Abstract

[Draw your reader in with an engaging abstract. It is typically a short summary of the document.   
When you’re ready to add your content, just click here and start typing.]

GAME NAME  
Cross Platform Development

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# Change Log

Updates made to the document should be described below.

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Author | Date of change | Description |
| 0.0.0 | AIE | 31/08/2020 | Initial Template created |
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Contents

[Change Log 1](#_Toc49774281)

[1.0 Development Environment 3](#_Toc49774282)

[1.1 Game Engine 3](#_Toc49774283)

[1.2 Source Control 3](#_Toc49774284)

[1.3 Third-Party Libraries / assets 3](#_Toc49774285)

[2.0 Game Overview 3](#_Toc49774286)

[2.1 Genre 3](#_Toc49774287)

[2.2 Camera Perspective and Movement 3](#_Toc49774288)

[2.3 Platform 3](#_Toc49774289)

[2.4 Technical Goals 4](#_Toc49774290)

[2.5 Game Objects and Logic 4](#_Toc49774291)

[3.0 Controls 4](#_Toc49774292)

[3.1 Windows / Web 4](#_Toc49774293)

[3.2 Console / Xbox 4](#_Toc49774294)

[3.1 Android / Touch 4](#_Toc49774295)

[4.0 Mechanics 4](#_Toc49774296)

[5.0 Graphics 5](#_Toc49774297)

[6.0 Audio 5](#_Toc49774298)

[7.0 Artificial Intelligence 5](#_Toc49774299)

[8.0 Game Flow 5](#_Toc49774300)

[8.1 ‘Mission’ / ‘Level’ structure 5](#_Toc49774301)

[8.2 Objectives/Goal 5](#_Toc49774302)

[11.0 Interface 5](#_Toc49774303)

[11.1 Menu 5](#_Toc49774304)

[11.2 High scores 5](#_Toc49774305)

[11.3 UI/HUD 5](#_Toc49774306)

[12.0 Progress report and feedback Meeting Minutes 6](#_Toc49774307)

[Friday 4th September 6](#_Toc49774308)

[Wednesday 9th September 6](#_Toc49774309)

[Thursday 10th September 6](#_Toc49774310)

[Friday 11th September 7](#_Toc49774311)

# Development Environment

## Game Engine

Unity 2019.3.6.f1

Chosen Unity due to its ease of access and beginner friendly interface. The version chosen was selected to the version being constant among all computers on campus.

## Source Control

Link to GitHub repo: <https://github.com/JustinKatic/CPD-TopDownShooter>

## Third-Party Libraries / assets

|  |  |  |
| --- | --- | --- |
| Asset Name  License | URL | Reason for use |
| Character Pack: Zombie Sample  Free – Unity Extension Asset | <https://assetstore.unity.com/packages/3d/characters/humanoids/fantasy/character-pack-zombie-sample-131604> | Enemy asset use for enemy entities in game |
| Jammo Character | Mix and Jam  Free – Unity Extension Asset | [https://assetstore.unity.com/packages/3d/characters/jammo-character-mix-and-jam-158456#reviews](https://assetstore.unity.com/packages/3d/characters/jammo-character-mix-and-jam-158456%23reviews) | Character asset use for main player in game. |
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# Game Overview

Elevator pitch

## Genre

3D Top down Shooter

## Camera Perspective and Movement

Top Down Camera Perspective with rigid body velocity movement

## Platform

what are the requirements for deployment to each platform?   
Setup process has been outlined and detailed >

PC-

Android-

Ps4-

Xbox-

## Technical Goals

* Goal
* Goal
* Goal
* …

## Game Objects and Logic

A list of logical elements in the game, i.e. door, button, pistol, ammo, light, bullet, wall, character etc. and description of their behavior and purpose

# Controls

## 3.1 Windows / Web

**Keyboard**

W- Move Player Character forward.

A- Move Player Character left.

S- Move Player Character backwards.

D- Move Player Character right.

**Mouse**

Left Click- Shoot bullet.

Mouse movement-Rotate player to face towards mouse position.

