

Topsy-Woody : Game Design Document

Team: Quasi-Gamers

1. Team Members

Name	Email
Akanksha Kumari (PM/ Analytics)	kumaria@usc.edu
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Kai Wang (Captain/ Game Design)	kwang425@usc.edu
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Nicole Lee (UI/UX)	nmlee@usc.edu
Rashi Sinha (Programmer)	rashisin@usc.edu
Shravan Kumar (Programmer)	shravan@usc.edu
Tong Wu (Game Design)	twu43036@usc.edu

2. Important Links

GitHub Link	Repo (Game): https://github.com/nicole9925/csci526-quasi-gamers (Analytics): https://github.com/AkankshaKumari05/csci526-quasi-gamers-analytics
WebGL Gameplay Link	https://play.unity.com/p/cs526_playable_prototype
Analytics Link	https://csci526-quasi-gamers.wl.r.appspot.com/home
Midterm Demo	https://drive.google.com/file/d/1IJ4PrWk0WPlbOVF4IEvY7flrQQHXKDpw/view?usp=sharing
Final Demo	https://drive.google.com/file/d/1ZMWHTSmq58Q0HcZp0Wm3YXv5_J7C7oFX/view?usp=sharing

3. Research

3.1. Games to Play Daily:

- Lizzet Clifton: [Big Tall Small](#), [Little Neon Ball](#), [Dead Sticks](#)
- Shravan Kumar: [Absolute Drift](#), [Ghost Trick: Phantom Detective](#), [Pico Park](#)
- Rashi Sinha: [Sliding Seas](#), [Brain Out](#), [Hill Climb 2](#)
- Akanksha Kumari: [Bricks Breaker Quest](#), [Wordle](#), [2048](#)
- Nicole Lee: [Bemuse](#), [Rolling Cheese](#), [City Fuse](#)
- Aishwarya Lahari Vanka Venkat: [Mekorama](#), [Shift 2](#), [Where's My Water? 2](#)
- Kai Wang: [Baba is You](#), [Portal 2](#), [Monument Valley](#)
- Tong Wu: [Elden Ring](#), [Mario Run](#), [Beat Saber](#)
- Mridul Goyal: [A Penguin's Adventure](#), [Dota 2](#), [Upword](#)

3.2. Spurpunk TD Game Review Videos:

- Lizzet Clifton: [Spurpunk Review](#)
- Tong Wu: [Game Review](#)
- Shravan Kumar: [Spurpunk Review](#)
- Rashi Sinha [Spurpunk TD: Game Review](#)
- Aishwarya Lahari Vanka Venkat: [Spurpunk TD Review](#)
- Mridul Goyal: [Spurpunk Review](#)
- Kai Wang: [Spurpunk Review](#)
- Nicole Lee: [Spurpunk Review](#)
- Akanksha Kumari: [Spurpunk Review](#)

4. Game Description

Summary

We have a rotating platform in 3D. As we move the character, the weight of the character tilts the platform. We want to make the enemies on the platform fall into trap doors while avoiding them and avoiding falling ourselves.

Genre: Physics and Puzzle

In a 3D space, we have one or more platforms. The basic platform consists of grounds and walls. Initially we have one player and one or more enemies. Players and enemies have weight but only the player's weight will tilt the platform. The farther the player is from the center of the platform, the greater the angle at which the platform will be tilted. When the platform is tilted, the enemy will be affected by gravity and move towards the lowest point of the tilt.

There are one or more trapdoors on the platform. Player's goal is to make all enemies fall into trap doors using the tilting mechanism and other elements/abilities on the platform.

We are still developing additional elements and power-ups. Currently, we have a jump pad that will bounce whatever object is on top of it vertically, and abilities like creating walls and breaking walls.

5. Roles

PM/ Analytics:

- Mridul
- Akanksha

UI/UX: (menu items like game over, restart)

- Nicole
- Aishwarya

Art: (art)

- Lizzet
- Nicole

Game Design: (Design of levels/ features in levels)

- Tony
- Kai

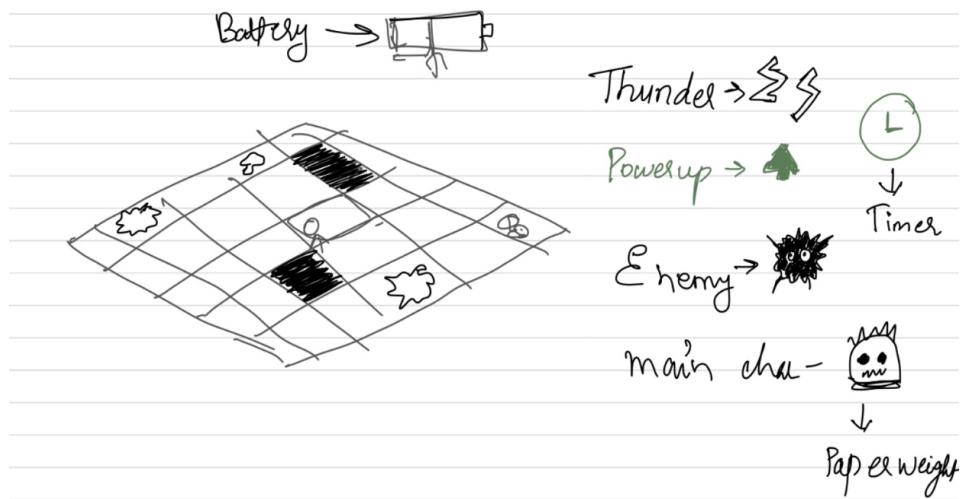
Programming: (Implementing our features including game mechanics)

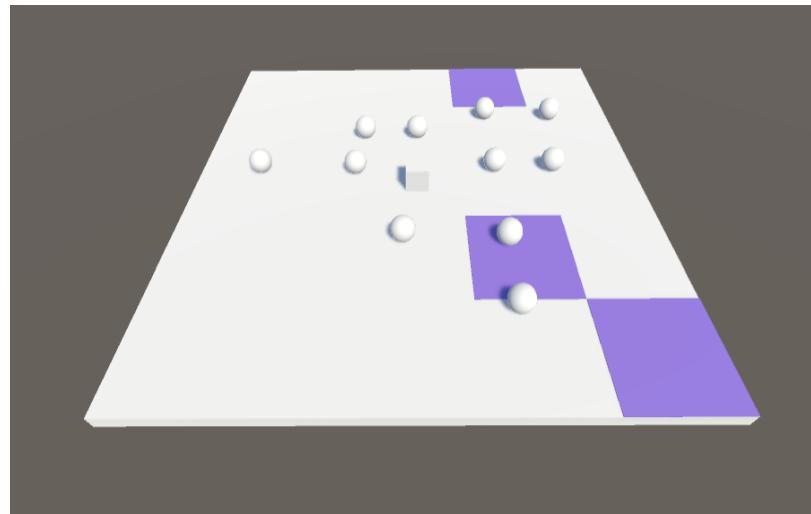
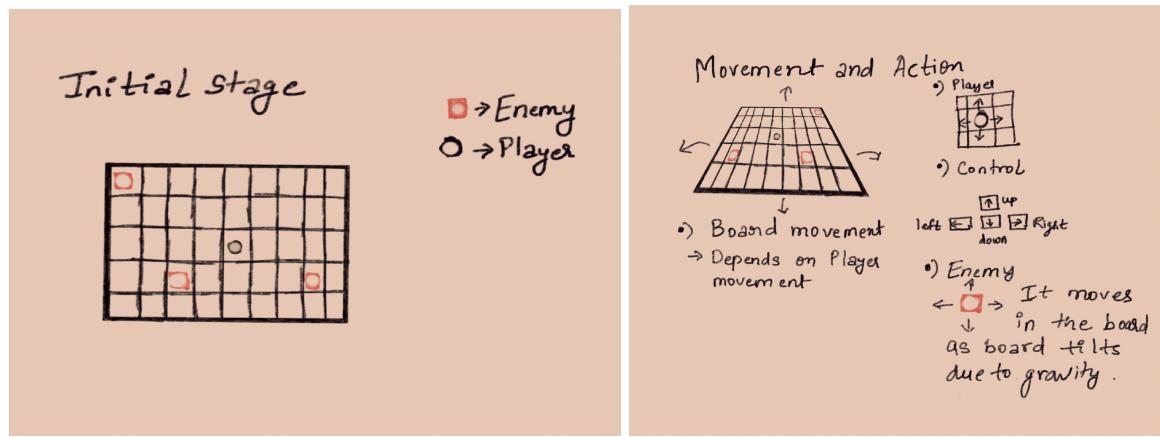
- Shravan
- Rashi

