TIDE RESCUE

Game Dev Team 3

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TRY2HARD STUDIOS

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Introduction

The tide is turning, the ocean is calling. This is the final concept of *Tide Rescue*, created by *Try2Hard Studios*. The team consists of five members scattered around different faculties of Eindhoven University of Technology, all with different visions on gaming which made the design process very versatile. Roles were divided into programming, art search and design and story writing.

This paper consists of a clear and cohesive description of what *Tide Rescue* has to offer in the ever-growing video game market, which is done by covering the uniqueness and enjoyment factor of the game with the accompanying formal models.

Game description

Tide Rescue is a 2.5D action-adventure game with open-world levels, each in new locations with different narratives. The choices for the design and story elements will be discussed in this chapter.

Ideation

To gather ideas, *Try2Hard Studios* embarked on a brainstorming journey, beginning with a mind map made during one of the workshops. This resulted in the fixed idea of creating a game revolving around a turtle with enemies.

The first concept covered a baby turtle, finding its way to the sea while avoiding enemies. As the turtle grew, new levels could be explored and that would result in a diverging storyline with multiple endings.

However, with the time and resource restraints in place, the team moved on to a new concept. The turtle would now roam around a single open world level, where it had to build homes for the turtle community for them to stay on the island. As the home-building storyline was not yet exactly what *Try2Hard Studios* wanted to create, further brainstorming took place.

The final concept, which is everything covered in *Tide Rescue*, introduces the *IARS (International Animal Rescue Squad)*, which welcomes the turtle as a special agent to the story which will be discussed in detail below.

Storyline

The *IARS* storyline begins with *Agent "Shell"* (from now: Shell) being admitted into the agency. The boss of the *IARS*, *Agent "Hydro"* (from now: Hydro) the capybara,

dispatches Shell to *Shellhaven*, home of the Hermit crabs. The island has been compromised: the *Claw Cartel*, a gang of ruthless True crabs led by *Baron Clawbeard* the King crab, has taken and imprisoned the Hermits that used to live peacefully. Their mission is to steal every shell of the Hermits so they can provide homes to their kind, purely out of jealousy and desperation – and Shell, as another shelled animal, understands the problem perfectly and is the best IARS has to offer for this mission.

Along the journey, Shell must free the Hermits from the claws of the evil crabs and find lost or hidden Hermits throughout the island. Each Hermit is named after a great ancient Hermit as stated in *The Great Hermiting*: an ancient tradition from when the Hermits were the island's greatest legends. Once a Hermit comes of age, they are bestowed a grand Hermit name to honor their past might: *Dermit*, *Squermit*, *Clermit*, etc.

When the mission is completed, there is little celebration as Hydro can't let Shell rest. This first victory is only the beginning, as something bigger lurks in the depths of the oceans and in the peaks of the mountains. The next mission involves protecting the Sea Horse community in *Coral Spire* from a merciless Barracuda syndicate, where *Agent "Surge"* the electric eel can be unlocked as a playable character.

The story will continue along different locations, where new agents can be unlocked and played. The game would include the possibility of revisiting older missions, such as *Shellhaven*, with the newly acquired agents. This would create the need for different strategies and approaches to already passed missions and could introduce areas that only certain agents are able to reach in order to unlock new features or story lore.

Uniqueness

Tide Rescue represents a unique concept, with roots in the 2.5D art style. Some of our sources of inspiration for picking 2.5D over standard 2D or 3D are:

- [EthrA](#) (Studio, 2022)**,** a 2.5D game that was of great inspiration for how camera movement and animations should work.
- **Octopath Traveler II,** which inspired us with world-building techniques and especially the importance of post-processing for an atmospheric world.
- **Paper Mario & Mario Odyssey**, again for how Nintendo has always played with 2D characters in a 3D world (and the reverse Nintendo being the pioneers & gold standard of such worlds. (Mainleaf.com, 2023)

Art Style

Tide Rescue involves a 2D character roaming a 3D world. This choice was partially because the team was more comfortable with 2D animation, so we could get farther with actual development (spending less time with things such as bones and rigging) and partially because of the "interesting-ness" that such an art style would add to the gameplay – after all, 2.5D is rather uncommon in the game industry and entices the player to figure out how such a game looks and plays; perhaps, at first, it is even a bit hard to imagine how a 2D character would move in a 3D world.

We truly believe that 2.5D is one of the driving uniqueness factors of our game and that we have shown what such a platform can offer. In such an open-world game, having the movement be satisfying is a must: otherwise, it quickly becomes a *(more interesting)* Walking Simulator. Part of the satisfyingness is having animations acting correctly, clearly showing which actions are happening. We will go into this deeper later in the essay when we analyze Shell's movements.

Gameplay

The Gameplay Loop is rather simple and focuses on rescuing Hermits, see [Figure 5]. The player is introduced to the storyline and then left alone in the open world. They can find Agent Hydro, a wise capybara *(whose wiseness is expressed by its mustache, moving around as it speaks, similarly to Master Shifu's from Kung Fu Panda, shown in [*Figure 21*]),* *who* will tell them about the mission.

Players are free to choose their own approach to the game; there are no other indications other than what Hydro says. We will later see that there is a story to be discovered by interacting with the Hermits.

Player Profiles: Bartle's Taxonomy

According to Bartle's Taxonomy (Bartle, 1996), players are split into four categories: Achievers, Explorers, Socializers and Killers. With "Tide Rescue", we have aimed to satisfy the Explorer and Socializer player types. As presented during the lectures, satisfying all categories is not possible for a game of this scale; so, we have chosen to limit ourselves to these two categories.

