

DEVOPS VR GAME

Final Report



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Contents

Introduction	2
Problems Encountered	2
Hardware Issues.....	2
Unity Issues	2
What I Achieved.....	3
What I Did Not Achieve.....	3
What I Learned.....	3
Differences	3
Conclusion.....	3

Introduction

The following document is my final report on the DevOps virtual reality application. In this document I will discuss:

- Problems I encountered and how they were resolved.
- What I achieved.
- What I did not achieve.
- What I learned.
- What I would do differently.
- Differences between the final product and the early design.

Problems Encountered

I came across many problems during this project and unfortunately I was unable to resolve them all.

Hardware Issues

Throughout the development of this project I had numerous hardware issues. Firstly, my backup drive got corrupted, which left me behind on time as I tried to redo my early work. While I was eventually able to catch up and buy a new backup drive, it did cause me some early problems.

The next problem I encountered was that my laptop was dated. This led to Unity running slow on my laptop. Near the end of the project my hard drive became corrupted and I lost my work environment. This led to a period of time in the run up to the demo where I had no computer in order to develop the website or finish any reports. Luckily I managed to borrow one from a friend for two days in order to crunch through any remaining college work.

Lastly, as a result of the pandemic and lockdowns I was unable to get the Oculus Quest 2 headset from the campus until March, which left me with little time to develop and test if the VR functionality was working. As a result, I was unable to implement all of the features I had planned.

Unity Issues

As I was new to development with the Unity engine, I was reliant on the tutorials in order to get a grasp of how it works. Some things weren't properly covered though so I had to find third party tutorials on the internet. This only became a problem when I realised each tutorial was using different packages from the assets store. This led to some player rigs and controllers not interacting correctly or making some tutorials difficult to complete.

What I Achieved

I managed to create the application and store it in an Oculus Quest 2 headset. The application allows users to roam around a virtual office space.

I was also able to incorporate a video player inside the office, which gives an introduction to DevOps principles.

Finally, I created blocks that the player could interact with. The concept of building towers with blocks was the core functionality of the Yata game I had planned to make within the office. I'm glad I was able to get the blocks working.

What I Did Not Achieve

I planned to do a lot more with the application than I was able to complete unfortunately. For example, while I managed to get the video player working in the office, I was unable to get the pause, play and timestamp buttons to work.

I also did not implement a functional version of Yata within the office. While I had the blocks working, I did not assign any values to the blocks, create rounds, implement the countdown timers or split players into teams.

What I Learned

Despite not achieving what I set out to do with this project, I feel like I learned a lot from it.

I have a much better grasp on Unity development now. I would be interested in using it more in the future to develop other games.

I also think my understanding of virtual reality development improved. VR is a growing industry that is only getting more and more popular, especially in the era of lockdowns and social distancing. Meeting and learning in virtual environments will become a lot more important in the future in my opinion, and I am glad to have gained some valuable experience in development and testing for this platform.

Differences

There are massive differences between my early design and the final product, namely because the project is still incomplete.

While the initial goal was to implement a virtual version of Yata in order to teach players about DevOps principles, I have had to settle with implementing a video player to teach the player instead.

Conclusion

In conclusion, even though I never finished the project as I had intended to, I still feel that I learned a lot and gained valuable experience. I will be able to use this experience in the future to build a different game in VR.