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**Requirements Specification for Capstone Project**

**Game Development with GODOT: Abyssal**

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# 1.Introduction

## 1.1 Purpose

The purpose of this document is to detail the software application Abyssal. The document will review the overall description of the application, functional requirements, domain requirements, nonfunctional requirements, and lastly any future requirements for the application.

## 1.2 Intended Audience

The intended audience for this document is for developers, testers, quality assessors, product manager(s), management involved in the application development, and any sponsors for the application.

## 1.3 References

Godot game engine documentation: <https://docs.godotengine.org/en/stable/>

Windows Operating System: <https://docs.microsoft.com/en-us/windows/>

Asset Artist: <https://www.kenney.nl/assets>

.[NET SDK](https://dotnet.microsoft.com/download): Framework for Mono Version

[Visual Studio Code](https://code.visualstudio.com/): For external IDE development

# 2. Overall Description

## 2.1 Product Overview

This program will be developed for the Windows 10 operating system. The program will be developed in the Godot game engine and will utilize Visual Studio Code for external code development.

## 2.2 User Classes and Actors

The intended user classes will be individuals wanting to play a platformer game. Actors will be the developers, testers, quality assessors, product manager(s).

## 2.3 Program Environment

The game is designed to run on windows 10 desktop systems. The application will require a minimum of 2 gbs of RAM, and 1 gbs of available storage for the application to be installed. It is assumed that the intended customer’s computer will meet these requirements for successful download and installation.

## 2.4 Use Cases

Below is a set of normally use cases from the users’ perspective. Including screen descriptions, action inputs, and alternative flows.

## User Case 1: Application launch

User clicks and runs the .exe for the game application to launch. From there the user will be presented with the main menu where they can select generic options such as: Continue, New game, Options, Exit.

## User Case 2: Continue launch

User clicks the Continue option from the main menu which allows them to continue where they previously left off with the game application.

## User Case 3: New game launch

User clicks the new game option from the main menu. This allows the user to start a fresh save for the game. Allowing them to start a new save if desired.

## User Case 4: Options launch

User selects the options menu option to be directed to the game’s adjustable settings. Here the user can adjust game settings to better suit their personal preferences.

## User Case 5: Exit launch

User selects the exit option from the main menu prompt to exit the application.

# 3. Domain Requirements

Below are the requirements imposed by the domain of the program environment.

## 3.1 System and Platform Requirements

The program requires the Windows 10 operating system with a minimum of 2 gbs of RAM (random access memory), and 1 gbs of storage to successfully run the application.

## 3.2 Accessibility and Useability Requirements

The application will include a settings option where the user can adjust in game settings for accessibility and useability on their system. The program will be installed from a .zip file for easy extraction of the application.

## 3.3 Safety and Security Requirements

The program will not collect any personal data about the user. All data will be stored locally on the user’s system which they have complete access over. The application will be available only from our website from a secure connection to our server.

## 3.4 Maintenance and Reliability Requirements

The chosen frameworks and APIs will be with the current windows operating systems and Godot 3.5 version (the most stable version).

# 4. Future Requirements

There will be the implementation of features that will enable the user to access and run the application on other operating systems. Future implementations will have the ability to run on MacOS and Linux distributions.

# Appendix A: Potential Changes and Constraints

Potential limitations or constraints may affect future development. Limitations including discontinued support of required software and APIs the prevent compatibility for many users. Another being cost as currently these systems are free for most users where in the future there is a possibility these applications will charge for a subscription or service of some kind.

# Appendix B: Example User Interface

Bellow is the initial layout of the main menu screen. This will display when the user first opens the application.Graphical user interface, text, application

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