Explorers

The open-world design means that the player is free to roam around the world, exploring and making decisions at their own pace. The art, world design, movement and sounds are satisfying and enjoyable on their own – "Tide Rescue" makes for a great *relaxing* experience, and this is *exactly* what we have aimed for: there are no elements

such as timers ticking down and players are encouraged to spend as much time as they would like. *(of course, there must be some time pressure... after all, the Hermits **need** your help!)*

Socializers

The game is structured around a very simple task: find Hermits and free them. But there's more to the Hermits than it initially bats the eye: many of them have stories to share, given that you *want* to listen to them. This gives Socializers the chance to go ahead and learn more about the Hermits and their ways. We will talk a bit later about the story the Hermits reveal and how the discussion with them helps certain types of players to develop bonds with the Hermits. However, since this game does not offer a multiplayer mode, the socializers would miss the working together with other players towards a common goal.

Achievers and Killers

The game appeals less to Achievers and Killers. The game does not have a clear point system, which the achievers need to feel accomplished, other than the players freeing as many Hermits as possible. They can also aim to get the full completion of the game. The Killers can find the appeal in the fact that this game has a "violent" approach, which will be discussed more in-depth later, and allows them to get a bit of the adrenaline they need. However, Killers want to be able to impose themselves on others, and since they won't play against others in this game, it isn't a great fit.

Other Perspectives on Player Types: Yee's Taxonomy

Some consider Bartle's Taxonomy to be outdated. Nick Yee, author of (Yee, n.d.), claims that Bartle's taxonomy has some fundamental flaws, such as players not clearly falling into one category and the division being rather unconvincing. Yee improves on Bartle's taxonomy using data from MMORPG players, with the help of which he identifies 3 player "components" (Achievements, Social and Immersion) and a large number of subcomponents, as seen in [**Error! Reference source not found.**].

Nick Yee's Taxonomy precisely pinpoints the player type for which Tide Rescue is most appealing and for which the game was designed: namely, the main component of *Immersion*, with subcomponents of *Escapism* and *Roleplaying*. Yee describes these player categories to be interested in "using the environment as a place to relax or relieve stress from the world, escaping from real life", respectively "taking the time to read or understand the back-story of the world as well as taking time to create a history and story for their characters"; perhaps, these descriptions more clearly describe the player types for which Tide Rescue appeals than Bartle's Taxonomy.

Fun & Player Motivation

The Self Determination Theory (SDT) is a psychological theory that explains what makes people feel motivated, based on three different needs: autonomy, competence & relatedness. (Center for Self-Determination Theory, 2014) As Tide Rescue is an open-world exploration game, player autonomy is one, if not the most important. We are going to analyze how our game uses the principles of SDT to give the user motivation.

I. Autonomy

The players are free to make their own choices and have their own approach or "tactic" for the game. We believe that an exploration-based approach is the best (and most satisfying one!), however, a very action-oriented player could get to the "point" of the game much quicker, and there is nothing that stops the player from doing so.

Let's see what broad paths the player has:

a) Pacifism
- The player can choose to roam around the world, finding the lost Hermits. They make a loud sound when found, and the player is rewarded with a satisfying animation, as seen in [Figure 7].
- The player can listen to what each of the Hermits has to say, and get invested in the story. All of them share unique personality traits and hint towards what the nature of Hermits is: it is up to the player whether they want to learn more or just save them, as shown in [Figure 8] This is also the point where side quests could be given.

b) The "violent" approach
- Contrary to the first option, the player can choose to run through the camps, freeing all the caged Hermits. However, the camps are purposely hard to defeat (with lots of enemies), to discourage this approach; but nothing is impossible. With great skills and coordination, the player can totally defeat the camps.

That being said, the approach that we have found and believe to be the best is a **hybrid**: observe how the camps are laid out; this is done by first exploring the world, and especially the high areas. Then, with some tactics, the player can sneak inside the bases and free the Hermits without the enemies even noticing.

II. Competence

This "hybrid approach" that we have just described is greatly encompassed in the theory discussed by Linda de Valk, "The Three Stages of Play" (Valk, 2015) and visually shown in [Figure 26]. We are going to see how "Tide Rescue" follows its framework, especially through the interactions with the Hermits.

Lost Hermit - Player Interactions

Hermits are scattered around the world. They can be found in many situations, but all of them make a high-pitched squealing noise, that entices the player to approach and interact; this sound was chosen especially to reflect the idea of a small critter in need of help, as shown in [Figure 22]. Moreover, the Hermits sit next to a light-emitting plant and a fireplace, which help them be spotted at night, as seen in [Figure 13].

Caged Hermit – Player Interactions

The other types of Hermits are those locked up in cages, found in camps and shown in [Figure 11]. These make no noise, however, are clearly in need of help through the universal cultural symbol of being caged, to which the user needs no further explanation: go to the cage, open it, and free the Hermit.

Exploration & Immersion

Now that the player had their first interactions with the Hermits, they might have different approaches: they might try to exhaust the dialogue of the Hermits, which involves going through lengthy dialogue options, worrying about what would be appropriate for an IARS Agent to say: this helps the player get involved in the story. Some of the Hermits are rude to Shell, such as the one seen in [Figure 12], and there are decisions to be taken regarding how you interact with the Hermit.

But also, the player might decide that there is nothing to be talked about, instead just saving the Hermits, as a good Agent should. This whole interaction system allows the player to act according to their values.

