Las Aventuras de Sofía: al rescate del valle Ulu’ ha

Game Design Document

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Game Design

Summary

2D platformer game in which you answer STEM related questions while defeating enemies along the way to achieve victory against the evil Dr. Pi.

Gameplay

Sofia (main character) runs and jumps through the level defeating enemies by stomping on them and answering the STEM related questions. Each question will appear when the MC jumps on a blue enemy or when she gets to the designated button. To finish the level she has to complete every challenge to open the last door.

Mindset

We intend that the player feels intelligent as well as powerful while playing the game by having the ability to one-shot a variety of enemies and completing the increasingly difficult questions.

Technical

Screens

1. Title Screen
    1. Sign in
    2. Options
    3. Character selection
2. Level Select||
3. Game
    1. History (first time only)
    2. Assessment / Next Level (Classroom)

4. End Credits

(example)

Controls

The player can move the character using WASD or the arrow keys, as well as space to jump. They can trigger buttons and levers using the O key to open doors in game.

Mechanics

https://docs.google.com/presentation/d/1vtJf138Hc0vLpBz_ZZVjaQ4903XAalyfhjs27sJK_X0/edit?usp=sharing

Level Design

(Note : These sections can safely be skipped if they're not relevant, or you'd rather go about it another way. For most games, at least one of them should be useful. But I'll understand if you don't want to use them. It'll only hurt my feelings a little bit.)

Themes

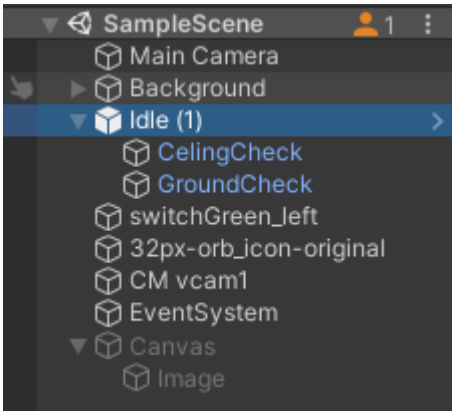
1. Meadows
    1. Mood
        1. Bright, green, calm, nature
    2. Objects
        1. *Ambient*
            1. Sunny
            2. Low grass
            3. Quiet
            4. Clean
        2. *Interactive*
            1. Normal, Flying, Thrower, Mysterious and Special enemies
            2. Buttons
            3. Levers
2. Classroom
    1. Mood
        1. Bright, calm, orange, learning
    2. Objects:
        1. *Interactive*
            1. Buttons
            2. Images

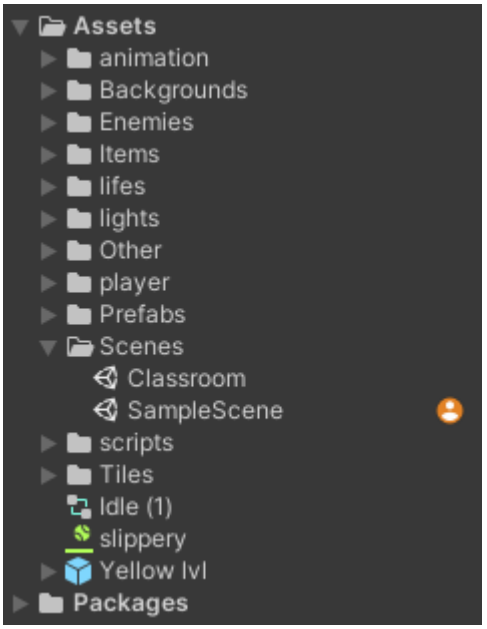
Game Flow

1. Player starts falling the sky into a tile
2. Must move right

3. Opens the door with the lever
4. Enters the classroom
5. Learns about the level's subject with images
6. Exits the classroom through a door
7. First enemy appears, player jumps on him to defeat it, other enemies will appear around
8. Player keeps going right, after a while a button appears to trigger questions
9. Player solves questions
10. Player keeps going right, reaches the end flag
11. Next level

Development





Graphics

Style Attributes

- Color palette: green, yellow, red and black.

- For the graphic style we will be using cartoony like assets with a cute side to them. We will mostly use round edges except for the question holes and some platforms to give some height to the scenes.

- We will explain the game mechanics with signs scattered throughout the level in which the player will learn how to play and solve the puzzles.

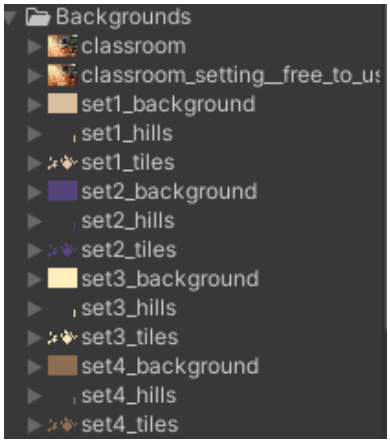
- The player will glow red when hitting an enemy and will lose a life. When the player stomps on an enemy, the enemy will glow red before disappearing.

Graphics Needed

1. Characters
    1. Sofia (idle, jumping, running)

    2. Enemies
        1. Normal (walking)
        2. Flier (Flying)
        3. Thrower (walking, throwing)
        4. Mysterious (Float like jump, walk)
        5. Special (walking)
2. Tiles
    1. Static
    2. Floating
    3. Mountain

3. Ambient



4. Other
    1. Button
    2. Door
    3. Lever
    4. Question block
    5. Answer blocks
    6. Flag

Sounds/Music

(Nothing yet)

Style Attributes

Again, consistency is key. Define that consistency here. What kind of instruments do you want to use in your music? Any particular tempo, key? Influences, genre? Mood?

<u>will be defined later</u>

Stylistically, what kind of sound effects are you looking for? Do you want to exaggerate actions with lengthy, cartoony sounds (e.g. mario's jump), or use just enough to let the player know something happened (e.g. mega man's landing)? Going for realism? You can use the music style as a bit of a reference too.

Remember, auditory feedback should stand out from the music and other sound effects so the player hears it well. Volume, panning, and frequency/pitch are all important aspects to consider in both music *and* sounds - so plan accordingly!

Sounds Needed

1. Effects
    1. Soft Footsteps (dirt floor)
    2. Sharper Footsteps (stone floor)
    3. Soft Landing (low vertical velocity)
    4. Hard Landing (high vertical velocity)
    5. Glass Breaking
    6. Chest Opening
    7. Door Opening
2. Feedback
    1. Relieved "Ahhhh!" (health)
    2. Shocked "Ooomph!" (attacked)
    3. Happy chime (extra life)
    4. Sad chime (died)

(example)

Music Needed

1. Slow-paced, nerve-racking “forest” track
2. Exciting “castle” track
3. Creepy, slow “dungeon” track
4. Happy ending credits track
5. Rick Astley’s hit #1 single “Never Gonna Give You Up”

(example)

(Note : Again, if you’re soloing you might be able to / want to skip this section. It’s up to you.)

Schedule

(what is a schedule, i don’t even. list is good enough, right? if not add some dates i guess)

1. develop base classes
    1. base entity
        1. base player
        2. base enemy
        3. base block
    2. base app state
        1. game world
        2. menu world
2. develop player and basic block classes
    1. physics / collisions
3. find some smooth controls/physics
4. develop other derived classes
    1. enemies
        1. Flying
        2. Thrower
        3. Mysterious
        4. Special
5. design levels
    1. introduce motion (right-left, game from left to right)/jumping
    2. mind the pacing, let the player play between lessons
    3. introduce STEM topic
6. develop left boundary (base player)
7. design sounds?
8. design music?
9. design story tell
10. design credits