coordination of their work and communication among team members. Popular tools are Slack and HipChat.
Proposed Architecture	Propose an architecture for your app. What technologies will you be using on the backend? What technologies on the front end? How will they communicate with each other? Which technologies will be responsible for which functionalities?

Submission format: This project milestone 1 submission should be a PDF document named ProjectMilestone1_<TeamName> (One person on the team needs to submit the document via the submission link in Moodle by the due date.)