More so, strengthening the anatomy of the player, they can decide to leverage the Day/Night cycle to their advantage: perhaps, it would be better to attack the camps during the day, when the quiet, caged crabs are more easy to spot, and go on the hunt for the lost Hermits during the night, when they can be more easily seen due to the light-emitting elements, as shown in [Figure 10].

III.   Relatedness

The Fourth Stage: Transformation

The lecture (Spek, 2020) mentions a fourth stage of play: "Transformation". This is about what lesson there is to be learned from the game, and how the game builds a long-lasting memory in the mind of the player.

We are doing this by surprising the player with a cute and iconic image, that makes the whole exploration have actual consequences: the Hermit Party! This is also the place where the player has the option to end the story, once they have found enough Hermits.

Mario Odyssey is one of the games that we have, perhaps subconsciously, taken inspiration from. In the game, Mario has the simple task of collecting moons [Figure 4]: nothing more. They are used to power up his ship, which brings him to the next level.

Each of the worlds *(called "kingdoms")* has a large number of moons: sometimes, even over 30. Mario Odyssey has ~900 Moons scattered over 17 worlds; however, the player only has to find roughly 10 of them per world to advance. (Minotti, 2018) This leaves the player with the option of either leaving the world as soon as the minimum number of stars has been found, essentially "speed running" the game or going for completion, exploring more of the world, playing all the minigames and finding all the Power Moons. Hopefully, you can now see the analogy between the Hermits and the moons.

The Hermit Party

The Party is where the rescued Hermits go. The tent behind Agent Hydro starts empty, with no music playing – there is no hint of this party happening. The player can figure out that the party will take place by talking to the Hermits, who, after some dialogue sequences, make references to the Party, as shown in [Figure 14].

As soon as the first Hermit is rescued, they go inside the tent, with the Party starting. The player is usually not there to see this happening, until the end of the rescue mission, when the player will be greeted with a long-lasting, satisfying image: all of the Hermits that they have previously saved sitting in the tent, bobbing around to music, as seen in [Figure 13]! The image of the happy crabs helps make players feel as if they made good decisions along the way and perhaps raises the dilemma in the minds of some players: *"Are there more Hermits to be saved? I want them all to be happy, at the party!"*

This whole idea sounds silly: *how can someone possibly get attached to a character as simple as the Hermits?* This is a rather complicated discussion, and perhaps it starts with the Hermits being an obviously oppressed group – the story reveals that they are essentially hunted for their shells for no apparent reason, by their own brothers; this helps empathize with them, and some players can derive a deeper meaning from this. More so, by talking to the lost Hermits, the player has the chance to explicitly learn about how some Hermits feel about their own brothers, the "normal" crabs; one such conversation is shown in [Figure 16]. Science shows that humans are eager to empathize with the underdogs "just because", especially in the context of fictional setups, with 81% of a survey's respondents supporting the underdog of a fictional basketball match, as discussed in (Stromberg, 2015).

During our playtesting, what we have expected has been proven true: certain players, especially those touched by the story, are "putting themselves in the shell" of the Turtle, and

finding themselves spending time carefully picking their dialogue options; as in, listening to what the Hermits have to say and getting emotionally involved with their situation to a certain degree. Now, these players appreciate this image of the Hermit Party that incentivizes them to go around explore more and more.

Formal Models

Introduction

In this section, we are going to go more in depth on the technicalities of the game, detailing how the systems of the game were implemented. By using the Mechanics-Dynamics-Aesthetics (MDA) framework (Robin Hunicke, 2001-2004) we ensure that the mechanics perform their functions while contributing to the aesthetics and dynamics of the game.

Aesthetics represent the players' emotional responses when interacting with the game system. In our case, the aesthetic goals are creating a relaxing yet engaging atmosphere that encourages exploration and attachment to the creatures of the world.

Dynamics describe how mechanics interact over time and in response to the players' input, aiming to create desirable aesthetic experiences. Thus, the aim is to maintain a sense of immersion and adventure as the player explores the environment and saves the Hermits. Each aesthetic element had some adherent dynamics.

Mechanics are the actions, behaviors and control mechanisms given to the players, in this case, the movement, combat, rescuing and general interaction with the environments through dialog and story.

Player Movement

Movement in 2.5D is a very interesting challenge since we wanted the player character to integrate naturally into the 3D world, which none of us had any experience with. We have quickly learned that we have two options: a 2-angle approach (ThatOneUnityDev, 2023) and an 8-angle approach, like in the game *EthrA* by StoneLab Studio (Studio, 2022). The 2-angle approach is built for rather flat worlds, so for our character to better fit in the 3D world we have instead we have decided to go with 8 angles, with the obtained result shown in [Figure 1].

Shell Movement

We believe that the animation is part of the core of the gameplay experience – by getting satisfying and fun animations for movement, the rest of the game is bound to be entertaining; this belief is part of what made the first 3D Mario games so legendary:

Nintendo spent lots of time translating the jumping of 2D Mario to a 3D world, making the now legendary jumping animations. (Plus, 2020) Moreover, seamless and enjoyable animations lead to better player immersion: after all, a visual glitch or a "snap" breaks the immersion of the player, instead of "gawking at the weird artifact". (J. Martin, 2020)

Unity now facilitates building advanced animations using a new state-machine-based system. Animations can be set up to interrupt each other after a certain percentage, or after several frames. Moreover, transitions can be set up – there are many, many more variables and settings at play, so we have spent a lot of time having the animations be perfect; the state machine of the animation for the turtle can be seen in [Figure 17]. This attention to detail helps immerse players, making the movements more fluid.

I. Attack System

The attack system was inspired by the videos of turtles bumping into objects [Figure 18], using mechanics designed to be both functional and playful.