6. Prototypes

6.1. Group 1: Mridul, Akanksha, Nicole

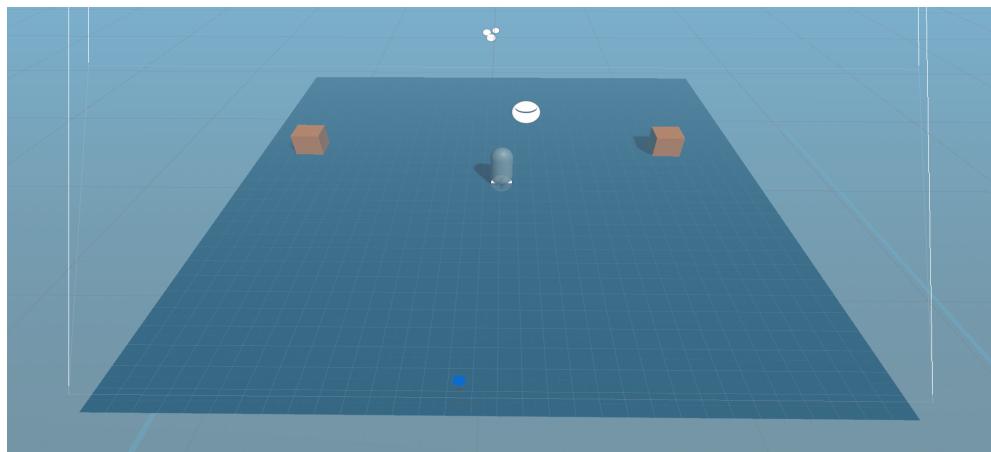
<https://github.com/nicole9925/csci526-group1-prototype>

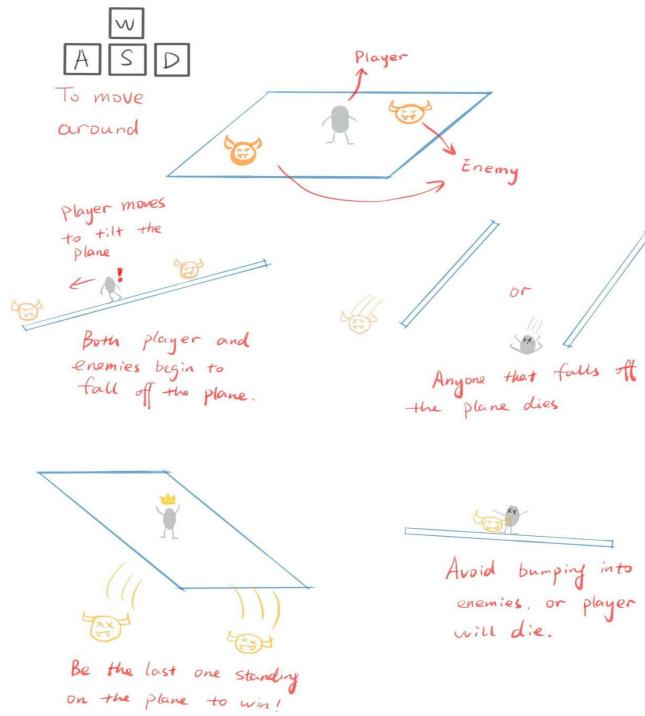




6.2. Group 2: Shravan, Lizzet, Tony

<https://github.com/ShravanK55/CSCI526Prototype>





6.3. Group 3: Kai, Rashi, Aishwarya

WebGL: <https://play.unity.com/mg/other/prototype-78>

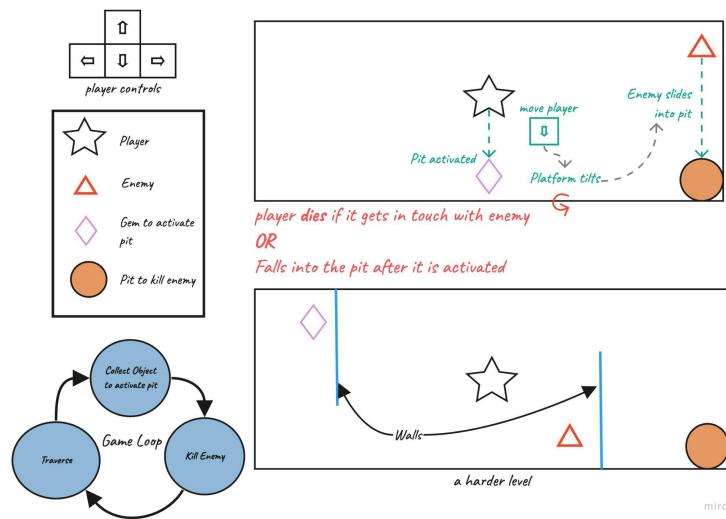


Fig. Prototype with core game mechanic (platform tilt based on player position)

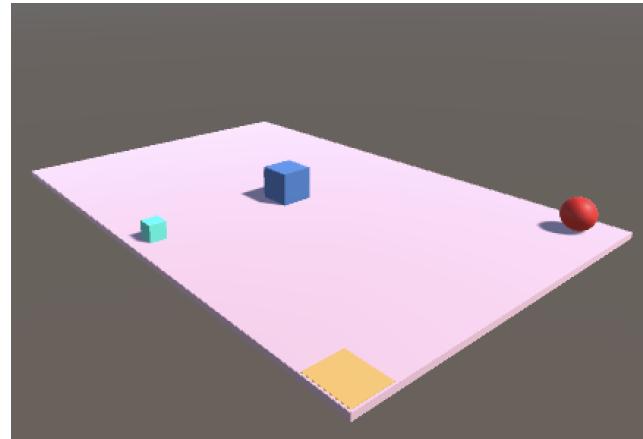


Fig. 3D Visuals of Prototype

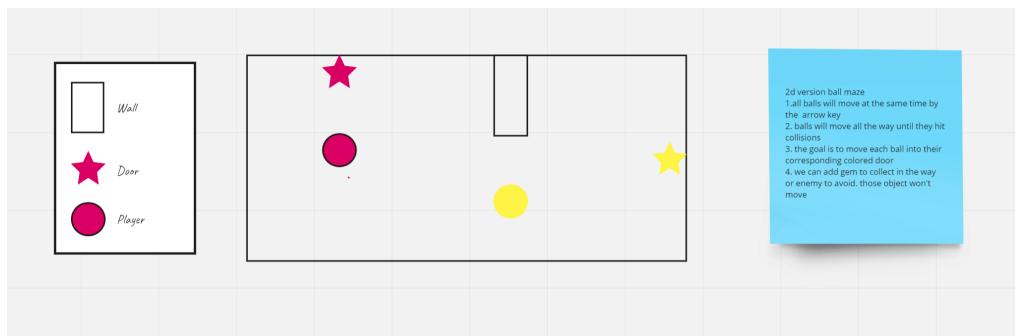


Fig. Prototype with core game mechanic (2d ball maze)

