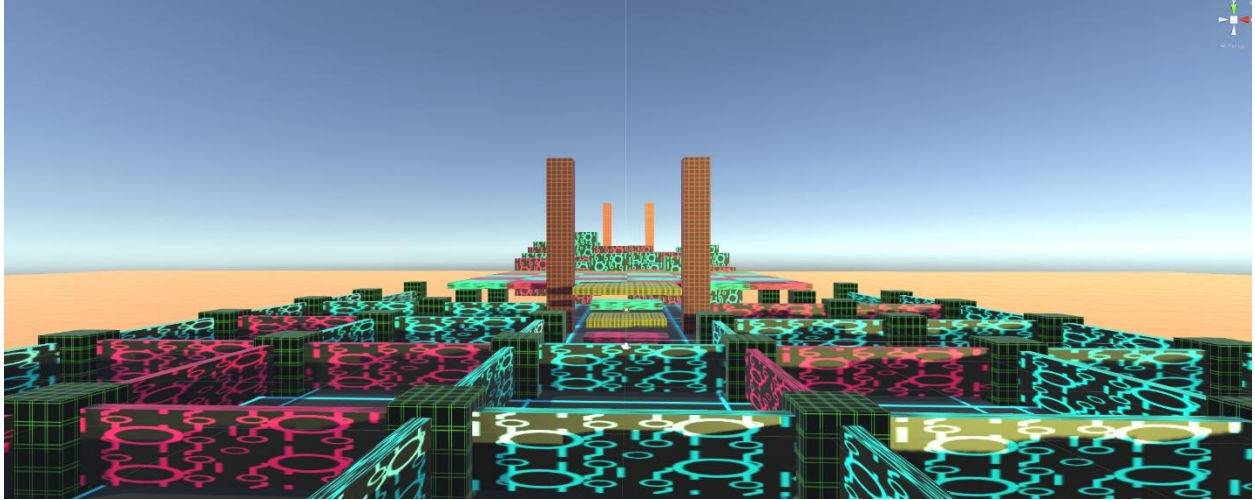


Game Design Doc



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355132

EGD2 – Role Specific Training II – Game Design

Odette Jansen

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Problem Statement:

My problem statement was finding a way to flip the first-person shooter genre on its head. Finding a way to create a new genre and creating a game where problem solving was combined with aim based shooting.

I enjoy watching video's online, and have been watching Mark Brown's "Game Maker's Toolkit", a video series on YouTube detailing the game mechanics in various games. As his game of the year for 2017, he doesn't choose Zelda: Breath of the Wild, Mario, or Horizon: Zero Dawn, or any other triple AAA game, instead choosing the game Snake Pass.

He states that it is one of the most innovative games. In the game snake pass you control a snake in a platforming game, but are unable to do what most platforming heroes can do, namely you cannot jump. He goes on to say, "...Because sometimes taking a mechanic away can lead to all sorts of interesting consequences. Designers can find fertile ground by asking themselves, what does it mean for a shooter where you can't shoot, a driving game where you can't brake? Or a platformer where you can't jump?" (Mark Brown, 2017)

Using this same thought process, I wanted to create a game where the action of shooting also causes other things to happen in-game, where you are no longer merely shooting a bullet when you press the left mouse button but the game changes when and if you shoot. Creating a state where the player must always ponder what the consequences are or could be when he or she starts shooting in the position or area they are in. I want the player to be curious about what new mechanics will be introduced or recurring themes in the game.

I feel that this is a user experience that doesn't exist currently. Something that would come close would be the Portal series from Valve, but there are distinct differences. To test if something like this fun, I will create a prototype in Unity, and observe people playing the prototype. This will show me how they play the game, if they are enjoying themselves, where they get stuck, and will allow me to ask them questions about what they think and feel about the prototype.

I will be able to let them test using my laptop and mouse, using my Unity builds, a testing protocol will serve as a checklist to ensure that the prototype succeeds in various aspects.

Proposed Design:

I will create a prototype using one mechanic to see if this concept should be developed further. I need to create a 3D space in unity in which a player can move through, code to allow the player to shoot, and things that shift into or out of being when the player shoots. As I want to experiment with scaffolding this would be one of the earlier levels, in which the player would be given the time to adjust to the movement, jumping and the idea that things will change in-game when the player shoots.

