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

2. **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.

3. **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.

4. **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.

5. **Name:** high_score_leaderboard
   Type: functional
   Summary: The game will display the highest scores achieved on the local machine.

6. **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.

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

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

9. **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.

10. **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.

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

12. **Name:** input_types
    Type: constraint
    Summary: The game must be able to receive keyboard and XInput controller input.

13. **Name:** target_frames_per_second
    Type: constraint
    Summary: The game must be able to run at 60 frames per second.

14. **Name:** platform_resolution
    Type: constraint
    Summary: Must work on 1080p monitors.