

OOAD Semester Project Proposal

Scope

Covers your topic for the work for Projects 4, 5, and 6:

- Project 4 will be a thorough design effort for the project (100 points)
- Project 5 will be an interim report and demo on the first development iteration (75 points)
- Project 6 will be the second iteration and demo of the final project delivery (100 points)

The Semester Project – A Demonstrated OOAD Effort

Create a non-trivial set of classes and services that make use of some of the design patterns we cover to provide a nice set of functionality to the end-user; we like to see some UI design and data handling, but your project may vary.

How much work should we try to do?

While I am asking for a non-trivial project, you only have so much time. Your team will have two weeks to do a thorough design, and then you will have about four weeks to develop your system prototype (2 iterations consisting of 2 weeks each).

For sizing your work, during each iteration, each member of your group should expect to work to implement one to two use cases (possibly with other teammates). As a result, if you are a member of a two-person team, you will want to target about 4-8 use cases for your system. A 3-person team is looking at a 6-12 use cases (12 is a lot!). You will detail this scope estimate in your initial design effort.

Typical applications

- A Native or Multiplatform Mobile Application
- A Responsive Web Application for Mobile Use
- A Web Service Paired with a Mobile Client
- A Cloud-based Application (using Student accounts for AWS, Google, Azure) with a Web or Mobile Interface (Think ahead on this one – getting the cloud account can be a delay)
- A Game for a specific platform (had some neat C#/Unity applications last time)
- Other Client/Server Applications
- An IoT style device or set of devices – I have SBCs (Raspberry Pi 3) if you need them!
- But please, no Monopoly simulations

Submission

Submit a PDF on Canvas – Ungraded, but required, **by Wednesday 10/7**

- Title of Project
- Members of Team
- Language/Toolsets planned for Code
- A Paragraph (just a few sentences) on **What This Project Idea Is**

A single page PDF should be enough, I just need to understand what you are thinking of making. I will review the projects and I may ask questions or request revisions.

Examples

Typical semester projects (1 to 3 people on project teams)

- Automated Greenhouse (Raspberry Pi based)
- Family Story web application
- Chess companion program
- Job Portal web app
- 2D Dungeon game
- Swivel Stones (Candy Crush-like) mobile app
- Library System simulation web app w/DB backend
- Pirates vs Ninjas game (C#/Unity)
- Raspberry Pi voice interface Scheduler
- Scientific Calculator Android application
- ClassQA class quiz web tool
- TidyTunes web/mobile tool for cleaning Spotify
- ~~Monopoly game app~~
- Simulated Smart home
- Memorization game mobile app
- Automated Restaurant Ordering & Serv. System web app
- Weather Fashion – expert system for what to wear by weather forecast
- Food management – shopping/recipe tool
- Adopt A Pet – web based management tool
- IPA: Image Processing Application – Windows app
- Happy Hour Website – tracks happy hours at local establishments
- ATM Simulation
- Alexa and Website Automated Dungeon Master
- Agent-based model of firefly mating strategy
- A robust bridge between Keras and Scikit-learn
- Chess iOS app