The first mechanic is then to shift objects in and out of being when the player shoots. This is a relatively simple system to grasp as a player but gives so many options to implement as a designer. Walls that were previously cover that will disappear when the player returns fire to enemies, or the platforms that the player is standing on to disappear. As this is a prototype I will however focus solely on testing the core mechanic.

I will use level design ideologies from Koichi Hayashida, who likens his levels to four panel comics in manga, "It's very similar to a narrative structure that you find in four-panel comics. Something that's talked a lot about in Japanese manga, for example, is a phrase, kishoutenketsu, where you introduce a concept, and then in the next panel you develop the idea a little bit more; in the third panel there's something of a change-up, and then in the fourth panel you have your conclusion.

Why two levels?

I decided it was necessary to have two distinct levels as a prototype, because of the intended user experience. I want levels to have a distinct mechanic or a mix of previously introduced mechanics, leading to new and interesting problems. I believe this will keep the game interesting and fun throughout its duration and will add to the replay-ability as players increase their mastery of the games mechanics.

As such I needed to playtest if players were okay with the switch between level mechanics.

Level 01

Following this concept, I start the player in a space where there is no danger, and she or he can get acquainted to the controls, allowing them to realize they are boxed in by colored walls, and to discover that some walls will disappear when they press the left mouse button.

I will try and lead the players forward using landmarks in the distance which should grab the players attention.

To create emergent gameplay, I will design a maze around the starting area from which slower players can navigate through but providing means to the players that feel more comfortable in first person shooters, to progress faster by enabling them to jump onto the wall using smaller blocks that will shift in and out of being next to the walls and columns. As seen in figure 5.

