

170 Jam3 Group 22

Soaring Hearts



"In Soaring Hearts, you play as best friends Hardy and Fuzzy as they attempt to climb the mountain to make their flightless lives a bit more free. Their eyes may be too small to see the view from the summit, but at the end of the day, it's all about the journey, not the destination."



Prompt: Puzzle Game Tutorial Without Words

Group 22

Link to Slides for Gifs:

<https://docs.google.com/presentation/d/1hxMc3p9E-OF4ekMDcbuWu2EDOuATNZK2l8SWExSiVyl/edit?usp=sharing>

Members:

- **Solomon Bell** (Production - Lead / Website)
- **Nick Pastoria** (Production - SFX / BGM)
- **Denae Ficks** (Sprites / Animations)
- **Michelle Huang** (Sprites / Background)
- **Dominic Berardi** (Level Design / Programming - Scenes)
- **Ryan Hueckel** (Programming - Movement / Animation Integration)
- **Justin Satriano** (Programming - Parallax / Debugging)
- **Manas Sara** (Programming - Camera / Sprite Integration)
- **Nathan Prieto** (Programming - Movement / Debugging)

Finished Product

Itchio: <https://sunnieside-boi.itch.io/soaring-hearts>

GitHub: <https://github.com/Manas701/CMPM170Jam3Proj>

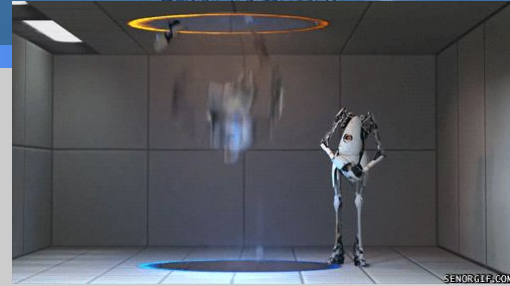


Inspirations

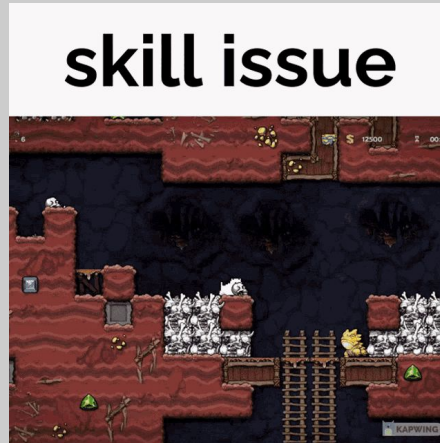
It Takes Two



Portal 2



Spelunky 2



skill issue

BattleBlock Theatre



List of Games We Introduced:

- Mirror's Edge
- Manifold Garden
- Super Metroid
- Silent Hill 2
- Portal
- Soulsborne Games
- Inside
- Rainworld
- Hollow Knight
- Battleblock Theatre
- Pico Park
- Talos Principle
- Resident Evil
- Devil May Cry
- SuperBrothers: Sword and Sorcery
- Spelunky
- Castlevania 3
- Undertale
- Journey
- Doom
- Stealth Bastard
- It Takes Two
- We Were Here franchise (edited)

Ideation

We are doing a second vote for the top three we have right now

We will be doing the 3,2,1 vote (3 is the one you wanna do most and 1 is the least, use each number once)

RetroGrafx

React with **3** **2** **1**

2 3 **3** 3 **1** 3

As it Turns Out (RPG)

React with **3** **2** **1**

3 2 **2** 3 **1** 4

Puzzle Game Tutorial w/out Words

React with **3** **2** **1**

1 3 **3** 4 **2** 2

Prompt Selection

@everyone we are voting on our final pitch/game. We will be using 3, 2, 1 Voting (3 is our first choice, 1 is our last choice)

Concept 1 (Two baby penguins figure out how to navigate the icy caverns in our physics-based isometric puzzle game.)

React with **3** **2** **1**

3 3 **2** 4 **1** 1

Concept 2 (Two flightless birds try to climb to the peak of the mountain in this vertical scrolling puzzle-platformer)

React with **3** **2** **1**

2 4 **3** 4

Concept 3 (In our physics-based puzzle platformer, play as two baby birds dreaming what it will be like to one day fly across the sky.)