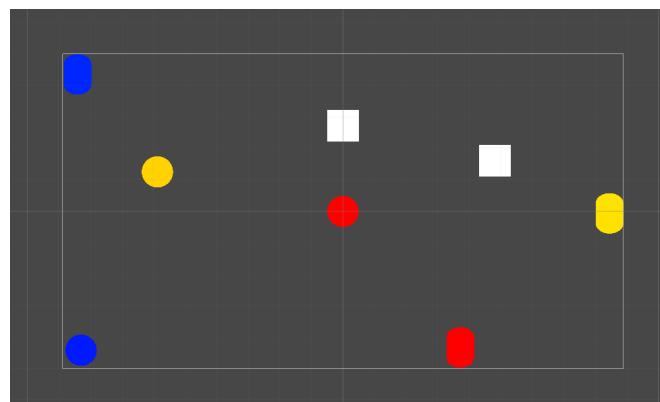


Fig. 2D Visuals of Prototype

7. Weekly Feedback and Tasks Done

7.1. 9/06/22

- Class feedback
 - This week we had our prototypes ready and received feedback from professor Easley
 - We were told that our prototypes are exactly what we mention in the GDD, which was great
 - Prototype 3 had walls, unlike the other two prototypes, and this was great because now there was only one way to kill the enemy (send it through the pit) instead of just sending it over the edge
 - Professor told us that because we had chosen the main point of the game to be about weight and balance, we needed to focus on that and advance that
 - We need to look at the language of our game
 - All the power ups have to deal with that
 - We should pick one prototype and move forward from there
- Tasks done based on feedback
 - We chose prototype #3 and continued to work from there based on class feedback
 - We made the walls visible to constrain the players movement to the platform and make it so that the enemy can only be killed in one way
 - Experimented with limiting the player movement only along certain axes
 - Experimented with adding real physics to the platform movement instead of basing it on the position of the player relative to the center of the platform
 - Created a launchpad feature that will throw any object that tosses it into the air
 - We worked on enemy movement
 - The design for level 1
 - Exploring analytics solutions
 - Following the player
 - Roaming on the platform
 - Publishing on WebGL

7.2. 9/13/22

- Class/playtester feedback
 - Playtester wants a restart button
 - It is immediately apparent that you're in a 3d area with gravity
 - We are on a pool table
 - With the arrow keys, the blue capsule moves, so that is the player
 - As the player moves around the platform, they weigh it down
 - He is drawn to the red object and goes towards it
 - He then notices the health bar and wonders how that connects to player

- He sees the launcher but is confused at its functionality so he goes near it and is launched into the air
- Come up with weird/unique ideas for the game
- Tasks done based on feedback
 - Added a restart button to the level
 - Added particles flying out of the launcher (as if they're being blown away) to show that this area pushes objects upwards
 - A visual component to make the player know the launchpad is a launchpad
 - We changed the platform into tiles, made it larger so that the playtester no longer thinks he's on a pool table
 - Developed a feature that will destroy part of the platform based on a timer
 - Move the launchpad to level 2 instead of level 1 so that the player just understands the physics and point of the game in level 1
 - More work on analytics
 - Create a start menu and connect the levels together
 - Design more levels

7.3. 9/20/22

- Class/playtester feedback
 - The playtester is initially confused about what supposed to do
 - Not immediately clear that the movement of the player affected the tilt of the platform
 - He goes towards the enemy
 - Loses repeatedly because the battery keeps running out/ is confused by the battery
 - Cannot go back to menu once a level has started
 - He could not see the enemy because it was behind a wall
 - We should use non-text guidance to show the player where he can go, constrain things so that there is only one way to do things and the player learns how the game works
 - He likes the multiple platform idea
 - Have them move the same way or different way
 - Have to connect the different levels to get the ball in the hole
 - He likes the tiers because we have done 3d
 - He's more interested in the exploration of the 3d world and how we take the old school maze and explore it in the digital world
 - Come up with new ideas without new mechanics
- Tasks done based on feedback
 - Made walls transparent so that the player can always see the enemy
 - Have less upward force on launchpad
 - Make whatever is launched always visible on the screen so the player doesn't get confused about where it goes
 - Removed the battery connected to the player movement

- This is a physics based game and we want the user to explore their players movement on our platform
- Continued working on enemy ai/ following player
- Continued working on analytics
- Made level 3 game design to have multiple platforms
- Modeled a new gate with a circular shape (same as enemy) and added the same red material to it that the enemy has so that the player knows to send the enemy to the red hole

7.4. 9/27/22

- Class/playtester feedback
 - For our presentation, don't talk like authors
 - Talk about the main point of the game
 - Talk about why you used three axes
 - Think about giving the player choices
 - Think about how different people will want to play your game in different ways
 - Create multiple ways of winning/ playing your game, don't restrict the players
 - For everything good, there needs to be a drawback so the player can choose if they want to risk it for the reward
 - GDD
 - Add feedback you've received every week
 - Write your plan and changes based on this feedback
 - Your game description is too brief
 - Add more details
 - Combine the two analytics sections together
 - Add Analytics methodology
 - Mark the roles on the spreadsheet page
 - Github
 - 7/9 people have commits
 - For the midterm, everyone should commit
 - Everyone should have a commit by the midterm
 - Game feedback
 - Learned to play quickly, mechanics were good
 - They will come back next week and ask us what changes we made
- Tasks done based on feedback
 - Updated game description in GDD
 - Marked the roles for each member in spreadsheet
 - Added weekly feedback and corresponding improvements in GDD
 - Added more levels with options to play in multiple ways to win along with risk/reward for them.
 - 9/9 team members have commits on Github now

7.5. 10/04/22

- Class/playtester feedback

- The difficulty rose a lot in shravans level
 - It was unclear that going on the light blue tile lets you jill the walls
 - Immediately died with the two holes in level 5
 - Level 6 is buggy
 - Reset the enemies if they fall off the side
 - Maybe having two platforms with enemies moving at the same time is too hard
 - Having two or more platform makes it hard to control
 - Level 6 there was no way to jump to the ramp
 - Learning curve for power ups was harder
 - Change the character color
 - He liked the one with the power up the best
- Grade
 - In analytics put implementation notes (weren't there at time of graybox)
 - They're looking at how much is game changing
 - We are doing this
 - They want teams to explore diff game mechanics and address playtest feedback
 - Keep pushing it
 - Burst apart and do drawings of puzzles
 - Don't make decisions by committees
 - Everyone research a puzzle that mutates our original idea
 - Make enemy respawn or try the three star thing for playtesting
- Todos
 - More strong level design
 - Fixing bugs
 - Fix launcher so that it works with analytics (Lizzet)
 - Make it obvious what the power ups do (Breaking-walls power up - Aishwarya)
 - Make shravan's level easier (Shravan)
 - Make it so that the player can slide along the walls (Nicole & Lizzet)
 - Camera movement cinemachine (Lizzet)
 - Level 6 improvements (Rashi)
 - Reset enemies if they fall out of the platform
- Tasks done based on feedback
 - Level 6 bug fixes
 - Enemy respawns if fall off the platform
 - Level 5 improvements
 - Fix for player getting stuck at walls
 - Added Analytics methodology in GDD
 - Added camera movement for better user experience

- Updated power ups to make them more intuitive

7.6. 10/11/22

- Mid-term prep (Tasks done)
 - Added new levels
 - Bug fixes in some levels.
 - Bug fixes in Analytics
 - Updated GDD with list of tutorials
 - Created Midterm Demo Video.

7.7. 10/18/22

- Class/playtester feedback
 - Enjoyable
 - Cant infer a lot, everything
 - Breaking the walls
 - Multitier
 - launchpad
 - Unclear or frustrating
 - Did not realize the enemies would kill you if you touched them
 - Platform hard to control
 - We have a wall creator but not breaker
 - More hints for finishing level
 - Camera angle problems
 - Level 7 with the bridge
 - They didnt realize player couldnt go in the hole
 - UI is different on different screens
 - More tutorials for powerups
 - Later levels too hard
 - Wall breaker needs more time
 - Faster ball movement
 - Didnt know the red ball should go in the hole
 - Wall creation unclear
 - Difficulty increases too fast
 - Improvements
 - More time for powerups
 - Make winning conditions more clear
 - Checkpoint for like halfway through the level
 - Ideas
 - Balls going to different destinations
 - Different sizes of balls
 - Power ups to increase or decrease the size of the player
 - Dynamic obstacles instead of static walls
 - Music
 - People are trying to pass the level fast

- Smaller connected boards instead of one large one with the camera far away
- Add animations
- Timer
- Leadership board
- More levels
- Bugs
 - Player cant move on walls
 - Enemies respawned out of bounds
 - Enemy disappeared in level 4
- What we will do
 - Lizzet
 - Art
 - Clips of tutorials
 - Intuitive powerup things
 - Nicole
 - Art
 - Rashi
 - Camera bugs
 - Kai
 - Wall bug
 - Leaderboard
 - Akanksha
 - Increasing or decreasing mass
 - Mridul
 - Fixing UI
 - Tony
 - Add more level designs between easy and hard levels
 - Maybe combining easier levels
 - Have a level with two platforms in between level with 1 and 3 platform
 - Aishwarya
 - Fixing UI
 - Shravan
 - Faster enemies
 - Enemy respawning
- What we don't have time to do
 - Increasing or decreasing mass

