

2307-BSE

Integrated Design Document

CS201.1

Alexander Legner

Document Outline

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Proposal

Introduction

Game Concept

A 3D tower defence style game where you must defend your homeland from the evil below. You have borrowed some super-secret towers to defend your home from 'Earth', but they won't mind ;) technically it never existed right? Your newly acquired turrets will be used to defend your home from these attacks!

Unique Selling Points

- The theme for the game is based on a celestial vs underworld. It will be a 3D cartoon art style to keep it fun and unique.
- The towers will be upgradable with different paths with unique stats and abilities which allows the have the choice/strategy on how to destroy the enemy. Ultimately their choices will determine whether they will survive.
- There will also be a unique story line. This will include unlocking new towers and increase in difficulty as you progress. There will be unique bosses and enemies in each region of the campaign. There will also be an endless version which the games alpha will consist of.

Time Constraints

Project duration: 24/07/2023 - 15/09/2023 (8 weeks)

Refer to Timeline/Schedule for specifics.

Software/Hardware

Game Engine: Unity

Primary Programming Language: C#

Target Platforms

Table 1: Target Platforms

MINIMUM	RECOMMENDED
Requires a 64-bit processor and OS. OS: Windows 10 64-bit. Processor: AMD Ryzen 3 1200 or equivalent. Memory: 8 GB RAM. Graphics: AMD Radeon R9 380 or equivalent.	Requires a 64-bit processor and OS. OS: Windows 10 64-bit. Processor: AMD Ryzen 5 2600 or equivalent. Memory: 16 GB RAM. Graphics: AMD RX 6700 XT or equivalent.

Target Audience

Target Audience: Teenagers and young adults that play video games.

In today's world, many teenagers and young adults play video games for many reasons including reducing stress, entertainment, socialising and more. Data from pew research shows that *"three in ten (31%) teens play video games on a daily basis"*. – There are more teenagers and young adults that play as well but the primary reason for targeting teenagers and young adults is to attract as many of the active gamers that are looking to play games every day. By targeting teenagers and young adults, we have covered most regular gamers and will hopefully bring this game great success amongst the gamer community.

Game Features

Core Functionality

The core functionality of this game is to build towers to defend against enemies. Each feature will improve upon this core functionality.

Levels

Each level will introduce a new feature of the game. For example, the first level will introduce the tutorial to teach you how to play. The next level would then introduce new enemies and towers to expand the user's arsenal. Eventually one of the levels will contain a boss battle which can instantly make the player lose if the player doesn't defeat it with strategy.

Objectives

The objective of this game is to build towers and fend off enemies from attacking your life pool. You will need to complete a set number of waves to complete the level. There may be optional objectives which make the game harder but give you a better reward.

Reward and Progression System

Within each level you start with enough money to buy a few simple towers. When you kill enemies, you gain money to upgrade and build more towers. Outside of the levels you will gain victory points from completing levels and extra objectives within these levels. These victory points allow you to upgrade/unlock unique abilities and towers which will help with the increasing difficulty that comes with each new level.

Game Mechanics

Your towers automatically target the first enemy (closest to the life pool and within range) and will shoot the target automatically. The projectiles cannot retarget if the enemy dies. You click on tower bases and towers to build/upgrade/sell towers. You can look/move around freely within the map space.

Gameplay Overview

Gameplay for the player will consist of waves after waves that the player must defend from. This will include making sure towers are placed in a strategic way and upgrades are given to towers to where they are needed. The player will be able to send the next wave if they feel that they can defend from it and the current wave. The player can also use unique abilities to defend from enemies that towers miss.

Controls

WASD move you around forward left right and back like most games. Holding middle mouse button allows you to look/move the camera. Clicking on towers and on the HUD works as expected.

User Interface Design

The user will have a HUD which will include the towers that they can place. The stats of the towers. A mini map for orientation and lastly the wave bar which shows how long until the next wave. I created some simple mock ups of what the UI could look like.