React with **3** **2** **1**

1 7 **3** 1

Scrapped Concepts

Level 1 Layout/Intentions



- Level 1 was designed around utilizing basic platformer mechanics such as running and jumping
- Specific central mechanics in this level include **box interactions** (shoving, using as platforms) and **moving platforms** (pressing buttons)
- Having two players makes these mechanics more interesting than normal, requiring critical thinking and teamwork

Specific Level 1 Invisible Tutorial

Box Interactions

- Introduced immediately with falling boxes; **tells player boxes are affected by gravity**
- A few more lie in the players' ways, forcing the players to jump onto or over them; **tells player boxes can safely be stood on**
- A box lies in front of the only place the player can move through, meaning it must be shoved; **tells player boxes can be shoved**

Results in the players **using the things they've learned** to push a box down for the other player to use as a platform.



Level 2 Layout/Intentions



- Second level based teaching players the throwing mechanic.
- Players can **grab** and **throw** each other. If a thrown player hits a wall they get **stuck** in it. Stuck players can be used as a platform.



Specific Level 2 Invisible Tutorial

Throwing and Sticking

- Level starts with a large wall that can only be scaled **by learning the throwing/sticking mechanic**
- **Players are forced to experiment** and will figure out they can grab/throw each other
- With nothing but a wall in front of them, the thrown player will hit the wall; **showing that thrown players stick to walls as a usable platform**



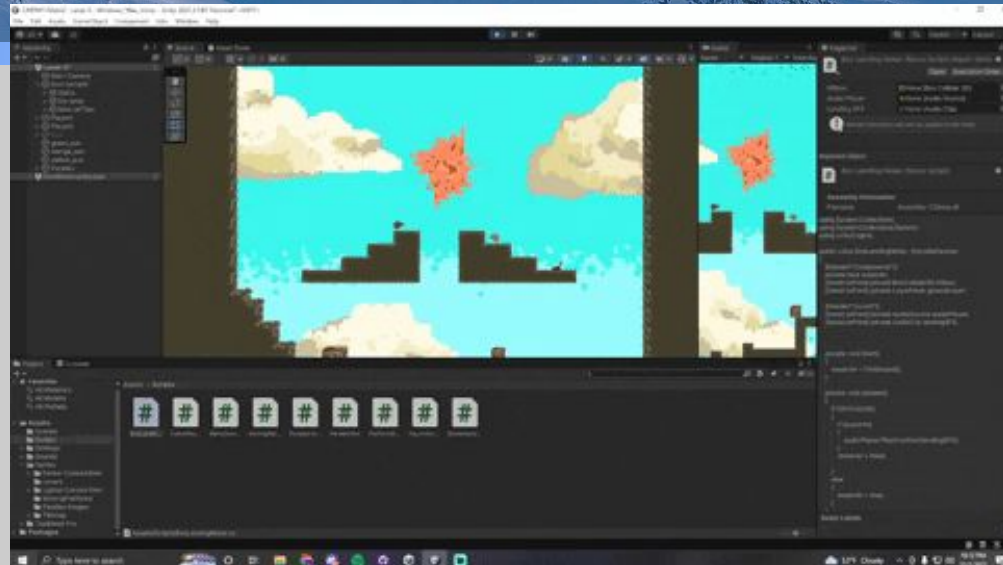
Level 3 Layout/Intentions

- Level 3 focuses more on puzzles
- Involves a new **parallax scrolling** puzzle mechanic
- Both players must work together to complete the image



Specific Level 3 Invisible Tutorial

- When camera is at certain X-axis, puzzle completes
- Completed puzzle depicts the answer to the correct door above



- If players choose middle door, they win!

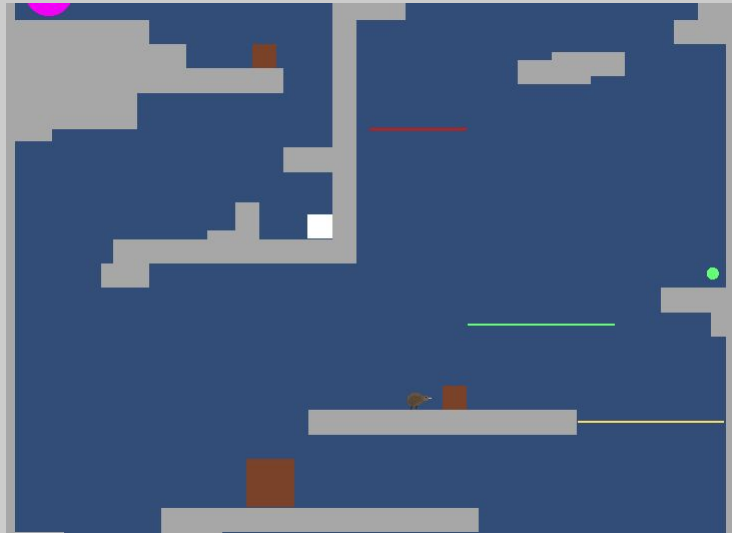
Playtesting

- Test Runners were asked to keep track of observations.
- Runners then had 3 questions to ask testers:
 - How does it feel to control your characters?
 - How do you feel about the level of difficulty?
 - How intuitive do you feel the mechanics were introduced without the introduction of a tutorial?
- Runners then were to record and, if possible, answer any questions the testers may have had.

