



SOURCE CONTROL PROJECT DESIGN DOCUMENT

PREPARED FOR

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CSCI 4250.088

PREPARED BY

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1. Project Description

“Source Control is a critical aspect to team-based software development. In SE I, students are introduced to the basic concepts of committing code and managing branches. Your independent project will be to take it to a higher level by leveraging GitHub actions, Discord, and Selenium. You will create a repository in GitHub to contain a simple website with one or more buttons to cause a simple state change. Once that is working, you will automate the inclusion of two code reviews (by team members other than the author of the code change) done sequentially or concurrently such that if a code review is not completed or was rejected, the code change is not carried forward in GitHub. After that, you will integrate Discord into the process so that a message goes out to a discord channel when a code review is being requested and the pull request it corresponds to. After that, you can create a Selenium automated test against the website. Once that works, you can integrate that test into the code change process within GitHub (to occur after the two code reviews) so that the test has to pass before the change can move forward.

All of the above is part of Continuous Integration which is key to modern DevOps.”

2. Minimum Viable Product

To have a product that could meet expectations, I'd need to create a website that has a button to cause a simple state change. Automate the inclusion of two code reviews sequentially or concurrently so that a code review is not completed or rejected and the code is not carried forward to GitHub. A message will go out to a discord channel whenever a code review is requested and the pull request it corresponds to. Automate test against the website with Selenium. Integrate test into the code to change the process within GitHub so that the test has to pass before the change can move forward.

3. Obstacles

The main obstacle I feel I will face during the course of this project is learning these new tools and libraries in a decent amount of time to apply it to this project. Another possible obstacle that might come is with time management. Due to my other class

obligations I can't devote my whole time to this project and need to juggle multiple different projects and assignments while working on this project so making sure I don't waste the time I'm given is essential to successfully completing this project.

4. Tools & Libraries

- GitHub Actions
- Discord API
- Selenium

5. Milestones and Reporting

Total estimation of man hours: 88

Milestone	Sprint	Task	Hrs	Dates
1 - Planning: Sprint 0				
1.1	0	Create Design Document	5	1/22 - 1/28
1.2	0	Setup General Github & Kanban Board	3	1/22 - 1/28
2 - Learning: Sprints 1-3				
2.1	1	Learn & Practice Github actions	10	1/29 - 2/4
2.2	2	Learn & Practice with the Discord API	10	2/5 - 2/11
2.3	3	Learn & Practice Selenium	10	2/12 - 2/18
3 - Development: Sprints 4-7				
3.1	4	Create a Website w/ State Changing Buttons	4	2/19 - 2/25
3.2	4	Automation of the inclusion of Two Code Reviews	6	2/19 - 2/25
3.3	5	Integration of Discord	10	2/26 - 3/4
3.4	6	Automated Selenium Test	10	3/5 - 3/11
3.5	7	Integration of Selenium Test w/ Github	10	3/12 - 3/18

4 - Testing: Sprint 8				
4.1	8	Test Application w/ Test Cases	5	3/19 - 3/25
4.2	8	Polishing	5	3/19 - 3/25