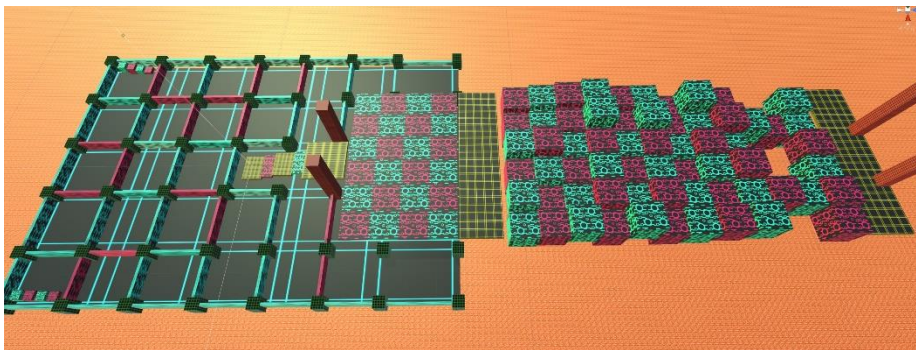


Figure 1 Level 01

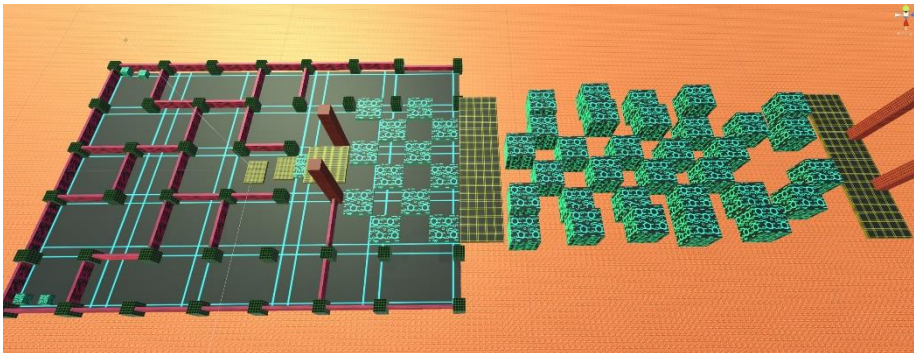


Figure 2 Level 01 Blue blocks

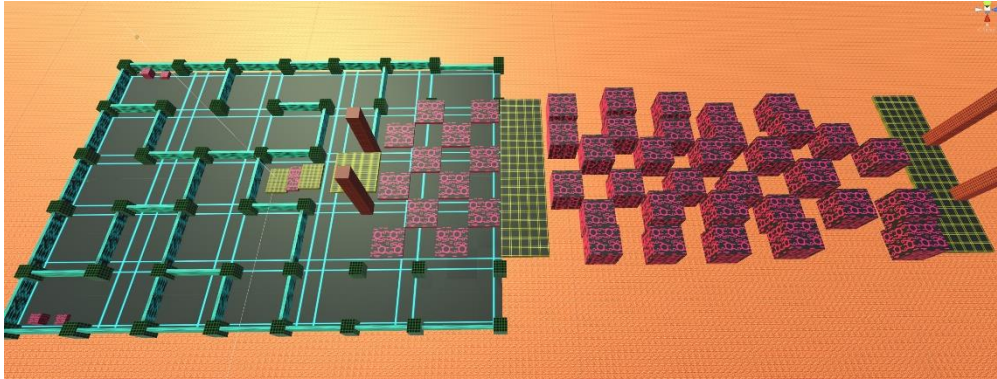


Figure 3 Level 1 Red blocks

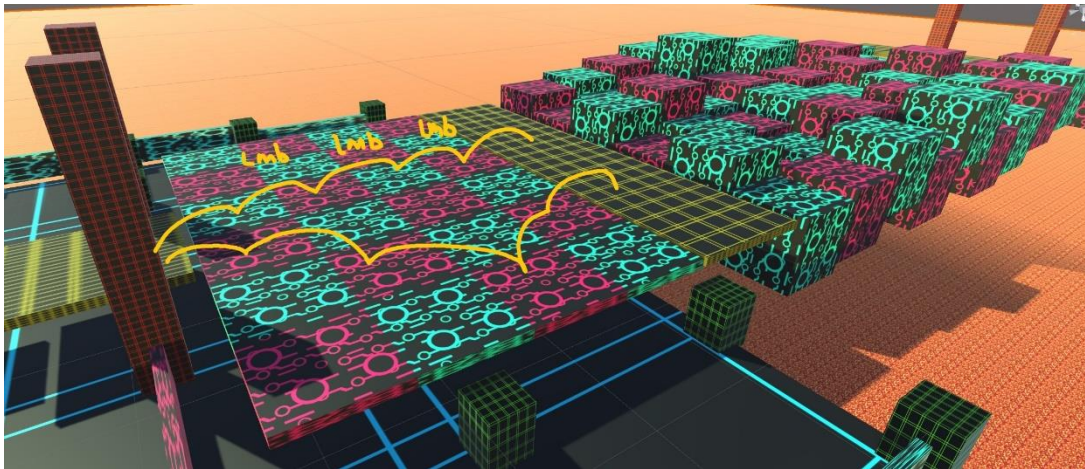


Figure 4 Example of player choice

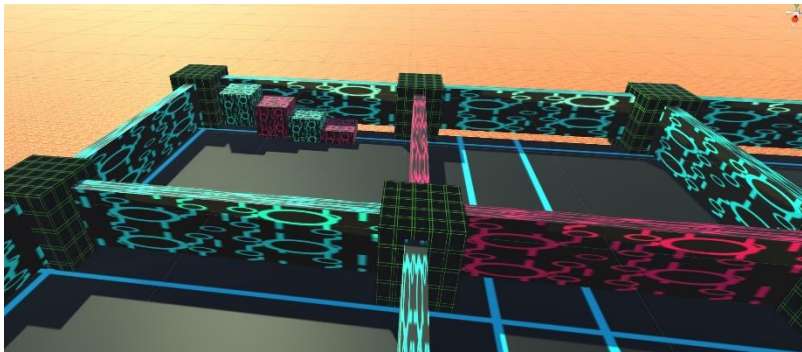


Figure 5 A way to jump onto the walls

Level 02:

In this level I wanted to explore blocks that turn on and off when you shoot at them directly, and combining this with turrets that can kill you.

