What Lies Beneath

Fiverr Milestone Overview - Milestone #1 Completion

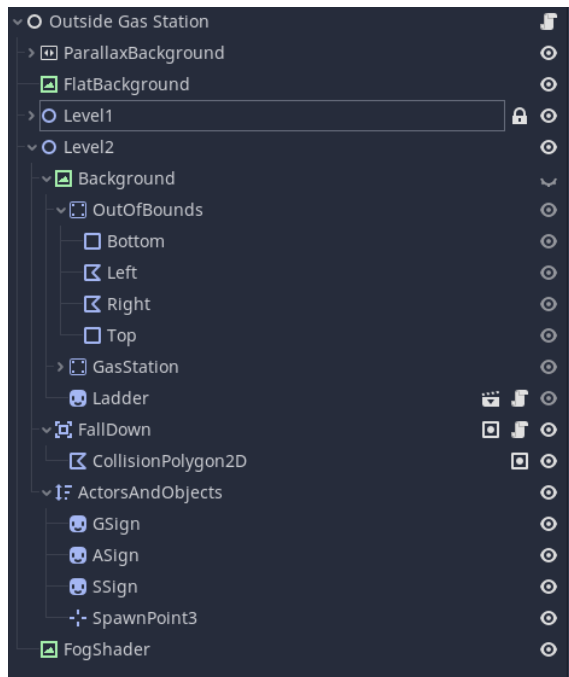## Intro

Imgur Link of Gifs: https://imgur.com/a/XAhMfN8

This document marks the completion of the Milestone #1. It's presented a few days before the end date to help accommodate any iterations/changes to this particular milestone beforehand. That said, I am happy to add additional animations when they come in for player movement.

Review of Structure

Level Structure

A level requires at least 1 floor and a maximum of 3 floors. The lowest level floor should be the first, going up to the highest on the third. The floor is for the player to move around in different areas. The reason behind having different floor groups is to keep areas distinct from each other, and requires a climbing of ladder or box to reach them.

The names of the nodes "Level1", "Level2", and "Level3" are required for the function to work.

In each floor, collision boxes or fall zones need to be positioned to keep the player on the plane, using Layer 1,Layer 2, and Layer 3 to control range of movement per floor.

For the background image, select a large flat png to display for the player to move around. To provide depth the the level, using the YSort node, place in objects that are cutouts of the background, and give them each a collision matching the floor they are on(and provide a pivot point on the very bottom of the object by holding "V" on your keyboard and left clicking). This will cause the objects, like a gas pump, to be drawn in front or behind the player depending on the Y value of the player and object, as well as having Actors collide and move around them.

Moving Floors requires the use of a Ladder, Box or Fall Zone. These can be used as much or as little as you would like. Ladders will need multiple instances in the level, 1 in each floor it connects to, to be drawn above/below the player and Actors accordingly. The values between the ladders should match between floors. Ladders should be in Actors on the lowest floor (or if you can walk behind it)

Player Movement Logic

Player Movement itself is mostly resolved through _process and _get_input(). _process is run on every 'tick' (so to speak). If there are no animations blocking player input, the _get_input() function is called, looking for player feedback.

Animations

On _get_input(), AnimationTree is called to change the state through the AnimationTree, calling Animations found in the AnimationPlayer. If you want to tweak animations, navigate to the AnimationPlayer node, select the animation you wish to edit, and go to town.

You can create additional sub animations as well, and pair it into the AnimationTree, but in order for it to play, you will need to insert them into spaces between AnimationNodes, and ensure there is just the one path through them.

Aiming

Aiming is just using the classic formula of "$y = mx + b$" where b is the barrel of the gun, and the slope a 45 degree angle. By forcing the mouse to be below this, and above its inverse equation, we keep the mouse within the aimable range. aim_gun(max_range=2). I have a function in which you can access the max_range in case you want to be able to change the range based on gun type, and you can feed the max range for these weapons easily. There is no gun fire option in this milestone.

Climbing Boxes

These objects can be added to the scene, and just like ladders, select the floor it's on, and what the floor at the top of the box is considered. It can only be moved left and right. Will need to know additional .
requirements to build out additional functions of a base box, but you can take the base scene of a box, and tweak it to fit your needs.