HUD

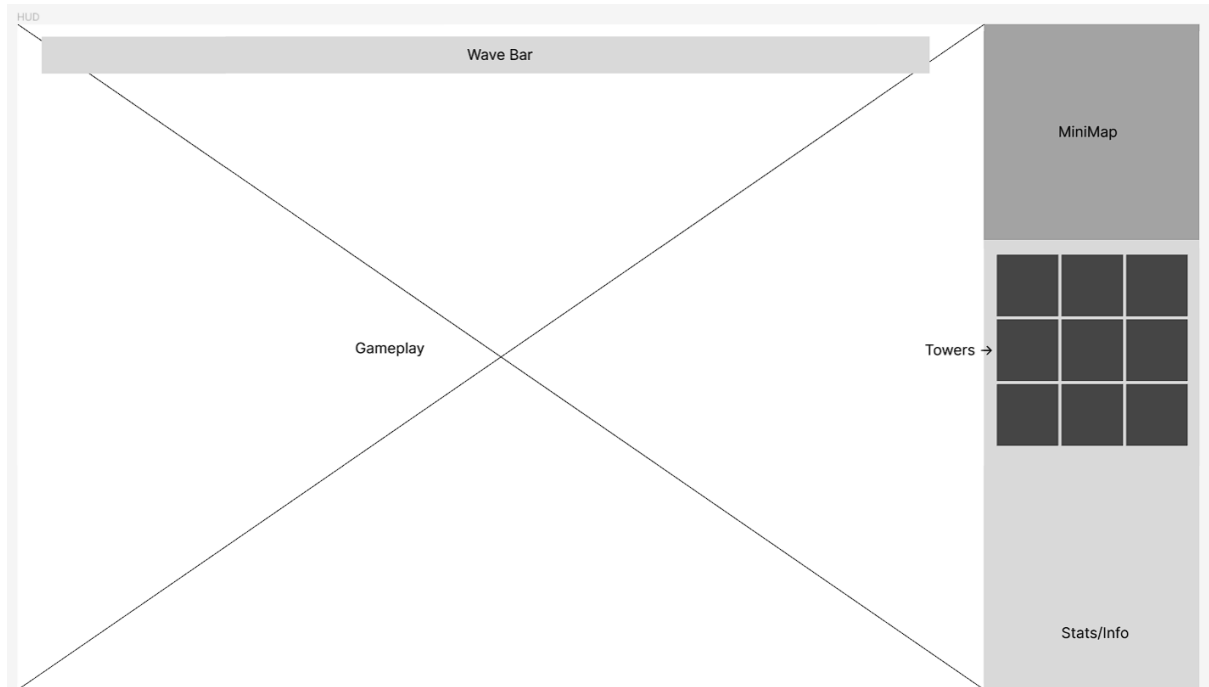


Figure 1: UI - HUD

Pause Screen

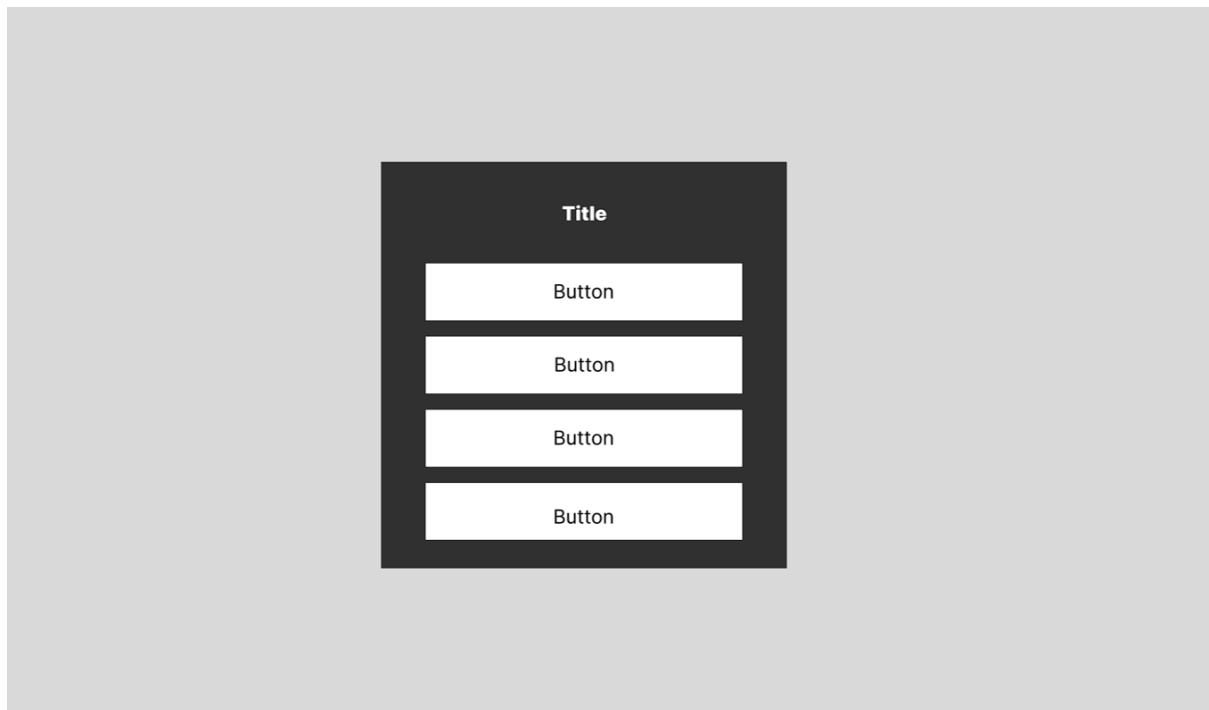


Figure 2: UI - Pause Screen

Title Screen

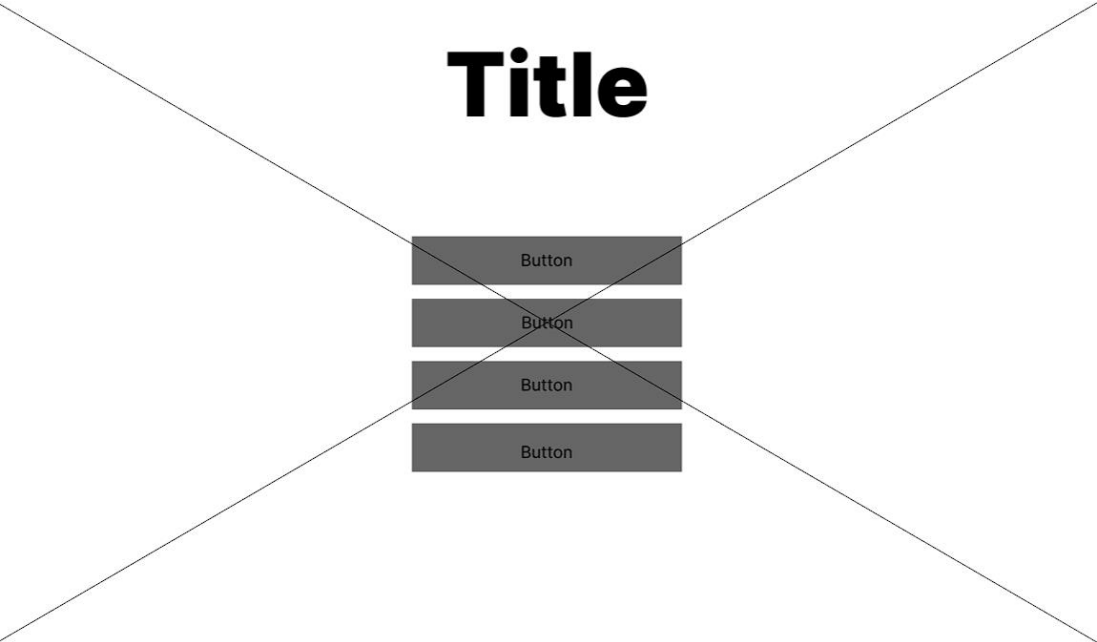


Figure 3: UI - Title Screen