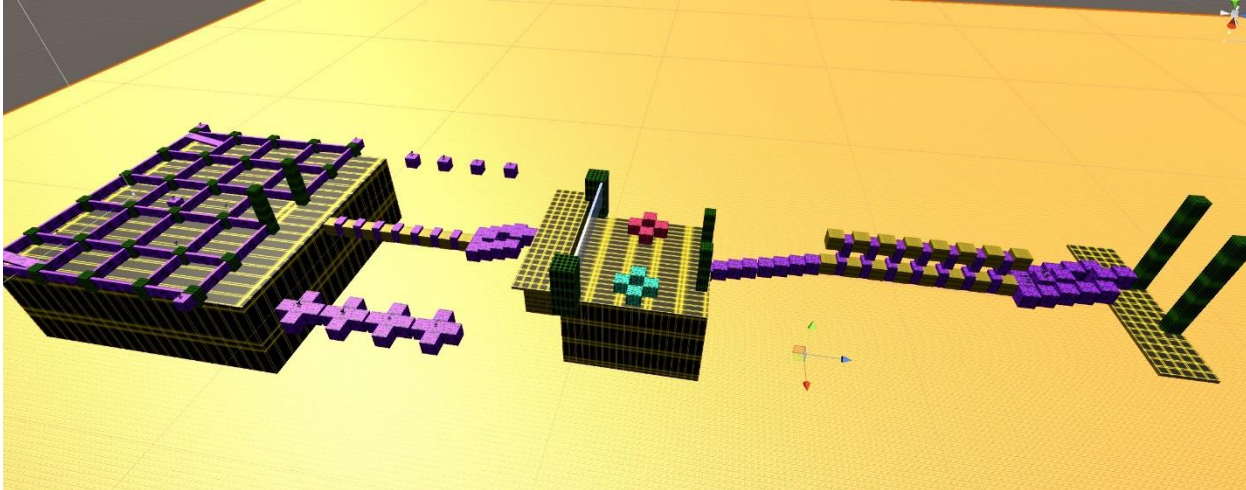


Figure 6 level 2 with all elements active

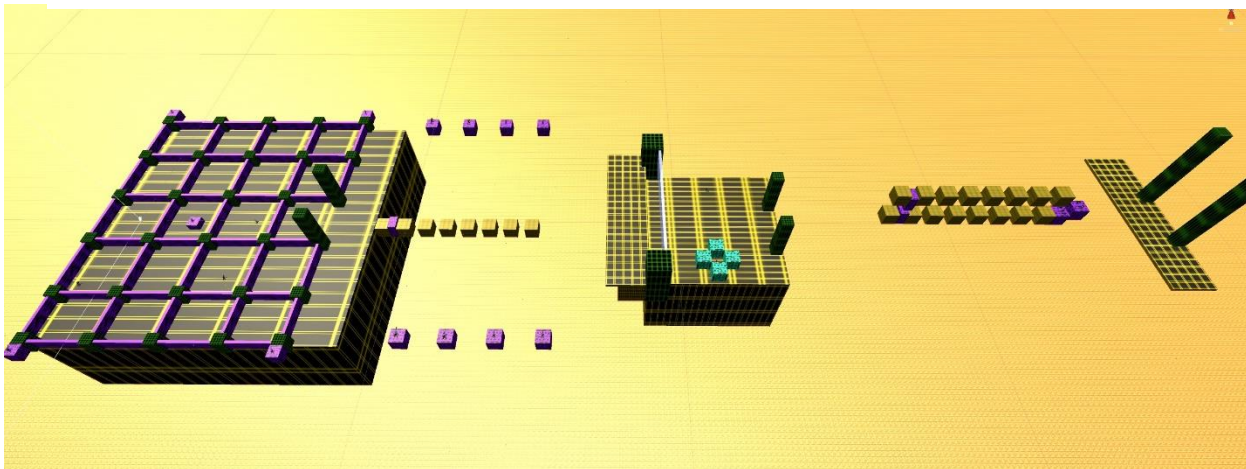


Figure 7 Level 2, as the game starts for the player

I feel this level is emergent because the player decides how hard he wants the level to be. If he or she wants to rush through the game, they can, but the chance is high they will be caught by a stray bullet. If players take it slow they can disable turret positions and ensure that they won't respawn.

Currently however, there is nothing to stop players from taking their time, or to promote faster play. Encouraging one or the other might make the game less emergent in my opinion.