Spawn Points

Dropping Position2D SpawnPoints to match up with the Exit Zones will move the player to the Floor and position of the node. SpawnPoints are infinite, but must be named "SpawnPoint1", or whichever number you want to provide. It must also be placed in the YSort of the Level1, Level2, or Level3

Moving out of the level is done by players walking into the trigger points. These trigger points you drag the scene to load into it, and advise the Position2D node you want to snap the player to. If the number is not Found (SpawnPoint3), it will default to look for 1 (SpawnPoint1).

Dynamic Camera

Camera is placed on an Actor, and has a 'snap' function towards the actor it's placed on. Moving will slowly bring the camera further in the direction of movement as well.

Using an AnimationPlayer on the Level will allow you to fully control the camera as well if desired for cutscenes, etc.

Player Movement Milestone (Commit 07baaef in Movement)

- ☑ ~~General Movement~~
  - ☑ ~~Walking~~
  - ☑ ~~Running (Hold-Shift)~~
  - ☑ ~~Hidden Stamina Bar~~
  - ☑ ~~Climb Ladder~~
  - ☑ ~~Fall/Drop~~
- ☑ ~~Interactions~~
  - ☑ ~~Push/Pull Box/Climb Box~~
  - ☑ ~~Kneeling (Looting/Interacting)~~
  - ☑ ~~Interactable Object (Shimmer)~~
- ☑ ~~Basic Combat~~

- ☑ ~~Aiming (across the walkable axis)~~
  - ☑ ~~While Aiming you can only Walking~~
  - ☑ ~~Button to pull out gun~~
- ☑ ~~Game Camera~~
  - ☑ ~~Dynamic Camera Primarily on Character~~
- ☑ ~~Additional Features~~
  - ☑ ~~Splashscreen~~
  - ☑ ~~Project Image~~
  - ☑ ~~Level Change~~

Menu System Milestone

- ☐ Silent hill style ([scrolling inventory](#))
  - ☐ Options to: Use, Reload, Equip, Remove
  - ☐ Gun Equipment Slot
  - ☐ Still Screenshot of the Game in the top left with colour overlay indicating health
- ☐ Map option - Placeholder Screen
- ☐ Memo - Journal Pages
  - ☐ Left right over Journal Objects
- ☐ Important Objects
  - ☐ Shows Keys
  - ☐ Shows Map Fragments
- ☐ Options with: Music and Sound Control
- ☐ Global Player State
  - ☐ Health
  - ☐ Equipped Item
  - ☐ Inventory
  - ☐ Important Inventory Items
  - ☐ Map Fragments
  - ☐ Location

Dialogue Milestone

- ☐ Dialog with branching options as well as object Inspection
- ☐ Interact-able Objects in Level where it triggers dialogue
- ☐ Interact-able Objects in Level where it triggers text above the player's head
- ☐ Save Dialog Choice Tree in Global Player State

Map System Milestone

- ☐ Collecting fragments of maps to reveal more of the map (accessible via the menu system)
- ☐ Metroid Style Map where map highlights which location you are in

- ☐ Track if you have been in the space
- ☐ Track if the door is locked (show by X)

Combat Milestone
- ☐ Player Combat
    - ☐ Shooting Gun While Aiming
    - ☐ Melee Animation
    - ☐ Check on Hit/Provide Damage
    - ☐ Taking damage
    - ☐ HP Recovery (Syringe)
    - ☐ Game Restart
- ☐ Player Inventory
    - ☐ Check Equipped Item (Gun)
    - ☐ Provide Damage on Check

Enemies Milestone / Save Point Milestone

- ☐ Enemy AI Types Created
    - ☐ The Lost – The remnants of a person. Doesn't focus on the player and shuffles on its own, until it sees the player and goes straight to the player. Takes 2-3 hits
    - ☐ Rabid Dog – Sprints to player on line of sight.
- ☐ Enemy Interactions
    - ☐ On Player Touch, Damages Player
    - ☐ Attack Animations
        - ☐ Attack hitboxes
        - ☐ Critical hitbox damage
    - ☐ On Kill, Enemy is destroyed and removed
    - ☐ On Entry, Enemy States are stored and loaded back

- ☐ Object in world where the character can save
- ☐ Start Menu
    - ☐ New Game
    - ☐ Load Game
    - ☐ Quit
- ☐ On Death, Load Last Save