Going a bit into the technical implementation aspects of the attack, the turtle lunges forward via an animation and then a capsule is being spawned in front of it, which is shown in [Figure 23]. This is common in all types of games, and perhaps the simplest & most effective implementation which aligns with the goal of maintaining a lighthearted experience; the attack is shown in [Figure 20].

II. Defense System

Predictably, defense is done by the turtle shelling up, as seen in [Figure 19]. This is done through individual animations from every angle, such that the player can see a visually pleasing shell-in/out animation. This mechanic enables players to choose between engaging in battles and retreating.

Enemy Crab Movement

The enemies are simple NPCs, with simple area-based navigation, with a whole fight being shown in [Figure 24] – we have not intended to make them *very* tough, as that is not the targeted audience of the game; after all, the focus is to maintain a calm, pleasant environment with elements of unpredictability, but without inducing too much stress.

I. Attack System

The Crabs have two possible attacks: melee or long range, by throwing a rock. The attacks deal a great amount of damage, but are rather easy to avoid, either by shelling

up or by simply running away. The mechanics of evading the crabs encourage the player to be strategic when making decisions, weighing the risks and rewards of combat.

II.   Bush Stealth

Hiding in a certain type of bush (seen in [Figure 27]) makes the Crab AI lose its *aggro*. This is an useful mechanic, as it enables the player to exit the "Attacking" state of the crab directly, instead of running away; this allows for completely avoiding the crabs, supporting the pacifist route. The state machine of the Crab AI is pictured in [Figure 28].

Extra NPC Movement Details

I.   Agent Hydro Movement

To make the interactions charming and unique, Hydro moves its moustache while speaking. This makes the character feel more alive, making the player more attached to the NPC.

II.   Hermits Movement

Hermits have very simple movements: they bob up and down when idle and rise to the skies when saved. This "raising to the skies" movement, seen in [Figure 22], was originally intended as a placeholder; however, during playtesting (and final presentations) we received overwhelmingly good feedback on this animation, so we have decided to keep it for the final version the game. This movement makes the rescues feel satisfying, visually (and audibly) rewarding the player's progress. To add to this, as mentioned in the Relatedness section, their backstory makes players emphasize with them as underdogs, which is often the case with stories of characters at a disadvantage. (Jhonson, 2021)

Dialogue System

The dialogue system was built using a free Unity extension that allows building *(even rather complicated)* dialogues using State Machines, similar to how animations are made – again, there are loads of variables and options, made just for getting the perfect dialogues. This contributes to achieving narrative by enabling players to communicate with the NPCs in a way that feels natural; moreover, this deepens the player's overall emotional connection to the world.

Hunger & Health System

The health and hunger system takes heavy inspiration from Minecraft – in fact, it works almost identically, with regeneration only happening with a full enough hunger bar.

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We have designed the icons ourselves, with the hunger bar being made out of kelp, which we considered to be the most appropriate element to symbolize hunger for a turtle, as seen in all gameplay footage, such as [Figure 24]. Actions such as jumping or shelling empty the hunger bar and eating the limited available foods, such as coconuts or mushrooms replenish hunger, promoting resource management and planning. Thus, the player is responsible for maintaining the turtle's health and hunger levels.

Juiciness – Sounds and Particles

After building the core of our game, we have moved to making some interactions like attacks and Hermit rescues "juicier", by adding particles and sound effects, with these effects giving instant feedback to the player. Another sound effect that adds value to the gameplay and making the player more immersed is the music that plays while being in the proximity of a crab outpost, seen in [Figure 27].

Some other examples of sounds that add value to the game are those made by NPCs such as crabs and hermits, as seen in fighting such as that in [Figure 24]. Extra sounds could be added in future versions of the game, such as environmental (foley) sounds and effects when shelling.

Process, Recommendation & Reflections

Process

We have had an iterative development process, we started with the most important parts, such as the actual world and terrain design, and then slowly started focusing on the details, such as dialogues and various other game elements.

In the following part, we are going to go over some of the recurring issues we have encountered in our development...

Issue of world size

One of the recurring issues was that of world size; the last world is roughly 1/5 of the initial world! The world was modified approximately 4 times during the development process. This is also our tip for other developers: really think about movement speed and how much terrain the player can *really* cover.

Time constraints

An element that we sadly had to remove was the underwater part of the world; originally, we wanted a multiple-act story, with the play area moving underwater in the second half of the game, with enemies such as pufferfish. However, we decided that it

would be better to focus on getting the land part dialed in, with the underwater area being left as a potential future DLC.

At some point during the development process, we had a boss fight in mind, even designing sprites for it [Figure 25]: again, due to time constraints (and also not really fitting in the desired aesthetic of the game), we have decided to drop it.

Reflections

Ana Patrichi

I took this course mainly because I love the art aspect of video games and wanted an excuse to learn how to make games. Even if my background is computer science, I wanted to try something outside coding. Luckily, our team had a few people into programming, so I had this chance. Honestly, I had 0 previous experience with pixel art or animation when we started. I relied a lot on YouTube channels like AdamCYounis, which cover everything from picking the right canvas size to exporting animations to Unity. Learning Aseprite from scratch was a challenge but the tutorials, along with the feedback from friends and my group helped make the process easier. By the end, I had created all the pixel art sprites and animations, except for the food and health bar. I really had underestimated how much time and effort this would take. I used to think that since so many indie games used 2D pixel art, it couldn't be that time hard or time-consuming, but I was so wrong. There were so many NPCs and animations we had to unfortunately scrap due to the lack of time, like a final boss battle. The game also turned out pretty differently from what I first imagined. I originally had something more like an atmospheric survival game, like Silent Hill, but with a turtle trying to survive in a dangerous world. Even though it wasn't what I had in mind at first, I am happy with how everything came together. In hindsight, I wish we had another member on the art & animation duty, since I would've had something to learn in that department as well.

