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GAM250

Team Luminosity

Game KnightLight

Playtest Report 1

New Movement Playtest

Subject

KnightLight's new movement

Executive Summary

As we start a new semester and after having refactored where our game is going, a new movement has been prototyped to add a new movement mechanic and different movement values for both main characters. Additionally, a linear tutorial prototype was made to teach the player the new mechanics we're planning on implementing to the game. The main purpose of this research focuses on movement and mechanics with some focus on level design as well, but some additional questions were made regarding game feel and brief narrative. Some of the main observations were how players couldn't tell the hazard tiles were dangerous, the movement while being launched is too restrictive as other games let you move midair, the light form having more protagonism than the knight, and the suggestion of adding a trajectory line signifier. In addition to a bug on overlapping colliders which could get the player stuck after being launched. After analyzing these observations and many others, we reached multiple conclusions and recommendations such as the tutorial needing longer knight sections as it didn't do much other than enable light. And our main takeaway being that it's better if we start as light at the beginning of the game and we find the knight during the tutorial, like an ability. This would allow us to properly introduce all the basic movement and mechanics including the hazard tiles at the start, as well as make the abilities unlockable creating a sense of discovery and make abilities like the launch itself unlockable later in the game and less exploitable at the start of it.

Purpose

“What changes should we make to KnightLight’s new movement and its mechanics?”

The purpose of this playtest was to see how playtesters react to our new movement prototype. Since not much thought was put into last semester’s player movement, we decided to make a new one that feels more responsive to player’s inputs by making the jump height dependent on how long you keep the jump key pressed while clamping this variable between a minimum and a maximum jump height value. In addition to a new movement mechanic where the player character leaves their armor and can launch themselves in whichever direction they’re aiming to with their mice, and then they can recall back to their armor by pressing the same key they used for launching. These different player entities have different movement values that balance their abilities, Knight (blue square) has a lower jump height but they’re immune to hazards, while Light (yellow circle) has a greater jump height and can be launched to higher platforms.

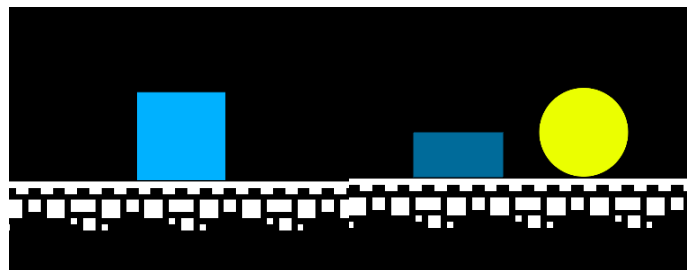
Additional Playtesting

In addition to movement, some level and UX elements were analyzed, too. Elements such as tooltips which were simple text in the level’s background which explained how to use basic abilities as the player progressed through the level. A new hazard tile replaced the spikes due to discrepancies between their height and other terrain tiles’ height. On top of this, some questions were asked during the feedback and debriefing section of the playtest. Questions like what kind of game we’re making based on the prototype’s feel, or what happens to the player character when you use the “switch” ability were asked to get more playtester input on the game’s user experience and narrative aspects. Additionally, some observations were made on the level design and its tutorialization through challenges.

The Build

The Unity build consists of the player controller with the changes and additions explained earlier. The player can use the 'A' and 'D' keys to move left and right, respectively, the spacebar to jump, and the 'S' key to fall through one-way platforms. Regarding the "switching" ability, the player can tap the 'W' to switch immediately between forms, or they can hold it to aim with their mouse where the light form is being thrown and release it to launch it. When the light form is outside the knight form, the player can press 'W' to go back into the knight form. This will make the light form move back towards the spot where they left the knight form, avoiding all damage in the way.

