Falling Islands

Game Design Document

Index

Intro

Falling islands is a timed exploration and platformer game. It involves navigation through a set of islands which are timed to fall. The task of the player is to save the island before time runs out. Obstacles lay in the path of the player but can be overcome through the use of their navigational abilities. The atmosphere of the game can be downright depressing since the inhabitants of the islands are essentially waiting to die. Notes, NPC's and the character's own thoughts are scattered throughout the islands which the player can (optionally) seek out.

Gameplay Description

The player is a glider, and their task is to save the islands. Hence, the core gameplay ability is always navigation, which involves sprinting and gliding through the air. The gameplay can also include launching upwards, destroying obstacles, climbing ladders, moving obstacles, collecting things which increase the time of the island, collecting things that save an island from falling, and lastly, reading interactions with NPC's, random notes and the character's own thoughts.

The navigation is meant to feel very floaty. The player should feel as though they are part of the wind as they glide around the islands. Holding space lets the player fall down slower, and the player can "sprint" if they hold shift. The combination of these two can help achieve this gliding feeling but sprinting alone can do a pretty good job.

Moving obstacles is done through simply left clicking and holding on an Orange-block. While you hold it, the orange block moves along with the player. This is particularly useful when a ladder is attached to the block, since this way, you can move the ladder around and perhaps get to places as one alternative among other navigational choices.

Launching up into the air is done through getting onto the Blue-blocks. Hitting obstacles (Red-blocks) is done by left clicking. It is a timed strike, and some level of intensity can emerge when one is gliding through the air having to focus on not falling too far down, while also trying to get close enough to destroy an obstacle.

Collecting things is done simply by walking up to them. This can increase the time you have for a certain island (Green-blocks) or outright save the island (Purple-blocks). This is dissimilar to interactions, which prompts the player to press F before they can interact with it. Such interactions are either thoughts (the character's reflections), dialogue of NPC's (usually filled with some level of desperation), and pages (left over by some NPC's).

Lastly, of course, the player can fall. Such a fall simply teleports the player back to a checkpoint but does decrease the overall time they have to save the islands.