Andrei Avram

I have been a fan of game development for a while now, this is also the reason for which I took this course. Since I had prior experience with Unity programming, I took up on the most part of the script and game behavior development. I built and programmed most of the player behavior as well as the enemy AI behavior alongside the other interactions. I also helped in making the player UI and main menu. For me, the hardest part must have been learning how to approach developing an AI enemy, as this was also my first time attempting it, however through many trials (and errors) I was able to produce a version that I am contempt with. Open world exploration games are my favorite, and being able to take part in the development of such a game was fun and accomplishing for me.

Susan Oude Vrielink

I've played video games since I was a child, at first the games my brother bought, and later the games I decided were way more fun. I always like exploring open world games and find every hidden outcome that was available. I enjoy playing games with my friends and working together or sometimes against each other. I chose to do this course as I wanted to learn the process and the steps that go into creating a well-functioning game. I also enjoyed learning about the psychology that goes into designing a game for specific player types and users. I think that I can use this knowledge during the design process outside of digital video games which I value a lot. I helped with creating the story, art and other things. I think that whilst our end product is not the type of game I would normally choose to play, I do really enjoy how it ended up, I think it is a unique and fun game that users would enjoy playing till completion. As for future plans, games that have a distinct story-telling base (like *Life is Strange, Missed Messages* and *Detroit Become Human*) have always captured my interest. So, I would love to try to create a game that it similar and lies a focus on the fact that the player decides the story. Of course, it would have to be a lot smaller than for example Detroit Become Human (with its 85 endings).

Sebastian Acujboaei

I was more involved with the technical aspects of the game, especially with World Design and Animation. Talking about my perspective towards games in general, I must say that I really have a repulsion for ultra-competitive games, so designing such a laid-back, relaxing and artsy game was something I really found fun. So, I was the one that *(among others)* designed the terrain and put together the animations, both being challenging tasks both from a technical perspective and a design perspective. The main challenges were explained in the essay; if I were to do this again, I would precisely calculate the size of the world from the beginning and get an idea about how the world would actually be distributed before the start of the development process, perhaps through concept arts and so on. Nevertheless, my perspective on games did not change by much, except for realizing that there is a lot of work going into even a simple game, and now I can totally understand how developers spend years upon years on development; but on the flip side, some really simple games can be really fun and effective, by leveraging human psychology: one example that comes to my mind being Among Us, which, from a technical standpoint, is really unimpressive. However, through smart game design, only 7 months of development were needed for a 4-person team to develop what would become a worldwide sensation.

Rodrigo Nunes Salgado

Since I was little, I have always loved playing video games and appreciated the work put into them. Outside of my studies, I had already tried creating my own game, or at least the storyline for one. When I found out there was a course actually teaching this process, I couldn't miss out on the opportunity to really create something. This was put into practice during the course, as I was responsible for refining the story from our initial concept. I also have a big passion for music, so I was also put in charge of selecting fitting soundtracks that work well with the game. Lastly, I also attempted to aid my colleagues in the programming phase of the game. I tried to incorporate an achievement system, the audio and a functioning mini-map. Due to my own time constraints, I didn't have a lot of time to learn how to incorporate these elements in Unity. The addition of the audio took me hours, I had no idea how to further incorporate the achievements aside from the base steps of the tutorial I followed, but I was able to program a functioning mini-map which I am proud of but probably had little value to the whole process. Eventually, I left the coding for the others in order to focus on my other responsibilities. I was astounded by how many free assets there were to use, as at first I thought it would be impossible to find free musical and design elements. And the quality was also great, which made the process way easier! I feel fulfilled with the story we came to refine as our final concept and the vibe that the game gives off now with the musical elements also put in place, and I would love to learn how to program more complex assets of a game for possible future work.

Bibliography

Bartle, R. (1996). *Hearts, clubs, diamonds, spades: Players who suit MUDs*. Retrieved from https://www.researchgate.net/publication/247190693_Hearts_clubs_diamonds_spades_Players_who_suit_MUDs

Center for Self-Determination Theory. (2014). *Self-Determination theory*. (Selfdeterminationtheory.org) Retrieved 10 31, 2024, from https://selfdeterminationtheory.org/theory/

J. Martin, C. U. (2020). *usv.edu*. Retrieved from How to Make Immersive Game Design: https://usv.edu/blog/how-to-make-immersive-game-design/

Jhonson, M. (2021, 1 28). *Why Do We Love Underdog Stories? Psychology Weighs In*. Retrieved from Psychology Today:

https://www.psychologytoday.com/intl/blog/mind-brain-and-value/202101/why-do-we-love-underdog-stories-psychology-weighs-in

Mainleaf.com. (2023, 06 12). *First 3D game: a history of 3D game development*. Retrieved 10 31, 2024, from https://mainleaf.com/first-3d-game-a-history-of-3d-game-development/

Minotti, M. (2018, 05 28). *Super Mario Odyssey speedrun sets record: 880 moons in 8 hours, 16 minutes*. (VentureBeat) Retrieved 10 31, 2024, from https://venturebeat.com/games/super-mario-odyssey-speedrun-sets-record-880-moons-in-8-hours-16-minutes/

Plus, N. F. (2020, 5 22). *Why Mario's Triple Jump Animation Is So Good*. (Youtube) Retrieved from https://youtu.be/zCxpzIiUJIg?si=xhK-Vlx1xYNgpuXu

R, H., M, L., & R, Z. (2003). *MDA: A Formal Approach to Game Design and Game Research. Proceedings of the AAAI Workshop on Challenges in Game AI.*

Robin Hunicke, M. L. (2001-2004). MDA: A Formal Approach to Game Design and Game Research. *Game Developers Conference*.