7.8. 11/15/22

- Class/playtester feedback
 - background is too bright
 - consider to make the ball red so it looks more dangerous

- To do
 - Aishwarya: add art to the rest of the levels
 - Akanksha: work with kai to make the leaderboard ui
 - Kai: work with Akanksha to make leaderboard ui
 - Lizzet: make the menu pause and resume button
 - Rashi: work on adding bomb enemies to some levels
 - Nicole: art designs
 - Shravan:
 - Tony: work on enemies dissolving when they reach the pit

7.9. 11/22/22

- To Do
 - Akanksha: add UI to leaderboard,
 - set all enemies speed to 2 : done
 - add glowing red orb to the enemies : done
 - Work on new design for pit : done
 - Kai: finish leaderboard, ranks
 - Lizzet: add wall creation level
 - work on adding low poly stars to sky for new lighting: done
 - Lighting issue, things are really dark (make everything visible)
 - Probably either lighter platform or lighter skybox
 - Changed enemy electricity color: done
 - Potentially add enemy electricity to woody on collision
 - Change texture of woody during powerup
 - Nicole: set all enemies to 2, skybox experiments
 - Rashi: create tutorial videos for features, experiment with wall design
 - Shravan: work on solution so that when the bomb blows up a tile, the enemies and woody fall through (right now theres a large collider underneath). Make collider the same height as the floor for all the levels so that things arent floating
 - Aishwarya: work on music synching
 - Tony: Motion blur for speeding up, fix shader
 - Disable pause menu when we win a level (done)
 - CAN SOMEONE LOOK AT: respawning the enemies relative to the grid, not at one specific place in world space?
 - If we have time
 - Make the walls thin for all the levels, they will have the same design as now but just be thinner. The intractable walls will be the same cube as now
 - If woody touches the hole, we disable the large collider underneath so woody falls, we can do this for enemies too
 - New design for pit for enemies
 - Woody texture color change for wall breaker

8. Mid-Term Improvements

8.1. Your assignment due for next class is the following:

- Identify at least 10 fixes/improvements for your game based on the analytics and feedback forms from midterms and add these to your GDD. Each item should specifically cite analytics graphs and feedback with an explanation of what issue was inferred and why. You should try to leverage as much of your data as possible when determining issues (i.e. try to utilize multiple graphs or feedback responses to see if they point to the same issue).

1. It was not clear that the player could not touch the red balls

Issue: A lot of the feedback on the feedback form mentioned that the players would not know they would die if they touched a red ball. The analytics also indicates that users might not be aware of this fact since the death rate of level 1 is relatively high compared to level 2-5 even though it should be the easiest one in terms of difficulties. We believe that this is because there is no intuition in our game that the red balls are “evil” or “enemies”, which is how we had been thinking of them

Solution: We are working on an electricity effect for the enemies to make them look dangerous so that the player steers clear

2. Fix wall bug that makes it so that players cannot move when touching/standing on the wall

Issue: We received feedback that the players could not move when they were touching/standing on the wall. The analytics also gives us a clue of such an issue. We have jump pads in level 2 and level 5 where users might jump, land on a wall cube and get stuck there. In level 2, among ~360 players started the level, 44 players died before finishing the level and 42 were able to finish it. The rest of them could either be stuck on the wall or quit the game before finishing it. Similar situation in level 5. We have a low passing rate with a low death rate. We conclude that the not walkable bug is affecting the game play by feedback and analytics data.

Solution: Find the bug and fix it

3. The game moved too slowly after initial tries

Issue: We receive feedback that players were becoming frustrated by having to wait for the red balls to move

Solution: Make the balls move faster. We have actually tried doing this, but the physics that we currently have makes it hard to be flexible. Since our enemies are supposed to have no weight and virtually no mass, the balls naturally move slowly. We will have to edit our physics to make this work.

4. Add art/change design

Issue: There are several issues with our art right now. First, it is not intuitive. For example, players do not know that the goal is to get the balls into the hole. Secondly, our walls cover the ball at certain angles

Solution: Create new designs to make game more intuitive and to make the visibility of the ball better

5. Change level difficulty progression

Issue: The game gets too difficult without the proper progression as we can see from our analytics graphs of levels started vs completed. Specifically, we observed that there is a huge difference between the passing rate of level 3-4 vs level 5-7. We have roughly the same number of players who start the game but ~80% less passing rate. Furthermore, from the total player travel distance graph, we observed that for level 5-7, players are actually moving similar distances, which could indicate that they are trying hard but still can't pass those levels. Combining those analytics graphs together, we concluded that the difficulty level between 3-4 vs 5-7 might be too large.

Solution: Introduce powerups earlier in the easier levels, create intermediate levels, and redesign existing levels with this issue in mind

6. Issues with UI

Issue: Based on the feedback from, some players could not see all of the UI elements while they were playing the game. There was also frustration that once we click the menu, there is no resume button and the players would have to restart the level

Solution: Change menu bar to include a resume button and make the UI anchored to the screen based on scale, so that any person could see it no matter their screen resolution

7. Camera Issues

Issue: Some players could not see the entire gameplay area in levels where there were multiple platforms

Solution: Change the way that we are following the player's location so that the platform is always in view

8. Needing more tutorials for the power ups

Issue: A lot of players were frustrated that they didn't know how to use the powerups and we introduced them too quickly.

Solution: We could create more scenes that introduce the power ups in a gentle and simple way

9. Need more reasons to replay the game

Issue: More people would like reasons to replay levels again, and the base game could get repetitive.

Solution: Add in leaderboards to track how quick different players play the game and add in a competition element.

10. Clarity of objectives

Issue: Some players did not understand what to do in order to clear a level.

Solution: Add more indicators and/or telegraphs that indicate what the player can do to finish the level and/or guide the player to the different options that exist in the game.

11. Add checkpoints

Issue: People were getting frustrated because they would have to completely restart the game after considerable progress

Solution: Add checkpoints at each platform

- Identify which improvements you will begin implementing and start working on these. Additionally, determine if there are any improvements that are infeasible to do with the time remaining in the semester. Be prepared to discuss what you have chosen to implement and what you have accomplished so far during next week's class.

1. We will begin working on

Fixing UI issues

Fixing Camera issues

Fixing getting stuck on the wall issues (✓)

Adding/ Creating art assets

Changing the difficulty progression (✓)

Making the powerups more intuitive to use (✓)

Making it obvious that the red balls are enemies and should not be touched (✓)

Basic audio (✓)

2. What is infeasible this semester

Adding more power ups such as increasing or decreasing weight of player

A mode where gravity changes

8.2. Improvement Schedule

Issue	Tasks to Resolve Issue	Deadline	Progress
players cannot move when touching/standing on the wall	find the bug and fix it (Kai)	Week 10	completed
The game moved too slowly	Added a time scale factor to the player to possibly speed up/down the game (Shravan)	Week 11	completed
The game moved too slowly	add speed controller to enemies (Nicole)	Week 12	completed

It was not clear that the player could not touch the red balls	add an electricity effect for the enemies to make them look dangerous so that the player steers clear (Lizzet)	Week 11	completed
The game gets too difficult without the proper progression	create intermediate levels, and redesign existing levels with this issue in mind (Shravan)	Week 11	completed
Needing more tutorials for the power ups	Introduce powerups earlier in the easier levels (Tony)	Week 11	completed
Add art/change design	add tile art design (Rashi)	Week 12	completed
Add art/change design	add game over art design (Aishwarya)	Week 12	completed
Add art/change design	add character art design / woody (Nicole)	Week 12	completed
Add art/change design	add background art design (Nicole)	Week 12	completed
Add art/change design	add music (Nicole)	Week 12	completed
Add art/change design / Needing more tutorials for the power ups	new launchpad design (Lizzet)	Week 12	completed
Add art/change design	Added fade animation to text (aishwarya)	Week 12	completed
Add art/change design	add art design to all levels (Aishwarya, Akanksha)	Week 13	completed
More people would like reasons to replay levels again, and the base game could get repetitive.	Add in leaderboards to track how quick different players play the game and add in a competition element. (Kai)	Week 13	completed
some players could not see all of the UI elements while they were playing the game.	Change menu bar to include a resume button and make the UI anchored to the screen based on scale, so that any person could	Week 13	completed

	see it no matter their screen resolution (Lizzet)		
More people would like reasons to replay levels again, and the base game could get repetitive.	Adding the new feature of bomb enemies to some levels (Rashi)	Week 13	completed
Updating the visuals for the enemies	Had to update the effect of the enemies dying since they no longer fall through the pit (Tony)	Week 13	completed
UI needed to be added for the leaderboard that was implemented	Adding art assets (Akanksha)	Week 14	completed
Feedback from the TA's that the effect from the power up on woody was confusing	Change the effect from the power up on woody	Week 14	Not started
Dark tiles hard to see on screen	Fix the lighting or materials on the grid tiles	Week 14	completed

