University of Plymouth

School of Engineering, Computing and Mathematics



COMP3000

Final Stage Computing Project

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*(Defend & Capture)*

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BSc (Hons) Computing & Games Development

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# Abstract

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# Word Count

# Code

(*GitHub link*)

# Introduction

This report details my experience in taking on a large solo project that attempts to showcase my skills and understanding of Unity’s libraries as well as incorporating many of the aspects that were taught to me over the duration of the course, specifically, I drew inspiration from COMP2007 where I built a 3D game and scene for the first time as well as Comp3013 where I was project manager and spent more time with project development strategies. I intended to utilise the experience id gained in these modules to plan and enact a project of appropriate size and scale that can be used as an important stand out portfolio piece that includes hall marks of industry standard criteria that employers would like to see. With significant focus on Unity and partner software with unity such as blender, I hoped to link this to the current COMP3014 module to achieve this portfolio piece as well as to feel fulfilled that my career at university lead to this, and I can be proud of it.

## Project Definition

Defend & Capture is a 3D single player, artificial intelligence driven, real time strategy game with a casual simulation twist on the combat. It is built on the Unity game engine, Specifically, built primarily using Unity’s navmesh AI system, raycast networks and lightweight custom built sorting algorithms. The game features some custom-built assets using Blender and free assets imported from the Unity asset store, several RTS focused features and several important AI mechanics that I believe push the game to a higher level. The gameplay loop is designed around a rock paper scissors-based unit creation where unit types of counter other unit types, the player must create these counters while the AI counters theirs while managing their bases supplies and buildings. The main objective for the player is to get to the AI base and destroy it to win.

## Purpose

The purpose of the game was to provide a creative platform for me to experiment with pushing my limits with the unity engine while creating an AI along this premise.

# Method of Approach

## Project Management

## Version Control

## Language and software used

# Legal, Social, Ethical and Professional

# Implementation

## Sprints 0 - 12

# End of Project Report

# Project Post-Mortem

# Conclusion

# Bibliography

**There are no sources in the current document.**

# Appendices