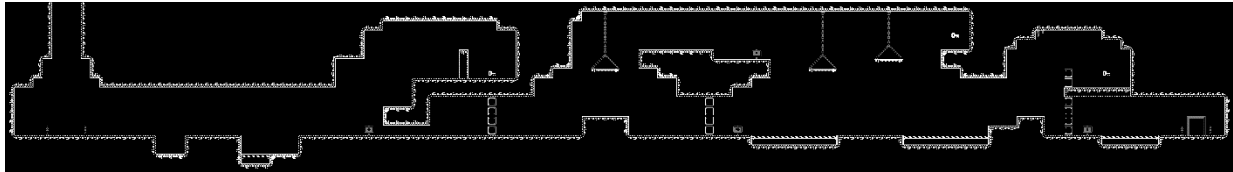
No sprites or animations were implemented for the knight and light forms, so placeholder shapes and colors were used to signify their dissimilarity, with the knight being a blue square which gets darker and shorter when switching to the light form.



Knight, and Light next to Knight after switching

The tilemap consists of a brief explanation of basic movement controls (move and jump), and three different challenges where the main goal is to get a key to unlock the door and progress to the next section. The first challenge focuses on the switching ability requiring the player to turn into the light form and makes them notice the jump height difference between both forms, including a short melody of three simple light max height jumps with the key at the end of these. The second challenge teaches the player how to launch the light form to a high one-way platform. Which leads to another jumping challenge with the player's life at stake now as if they fail a jump, they'll fall to the hazardous terrain at the bottom. Once the player reaches the key, a tooltip becomes visible explaining how the player can recall back to the knight instead of having to backtrack. Once they're in knight form, the player continues to the right and walks on the hazards they wouldn't have been able to touch before as the light form because the knight is immune to hazards. Finally, on the third challenge, the player must launch the light form into a small pocket in the ceiling to reach a key

and unlock the door blocking the path. This challenge was designed to combine the launching ability with a jump unlike the second challenge where no jump was required. Once the path is opened, a hazard can be found on the ground in the path to the exit door, so the player must remember to go back into their knight form to go past this hazard and finish the level.



Movement Playtest Tilemap

Method of testing

This playtest session was structured similarly to last semester, where playtesters play through a Unity build of our game while the researcher takes notes on their behavior and makes observations regarding the subject's interaction with the game. Then the subjects get interviewed with questions regarding their experience by the researcher, questions already mentioned in the additional playtesting section. Finally, they are asked to share their feedback on the game by asking them what they liked and disliked about the experience.

Methodology

All three of the playtest sessions were done online over Discord with playtesters streaming what they saw on screen using the screen share feature. These were all performed on the same date: January 21st, 2024. The average playtest session was about 15.6 minutes including gameplay, feedback sharing, and debriefing. All three participants playtested online were non-DigiPen college students around the age of 21. Two of the subjects' relationship with the researcher is being regular subjects for playtesting, while the other one is the researcher's sibling. No ethical considerations to be made regarding the experience. All playtesters consented to having their data collected and analyzed to form recommendations for our game design.

Participants

Playtester A

Name: Carlos Callupe

Identity: Non-DigiPen Film and Media Studies Student

Place: Discord

Date: 01/21/24

Session length: 22 minutes

First Time User: Yes

Playtester B

Name: Samuel Gadbois

Identity: Non-DigiPen Art Student

Place: Discord

Date: 01/21/24

Session length: 12 minutes

First Time User: Yes

Playtester C

Name: Angel Bautista

Identity: Non-DigiPen Student

Place: Discord

Date: 01/21/24

Session length: 13 minutes

First Time User: Yes

Limitations

While choosing the sample, regular playtesters were chosen due to convenience and availability, meaning all of them were familiar with the playtesting process. Another consideration made while picking subjects was making sure their experience in games was varied and not limited to one single genre to avoid biases between experiences and have a broader range of potential ideas the playtesters can share. The only limitations to consider is the relationship between the researcher and one of the subjects who was the researcher's sibling which might create some bias and make them avoid making comments that might be too critical of the game's design. Additionally, one downside of choosing to perform these playtest sessions exclusively online is that the researcher cannot see playtesters' physical reactions to the game, such as facial expressions in response to game stimuli. However, this information was not considered relevant in this research.