Changes from Initial Documentation

The flow diagram and map from initial documentation:
Link to images: imgur.com/a/ZgWGVWk
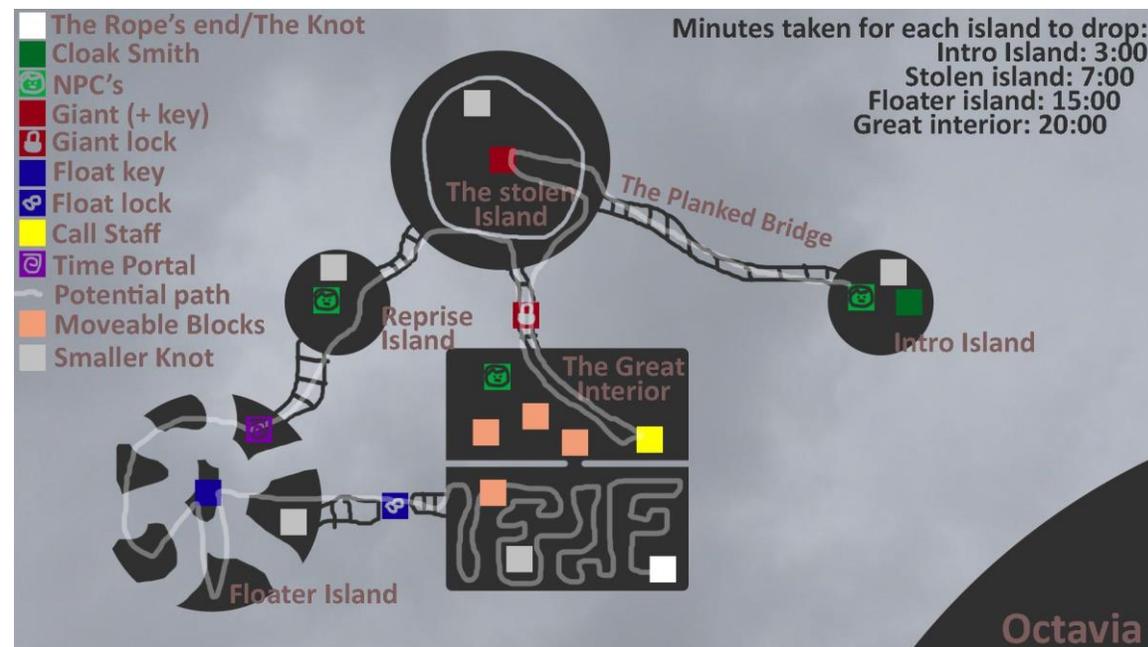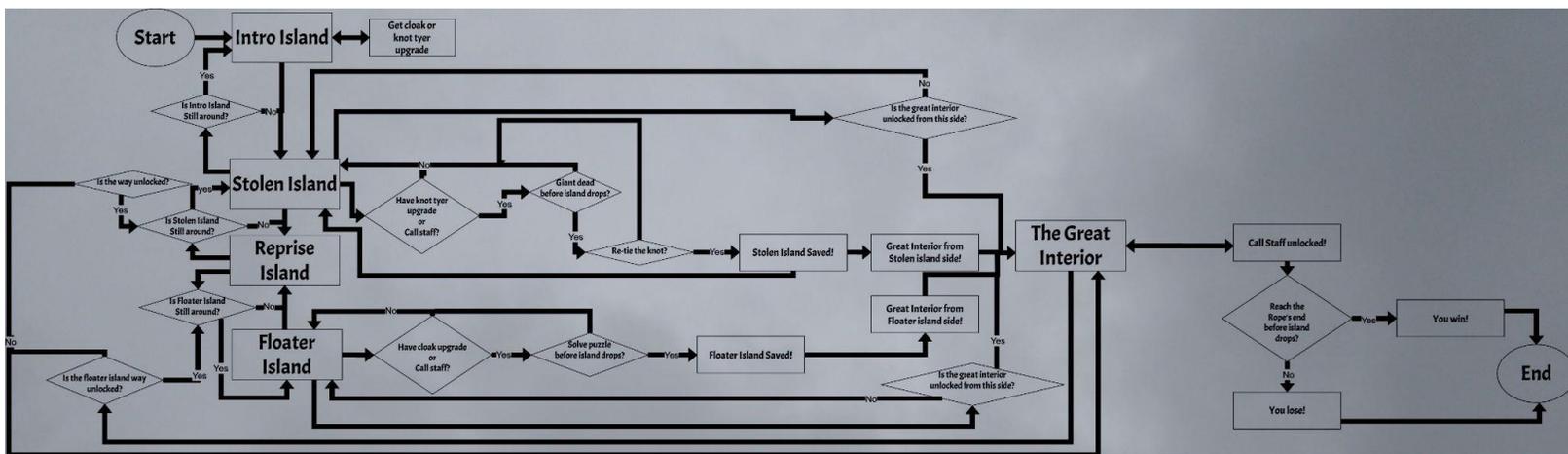
Many things have changed. There is no cloak of knot tyer upgrade. There is no time portal, a call staff or a giant. The progression of levels is relatively the same though. You can still go into the great interior from the stolen island (now called colosseum) as well as the floater island. There is a 'lock' between the colosseum and the great interior, but it is simply a moveable block that bridges the gap between the two islands. There is no lock from the floater island and the great interior. The interior of the Great interior has also changed. The maze part of it is relatively similar (but simpler than what it is on the map). However, the other side of it has turned into a parkour/navigational task. Indeed, there are two sides to this side: the parkour side and the optional "ladder task" side. Wherein, one can simply avoid doing the parkour and instead unlock a ladder after doing a task in order to progress.

Floater island also has interior regions within their islands, one of which contains an item that saves the floater island section from falling. There are more NPCs, and pages and interactions that have been added into the level.

Movable blocks, smaller knots (Purple-blocks), and the Rope's end remain. Their positions, however, have changed slightly, with more being added and moved around.

The potential path of the player is also slightly different. The player must either enter through the maze side or enter through the parkour side of the great interior. After this, they are locked in. If a player goes straight to the parkour side, they miss out on saving the floating and reprise islands. It's likely that the player saves those, then goes back for the parkour section instead of progressing to the maze.

Overall, the progression hasn't changed much, but the gameplay may be different given the new mechanics that were added and given how older mechanics were removed.

Systematic Breakdown of Components

Systematic components can be broken down into these groups: Movement, Checkpoints, UI, SFX, VFX, and the Blocks.

Movement is mostly done through a downloaded asset of a character controller, but this asset was modified greatly to allow for gliding and sprinting. The camera on the controller was also changed to allow for VFX like FOV changes when the player looks downwards (intendedly when they look down from an edge). Godot's built in 'clipped Camera' node allowed for camera collision with obstacles so it would not clip through walls. The camera also has a slight shake.

