CSCI 4600 Group Project

Vision Document

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Table of Contents

[1: Introduction 2](#_Toc1875639786)

[1.1 Purpose 3](#_Toc1376644634)

[1.2 Scope 3](#_Toc763924540)

[2: Positioning 3](#_Toc162029837)

[2.1 Business opportunity 3](#_Toc991407785)

[2.2 Problem statement 3](#_Toc1351735645)

[3: Stakeholder and user descriptions 3](#_Toc881078780)

[3.1 Stakeholder Summary 4](#_Toc1981610029)

[3.2 User Summary 4](#_Toc1842973038)

[4: Product overview 4](#_Toc1594756220)

[4.1 Product perspective 4](#_Toc17918584)

[4.2 Summary of capabilities 4](#_Toc1221137414)

[4.3 Assumptions and dependencies 4](#_Toc134535033)

[5: Product features 4](#_Toc1633429809)

[6: Constraints 5](#_Toc1528190800)

[6.1 System Constraints 5](#_Toc470264664)

[6.2 Risks 5](#_Toc1798594632)

[7: Other product requirements 5](#_Toc838579775)

# 1: Introduction

## 1.1 Purpose

This vision document serves multiple purposes and lays the foundation for the entire development process. It will act as a guiding framework, uniting the team toward shared objectives as it gathers, analyzes, and defines goals for an interactive game developed on the Godot platform. The emphasis will concentrate on defining the game concept, setting objectives, articulating design principles, outlining technical requirements, clarifying scope and features, providing a roadmap of the development process, and aligning stakeholders.

## 1.2 Scope

This document outlines the vision for the Godot game, explaining the associated business opportunities, detailing how the game addresses these needs by providing a clear definition of the problem statement. The stakeholder and user descriptions provide a summary of roles and responsibilities. Additionally, the product overview will provide a product perspective, summary of capabilities, assumptions, and dependencies. Each of the ten high-level Godot game features will be discussed in further detail while documenting various constraints and requirements necessary for its successful implementation. Any other product specific requirements will be detailed in subsequent sections to ensure comprehension of the project's needs and specifications.

# 2: Positioning

## 2.1 Business opportunity

People who are unsatisfied with AAA Games (Triple-A) are seeking more enjoyable games to play at an affordable price. Because we’re using free and open source software, we can produce a product with a smaller budget than other game developers. This project allows the software developers to improve their skills and practice project management in a low-risk environment.

## 2.2 Problem statement

|  |  |
| --- | --- |
| The problem of | People are bored during small time intervals |
| Affects | Everyone |
| Causing the impact of | Boredom |
| A successful solution would provide | An entertaining activity that is easily accessible. |

# 3: Stakeholder and user descriptions

## 3.1 Stakeholder Summary

|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Role** |
| James Brady | Skills: programming, game design/tuning, audio engineering, video editing | Software developer, product planner |
| Jacob Lehtola | Skills: programming, graphic design, project management, 3D graphics, shaders/post processing | Software developer, project planner |
| Peggy Lewis | Skills: programming, project management, user interface design, quality assurance | Software developer, quality assurance lead |
| Users of the game | These are the players of the final product. | Playtesting and providing user stories. |

## 3.2 User Summary

|  |  |  |
| --- | --- | --- |
| **User** | **Role** | **Description of use** |
| People who enjoy games/digital media | Primary user of the final product | The users will play the game on their personal computers. |

# 4: Product overview

## 4.1 Product perspective

This game will be simpler than other games on the market and take less time to complete while still providing a fun experience. It will run on personal computers, such as laptops and desktops. This will be a single player game, that doesn’t require internet access once it’s downloaded, and the source code will be available on GitHub.

## 4.2 Summary of capabilities

|  |  |
| --- | --- |
| **Customer benefit** | **Supporting features** |
| Fun activity with low time requirements. | Controllable character, world to explore, variety of enemies (see features section). |

## 4.3 Assumptions and dependencies

* + A computer system made in the last five years that runs Windows 10/Windows 11.
  + Users can read English.
  + Computer system with a keyboard, mouse, or a game controller.
  + Screen resolution of at least 1920x1080 pixels.

# 5: Product features

1. Control a 2D character and explore a fun and colorful world.
2. Navigate a variety of obstacles.
3. Avoid or fight a variety of enemy characters.
4. Player scores are tracked and displayed on-screen as the game is played.
5. High score leaderboard (for scores on the local machine).
6. Progress in levels with multiple modes of transport, by vehicle or on foot.
7. Use multiple weapons to provide varied and interesting combat.
8. Powerups can be used to help the player gain an edge.
9. Find secrets and hidden bonus items.
10. Play with the keyboard on your desktop PC, or with an XInput game controller.

# 6: Constraints

6.1 System Constraints

The system requirements will be relatively low, but the game requires Windows 10 or Windows 11, as well as a keyboard or XInput-compatible game controller. If time allows, support for popular Linux distributions or optimization for WINE are possible additions. Godot is, by default, unable to deploy to TV game consoles without third party libraries, so we will be limited to home computer platforms for the foreseeable future.

## 6.2 Risks

Risks to the successful completion of the project include:

* The software developers are learning a new software, Godot.
* Developer inexperience.
* The size and scope of the project might be too big.
* Lack of developer time/other obligations.
* Technical issues.

# 7: Other product requirements

Must have a working product before the end of Spring Semester 2024.