Method of Approach:

I created a set of questions that would serve me and my group as a checklist for the user experience, usability, and use of scaffolding in my levels, and those of Raphael's.

Using these questions, we got information if we needed to change or adapt anything to the core of our levels. If they enabled flow and if the play testers were able to grasp the mechanics of the levels for example.

Play testers were selected from students present at Hanze Hogeschool, and were only asked if they wanted to test a game. No information was given to the players prior to them playing the game. I wanted to see if they could grasp the mechanics and controls without having a handholding tutorial.

We encouraged thinking out loud, and asked questions after completing a level, while their experience was still fresh in their memory



Figure 8 Playtesting of our game's levels at Hanze Hogeschool

User Experience/Usability/Scaffolding Checklist

1. Is the player able to grasp the mechanics of the level without instruction?
2. Did this scaffolding enable flow?
3. Did this scaffolding enable enjoyment?
4. Did the player take too long on a specific part of the level?
 1. What was the factor that made that part too hard?
5. How long did the player take to complete the level?
6. How many times did the player die while trying to complete the level?
 1. Was there a specific frustrating part to a level?
 1. Does this need to change?
7. Was the player excited to play the next levels?
8. Did those levels feel as subsequent levels?
 1. If not, what could be changed to make them more coherent?
9. Does the player feel that he/she is making progress in the game?
10. Is the player missing something in the game?
11. Does completing a level feel satisfying to the player?
12. What was the most enjoyable part of the game?

Evaluate

Testing the first level with Rieneke, I found that the large columns indeed act as anchor points for the players attention. She said she was focused on reaching those landmarks and gave her a sense of direction. As the columns are larger than all the other objects in the levels they instinctively give you a reference point as to how you are progressing through the level and give you a sense of direction. For this reason, I also placed the checkpoints at these locations.

She gave some feedback on making the game more emergent by saying I should try and create more routes in the start. I added a way to get on top of the walls in the maze in the beginning and felt that this was a step in the right direction. Given more time I'd want to try and blend in the staircase more naturally to give the players the feeling they outsmarted the maze rather than it being a conscious decision to allow the players on top of the walls.

Also stating that it is a little disorientating in the beginning, but she got used to the mechanic the further she got.

Douwe thought the mechanics in the first level were fun, and suggested placing the blocks to allow the player onto the walls further to the sides so the player doesn't immediately run into them. This would ensure that once they reach the blocks they have a better grasp on how the mechanic of the level works.

From testing with a protocol, I was able to see how players that were new to the game reacted and collect data more formally. The data collected is present in unaltered form in the appendices, A to C.

Some players were able to pick up the game and grasp the mechanics were fast, and enjoyed a state of flow, while others had a harder time. These players when asked either didn't play games frequently or didn't play first person shooter games.

Suggestions included adding a timer, or a countdown timer, to make the game more suspenseful. Currently players didn't feel pressured to move quickly and said they could just take their time.

Others suggested adding collectibles to add secondary or tertiary objectives.