Salen, K., & Zimmerman, E. (2004). *Rules of Play: Game Design Fundamentals*. Cambridge, Mass. The Mit Press.

Spek, E. v. (2020, 09 10). *DZC10 Game Design Week 2 Engaging Design and Development part 1*. (YouTube) Retrieved 10 31, 2024, from https://www.youtube.com/watch?v=l_39zGnz4NQ

Stromberg, J. (2015, 03 15). *The science of why we love to root for underdogs*. (Vox) Retrieved 10 31, 2024, from https://www.vox.com/2015/3/20/8260445/underdogs-psychology

Studio, S. (2022, 12 19). *Pixel Art game in a 3D world. Small combat gameplay preview | EthrA Adventure/RPG game*. (YouTube) Retrieved 10 31, 2024, from https://www.youtube.com/watch?v=lwJurL2-f0c

ThatOneUnityDev. (2023). *How To Make A 2.5D Game - Unity*. (YouTube) Retrieved 10 31, 2024, from https://www.youtube.com/watch?v=cqNBA9Pslg8

Tracy, K. (2017, 12 23). *Tortoise Headbutting Cat (Youtube)*. Retrieved from https://youtu.be/wrkpoAxZYkQ?si=o9roQTdtLcbfmmXR

Valk, L. d. (2015). Designing for Social Interaction in Open-Ended Play Environments. *International Journal of Design*.

Yee, N. (n.d.). *Motivations of Play in MMORPGs*. Retrieved from
http://www.nickyee.com/daedalus/motivations.pdf.

Appendix
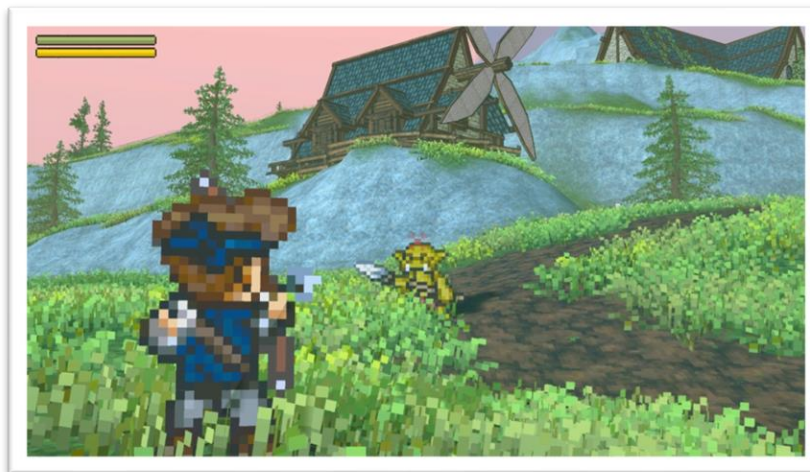

Figure 1 - Turtle 8-Angle Animation

Figure 2 - EthrA Gamplay Extract (Studio, 2022)

Figure 3 - Paper Mario Evolution [src: www.deviantart.com/lacuteperidotgemlove]
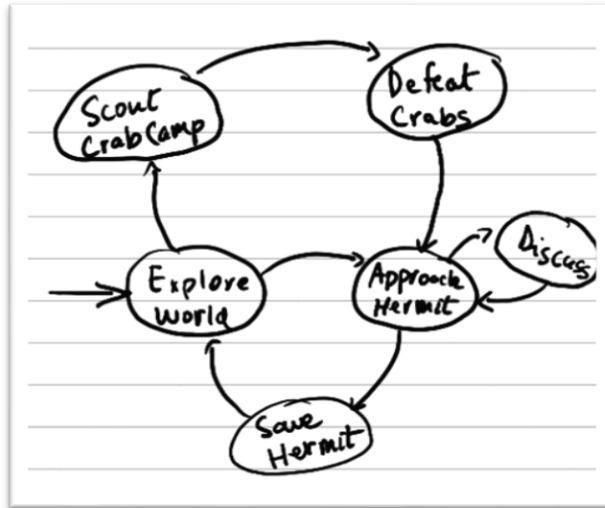

Figure 4 - Mario and a Star [src: www.nintendolife.com]

Figure 5 - Gameplay Loop

Achievement	Social	Immersion
Advancement Progress, Power, Accumulation, Status	**Socializing** Casual Chat, Helping Others, Making Friends	**Discovery** Exploration, Lore, Finding Hidden Things
Mechanics Numbers, Optimization, Templating, Analysis	**Relationship** Personal, Self-Disclosure, Find and Give Support	**Role-Playing** Story Line, Character History, Roles, Fantasy
Competition Challenging Others, Provocation, Domination	**Teamwork** Collaboration, Groups, Group Achievements	**Customization** Appearances, Accessories, Style, Color Schemes
		Escapism Relax, Escape from RL, Avoid RL Problems