## 3.2 Console / Xbox / PS4

**PS4 / Xbox analog sticks**

Left analog stick- Move player character in direction of left analog stick.

Right analog stick- Rotate player to face in direction of right analog stick.

-Shoot in direction right analog stick is facing.

## 3.1 Android / Touch

**Android joysticks**

Left Joystick - Move player character in direction of left joystick.

Right Joystick - Rotate player to face in direction of right joystick.

- Shoot in direction right joystick is facing.

# Mechanics

A list of intended core game mechanics. I.e., what the player can do and how they achieve this, and what this will trigger in the game. For example, shooting enemies is a core mechanic in an FPS.

* **Shooting**

Instantiates a bullet from empty object which is a child of the player so we can get the same rotation and direction the player is facing to ensure the bullet is projected in the correct direction. which has a gun controller script attached. This script contains a bullet speed variable and a time between shots. It also allows us to drag in which bullet we would like to shoot which comes with its own script attached to the bullet which contains a bullet life time that will destroy the bullet after its been instantiated after x seconds and a damage to give variable which is how much damage is the bullet going to deal.

## Hazards

Throughout the map there are circle platforms placed which is an indication of where the enemy spawn points are.

## Obstacles

To Progress to next wave, you need to destroy all the big zombies in each wave however there are lots in mini zombies that may get in your way trying to attack the player. This creates the gameplay of the player always needing to be on the move repositioning and having to shoot through hordes of little zombies to get to the big zombie

## Items / Collectables

Things in the game that can be collected. Coins, health packs, weapons, powerups etc.… e.g., for space invaders, enemies might drop a powerup for the player to collect. How are the items collected? Player collision, are they shot at? Etc.

Health pack – collected when the player walks over health pack. Dropped from big green zombies that spawn once every x seconds.

# Graphics

Describe graphics features here. I.e., is your game top-down 2D? What post processing are you using? Include perspective, art style, graphic features. Justify graphics selection.

# Audio

Describe audio requirements. Sounds Effects, Ambient music etc.

# Artificial Intelligence

Describe how your AI will works, i.e. state machine, fuzzy logic, GOAP. Describe the various behaviors

# Game Flow

## ‘Mission’ / ‘Level’ structure

If applicable. Are all levels stored in memory? what data is saved across levels, are levels loaded synchronously to prevent pauses?

## Objectives/Goal

What does the player try to accomplish on each level/mission? How is the players progress evaluated?

The players objective in each wave is to get kill all the big zombies while avoid being killed themselves. Killing all the big zombies results in the next wave beginning the goal is to try and get to the highest wave possible.

1. Levels

If any of the Levels require specific behaviors, describe those here. UML chats provided if applicable.

Level tiling tool use identified if relevant, use by designer discussed, how was it built

1. Items

List of items you can pick up that can affect the player. Include details on how items influence gameplay or AI logic.

# Interface

Make sure to address the differences needed per platform.

## Menu

What are the menu options, how is it presented to the player? Provide wireframe.  
How does this work for each input device chosen (keyboard/mouse, controller, touch)

## High scores

how is it presented to the player? Provide wireframe.  
How does this work for each input device chosen (keyboard/mouse, controller, touch)

## UI/HUD

What is involved in the UI/HUB, what information is being provided to the player. Mock up of intended UI/HUD design

# Progress report and feedback Meeting Minutes

## Friday 4th September

Describe state of project

* Thing
* Thing

Feedback from teacher and peers:

* Describe
* Describe
* Describe

Action Items:

* Describe
* Describe
* Describe

## Wednesday 9th September

Describe state of project

* Thing
* Thing

Feedback from teacher and peers:

* Describe
* Describe
* Describe

Action Items:

* Describe
* Describe
* Describe

## Thursday 10th September

Describe state of project

* Thing
* Thing

Feedback from teacher and peers:

* Describe
* Describe
* Describe

Action Items:

* Describe
* Describe
* Describe

## Friday 11th September

Describe what has been done since last time

* Thing
* Thing

Feedback from teacher and peers:

* Describe
* Describe
* Describe

Action Items:

* Describe
* Describe
* Describe