**CSS 497 Abstract Form**

**Name:** Pavel Peevl

**Faculty Advisors:** Kelvin Sung

**Quarter/Year:** Summer 2023

**Title**: Dive: Underwater Horror Game

For our capstone, our team of 5 students decided to make a 2D underwater horror game that would run both on Windows and Android platforms. This allowed us to gain experience with the entire game development lifecycle and, more importantly, how to develop a game for public consumption. This project was also the perfect opportunity to explore the development of custom visual effects using shaders, as the game needed effective visual effects to convey both the underwater environment as well as the horror atmosphere.

During development, we divided the game into individual tasks, and each week we decided on and distributed the tasks for that week. The project required a lot of communication, as there were a lot of independent systems that needed to work together. To this end, our team met three times a week, Monday for setting up tasks, Thursday for merging work, and Sunday for preparing our presentation to our sponsor.

Even with our frequent meetings, careful thought had to be put in on how systems were organized so that the entire team could use them conveniently. This meant utilizing C#'s events so that our systems could communicate with each other without direct access to each other.

One of my most significant experiences during this project was learning how to use a profiler. At one point we discovered that the mobile version of our game was running less smoothly than it should. I decided to try and profile the game, which resulted in me finding out that one of our scripts was consuming tons of resources, which was promptly fixed. Had I not used the profiler, I doubt we would have found the problem, as nobody thought that script was using so many resources.

At the end, our project resulted in a working and fun game that could be played both on Windows and Android devices. We know we succeeded, as the feedback we received from our final playtest was quite positive and saw major improvements from our previous two playtests.

In conclusion, this project not only served as an experience working collaboratively in an agile team and going through the entire development process for a game, but also makes a great entry to my resume which will make it a lot easier to land a job in the entertainment industry.