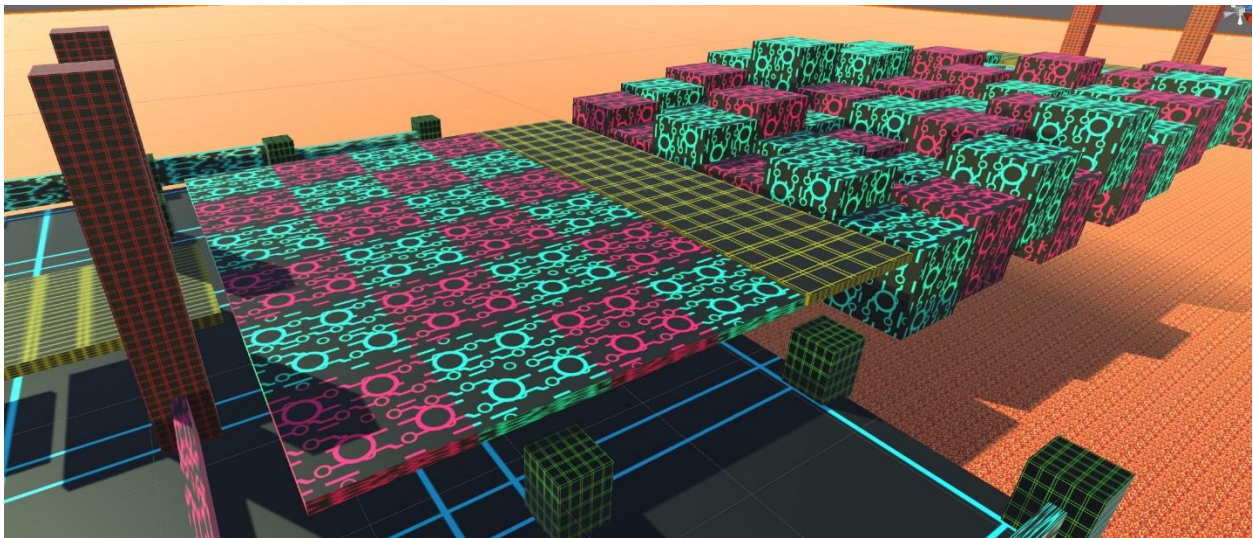
Geert, one of the playtesters, didn't immediately grasp that he could shoot the platforms turrets were standing on to make them fall. Once he finally realized he could he let out an "aha" which made me feel I've reached a certain plateau of scaffolding. I really enjoyed watching the players figure out the mechanics of the level, without telling them what to do or making it clear via text in a tutorial. I think letting the players figure out what to do rewards them when they figure out their solution to a problem.

The players also noticeably took different paths through the mazes, some opting more to pass through squares inhabited with turrets rather than moving around them, like others did.

Players had no problem switching from level 1 to level 2, mechanic wise. They felt that it still felt like the same game. This indicates I am going in the right direction design wise. More testing would need to be done to prove the accuracy of the findings.

A different result from the testing was that some players found the levels were too easy. This was by design as I was trying to create levels that I thought would appear in the beginning of the game.

I am happy with my experimentation and prototyping of emergent gameplay, scaffolding and the “kishoutenketsu” design ideology.



Why Unity?

I chose unity to prototype because I feel comfortable programming. It's easier to iterate and playtest games, and students in the Hanze Hogeschool are usually eager to test once they see it's a digital game. I coded the game following tutorials and by my own design. These levels will be included in the project for EGD.

I also feel that this game would have been hard or not as fun to paper prototype as the shifting of the blocks would have been hard and a hassle to portray. Using unity I was able to experiment with different variables and tweak these till they felt right, such as player movement speeds, bullet speeds, checkpoints positions or the fading in or out of scenes. There are other game engines to create prototypes in, but as I only have experience with Unity, I decided to use that.

Discussion:

Future additions:

I feel that both levels show that emergence is possible with the mechanics present in both. I believe this because players were seen to use their own playstyles to progress through my levels, choosing their own paths and solving problems in their own way.

I would want to playtest more and create different levels where I start to mix and match mechanics. These levels would be harder by design as they would use mechanics that would have already been introduced to the player. Creating a level where both the shifting of the blue and red blocks is necessary to progress as well as the blocks you must shoot for example.

I also want to test the game with rudimentary enemy AI that would be able to shoot at the player, and have iterations where their bullets will turn platforms on or off. So rather having the game turn into a more traditional shooter, having the enemies shoot at platforms to block the player or make the player fall and vice versa.

Enemies that shift into and out of being such as the red and blue blocks also allow for very innovative design as you force the player to make conscious decisions when he or she will be able to shoot.

Discussion of technique

In the future I would create a protocol much sooner as it allows the categorization of data much easier. I want to find a balance in observing players and seeing how their facial expressions change during actions, see how they play the game, and between maintaining a formal protocol.

I feel that both have its merits and disadvantages, and should both be used during development and iteration.

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Mark Brown. "How Snake Pass Works | Game Maker's Toolkit." Online video clip. Youtube. Youtube, 14 December 2017, Web. 18 January 2018.

Nutt, Christian. "The Structure of Fun: Learning from Super Mario 3D Land 's Director." Gamasutra Article, www.gamasutra.com/view/feature/168460/the_structure_of_fun_learning_.php.

