

Impossible3

Software Design Description Document (Architecture Section)

6.0 Architectural Design Document

6.1. Introduction

This document presents the architecture design for the software for the *Impossible3* project. The project is an Unity based game. It is a roguelike dungeon crawler and challenges the player with difficult gameplay. It constantly forces the player to react as well as strategize in a real time turn based system based on cooldowns.

6.1.1 System Objectives

Game will be an independent installation (all on the hard drive). Will have a start menu, no save function, the ability to select different difficulties. Players can “continue” a previous game but cannot “load” a game.

In-game, players will kill minions, clear a single room, and then advance, until the floor is completed. Cool-down timers reset on the completion of a room, advancement throughout the game yields encounters with more difficult enemies and better items (which will adjust the stats or effectiveness of each character). The game ends when the player kills the boss.

6.1.2 Hardware, Software, and Human Interfaces

-Hardware :

- Mouse : Used to navigate menus, select characters, & move / use skills
- Keyboard: Used to type in profile name, & use shortcuts for faster play
- Monitor : Used to see the game and the UI
- Computer : Used to calculate game images and interactions

-Software :

- Impossible3 Application : Runs and covers all game functions
- Software bundled with Unity: Ensures our game application can run

-User Interface :

- Main Menu : Starts new game, loads game & navigates settings
- In Game UI : Click on player characters and a grid tile to move or select a skill and click on a grid tile to attack/defend/special. Character statuses and inventory are shown at top left. Click on them to get additional info.
- In Game Menu : Pauses the game. Load/save change settings or quit

6.2. CSCI Descriptions

Game Client CSCI --

<Main application player shall launch>

Main Menu Screen CSC --

- New Game/ Load Game CSU

- High Scores Table (Optional) CSU

- Settings CSU

Core Game CSC --

- Actual Gameplay Levels CSU

 - <This is the main game area>

 - Environment <Textures + Obstacles>

 - Characters <Players + Enemies>

 - In-Game Interface/Interaction System

 - <The actual gameplay part>

- In Game Menu CSU

 - <Access to settings, Exit, Save/load, from in game>

Assets and Resources CSCI --

- <Anything that is needed for the full game to run>

 - Textures CSC <Textures for environments>

 - Sprites CSC <Character, enemy and item sprites>

 - Scripts CSC <Movement/Interaction Scripts>

 - Unity resources CSC <Anything additional Unity bundles>

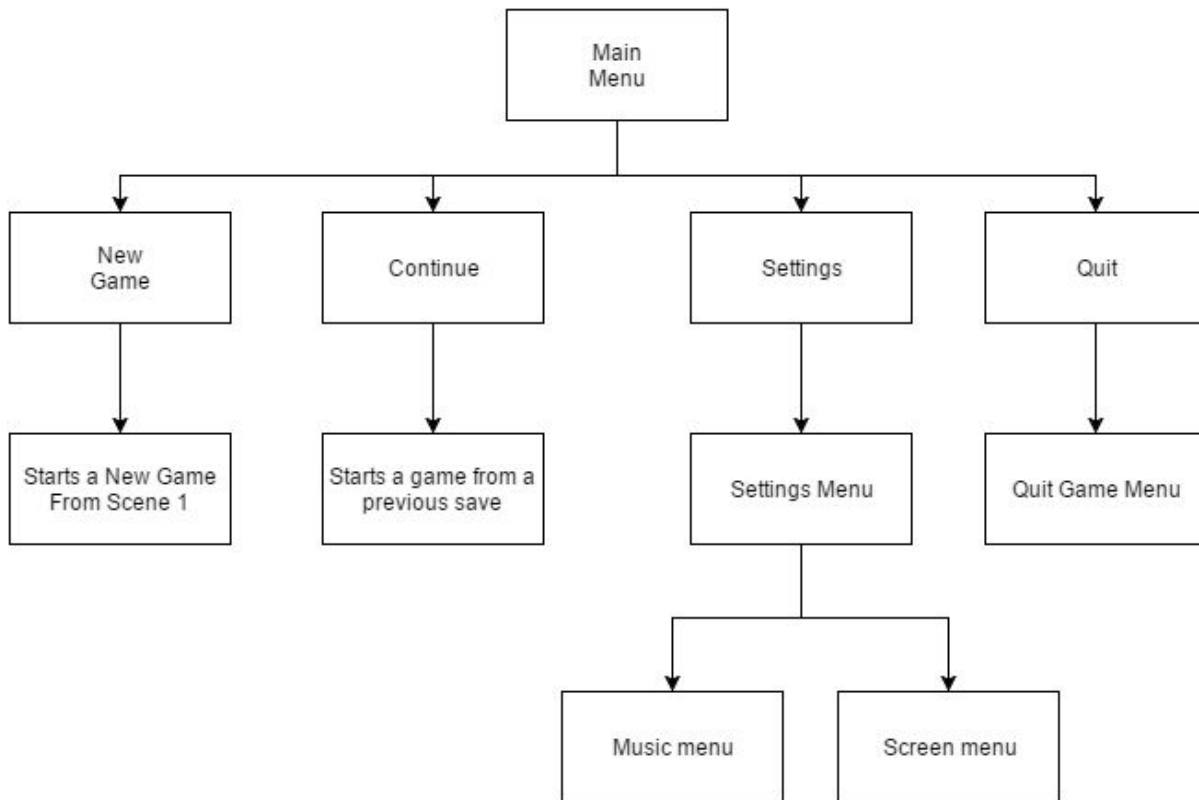
6.2.1 Concept of Execution

Impossible3 should work like a normal computer game. The computer will start up the game and the main menu will appear. The game will start depending on what the player clicks. Clicking new game will start a new game and clicking continue will ask the player to find the game save file to load from. When in game the player will be able to manipulate mechanics to achieve a goal.

6.2.2 Interface Design

Impossible3 has multiple interfaces within the game. It contains a Menu Interface, Combat Interface, and Town Interface. The Menu Interface is where players can set their settings, Save, Load, or Quit the game. The Combat Interface is the GUI that the player uses when interacting against enemies. Lastly, the Town Interface is the area where a player can buy or sell supplies and hire new members to their party. Below are some examples of what the possible design of each interface will be like.

6.2.2.1 Interface Identification and Diagrams



6.2.2.2 Project Interactions

All project files will be stored in a folder and sub-projects such as animation, sound and models will be stored in subfolders. The game will load a certain scene and take all necessary files that it needs for that scene. The game will be divided by levels and those levels will correspond to a scene. Every level the game engine will load certain objects and those objects will have models, animations, and sounds that the game will also load in the game.

6.3. Preliminary User's Manual

6.3.1 Installation

None is necessary, simply run the executable to play the game.

6.3.2 Software execution

Land at main menu, adjust settings via *Settings*, continue via *Continue*, or start a new game via *Play*. To quit hit *Quit*.

6.3.3 Features

Number keys 1-6 for abilities, this applies to all three characters. Left click to call up

attack UI, right click to call up movement UI. Once a player dies, he's dead. You cannot move during cooldown, the solid bars and the board highlighting will reflect this. Kill as many skeletons and baddies as possible.

6.3.4 Uninstallation

Delete the executable.

6.3.5. Contact us

Legacy contact is no longer maintained.