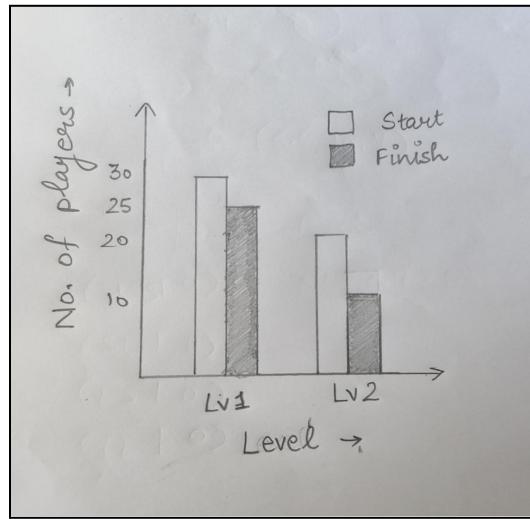
9. Analytics Corner

9.1. Analytics Methodology:

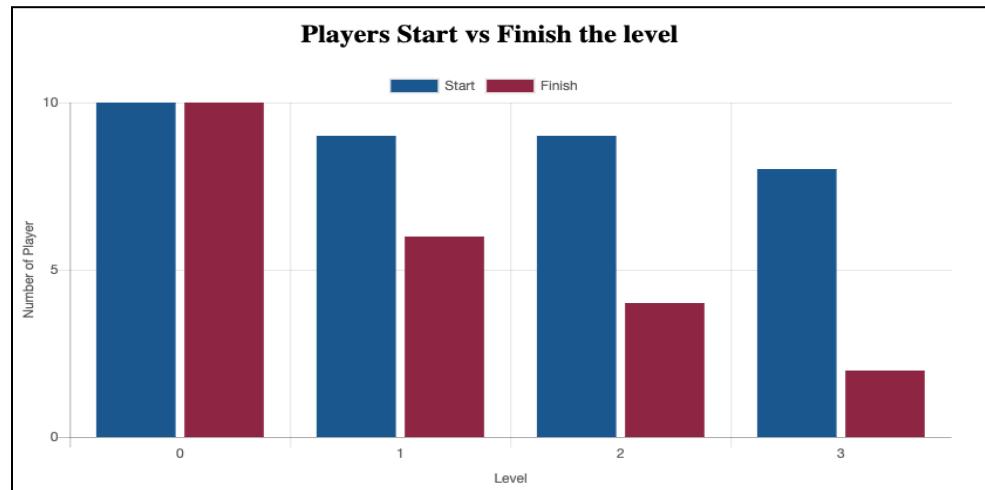
- Various game objects such as the player, the launchpad, the power-ups (making and breaking walls) are used to collect and send required analytics data by making a Get request to the external server.
- This flask server processes the data to database storable format. It is also used to make graphs in a webapp.
- We have used MongoDB as our database, and MongoDB Atlas to interact with the database from flask service.
- The graphs which get generated on WebApp are based on real-time data and Chart js is used to generate these graphs.
- Sample: <https://csci526-quasi-gamers.wl.r.appspot.com/static/home.html>

9.2. Analytics Parameters:

1. ***Number of times players start the level vs finish a level:***

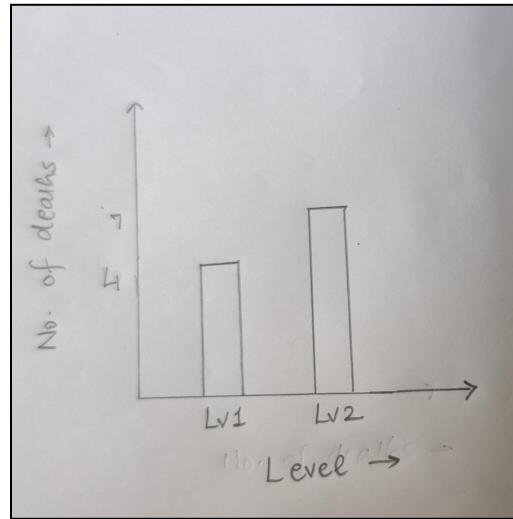


Actual Graph:

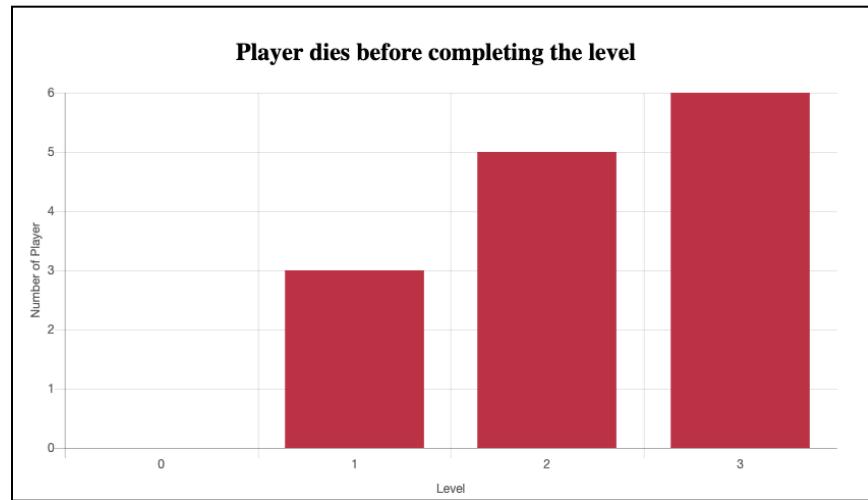


Explanation: More number of players will play level 1 to test the game and there will be some people who may not try level 2. The ratio of players starting vs finishing a level is more in level 1 since it is fairly easier and straightforward than level 2.

2. Number of times a player dies playing before completing a level:

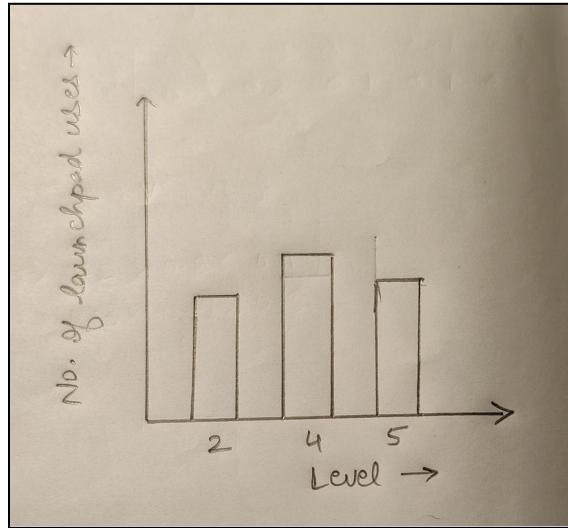


Actual Graph:

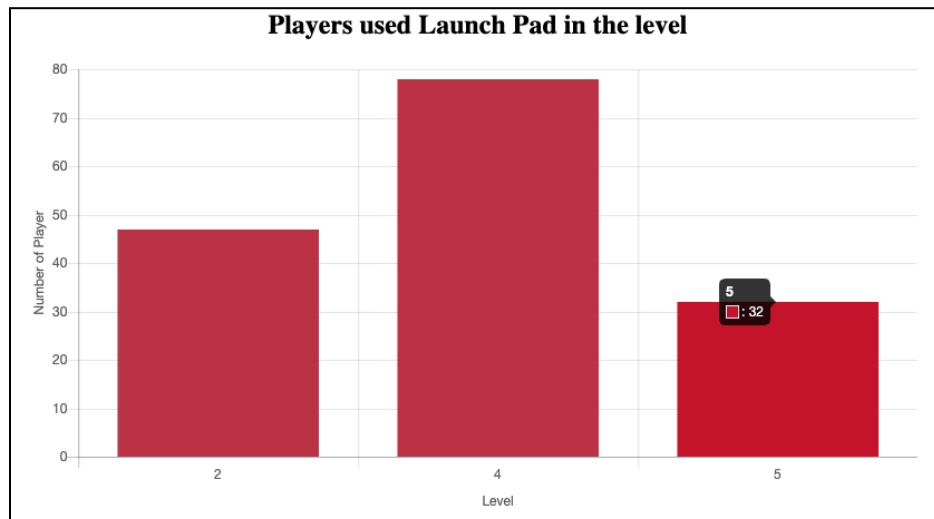


Explanation: Level 2 has higher difficulty so it is obvious that it has more deaths. However the number is not much higher than level 1 since they understand the game in level 1 while trying again and again. When they are on level 2, they just need to adjust to additional features.