Appendix A:

User Experience/Usability/Scaffolding Checklist

Tester: Geert

Notetaker: Dea

Observer/Asking Questions: Rens

1. Is the player able to grasp the mechanics of the level without instruction?

- a. Rens Level 1: Yes
- b. Rens Level 2: Doesn't seem to be able to do the purple platform bit? Or he got around it in a different way
- c. Raphael level: Yes, he got the mechanics

2. Did this scaffolding enable flow?

- a. Rens Level 1: Yes
- b. RensLevel 2: Yes
- c. Raphael level: The first level was a nice entry. It definitely felt good. A kinda dark souls flow

3. Did this scaffolding enable enjoyment?

- a. Rens **Level 1**: Yes
- b. Rens **Level 2**: Yes
- c. Raphael level: i dont know if it is the scaffolding, but i felt the joy

4. Did the player take too long on a specific part of the level?

- a. Rens **Level 1**:
- b. Rens **Level 2**:
- c. Raphael level: yeah probably, nah dont know if it was too long. For myself it didnt feel too long. it didnt feel like a waste of time to me

d. What was the factor that made that part too hard?

i.Rens **Level 1**:

ii.Rens **Level 2**:

iii.Raphael level: I didnt really get the hang of the controls, sometimes when i took a step back it was a giant leap, i had some trouble with the exceleration. My tactic wasnt the best as wel..

5. How long did the player take to complete the level?

- a. Rens **Level 1**: 5 Minutes
- b. Rens **Level 2**: 5 Minutes
- c. Raphael level: A long time for the second level, 15 or 20 minutes.

6. How many times did the player die while trying to complete the level?

- a. Rens **Level 1**:
- b. Rens **Level 2**: Several times in the turret bit after the maze? with the run towards the turrets.
- c. Raphael level: When it was just me being stupid it wasn't frustrating. But sometimes when I had some trouble with the keys it could be a bit frustrating. In total it wasn't frustrating.

d. Was there a specific frustrating part to a level?

- i. Rens **Level 1**: Challenged but not Frustrating for both levels
- ii. Rens **Level 2**:
- iii. Raphael level: getting a hang of the controls

iv. Does this need to change?

- 1. Rens **Level 1**:
- 2. Rens **Level 2**:
- 3. Raphael level: I would like a bit of tweaking for the controls. Especially the jumping.

7. Was the player excited to play the next levels?

- a. Rens: Seems to be that way yeah
- b. Raphael level: yeah

8. Did those levels feel as subsequent levels?

- a. Rens level: Artistically consistent
- b. Raphael level: I can feel them being in the same game. I can see them being the same game very well.

c. If not, what could be changed to make them more coherent?

9. Does the player feel that he/she is making progress in the game?

- a. Rens: Yeah
- b. Raphael level: yeah definitely. I did feel I was getting better. I created different tactics throughout the game as well.

10. Is the player missing something in the game?

- a. Rens: One part where he would like a sort of safe zone, in the second level, the part where he was going for the straight turret run.
- b. Raphael level: the second level could use a checkpoint

11. Does completing a level feel satisfying to the player?

- a. Rens: It does feel satisfying to get past a segment of a level, even though the level doesn't end with a "you did it yay" thing
- b. Raphael level: yeaaaahhh.

12. What was the most enjoyable part of the game?

- a. Rens: Discovering a new mechanic: Shooting the turrets platform.
- b. Raphael level: Getting to the end, everyone that was watching was cheering. Felt good for my strategy.

Feedback Rens level:

Level 1: Liked it, figuring out the red blue thing

Just one thing that's a bit tricky because he doesn't know where to go.

Likes the mechanic, it might be a bit hard but it's a puzzle so it should be hard.

Level 2: Player liked it as well. Player didn't think of killing the turrets. Turrets seemed unkillable, so the initial reaction was to just run away. Ramp to the walls wasn't as clear. People don't shoot the ground below the turrets they see a gun and think of shooting the turret and it doesn't do anything. Endorses(?) playability for different paths n shit

Feedback Raphael level:

He used a very different tactic than the other playtesters. He activated 3 color platforms, and jumped very quickly. Then he waited for the timers to almost run out and he would activate the other 3 colors. He is not frustrated, it's challenging. Sometimes the single platform jumps are a bit frustrating. He is choosing the hardest path, but he really likes it. Simple is for losers. So tweaking the controls a bit, and adding a checkpoint. Reset the velocity when you die.