Observations

Participant A

The first thing pointed out by this participant was how the cube (the player character), fell into this kind of cave. Once he learned the basic movement and jumping, he ran into the hazard tile, but since he was the knight, he didn't receive any damage and pointed out the difference between the ground and hazard tiles, and how it might be something he unlocks later. After reaching the first challenge and switching to the light form, he didn't immediately know the light form had a higher jump value so he tried to jump as the knight then rapidly switch to light to try and reach the platform using the small boost the player gets when they switch but he couldn't. Soon, he found out you can jump higher with the light form and collected the key making his way to the following challenge. In the second challenge where he was learning how to launch the light form, he wasn't using his mouse so he wasn't ready to aim and thought the launching ability had a set trajectory but shortly after he realized you can move your mouse around the player to aim. Once he reached the higher level, he ignored the recall tooltip and fell on his way back. After restarting the scene, he tested the hazard floor at the beginning of the level to see whether it was bugged or that tile did in fact only kill the light form. While they were replaying the sections he had already completed but restarted due to him dying, he pointed out the floor collision between environment floor and hazard floor was faulty both in horizontal and vertical sections as in the last section, in the launching part, you can get stuck between the colliders because the door and environment colliders overlap and the light form cannot be moved midair while falling. At the end, he did go back into the knight before walking on the hazard ground and finished the level.

Some of the feedback shared by the playtester was how the tutorialization of the level was not too difficult to understand, but the launching mechanic was what threw him off the most as the trajectory is weird and hard to predict, especially in the third challenge. Another complaint regarding the launching mechanic was how the player isn't able to move midair as they fall because it feels too restrictive and other games with similar mechanics do let you have free movement midair and even after hitting a wall the player just falls and isn't able to move. Regarding the hazard tiles replacing the spikes, he said they didn't make sense, that it wasn't intuitive to understand they were hazards, and that they look more like platforms, specifically mentioning certain Super Mario Bros tile. When asked about his opinion on the recall mechanic, he said it's

interesting that you cannot finish a level with just the ball. This led him into sharing a critique of the narrative and mentioned how the ball has more protagonism than the cube as it doesn't do much and that it'd be better if we implemented more mechanics for the knight. Regarding the level design, he mentioned it had a good scale, but it felt too linear, though it was understandable as it was a tutorial test map. He added that if we do plan to make a bigger map, we'd need to make the time the recall takes faster as longer distances between the knight and the light take longer times. When asked what he thought what kind of game this is going to be, he said it'll be a platformer with metroidvania aspects as these usually have bigger maps. And finally, when he was asked what happens to the player character when he "switches", he said it was some kind of soul leaving the cube which is why it's lighter and it jumps higher.

Participant B

This participant pointed out the contrast between the environment and the player character which was a simple cube. When they tried to jump, they accidentally launched and rapidly recalled back to the knight and mentioned how our old game used the 'W' key for jumping. On the introduction, they pointed out the hazard tile but didn't know what it was for yet. On the first challenge, he said the switch ability was cool but even then, they used the launch ability to reach the second key. While trying to perform the launch, they got stuck on the upper corner of a platform because the game didn't recognize the light form had touched the ground and it was still falling in the corner.

On the second challenge, they mentioned something I wasn't aware of which is that they were using their laptop's touchpad to aim instead of their mouse. One small problem I noticed was with the one-way platform collisions and their offset needing to be adjusted. As they made it through the platforming section, they accidentally pressed 'W' before getting the key and recalled back, having to try to launch again. And finally, on the last challenge, they got the same bug where the overlapping colliders got the light stuck.

When asked to share feedback, they said the movement is ok but it's annoying that launching doesn't work consistently and that we should add lines that indicate the trajectory like Angry Birds does. Regarding the hazard tiles, they said they were funny because it made no sense that the yellow ball was dying. After being asked what happens to the player character when they switch, they mentioned the cube dies and its body falls, while its soul comes out of him, and we you recall the cube comes back from the dead. Finally, one suggestion they gave was how the cube doesn't die and that we could make voids where the knight can fall and die.

