

Overview

Teams will undertake a semester-long project in groups of 5 or 6 students. The team/group project will consist of proposing a software development project, which includes developing an application consisting of a database, frontend, integration layer 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 software development tools and techniques.

Team Formation

Teams will be formed by your TA 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 eight milestones.

Milestone 1 – Project Proposal

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 Number	Your recitation section number plus a one-digit identifier. Assigned by your TA. This team number MUST appear on ALL milestones/deliverables/submissions posted by your team to your git repo.
Team Name	Can be used in addition to your Team Number for all deliverables and presentations.
Team Members	List of team members, first & last name.
Application Name	To be used in all presentations.
Application Description	A short (2-3 paragraphs) overview description of the application. Provide enough information to explain what functionality and value your product will provide to users of your application.
Vision Statement	A simple, one or two sentence statement describing the clear and inspirational desired state resulting from your team's efforts to create your application. Use the format/template provided in lecture.
Version Control	Identify the three repositories your team has created in git. (One for team meeting logs; one for Milestone submissions, and one for all project code/components.) Verify that you have shared access to the repository with your TA and all your project team members (screen shot.)
Development Method	Describe the software development methodology will your team follow. Describe the methodology and the features/steps you will follow. Common methodologies include waterfall, agile/scrum, iterative. You may choose to follow your own hybrid version of these methodologies as best suits your team.
Communication Plan	Describe in a paragraph or two how your team plans to communicate with each other during the course of the project. You may identify a collaboration tool for team members to utilize for coordination of their work and communication among team members. Such tools are Slack, HipChat, Google Groups, etc.
Proposed Architecture Plan	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?
Meeting Plan	Identify and describe your team's agreed-upon meeting schedule and mode. Identify the day(s) and time(s), mode, and location your team has agreed upon for regular meetings. "Mode" refers to how you are meeting (face-to-face), group video chat (like Skype), etc.

Submission format: This project milestone 1 submission should be a PDF document named ProjectMilestone1_<TeamNumber> and pushed to the MILESTONES repository in git.