Appendix B:

Name: Marcel

Age: 20

Gender: Male

1. Is the player able to grasp the mechanics of the level without instruction?

Getting a better hang of the first level than reka so maybe, yeah.

Figured out the purple wall/platform of the second level with relative ease.

Recognizing the pattern of where and how the blocks will appear. Intuitive design.

Way easier than Raphael's levels

1. Did this scaffolding enable flow?

Not as nice as Raphael's? its more segmented so its not as present

2. Did this scaffolding enable enjoyment?

once you figure it out, you know what to do, so no tutorial really needed

3. Did the player take too long on a specific part of the level?

No not at all, found it easy to be honest.

a. What was the factor that made that part too hard?

4. How long did the player take to complete the level?

The first one was relatively quick. Around 5 minutes?

5. How many times did the player die while trying to complete the level?

Not a lot really?

a. Was there a specific frustrating part to a level?

i. Does this need to change?

6. Was the player excited to play the next levels?

7. Did those levels feel as subsequent levels?

Yeah even with Raphael's level.

a. If not, what could be changed to make them more coherent?

8. Does the player feel that he/she is making progress in the game?

Making progress, not sure towards what?

9. Is the player missing something in the game?

Needs some pressure, tension, reason to get from one place to another. Countdown, timer, etc. Leaderboards?

- 10. Does completing a level feel satisfying to the player?**
Segments mean player feels as if he's already reached the end by the last segment
- 11. What was the most enjoyable part of the game?**
Shooting the turrets and watching them fall down.

Appendix C:

Tester: Reka

Notetaker: Dea

Observer/Asking Questions: Rens

ONLY tested Rens' because she rage quitted: Not part of the target audience sorry Reka

Afterwards, still played Raphaels' levels.

1. Is the player able to grasp the mechanics of the level without instruction?

- a. Level 1: No, not really, for both? Player needed to be told what the levels was.
- b. Level 2:
- c. Raphael's levels:yes

2. Did this scaffolding enable flow?

- a. Level 1:
- b. Level 2:
- c. Raphael's levels:: a bit

3. Did this scaffolding enable enjoyment?

- a. Level 1:
- b. Level 2:
- c. Raphael's levels:: Yeah

4. Did the player take too long on a specific part of the level?

- a. Level 1:
- b. Level 2:
- c. Raphael's levels: yes, at the last part of the tutorial level.

d. What was the factor that made that part too hard?

- i.Level 1:
- ii.Level 2:
- iii.Raphael's levels: targets were too small to shoot

5. How long did the player take to complete the level?

- a. Level 1:
- b. Level 2:

6. How many times did the player die while trying to complete the level?

- a. Level 1: Several times during the the multi platformed area
 - b. Level 2: A Lot of Times as well
- 8

c. Was there a specific frustrating part to a level?

- i.Level 1: The Multi leveled platform area.
- ii.Level 2: It was Challenging and frustrating?
- iii.Raphael's levels: Not enough time

iv. Does this need to change?

1. Level 1:
2. Level 2:
3. Raphael's levels: No, practice

7. Was the player excited to play the next levels?

- a. Level 1:
- b. Level 2:
- c. Raphael's levels: yeah

8. Did those levels feel as subsequent levels?

- a. If not, what could be changed to make them more coherent?
- b. Raphael's levels: More difficult than the first.

9. Does the player feel that he/she is making progress in the game?

Yes

10. Is the player missing something in the game?

- a. Maybe some collectibles or obstacles, a countdown that you have to keep in mind, a reason to complete this objective. What happens if she reaches the objective? Some kind of emotional/mental achievement.
- b. Raphael's levels: no

11. Does completing a level feel satisfying to the player?

yeah

12. What was the most enjoyable part of the game?

Raphael's levels: winning

Feedback:

Level 1:

Should the objective be clearly stated? Problem Solving game?

Ran into a wall several times

Asked if there was a sprint/can run faster?

Isn't sure how high the player can jump

Level 2:

I don't think she can grasp the purple wall thing?

Confirmed: didn't know she could do that.

Needed some help

Player plays story game

Confused about the orientation again, like in the previous level

What do you get at the end? a door to interact with I guess.