Project Milestone 3 – Implementation and Unit Testing

Objectives

- Become familiar with the transforming a design into code
- Become familiar with issues that can arise that may cause the design to be refined
- Become familiar with unit testing techniques

Overview

In this phase of the project, your will implement 80% of the functionality specified in your design. If in doing so, you feel the need to change you design, then do so but be sure to update your design documents. Also, if you discover that your any part of design documentation does not agree with your implementation, then fix either the design documentation or implementation or both. It is critical that your implement accurately reflects your design. Ideally, your design documentation should effectively guide your implementation. As you implement, you will write executable unit test cases that verify your implementation against your design.

Methods

This phase will cover three 2-week sprints. It will include planning for each sprint and doing a sprint review and retrospective in between the three sprints. The sprint review will be held in class with the instructor. Standups will be held in class throughout the sprint and will help to track the progress and keep everyone engaged in development (and unit testing) tasks. A standup report document is to be filled out each day that we hold standup in class.

It is intended for progress to be tracked in the Github project during the middle of the sprint and standup reports created for each standup day.

Do not worry about updating prototypes (unless they were the baseline for your code). The prototypes have served their purpose in informing and preparing for implementation.

Deliverables

- An initial implementation with executable unit test cases
- Sprint planning documents (3 of them)
    - List the stories that you're going to complete
    - Update your sprint backlog (github project) with the tasks – include a screenshot in the document
- Standup reports (one for each standup day)
- Sprint retrospective reports (3 of them)
    - During your retrospective, spend at least 10 minutes talking over:
        - What went well

        - What didn't go well
        - What specific things you can do to improve
        - List the measurement criteria
        - Assign a percentage to each team member based on your metric specified in this sprint's planning
        - Each person should have a percent between 0-100%
        - Total percent for the team should be 100%
        - Include the scrum master, and all of the members of the group (marking those who are present).
- Instructions for building code and executing unit tests
- 70-80% of your Application completed
- Unit Tests covering major logic
- A refined systems design
- A refined requirements definition document, as needed
- A refined system analysis, as needed
- A revised project plan, as needed

Some Other Common Software Engineering Deliverables Not Required

- Verification of data structures correctness
- Thorough unit testing
- User interface testing

Schedule

Tuesday, 2/25	Design Presentations & Sprint 1 planning
Thursday, 2/27	Sprint 1 standup
Tuesday, 3/3	Spring Break
Thursday, 3/5	Spring Break
Tuesday, 3/10	Sprint 1 standup
Thursday, 3/12	Sprint 1 review / retrospective & Sprint 2 planning
Tuesday, 3/17	Sprint 2 standup
Thursday, 3/19	Sprint 2 standup
Tuesday, 3/24	Ethics
Thursday, 3/26	Sprint 2 review / retrospective & Sprint 3 planning
Tuesday, 3/31	Sprint 3 planning
Thursday, 4/2	ABET quiz & Sprint 3 standup
Tuesday, 4/7	Sprint 3 standup
Thursday, 4/9	Sprint 3 review / retrospective
Tuesday, 4/14	Milestone 4 planning
Thursday, 4/16	Demo Day - Admin Demo
Tuesday, 4/21	Demo Day - User Demo