Playtest 1: There are some bugs and boy are they buggy.

Contextualizing:

- Had to start playtests late due to Thanksgiving break
- Already had lots of internal QA
- No visuals or SFX implemented at this time
- Playtested Levels 1 and 2
- Playtesters were a dev and a non-dev; Dev sat back and let the non-dev tell them what to do, observing their thought process



Observations/ Q&A:

- Some softlocks and bugs, but no frustration solving the puzzles (even though there were some difficulties)
- “Movement felt floaty, which is good because you need lots of time to adjust in the air.”
- “Simple, but still took time. Timing feels very important.”
- “The mechanics feel intuitive for those who play platformers, but it needs visual effects to link everything together, especially the wall sticking.”



Playtest 2: I hate my teammate.

Contextualizing

- Meant to test difficulty of puzzles and the effectiveness of the tutorials
- Playtesters were 3 non-devs

Observations/ Q&A:

- One playtester stopped playing after softlocking himself on the 1st level
- Figured out how to screw each other over, especially on level 2
- Completely skipped the first half of level 3

Playtest 3: Emergent Gameplay can be damn funny when you let it be.

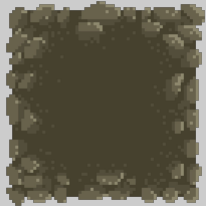
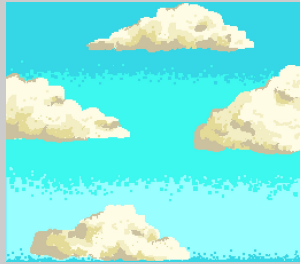
Contextualizing

- Final playtest right before we pushed game
- Playtested full game
- Meant to test overall enjoyment/find any last minute bugs
- Playtesters were 2 non-devs

Observations/ Q&A:

- Broke game in about a minute
 - Found Super Throws and Super Jumps
 - Decided not to remove because all the best platformers have exploitable movement that leads to the funnest tech
- Also highlighted the smooth, floaty movement
- Felt like they learned how to put together most the mechanics in the first minute, even if not intended to learn right away

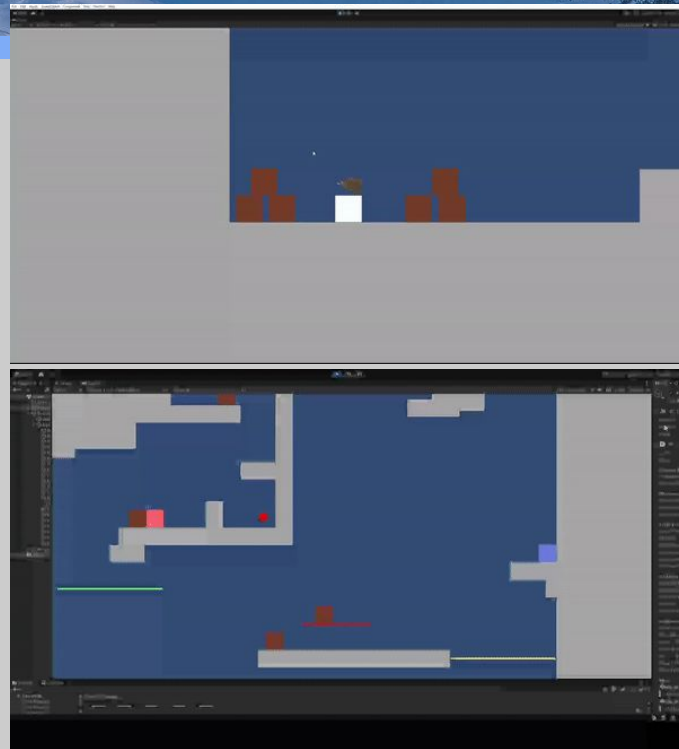
Artists Challenges/Processes



- Had to make a lot of animations for our two characters, took a long time to figure out what they should look like
- Making other assets also took time with want for detail/confusion over what exactly was wanted but also fun to make
- Theming was all over the place but settled on clear sky with mountains

Programmers Challenges/Processes

- **BUGS**
 - Many bugs in the early stages of development as we piled on more and more mechanics.
 - Through deliberate playtesting and reporting of bugs, we managed to iron out a lot of issues.
- **Parallel Development and Version Control**
 - Dividing task amongst multiple members and utilizing branches.
 - Coordination and Communication when working with the same files, scenes, assets, etc.
- **Manual Tile Mapping**
 - We designed the levels not attached to a tile map grid, which made adding the sprites very difficult