3. Number of times launchpad is used by the player in a level:

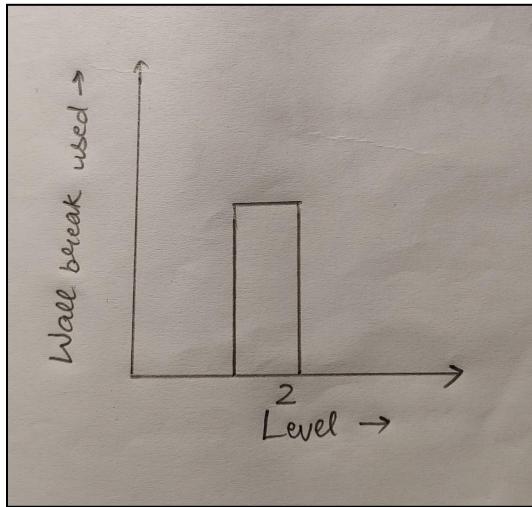


Actual Graph:

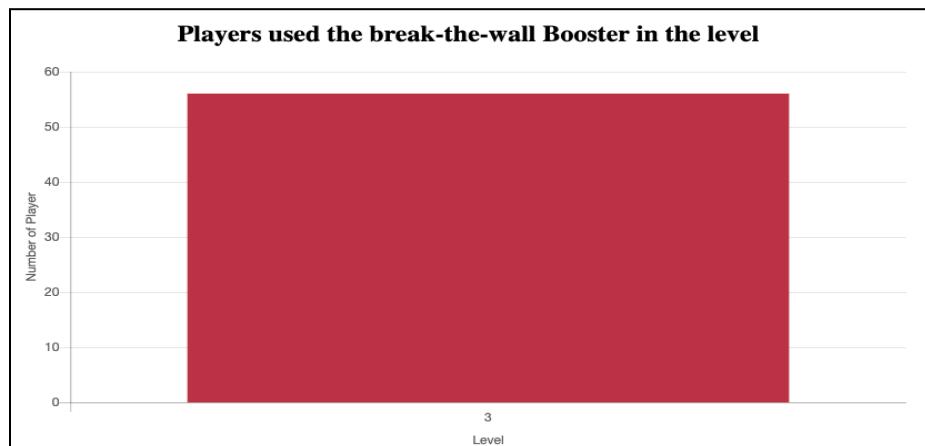


Explanation: Level 2 contains a new feature - the launchpad. The player can use it to propel themselves to another platform, or they can use it to move the enemies around to different areas on the platform. This can work as both an advantage or disadvantage. In level 2, the number of times the launchpad has to be used is less compared to the later levels, which has been demonstrated in the above trends, as seen in level 4 which requires more usage of this feature compared to the earlier levels.

4. Number of times layers use wall breaking powerup in a level:

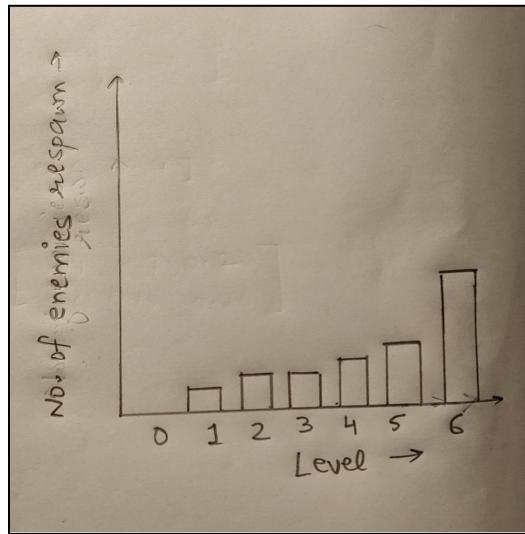


Actual Graph:

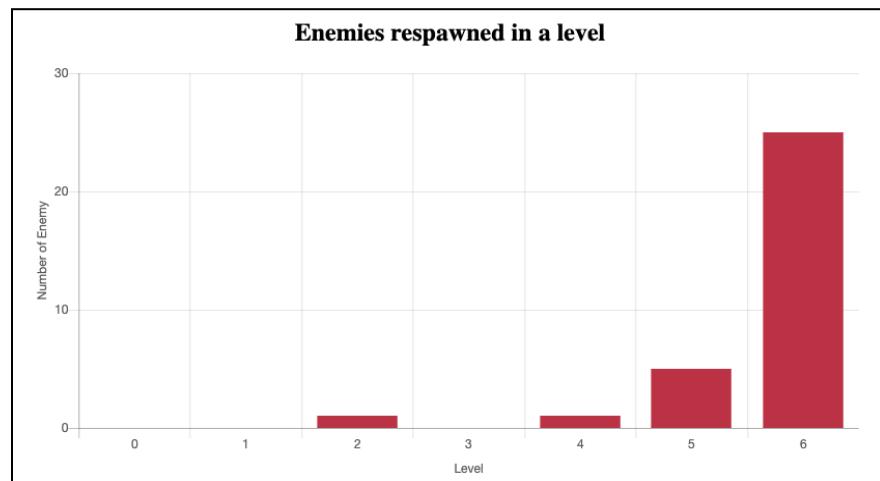


Explanation: This power-up can be used multiple times in a level to break walls in order to access the pit. The player can choose to reuse the power up as many times as they'd like, depending on how many walls they want to break to complete the level. Based on the level designs, certain levels require less usage of this power-up compared to other levels. For level 3, it's mandatory to use this power-up to complete the level since this level is like a tutorial for this power-up, whereas for level 5, the player can choose to complete the level with/without using this power up.

5. Number of enemy respawns in a level:

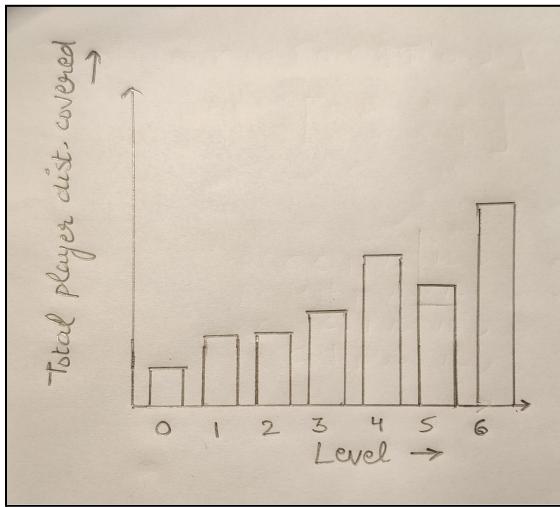


Actual Graph:

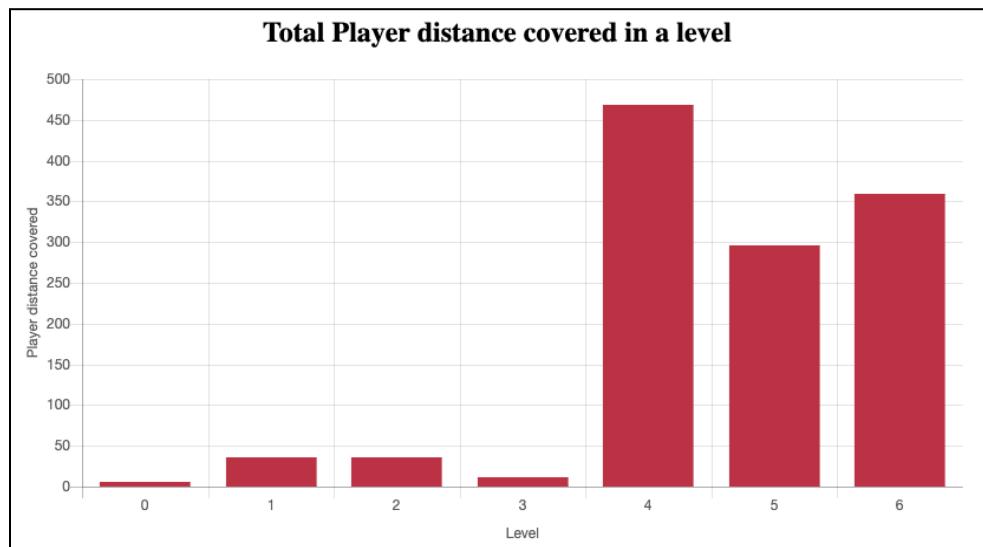


Explanation: When the enemies fall off the platform (and not in the pit) they are respawned. As the levels get more complicated, the enemies tend to fall off the platform more easily, which is why the earlier levels will have lower respawn rates than the later levels. Multiple floating platforms increase the chance for enemies to fall off from the platforms.

6. Total distance traveled by players in a level:



Actual Graph:

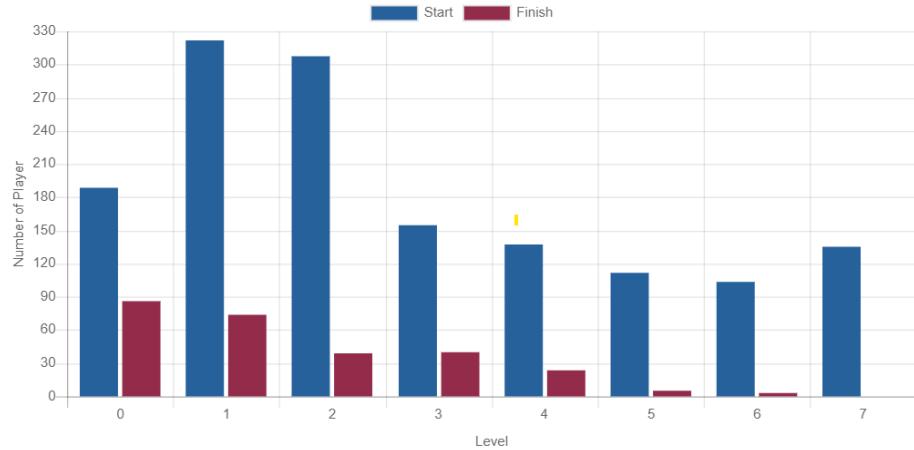


Explanation: Each level requires the player to move around to make the enemies fall in the pit. The levels with multiple platforms/larger platforms will require the player to traverse a larger distance in order to complete the level. We can use this metric to track the amount a player explores each level.

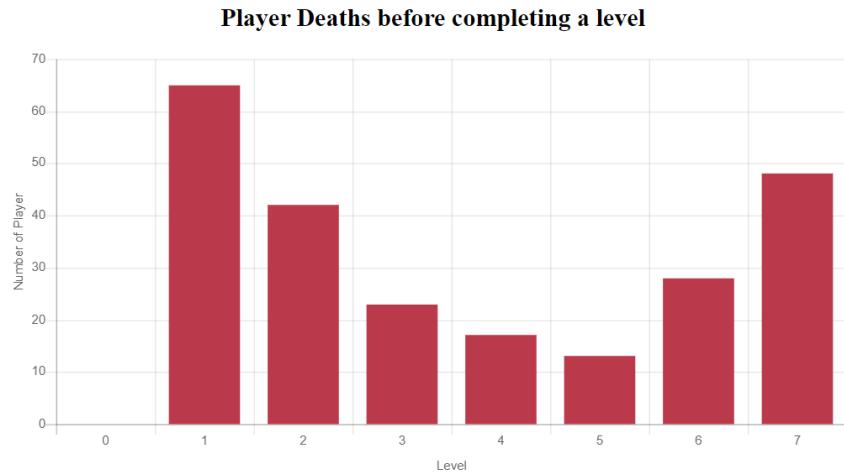
9.3. Mid-Term Analytics

1. Player Start vs Finish Level

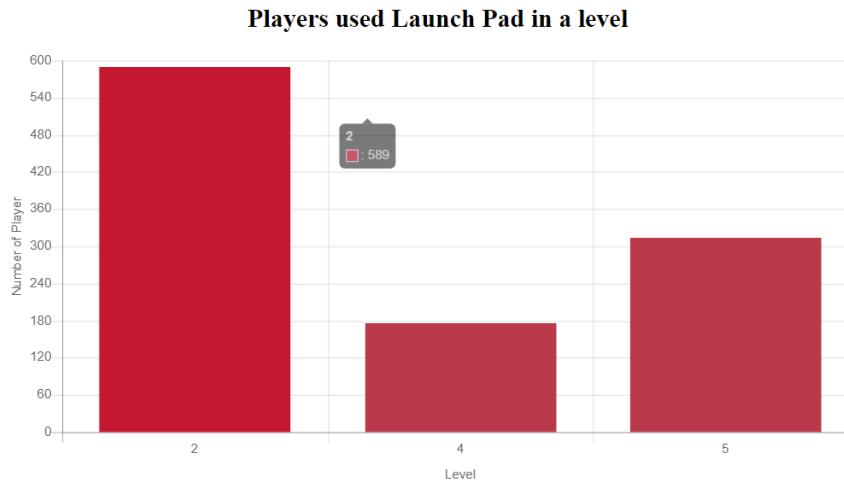
Players Start vs Finish a level



2. Player Deaths before completing a level

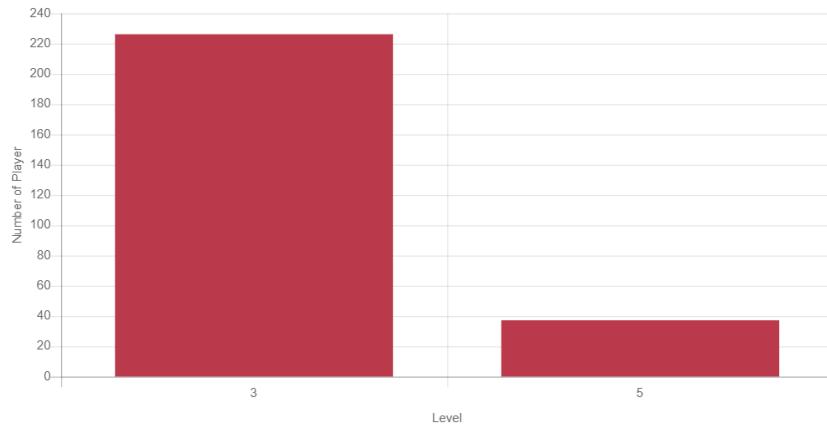


3. Players Used Launchpad in a level



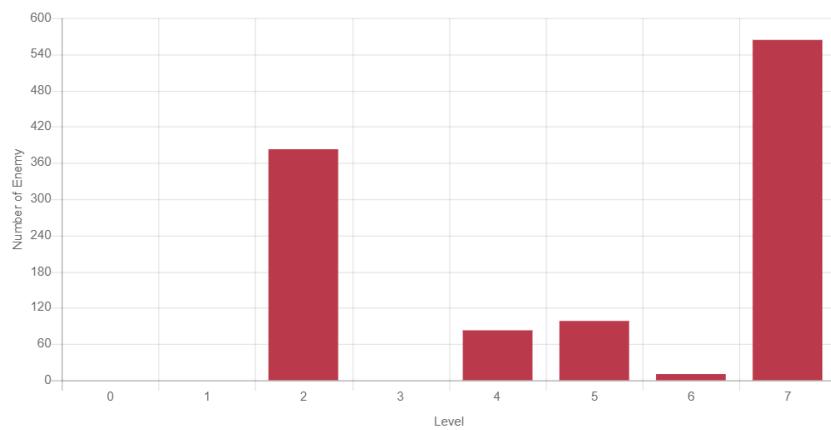
4. Players used the Break-the-Wall Booster in a level

