Design Document

Sunsinger Mechanical Alpha

Class: Senior Project– Fall 2016

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**1. Section I - Game Overview**

1.1. Game Concept – The Sunsinger (Alpha) is a 2D sidescroller. You play as the nameless main character, an awoken soldier from a time that is far gone. The Main character will awaken in a alpha stage and be presented with puzzles and enemies to fight throughout the entire stage. The Stage will consist of agility puzzles, enemies to fight, and an ending.

1.2. Feature Set – A focus on vertical progression, a variety of platforming puzzles, and a unique setting with a mysterious main character.

1.3. Genre – 2D sidescroller

1.4. Target Audience – Teens to adults who enjoy with this type of single player experience

1.6. Environment – Player wakes up in a cave, walks outside to some obstacles and enemies.

1.7. Project Scope

1.7.1. Number of locations – 1: Alpha Test Stage

1.7.2. Number of levels - 4: A level that will consist of first basic tutorial area, then an area using these elements to solve puzzles and fight enemies/mobs.

1.7.3. Items – interactive objects in the environment to progress throughout the stage. Mobs will also drop health potions to use in pocket inventory.

1.7.4. Fighting - will be able to fight with light attacks (Punches), heavy attacks (Kicks), and aerial attacks

**2. Section II - Gameplay and Mechanics**

2.1. Gameplay

2.1.1. Game Progression – The player will have to traverse the world and fight through certain stages. Throughout the game will be small challenges and fights to test the skill of the player. These stages will get progressively more challenging as the game goes on. In this version of the game there will only be 1 alpha stage.

2.1.2. Mission/challenge Structure – Survive through the level by defeating enemies in order to reach the objective.

2.1.3. Objectives – Get to the end of the level where the Boss from the Mob room awaits you.

2.2. Mechanics – The player traverses small platforming levels by moving left, right, and by jumping. The player can also defend himself by defeating enemies by attacking them.

2.2.1. Movement – the player can move left and right with the left and right arrow keys; they can jump with the spacebar key, and attack enemies using keys ‘z’, ’x’, ’c’, ’v’.

2.2.2. Objects

2.2.2.1. – Health potions can be picked up by colliding with them.

2.2.3. Actions

2.2.3.1. – health potions picked up will be heal the character by resetting the HP.

**3. Section III – Story, Setting, and Character**

3.1. Story and Narrative

3.1.1. Back story – The overworld is based in a post apocalyptic setting, in the ruins of the world we live in today. The main character will wake up and go through an heavy journey. The player will uncover the history of why the world is what it is.

3.2. Characters

3.3.1. Character #1 - Main Character (nameless)

3.3.1.1. – Main character is nameless but is known to be an ancient manufactured soldier from long ago that has survived all this time. He is known to manipulate fire and combustions. He does not have much of a personality. His physical stature is of a young gentleman around his 20’s. Long hair and skinny.

**4. Section IV – Interface**

4.1. Visual System

4.1.1. Head-up display (HUD)

1. Hit Points: HP bar located in bottom left corner
2. Pocket Inventory: Located directly right of the health bar.
3. Enemy Hit Points: Located above the heads of any enemy on screen.

4.1.2. Menus – The main menu contains the following:

1. Resume: Un-pauses the game
2. Controls: Displays controls.
3. Options: Toggle fullscreen, change volume.
4. Quit: Exit the game.

4.1.3. Camera - The camera focuses on the main character, and moves with him as he navigates the level.

4.2. Control System – Supports Keyboard and Gamepad:

4.2.1. Keyboard

1. Move Right: Right Arrow
2. Move Left: Left Arrow
3. Jump: Spacebar/Up Arrow
4. Light Attack: X
5. Heavy Attack: C
6. Dodge Right: Double Tap Right Arrow
7. Dodge Left: Double Tap Left Arrow
8. Use Right Item: V
9. Use Left Item: Z
10. Pause: Esc

4.2.2. GamePad

1. Move Right: Left Joystick Right/D-Pad Right
2. Move Left: Left Joystick Left/D-Pad Left
3. Jump: Left Joystick Up/A Button
4. Light Attack: B Button
5. Heavy Attack: Y Button
6. Dodge Right: Right Trigger
7. Dodge Left: Left Trigger
8. Use Right Item: Right Bumper
9. Use Left Item: Left Bumper
10. Pause: Start Button

**5. Section V - Artificial Intelligence**

5. Enemies

5.1. Slime - A basic enemy with a simplistic AI which would pose little threat to the player. This enemy would have an easily avoidable attack but may pose a threat in large numbers.

5.2. Minion - An enemy with a more advanced AI that will pose a greater threat to the player through its ability to dodge attacks and maneuver around the player.

5.3 Bat - A flying enemy with an erratic movement pattern that will swoop down to attack the player.

**6. Section VI – Technical**

6.1. Target Hardware – PC/Mac

6.2. Development hardware and software – Game Maker, Photoshop, Github

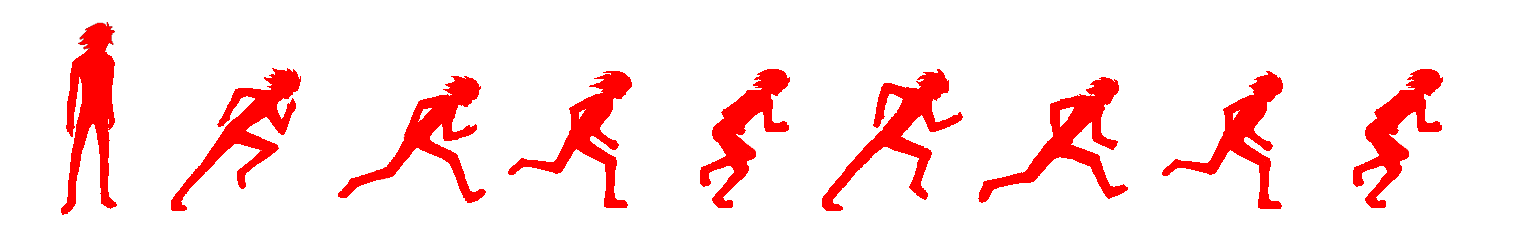
6.3. Game Engine – Game Maker

6.4. Scripting Language – GML

**7. Section VII – Game Art**

7.1. Assets/Sprites -

Running:



Jump:



7.2. Style Guides – For most of the sprites it will be a shadow of the character to save time to draw sprites as we aim to only aim for the functionality and backend code of the game.

7.3. Characters – There will be 4 type of enemies. 2 minions (strong and weak), slimes. and flying enemies, such as bats.

7.4. Environments – The environment will start out in a cave that the character will wake up in and then it will be mainly outside in a random outside setting.

7.5. Menus – An ESC menu, allowing the player to restart or quit.

**8. Section VIII - Secondary Software**

8.1. Editor – Adobe Photoshop will be used to create character sprites and other elements, such as the slides for the beginning scene.

**9. Section IX - Project Management**

9.1. Team contributions –

**Joshua Yoon -** Pixel Art, Programming

**Eliakah Kakou -** Programming

**Michael Marinaro -** Programming

**Roberto Gonzalez -** Programming

**Patrick Mayo -** Programming