Figure 6 - Yee's Taxonomy

Figure 7 - Saving Hermits
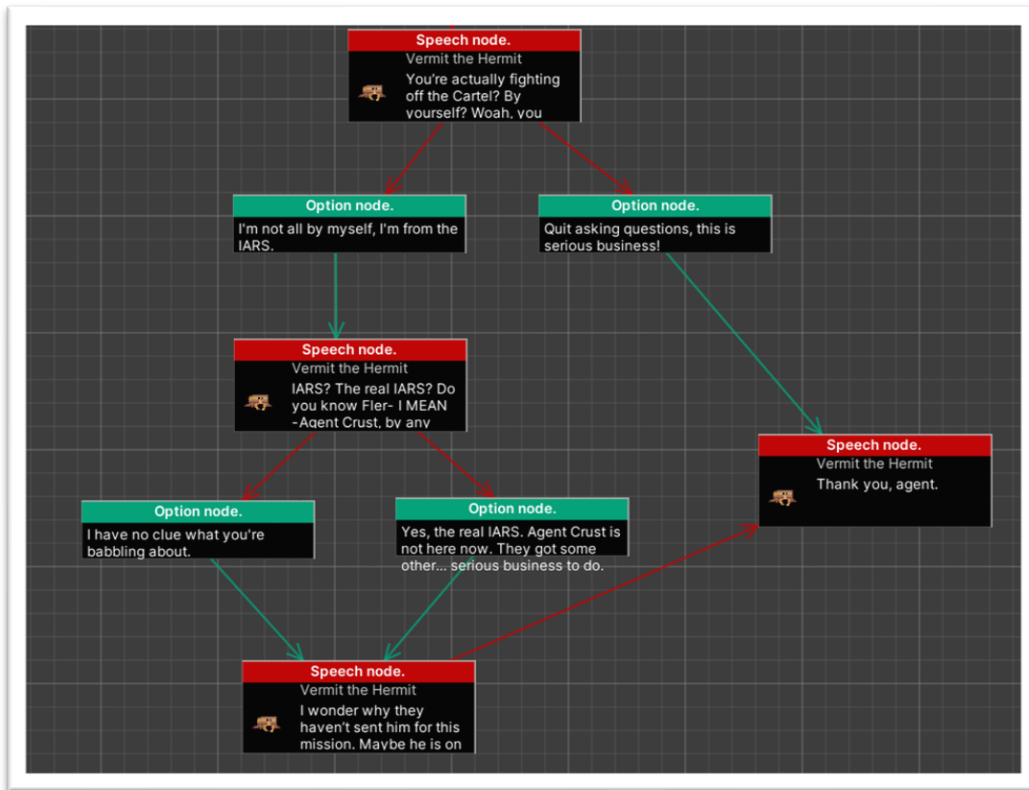
Figure 8 - Simple Hermit Conversation

Figure 9 - A Crab Outpost
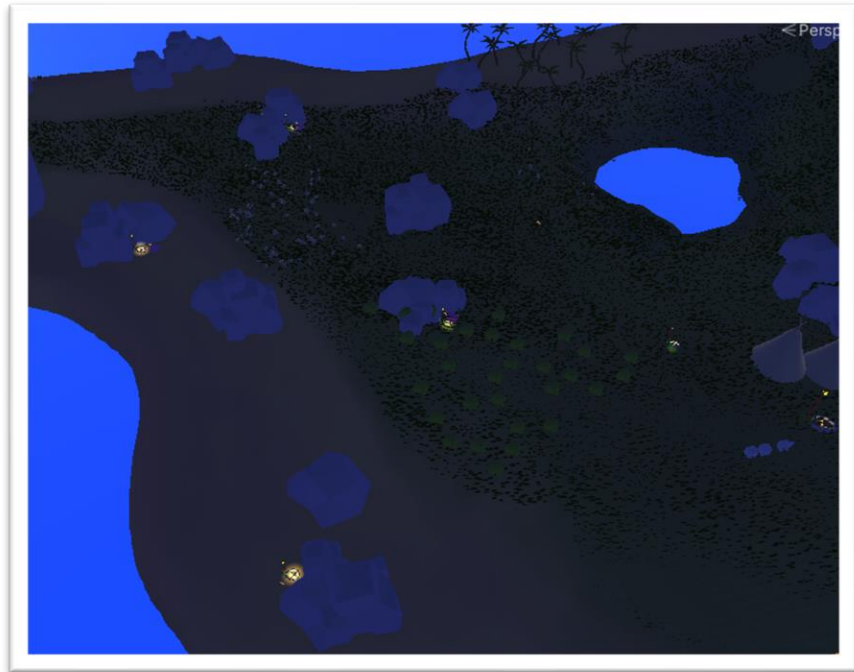
Figure 10 - Hermits at Night

