**Software Implementation and Testing Document**

**For**

**Group 2**

Version 2.0

**Authors**:

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# Programming Languages (5 points)

We are using GDScript for the entirety of the project, from the player and enemy code to the level design. We chose this language because it was the only one that would work properly with Godot that didn’t require us to download any external libraries. (Z)

# Platforms, APIs, Databases, and other technologies used (5 points)

The game is still being built in Godot, a game designer engine. (Z)

The sprites are primarily fetched from The Spriters Resource, a website for the sharing of sprites and sprite sheets. (R)

Enemy behavior is still being modeled after the original Super Mario Bros. (J)

# Execution-based Functional Testing (10 points)

I tested the player’s control over Mario through constantly writing code and testing if the key inputs worked correctly. I have not tested the main menu as it has not been created yet. I have tested Mario’s collision through code writing and slinging him in to numerous objects before eventually getting it to work right. (Z)

Enemies were tested through the same process, and only need a few more minor tweaks before they are complete. (J)

The levels were tested to ensure they are playable and capable of interacting with Mario. (R)

# Execution-based Non-Functional Testing (10 points)

I have not tested Mario’s behavior across levels yet, but I have tested the frame drops, and thankfully, there are no serious ones. (Z)

Enemies closely resemble the original game, and only need a few minor adjustments. (J)

# Non-Execution-based Testing (10 points)

I have done numerous walkthroughs and inspections of my own code while testing both functional and non-functional requirements. (Z)

I review my code before each test, and Godot’s built in IDE also helps by highlighting potential errors before running. (J)

There is not as much code to walkthrough for the level design, but I have walked through the code that does exist for the question blocks and reviewed the level designs multiple times to ensure they match the original games. (R)