
EE/CprE/SE 491 WEEKLY REPORT 10

11/15/2024 - 11/21/2024

Group number: sdmay25-33

Project title: Interactive Embedded Systems Learning using the Prairie Learn Framework

Client &/Advisor: Phillip Jones

Team Members/Role:

Rachel Druce-Hoffman — Notetaker

Justin Cano — Technical Lead

Joey Krejchi — Quality Assurance

Caden Otis — Project Manager

Devin Alamsya — Consultant

Weekly Summary

For this week, the team got together and brainstormed what we would like to accomplish for the beta version of our project for next semester. We then went through most of the previous HWs that the previous team implemented, and noticed many issues with problems (no randomization or autograding, bugs, bad quality). We also continued to improve on some HW problems, where we were able to get problem 1a of HW 12 to have randomized parameters and improved the user interaction for problems for HW1_Q3C and HW6_Q1A. We also looked more into getting ISU SSO to work with PrairieLearn, but we weren't able to successfully integrate that into PrairieLearn this week.

Past week accomplishments

- Caden: Last week, I worked on randomizing HW12_Q1a and not leaving it as a static problem. I was able to successfully get this problem to be randomized. In this problem, students are given some assembly code and need to record the values that update in the register files and in data memory. I was able to randomize the registers, offsets, and addresses used in the assembly code. I left the instructions static because it will be difficult to randomize those. The problem just needs to incorporate the ARM autograder for students to get a grade on their solutions. I also spent some time brainstorming with the team on what we would like to accomplish for the beta version of our project.

- Devin: Brainstormed with the team what the plan was for our beta test for the spring semester. Looked at the questions in HW 2 to see if they were autogradable and randomizable. Found some errors in the questions that need to be looked into. Finished up HW1_Q3C and HW6_Q1A. Looked into fixing HW2_Q2 and am currently in progress with that one now. Also started looking into HW 7 for whatever reason. Made it 1 question in before realizing that was outside of the scope we want to have ready by the spring semester.
 - Joey: Worked with the team to brainstorm on beta, then I started working on that task. I went through all the questions in homework 4 and checked them for accuracy, soundness, and randomization. There seemed to be a lot of apparent issues with how the questions are structured, and some of them appear to be wrong, but I will need to ask Dr. Jones about that. I also looked more into the ARM autograder bug, and I found some useful documentation from the previous year that was hidden. My first step is to get the testing environment setup, and I'm having issues with my virtual machine.
 - Rachel: Brainstormed with team to determine plan for beta. Noted status of each question in HWs 1, 3, and 6 towards our goal (see page 2 of our beta test plan doc). The criteria for this is based on randomization, autogradability, answer panel quality, and overall quality. Then I created a git issue for the noted problems in HW 6 and a corresponding branch. Fixed a format issue present in all five questions, fixed the answer panel and an instruction/autograde clarity issue in question 1B.
 - Justin: Helped the team make our beta test plan. Worked through homework 5 to find any bugs and ensure auto grading worked correctly. Started trying to integrate ISU SSO, but am running into issues with it still not letting us use SSO. Kept working on updating previous years documentation.
- **Pending issues**
- Justin: I put all the proper links and such into the configuration files for the server so that we should be able to use ISU SSO to login to prairielearn, but for some reason it still will only let us sign in using google accounts.

○ **Individual contributions**

<u>NAME</u>	<u>Individual Contributions</u>	<u>Hours this week</u>	<u>HOURS cumulative</u>
Caden Otis	Randomized problem 1a of HW 12, but still need to get the ARM autograder to work on this problem. Also spent some time brainstorming what the beta version of our project should have	6	44.5
Rachel D-H	Beta planning. Noting question status. Fixing question H6_1B. Fixed HW 6 quality.	6	47.5
Justin Cano	Beta planning like everyone else, worked through homework 5 question set. Worked on getting ISU SSO working for Prairielearn. Kept working on updating more documentation.	6	40

Joey Krejchi	Beta planning. Testing of the HW4 question set. More work towards the ARM autograder bug.	7	42.5
Devin Alamsya	Brainstormed and planned beta test, tested HW 2, worked on fixing/finishing HW1_Q3c and HW6_Q1A, worked on HW2_Q2.	6	38.5

○ **Plans for the upcoming week**

- Caden: By the week after fall break, I would like to implement the ARM autograder into problem 1a of HW 12. I still need to figure out how the other problems in HW 12 (besides 1b) use the ARM autograder. If I have enough time, I will then move towards an earlier homework that needs fixing, in order to ensure we have a good beta version ready to release for next semester. HW 12 isn't as much of a priority as other HWs right now since HW 12 can be implemented later into our beta version next semester, so I would like to focus on earlier HWs when I can.
- Devin: Will finish up trying to fix HW 2 and work to make sure short answer questions and anything else in the first 6 assignments that needs work gets done will get done by the end of the semester.
- Joey: I will work on some fixes for the HW4 issues and possibly continue to work on the ARM autograder bug if I have extra time.
- Justin: Try to fix the issue with ISU SSO not working properly. Keep working on updating documentation from last year.
- Rachel: I will continue to work on HW 6, and then work with the rest of the team to finish HWs 1-5 to have these 6 assignments ready to go by the end of the semester.

○ **Summary of weekly advisor meeting**

For this week's advisor meeting, we spent the majority of time discussing the progress we've made on some HW problems, like getting problem 1a of HW 12 to be randomized. We also talked about finding many bugs or just nonworking questions in previous HWs, which were implemented by the previous team. We lastly discussed our issue of not being able to get ISU SSO to work as another login method onto PrairieLearn. Our advisor showed us some documentation that will hopefully help us to implement ISU SSO before our next meeting with our advisor.