Participant C

This playtester's first thought after loading in the game and moving around was **how good the camera follow was**. When he walked up to the hazard floor, he asked what it was then continued to the first challenge where he learned how to switch and grabbed the first key. On the second challenge, **he had some trouble trying to aim to the platform directly above him** but ended up making it. On the platforming part, he fell to the pit and when he tried to walk on the hazard floor, he died. **He then learned that touching the hazard floor as the light form kills him**. Once he made it back to the platforming section, he saw the recall tooltip and thought **it was cool how you fly back to the cube**. When he got to the third challenge, he ran into the same bug where overlapping colliders got the light form stuck on the wall. Once he realized he needed more elevation to accurately launch the light form into the pocket, **he was struggling trying to hold the 'W' key, pressing the spacebar, and aiming with the mouse**, but he made it to the exit door in the end.

When questioned what he thought of **the hazard tiles, he said he thought they were decorations** and that's why he died earlier. Regarding what game he thought this would be, he said it was just a platformer and that he was expecting items to collect. Finally, he was asked what happens when the player character uses the switching ability and he said **he thought it was an angel coming out of the cube to help him complete a section**.

Some interesting feedback was shared by this playtester. One of their observations was **how smooth the horizontal movement was** he thought the cube was on a skateboard. He even recommended a platformer game that resembled his expectations. Finally, he also mentioned **there was no menu to leave the game since a pause menu hasn't been implemented yet**.

Conclusions

After making all these observations based on the playtesters' experience, these are the main takeaways:

- Players cannot tell the difference between the hazard tile and the regular environment tiles.
- Players need to be shown the difference between knight and light's jump height clearly.
- Players need to be told a mouse is recommended to enjoy the experience.
- Players don't like the bug where the colliders overlap.
- Players think the launching mechanic's trajectory is hard to predict.
- Players think light's movement midair is too restrictive.
- Players think the hazard tile does not look like a hazard.
- Players think it's interesting that you cannot finish a level with only one of the player entities.
- Players think light has more protagonism than knight.
- Players think the level design was linear enough for a tutorial.
- Players think recall should be faster on longer distances.
- Players think light is knight's soul leaving its body.
- Players think the placeholder sprites don't fit the environment.
- Players prefer to use the launch ability over the regular switch ability.
- The one-way platforms collision needs adjustments.
- Players want signifiers for the launching ability's trajectory.
- Players think knight should be able to die.
- Players like the smooth camera follow.
- Players have trouble aiming directly above them.
- Players like the recall animation.
- Players struggle when having to perform multiple inputs at once.
- Players think the hazard tiles are decorations.
- Players like how smooth the horizontal movement is.
- Players want a pause menu where they can exit the game.

Recommendations

Based on the conclusions, the following solutions or features can be implemented to the custom engine.

- We should make more platforming sections for knight.
- We should tell players a mouse if recommended to play.
- We should find a way to stop collider overlapping.
- We should make the launching mechanic trajectory more predictable and easier to learn.
- We should let the player move while being launched.
- We should find a hazard tile that looks more dangerous.
- We must make sure all levels require both knight and light's mechanics to be completed.
- We should have longer knight sections.
- We should have less linear level layouts on our actual levels.
- We should make the recall duration shorter when longer distances are covered.
- We should continue with the narrative where light goes inside knight and leaves when a section requires them.
- We should replace the placeholder sprites with actual sprites for knight and light.
- We should make the launch ability an ability you unlock later in the game, or not always available.
- We should adjust the one-way platforms collision so the player can easily go through them.
- We should add a trajectory line that indicates where light is being launched.
- We should make section where knight can die like cliffs or another type of hazard.
- We should keep similar values when moving our prototype camera to the custom engine.
- We should add set angles where light is being launched.
- We should make the recall animation more impactful.
- We should not overwhelm the player with too many controls they can perform at once.
- We should find a new hazard tile that doesn't look like decorations.
- We should move our player movement prototype to the custom engine.
- We should add a pause menu.