Godot Game Requirements

Team Members:

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Purpose:

The purpose of this document is to outline the functional and nonfunctional requirements of the project. This document will help ensure a shared understanding of the features, performance expectations, and constraints that will shape the 2D Platformer game. By defining these requirements, the document serves as a foundation for effective communication, collaboration, and decision-making throughout the entire development lifecycle, ultimately contributing to the creation of an engaging, high-quality gaming experience.

### Requirements:

1. **Name:** control\_player

**Type:** functional

**Summary:** The game will support basic controls for character movement, such as left, right, and jump

1. **Name:** navigate\_obstacles

**Type:** functional

**Summary:** The game will require the player to navigate through a variety of obstacles strategically placed in the game environment.

1. **Name:** encounter\_enemies

**Type:** functional

**Summary:** The player will encounter and must either avoid or engage in combat with a variety of enemy characters with unique behaviors.

1. **Name:** current\_high\_score

**Type:** functional

**Summary:** Player scores will be tracked and dynamically displayed on-screen as the game is played, providing a real-time indication of the player's performance.

1. **Name:** high\_score\_leaderboard

**Type:** functional

**Summary:** The game will display the highest scores achieved on the local machine.

1. **Name:** vehicle\_transport

**Type:** functional

**Summary:** Players will progress through levels using various modes of transport, including vehicles and on-foot traversal, adding diversity to the gameplay experience.

1. **Name:** player\_weapons

**Type:** functional

**Summary:** Players will have access to multiple weapons, introducing diverse combat mechanics and enhancing the overall gameplay.

1. **Name:** player\_powerups

**Type:** functional

**Summary:** Powerups will be available for the player to collect, providing temporary enhancements and advantages to overcome challenges.

1. **Name:** bonus\_items

**Type:** functional

**Summary:** Players can discover hidden secrets and bonus items within the game, adding an exploratory and rewarding aspect to the gameplay.

1. **Name:** main\_menu

**Type:** functional

**Summary:** The main menu will offer options for the user to start the game directly, select a specific level, or adjust game settings.

1. **Name:** platform\_os

**Type:** constraint

**Summary:** The target platform operating systems for the game are Windows 10 and Windows 11.

1. **Name:** input\_types

**Type:** constraint

**Summary:** The game must be able to receive keyboard and XInput controller input.

1. **Name:** target\_frames\_per\_second

**Type:** constraint

**Summary:** The game must be able to run at 60 frames per second.

1. **Name:** platform\_resolution

**Type:** constraint

**Summary:** Must work on 1080p monitors.