Production Challenges/Processes

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Task	Important Links	Category	Member(s) Assigned	Date Assigned	Date Completed	Due Date	Time Est.	Time Taken	Notes			
2	2D Player Movement	http://bit.ly/3Xlbele	Programming	Dominic, Nate, Ryan	November 18th	November 21st				2 Player Keyboard Controls		key:	Important
3	State Machine		Programming	Justin, Ryan	November 18th	November 26th							Less Important
4	Camera Movement	http://bit.ly/3qkqc08	Programming	Manas	November 18th	November 22nd							Stretch Goal
5	Wall Slingshot		Programming		November 22nd	November 27th							
6	Running Throws		Programming		November 23rd	November 23rd							
7	Moving Platforms		Programming	Dominic	November 27th	November 27th		1hr	1hr	Can be used in cardinal directions, at any speed or distance.			
8	Scene Handler		Programming	Dominic	November 27th	November 27th		30min	30min	Probably not complete, only did a portion to move on to next level / restart current level			
9	Bug Fixing		Programming	Programmers	November 28th	December 1st		Unlimited					
10	Player Animation/Art Implementation		Programming	RYAN (ryan)	November 28th	November 30th							
11	Platform Parent/Childs Box		Programming	Justin/Nate	November 28th	November 28th							
12	Remake Environment with Art Tiles		Something	Manas									
13	Character Design	2 Birds	Art	Danae, Michelle	November 18th	November 22nd	November 22th	3hrs	1hr	1 done			
14	Walk/Idle Animations		Art	Danae, Michelle	November 18th	November 23rd	November 24th	3hrs	3hrs	1 done			
15	Jumping Animations		Art	Danae, Michelle	November 18th	November 23rd	November 24th	1hr	1hr	1 done			
16	Being Held Anim/Holding		Art	Danae, Michelle	November 18th	November 23rd	November 28th	2hr	1hr	1 done			
17	Jump Animation Holding/Being Held		Art	Danae, Michelle	November 22nd	November 23rd	November 28th	2hr	2hr	1 done			
18	Throwing Animation		Art	Danae, Michelle	November 22nd	November 28th	November 28th	1 hr	30 min	1 done			
19	Slingshot Animation		Art	Danae, Michelle	November 22th	November 28th	November 28th	1 hr	1 hr	1 done			
20	Level Tieset		Art	Michelle, Danae	November 18th	November 30th	November 30th						
21	Background Design		Art	Michelle, Danae	November 18th	December 1st	November 30th			Necessary for Level 3, Vertical Parallaxing			
22													
23	Level 1		Design	Dominic	November 18th	November 23rd	November 23rd	2.5hrs	3.5hrs	Key Mechanic: Player Interaction (ended up being interactions using boxes and moving platforms)			
24	Level 2		Design	Dominic	November 18th	November 28th	November 27th	3hrs	4.5hrs	Key Mechanic: Slingshot / Wall-Sticking			
25	Level 3		Design	Solomon, Danae, Dominic	November 18th	November 29th	November 29th	3hrs	4hrs	Key Mechanic: Vertical Parallax			
26	Pause Menu		Design/Programmin	Dominic	November 30th	December 1st	December 1st	1hr					
27	Start/End Scene		Design/Programmin	Dominic	November 30th	November 30th	December 1st	2hrs	2.5hrs	Also made a controls/story scene			
28													
29	Jumping SFX		Audio	Solomon, Nick	November 18th	November 24th							
30	Landing SFX		Audio	Nick	November 18th	November 24th							
31	Grabbing SFX		Audio	Solomon, Nick	November 18th	November 24th							
32	Throwing SFX		Audio	Solomon, Nick	November 18th	November 24th							
33	Song		Audio	Nick	November 18th	December 1st							
34													
35	Playtest 1		Playtest	Everyone	November 18th	November 29th	November 24th-25th			Level 1 Playtest			
36	Playtest 2		Playtest	Everyone	November 18th	December 1st	November 28th			Level 2 Playtest			
37	Playtest 3		Playtest	Everyone	November 18th	December 1st	November 30th			Level 3 Playtest			
38	Playtest 4	http://bit.ly/3VcE4BA	Playtest	Everyone	November 18th		December 1st			Final Playtest			
39													
40	Sides/Presentation	http://bit.ly/3qgwaj	Deliverables	Solomon	November 18th		December 1st						
41	Game		Deliverables		November 18th		December 1st						





Thank you!