Other VFX include a particle emitter that was at first intended to be clouds but turned into floating balls going across the map. The environment also was heavily modified so as to create a fog effect intending to simulate the environment when inside of a cloud. Lighting was also used in the form of lanterns and emission materials.

There is one checkpoint on each island (the great interior has 2). Checkpoints were done in a way where if you are currently on an island that is falling: you would spawn at the next island's checkpoint. If there are 2 islands that can be considered 'next' (great interior or Reprise from the Colosseum Island) it is randomly selected which one is picked. If you are on a saved island, and the next one falls. You are simply stuck there and should probably restart.

UI includes the pause menu, the interaction prompts, the end menu, and the timers. The timers simply update each second (which is another count-down timer). Some math had to be done to convert seconds into displaying into a MM:SS format. The pause menu can end the game and freezes everything or unfreezes everything when exiting the menu. It will not unfreeze everything if the player is currently in an interaction (which itself freezes everything and unfreezes when exiting the interaction). The interactions display text in a dialogue box style. It is essentially a colorBox node along with a labelNode, which displays if the player presses F on an interaction object. Doing this will send some text to the labelNode: an array of strings. Each successive F-press will go through the array until it is finished. After which, the text on that interaction will be replaced by some pre-defined text and interacting with it will only display that one text from now on. The end menu happens when the player reaches the Rope's end, or the last island falls along with the player. This simply displays the number of islands saved and whether the player wants to restart or quit.

SFX includes all the sound effects and the music. The background music plays right away, while the sound effects are triggered by interactions, blocks, or by a respawn. Each interaction has its own effect: page flip sound for pages, a surprised sound for NPCs, and a wind instrument sound for thoughts. The obstacle block triggers a hit sound when the player's sword enters it. The Purple-block and the Green-block also trigger their respective sounds. When the player respawns, there is a unique sound effect. Lastly, when an island falls a short clip of music plays.

Regarding movement: the hardest blocks to code were probably the wind blocks of which there are blue (going upwards) and red (going downwards). These essentially lower or increase the player's Y-axis if the player is inside of it. Since the red wind blocks act as a barrier, they push the player down with a lot more force. Whereas the blue ones feel like a slow float upwards ending with a push.

The grabbable blocks which move along with the player only move if the player isn't already grabbing something (otherwise the player can run into another one and un-intentionally also start moving that).

Apart from these blocks, the collectible time stopping, or time-adding blocks simply communicate with the timer nodes to either pause the timer (for the rest of the game; saving the island) or add some number of seconds to the timer. Hence the blocks interact with the UI aspects. In fact, the text even turns green after collecting either of these blocks.

Artistic Style Outline

No reference was really used apart from "Inside".

Image from: https://mobilesyrup.com/2017/09/26/hit-indie-game-inside-nintendo-switch-ios/

The foggy/hazy visuals of the game were also simply due to wanting the game to essentially take place within a large cloud. Given this, I also thought that the sounds of the game should also be "windy" or cloudy in nature. Some of the sounds are deep, impactful, bass-type sounds, which I feel add a feeling of isolation to the player. Indeed, much of the sounds are used to convey a kind of isolation, and sometimes scary (like when an island falls). However, some are calming or relaxing as well (the wind chime, the surprise NPC). It's a mixture of peace and perhaps scary isolation. The game's feel also comes from the interaction objects which are associated with some of the sounds.

The minimalist art style of Inside was also what I was going for in the original documentation. It is much more minimal, of course, and distant things are made harder to see. This, again, I feel adds to the isolated feeling of the game. Lights are used at times to signal something through the haze as signals for where the player should go towards, but also for creating more of a scary, perhaps suspenseful feeling.

Asset Breakdown

Art Assets

No art from outside sources were really used apart from the character controller:
https://godotengine.org/asset-library/asset/251
On top of this, a font was used for all text in the game:
https://fontlibrary.org/en/font/avara
Mostly all art was made through combining primitive shapes together using the union/difference commands and messing with material colors/emission.
At first, I wanted to create clouds using a shader, but Godot's shader language is different than Unity's, and I couldn't really get how it worked and needed more time than I had to figure it out.

Text Assets

Some lines from Thin Cities 5 in Italo Calvino's *Invisible Cities* are used, but most of the text is from me. Most of the dialogue/interaction prompts did not take long to write. I wanted to build a world outside of the level and reference the city of Octavia as much as possible, while also communicating the despair and desperation of the inhabitants of these islands. When referencing Octavia, I allowed myself to simply make stuff up about it. Overall, this was probably the most fun part for me.