Players used the break-the-wall Booster in a level



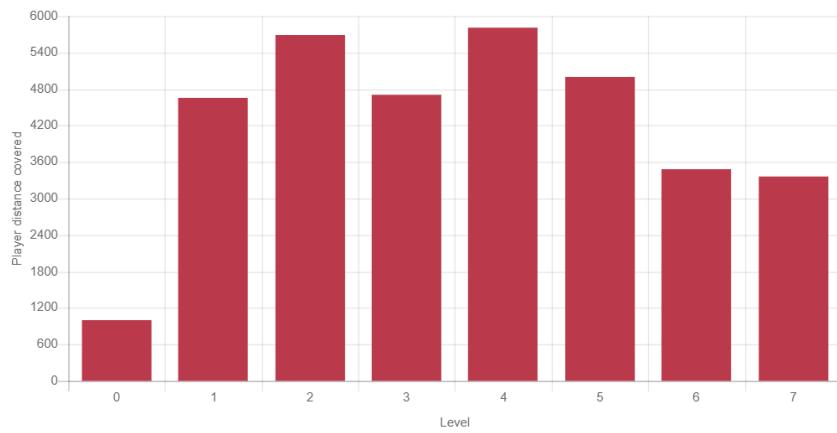
5. Enemies respawned in a level

Enemies respawned in a level



6. Total Player distance covered in a level

Total Player distance covered in a level



10. List of Tutorials Used

1. [Game Development for Beginners - Unity Course](#)
2. [Create and Publish WebGL Builds](#)
3. [How to Blend/Switch Between Cinemachine Cameras - Unity Tutorial](#)
4. [FULL 3D ENEMY AI in 6 MINUTES! || Unity Tutorial](#)
5. [How To Make Basic Enemy Ai Movement Unity3D 2021](#)
6. [How to use Unity NavMesh Pathfinding!](#)
7. [3D Tilemap in Unity](#)
8. [Particle System in Unity](#)
9. [Customizing gravity](#)
10. [Dissolve Effect in Shader Graph and URP](#)

11. Audio Assets

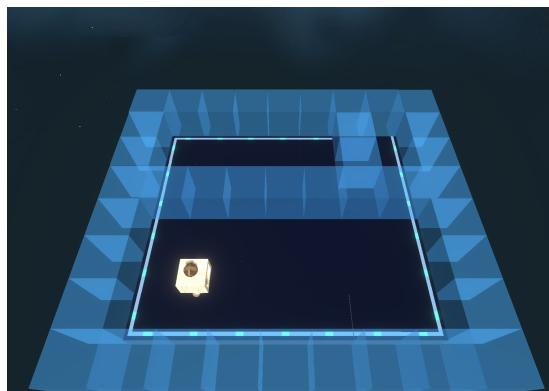
1. <https://pixabay.com/sound-effects/sci-fi-survival-dreamscape-6319/>
2. <https://www.youtube.com/watch?v=1ubmHDrlNpo>

12. In-Game Art

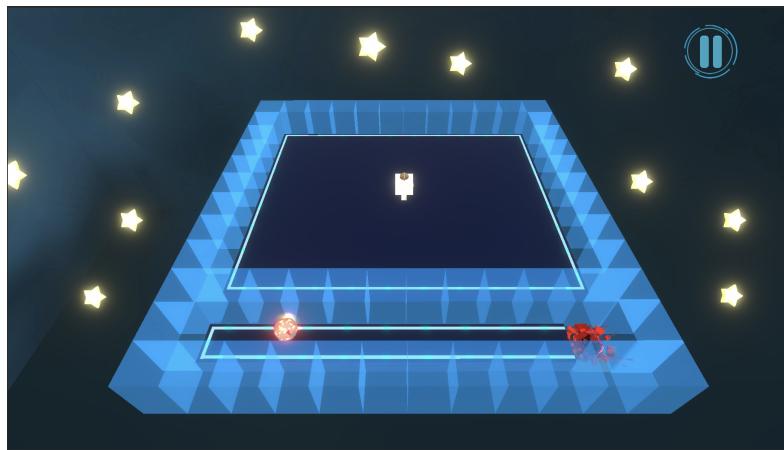
12.1. Main Character - Woody:



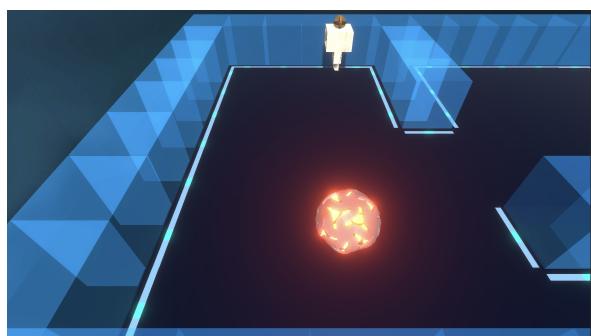
12.2. Platform



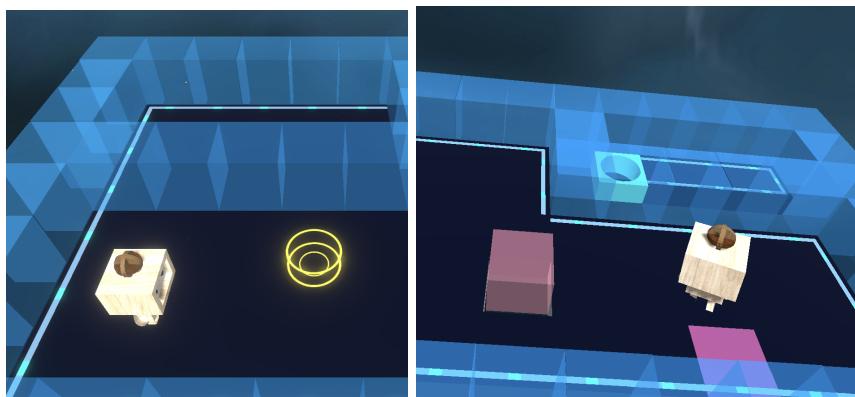
12.3. Environment

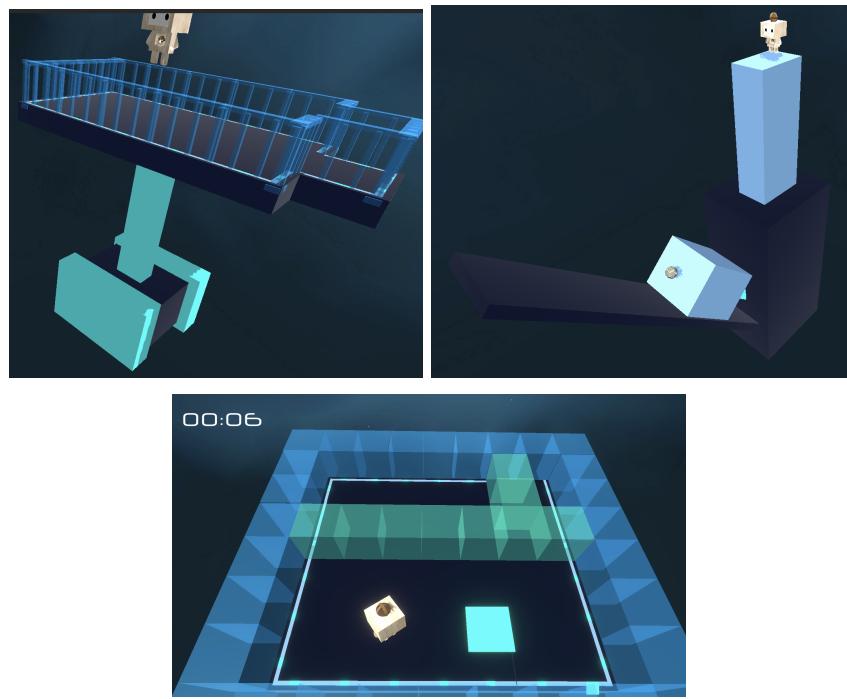


12.4. Enemies



12.5. PowerUps/Features





12.6. User Interface

