

Emily Bever

## Summary of Hours and Justification

### Fall Semester (**45** hours spent):

During the fall semester, my team and I spent most of our time working on designing the project, determining how we want to implement it, and lots of research to prepare ourselves for a smooth development period. In our fall hours chart which details hours spent on each activity here: <https://github.com/Phinmala/CS5001-Senior-Design?tab=readme-ov-file#fall-hours> you can see that everyone in our group spent **15** hours in weekly team meetings where we went over our progress and planned work for the next week, notes here:

<https://github.com/Phinmala/CS5001-Senior-Design/blob/main/Meeting%20Notes/MeetingNotes.md>. We each also spent **12** hours on assignments in the fall including writing our individual assessment and biography essays, and group work including working on reports, making our fall semester presentation, peer review, writing our ABET concern essays, making design diagrams, making our task list, ect, all of which can be found in our README:

<https://github.com/Phinmala/CS5001-Senior-Design/blob/main/README.md>. Finally in the fall semester, I spent **18** hours on research and development. I watched many video examples and participated in learning tutorials on React, as well as researched Node.js. I also made our initial Node/ Express.js server and our React application (we ended up not using it since we decided not to use typescript). After our official application was made, I worked on the setup of a rough draft of the frontend that had routing from a landing page to a module list page. You could then click on a module and it would take you to a page for that module. This was all in the very early stages of the application, but it set us up for success for the spring semester where we would focus primarily on development.

### Spring Semester (**55** hours spent):

I spent the majority of the spring semester of senior design working on frontend development of our application, Hackademia. Our application currently is entirely a front end application as of right now, since our backend is available for the next phase of the project, but does not currently play an active role. So frontend development was a big part of the project. I spent **30** hours on front end development this semester. We split the front-end work between two teammates. As can be seen from our spring semester meeting notes:

<https://github.com/Phinmala/CS5001-Senior-Design/blob/main/Meeting%20Notes/SpringMeetingNotes.md>, I focused primarily on creating our interactive learning modules. This included the initial set up of our stack, register, c-code, assembly code, and terminal models. Then after getting all those set up, I worked on the animation which included pressing buttons and the user would be able to step through the actual execution of buffer overflow examples. Pressing the buttons will add and remove text from the stack and register, highlighting elements of each model to show what was updated in that step in order to visualize the current state of the attack. This can mostly be seen in the components section of our github:

<https://github.com/connolrc/Hackademia-dev/tree/main/frontend-dev/src/components>.

Specifically, I worked most heavily on the Buffer Overflow module and the Call Stack module. In addition to frontend development, all team members attended **15** hours of weekly meetings where we discussed what we accomplished the week before, planned our work for the

upcoming week, resolved merge conflicts, and helped each other on any issues we were having. This semester I also spent **5** hours on individual and group assignments including reflection essays, testing, helping with the poster, and our powerpoint, all of which can be found in the Readme table of contents:

<https://github.com/Phinmala/CS5001-Senior-Design/blob/main/README.md>. And finally, **5** hours of the senior design expo, where we demoed our application to judges and the public.