



ICT GameDevelopment

Group 2

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1. Introduction

1.1 Game Overview

This document outlines the design and development of a simple 2D platformer game created in Godot Engine. The game features a player navigating through levels, avoiding obstacles, collecting items, and reaching the goal.

1.2 Objectives

- Create an engaging and fun gameplay experience.
 - Implement a modular and reusable code structure.
 - Provide a polished visual and audio experience.
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2. Game Design

2.1 Gameplay

- **Core Mechanics:**
 - Player can run, jump, and interact with objects.
 - Collectibles (e.g., coins) increase the score.
 - Enemies reduce player health or end the game.
 - Reaching the end of a level progresses to the next.
- **Win Condition:** Reach the goal at the end of the level.
- **Lose Condition:** Player health reaches zero or falls into a pit.

2.2 Levels

- **Level 1:** Tutorial to introduce controls and basic mechanics.
- **Level 2:** Increased difficulty with enemies and moving platforms.
- **Level 3:** Complex level and hidden collectibles.

2.3 Controls

- **Keyboard:**
 - Move: Arrow keys or A/D

- Jump: Spacebar
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3. Target System

3.1 Platforms

- PC (Windows, Linux,)
- Potential for mobile adaptation (Android, iOS)

3.2 Performance

- Minimum hardware: Integrated graphics and 2 GB RAM.
 - Target framerate: 60 FPS.
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4. Development System

4.1 Software

- **Engine:** Godot Engine 4.x
- **Tools:**
 - GIMP/Photoshop for graphics
 - Audacity for sound effects
 - Git for version control

4.2 Programming

- **Language:** GDScript
 - **Structure:**
 - Nodes for player, enemies, and environment.
 - Scripts attached to nodes for behavior.
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5. Specification

5.1 Concept

A light-hearted and visually appealing 2D platformer that is easy to pick up and play, with levels that progressively challenge the player's skills.

5.2 Objectives

- **Primary:** Deliver a complete and playable game.
 - **Secondary:** Implement modular design to allow future expansions.
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6. Frontend

6.1 Menus

- **Main Menu:** Start Game, About, Exit.

6.2 HUD

- Score display
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7. Team

- **Olayiwola Mubarak:** Level and gameplay design.
 - **Fazaz soliu:** GDScript programming and Godot implementation.
 - **Chiebuka Ezenwa:** Sound effects and background music.
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8. Conclusion

This document serves as a guide for developing the simple platformer game in Godot. It outlines the core design principles, technical requirements, and development strategies. The goal is to create a polished, enjoyable game that can be expanded in the future.