Nicholas:

First Semester

First Semester	Description	Time Spent
1	Class Assignments	20 hrs
2	Project Brainstorming	10 hrs
3	Personal and group Research	1 hrs
4	Meeting with advisor	3 hrs
		Total: 34 hrs

During the first semester most of my time working was with my team. For this reason, my hours spent lines up pretty well with the hours spent chart that was included with our report last semester. My work during semester one totalled around 34 hours.

Second Semester

Over the second semester our team met weekly and we all worked individually between these meetings. These meetings were generally about 1.5 hours where I mostly worked on completing deliverables for this course or working on setup for the VR environment. We had about 8 of these meetings where we spent a combined 12 hours. Apart from completing assignments as part of this some of the other things that I worked on where:
- Setting up the VR environment: 1.5 Hours
- Adjusted Models and Animation: 1.5 Hours
- Tested Teleportation: 0.5 Hours
- Setup New Testing Method: 1 Hour
- Tested Object Scaling Fixes: 3 Hours

During the final two weeks before the expo we were all available to work much more than we had been so we began to meet at my house for longer, collaborative development meetings.

Hours Worked			
	21-Mar	5:00PM - 5:30PM	
	23-Mar	1:00PM - 5:00PM	

	28-Mar	1:00PM - 6:00PM
	30-Mar	12:30PM - 8:30 PM
	2-Apr	11:30AM - 9:00PM
	3-Apr	11:00AM - 9:00PM
	4-Apr	2:30PM - 9:00PM
	5-Apr	5:00PM - 9:00PM

This chart is a breakdown of all of our meetings in the last two weeks of the project alone. These times are based on our commit history. These times can be verified here and here. Most, if not all of the commits in this history were made from my account. **Because we were all working on and testing with my system during our in-person meetings, not all of the commits that were made were changes that I worked on.** However, I was personally present and working whenever commits were being made on my PC so these hours do show an accurate breakdown of when I was working during this time. This time alone constitutes around 47 hours of work.

During this time I helped with testing and development to some extent for most of the features that were being worked on. Some of the things I spent extra time on where:
- Developing an Object Collision System
- Scripting for Physics Options
- Remapping Controls
- Scaling Colliders
- General Bug Fixing

In total I spent about 66.5 hours during the second semester. Combined with my total from first semester, I worked about 100.5 hours on our Senior Design Project in total.

Adonia:

First Semester	Description	Time Spent
1	Class Assignments	20 hrs
2	Project Brainstorming	10 hrs
3	Personal and group Research	1 hrs

4	Meeting with advisor	3 hrs
		Total: 34 hrs

During the first semester I spent 20 hrs working on class assignments, 10 project brainstorming with the group. One hour doing research and 3 hours in advisor meetings. Much of the assignment work and project brainstorming was spent working with the team and some was spent individually. We had weekly meetings to outline what was expected for the next assignment due and how we should divide work. We would brainstorm solutions and ideas as well.

Second Semester

I spent my most significant individual work time on Player Menu UI and functionality. These menus took approximately 12 hours to create, test, and debug. Setting the object as the spawn object as well as changing the preset were the two most difficult tasks for this work. As the most experienced individual on the team in github I set up all repos as well as instructing team members in version control best practices. I spent approximately 5 hours cumulatively instructing teammates, working on merges and merge conflicts, fixing git errors, and general repo management. I also participated in around 40 hours of peer programming in group meetings working on spawning objects, menus, and general team debugging sessions. This totals 52 hours.

Sam:

During the fall semester, our team met for 2 hours a week to brainstorm and work on senior design assignments. Also, every week we would each put in an additional hour online wrapping up our assignments. We met with our advisor several times throughout the semester as well. Individually, I spent a lot of time researching Unity, and even started developing my own 2D game as practice. This alone should account for around 30-35 hours, and since our project was an intensive one, we probably more than doubled that number for the Spring.

I tried to include myself in everything that I could during development. I started out by helping the team get Unity and a project set up. I worked on and added many features throughout development: hand tracking, grabbing, grabbable objects, teleporting using a reticle and ray interactor. These are all relatively standard VR features I added to our game using OpenXR, an open source VR API. There were much more difficult features I developed as well. I developed the ability for hands on object scaling. This was very difficult, as the OpenXR package we used for grabbing does not allow objects being held to have their scale adjusted. So, a work around was needed. Every object had its grabbable physics separated from its visuals. That way they are not the same object, but are two connected objects, which we can manipulate. This advance also allowed me to create player scaling later on. These difficult features all took me hours and hours of tweaking.

Also, during the last several weeks of development, we would spend hours together doing peer development and testing. All of these changes were made using Nicholas's

computer, since he had it connected to the VR hardware for testing. Based off of our team's estimation, this period of intense group work totals over 40 hours alone.