Apart from this, there is a hint at the first bridge where the player is expected to glide across. If they die 3 times in that area, a hint is given to them that they should hold space. This hint took more effort than it should have.

Sound Assets

Ambient wind/Background sound:
https://www.youtube.com/watch?v=sGkh1W5cbH4

Time added: https://www.storyblocks.com/audio/stock/wind-chimes-steady-chime-bxxbjun2lwbk0wxtbgd.html

Island falling music: https://www.storyblocks.com/audio/stock/scary-horror-wind-chimes-be7foy68prk0wyam0a.html

Object destroyed: https://www.storyblocks.com/audio/stock/swooshy-punch-or-hit-bebnlvhnidsk0wxruof.html

Island Saved: https://www.storyblocks.com/audio/stock/rope-using-sxeidb338wsk0wxs7wj.html

Respawn: https://www.storyblocks.com/audio/stock/cinematic-low-drum-beats-hgqqbrhhiwhk0wxs30e.html

NPC Dialogue sound: https://www.storyblocks.com/audio/stock/man-surprise-sound-fun-emotion-shout-ht4cmfirv8k8umgzma.html

Meditations Dialogue sound: https://www.storyblocks.com/audio/stock/andean-flute-short-sounds-reixqrnn8wrk0wxs9ni.html

Paper sound: https://www.storyblocks.com/audio/stock/magazine-cover-turn-page-rlsnh7anldrk0wxx4et.html

All of the sound effects (apart from background/ambient wind sound) were edited, shortened, split into multiple files, and sometimes even pitch shifted. The program I used for this was Audacity. Apart from pitch shifting it from audacity, all sound effects were pitch shifted given a random range between -0.3 and 0.3 from their initial pitch each time they played. This made repetitions of the same exact sound unlikely.

Development

The game needed to be scoped down a lot from the initial documentation. As mentioned before, some mechanics were removed, and others were added.

The major layout of the level remains unchanged. Indeed, only things which have changed are the things within these levels (e.g., blocks, platforms). After the layout, I added a bunch of mechanics: obstacles, grabbable objects, ladders and blue wind blocks. This required changing the character controller so that grabbable objects could move with the character, and so ladders and wind blocks could change the player's Y-axis. Obstacles required some kind of hitting animation, and so that was added too.

After this, I added a gliding mechanic that allowed the player to fall at a slower rate, and also changed the falling code in the character controllers since it was programmed to increase falling speed the longer the character was falling. Now, it falls at a constant rate, and a slower constant rate when the player is gliding.

The character controller comes with its own sprint functionality, and I used it when testing the mechanics/level. I grew fond of it, so I kept it as a mechanic eventually.

After this, the timed aspects of the game needed to be created. I added timerNodes to each of the islands (which are a bunch of primitive blocks, which are children to some parent). Attaching a script to the parent which made the island fall down at a constant rate given a certain condition was created. This condition would be when the timerNode runs out.

After this, I needed to display the timers for each island. I looked up how to make the seconds of each timer display in MM:SS format since I'm just bad at math. Then I used labelNodes to display it on top of the screen: Godot's 2d (called Control) nodes are much more intuitive than Unity's canvas in my opinion. Attaching the Labels to the Control node called TimerDisplay allowed me to display all timers. Next, I wanted to make them display more dynamically: when on an island, only that island's timer displays. When in-between islands (the bridges), then all of their timer's display. If a timer runs out, the island falls, and a sound effect plays, and the timer's labelNode disappears.

Of course, I also needed the sound effect/Music. So next I added all sound effects into the game (after editing the sounds in Audacity). As stated above, the sounds were triggered, their pitch was randomized within a range, and then played.

After this, I added the pause and ending menus, both of which could end the game which was needed since all that could be done up until now was alt-tabbing out.

Around this time, I focused more on the look of the game. I messed around with the environment (another Node in Godot) and got a foggy look. I removed the sun entirely (which is in the default environment) and edited the lighting so it would appear darker. Then, I made a lantern object with just around 4 primitives, an emissive material and an omni light. Later, I also added a directional light to it. This lantern object would be all the lighting in the game (besides from the environment).

Next, I created a particle system, first intended for clouds, but now just spheres floating towards a direction. I thought about removing this but added it into one of the interactions eventually and decided to keep it.