Timeline/Schedule

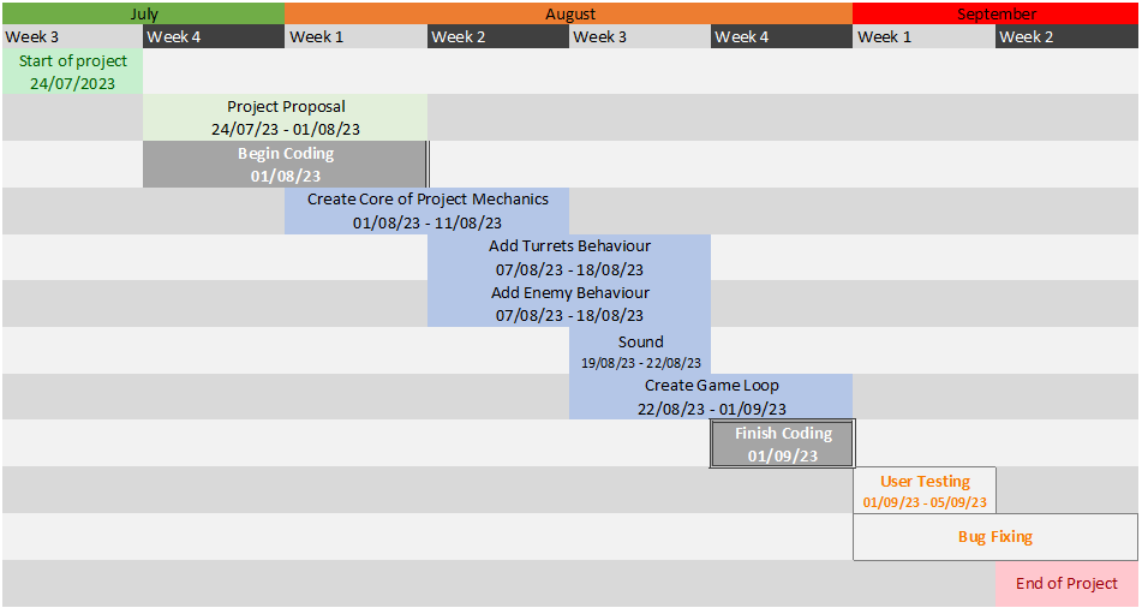


Figure 4: Timeline Gantt Chart

I have also included references to assets used in creating the prototype of this game.

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