The 'narrative' of the game or the interaction objects were a late addition. I had made a dialogue box type system before in Godot, which is a lot more complex than what is in this game, so it really didn't take long to create a node which would receive text, display text, and set a replacement text to the node which just gave it a default text for when the player ever interacts with the NPC after the initial dialogue is played out. I always wanted a shopkeeper NPC, so I added her first. Then, the next NPC's just sort of came to me randomly as I was thinking about the kinds of things I could put into the game. I thought pages lying around were always cool in games, so I made my own. Lastly, the thoughts/reflective interactions were also a result of thinking about what the character could say to increase the tone I was going for. I added a handful of interactions throughout the game as it was being developed: one for each Island at least.

It was during this time that I really began changing around the objects within the game. I, at one point, wondered what would happen if I attached/childed the ladder object to the grabbable object. Of course, the ladder became grabbable! I would use this twice in the game, but both are optional. The Colosseum for example just had one grabbable bridge that led to the Great Interior. This would change into 2 bridges, which could go into both of its progress directions (reprise island also needs a bridge now). The great interior would require both bridges. One of the bridges can be unlocked by a grabbable ladder (or through floating into a hole). The other bridge can be unlocked through using the first bridge to get to it, or again, just through floating on to it.

For the floater island regions, I added a bunch of interiors to 3 of the floating islands for more interactions and also to hide away the island's Purple-block.

For the great interior: the parkour side was split into 2 since I always felt this side was very empty. This new side holds an NPC and a poem about time, again reflecting some kind of desperation of dread. This new side is entirely optional, and also an alternative path if the player does not want to parkour, since a grabbable ladder can be unlocked here that allows an alternative progression path. Eventually, I realized

that grabbable objects could end up in places where the player could not reach them. So, an object (basically an interaction object with an edited script) was added that would reset them to their initial positions.

Camera sway and FOV were later additions. The opening title also was a last addition. Apart from this, the last major addition was the red wind blocks. I noticed that instead of doing the whole bridge thing in the Colosseum, the player could simply float to the next island by jumping off and gliding. The red wind blocks push the player downwards forcing them to respawn at the checkpoint if they try to do this. Even an NPC comments on them.

The last thing I noticed was a bug with the red wind block. After respawning, for some reason, it would randomly shoot the player downwards even when not in the red block. I fixed this and then exported the game.

Additional Ideas and Possibilities

One thing I wanted to add was allowing the FOV to change only on the edges of islands. On top of this, I would have liked to lessen the sound of the background wind sound once inside an interior to simulate a more closed environment.

I also wish the game had a more narrative focus. I wanted to add pages around that would tell a story perhaps out of order of a person slowly filling up with dread. It would be up to the player to put them all together. For now, most of the interactions are disjointed and there isn't as much of a story arc to them as I want there to be. Indeed, there could be another counter in the ending menu: instead of just showing how many islands were saved, it could also show how many pages were collected.

One thing I wanted to add since the first documentation was a time gate of some sort. In fact, I wanted to use a shader to create a blackhole underneath the floating island. Going into it would make the player go back in time, which would be useful if they let an island fall. This would allow the player to have another run at it, but this doesn't seem too useful to me at this point. Although, it would be a cool visual.

The call staff: a removed mechanic, but one which would have been cool. I think the hardest part would be the code for calling it back to the player. I'm not sure how fun this would be though as a navigational method. Early on, I didn't really like sprinting too much since I thought it allowed getting to places where the player shouldn't be able to get to. The call staff would be an alternative to sprint. However, now, this isn't much of a problem, and hence, the call staff was removed. I also think sprinting is just faster and more fun. However, using the call staff in a fun way would be interesting. It would be cool to prototype it and see what could be done with it.

This game does have some horror-elements to it. I first wanted the maze to be very complex, and also wanted to put a giant snake in it, the scales/body of which you would be able to see between corridors and openings. This would be too hard in my opinion, but putting something that chases you in the maze, perhaps just a normal NPC would be interesting. Since it is the last section, feeling that thrill of escaping from something may be a good way to end it.

I wanted to add randomized text in the pause menu. Right now, it just says "you feel chilly," but it would be cool to have a pool of 20 different texts to display which would similarly convey the atmosphere of the character's environment.

Making the islands vertically connected was an idea I had too late. I think it would be cooler if the islands were all stacked on top of each where going from one island to one above required being shot upwards and going from one island to one below required only jumping off. Such vertically I think would have just been an improvement on the game overall.

It would have been cool to actually have a bunch of ropes in the game that extend into the sky from each island. In the beginning, I wanted one giant rope that would connect all islands to the great interior. Then, the great interior would have a giant rope connecting to a net far above (outside the view of the player). Such a rope could also function as a guide for progression, and a hint that the player must, in the end, end up in the great interior region.