Figure 11 - A Caged Hermit
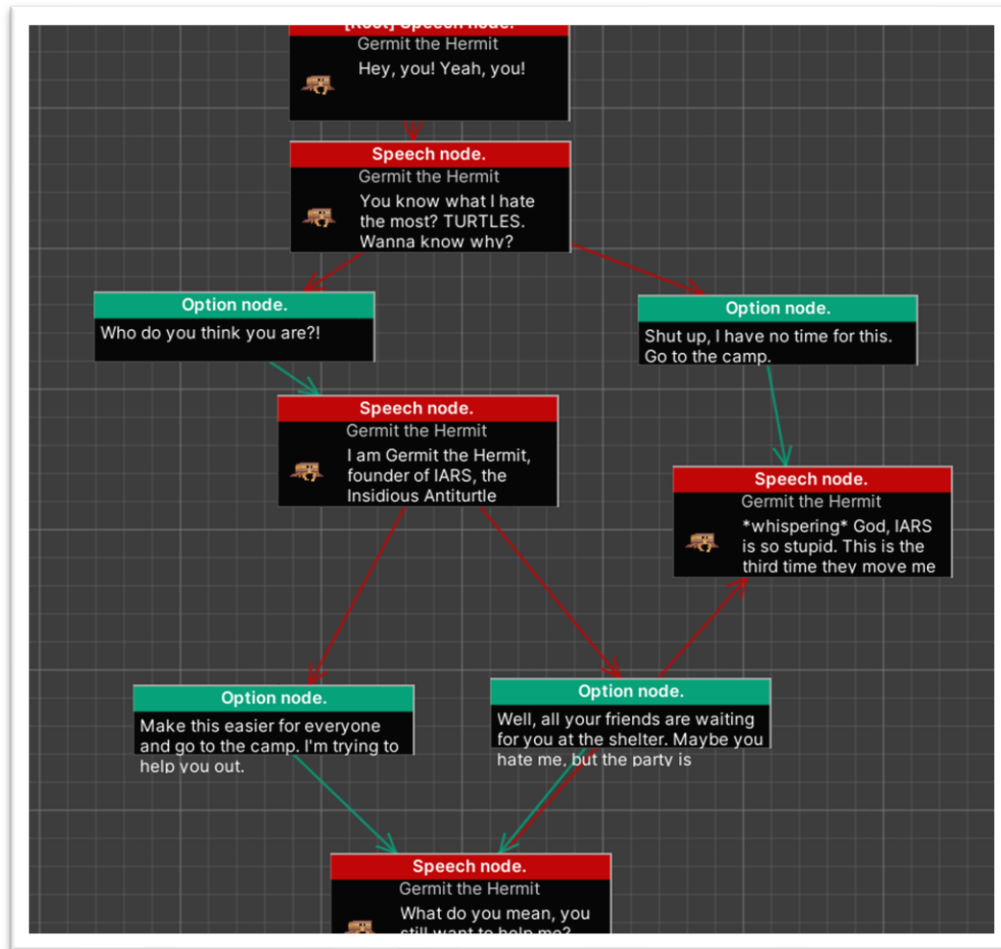
Figure 12 - A Rude Hermit Conversation
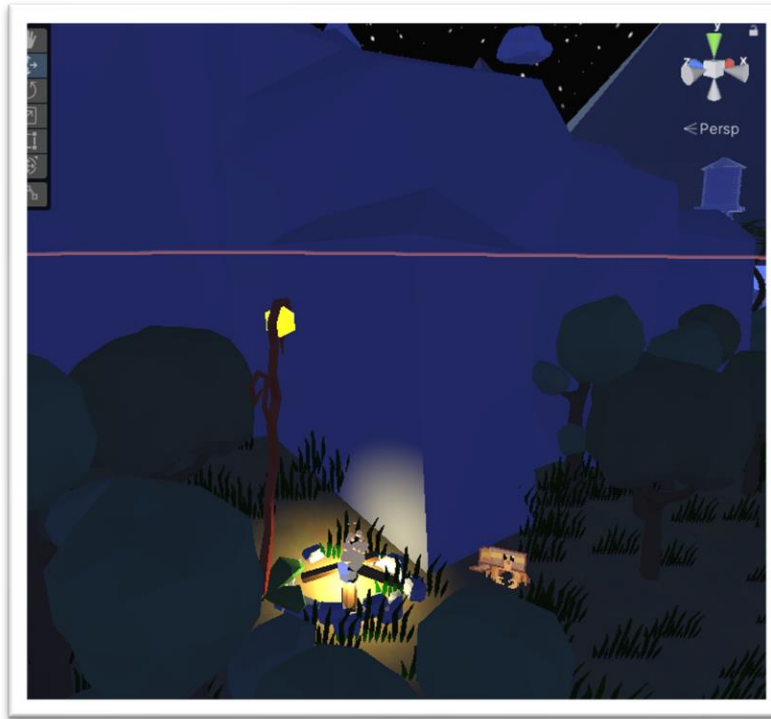
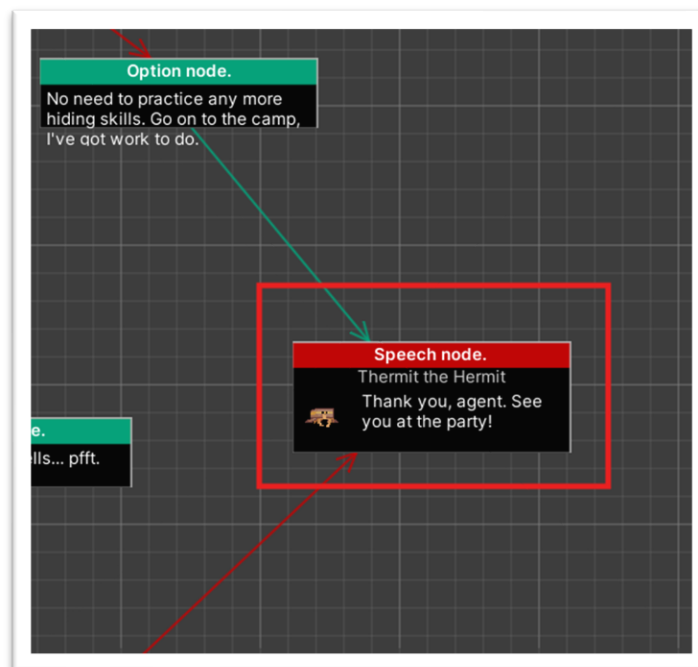*Figure 13 - Hermit at Night, closeup*

Figure 14 - Hermit talking about party

Figure 15 - The Hermit Party
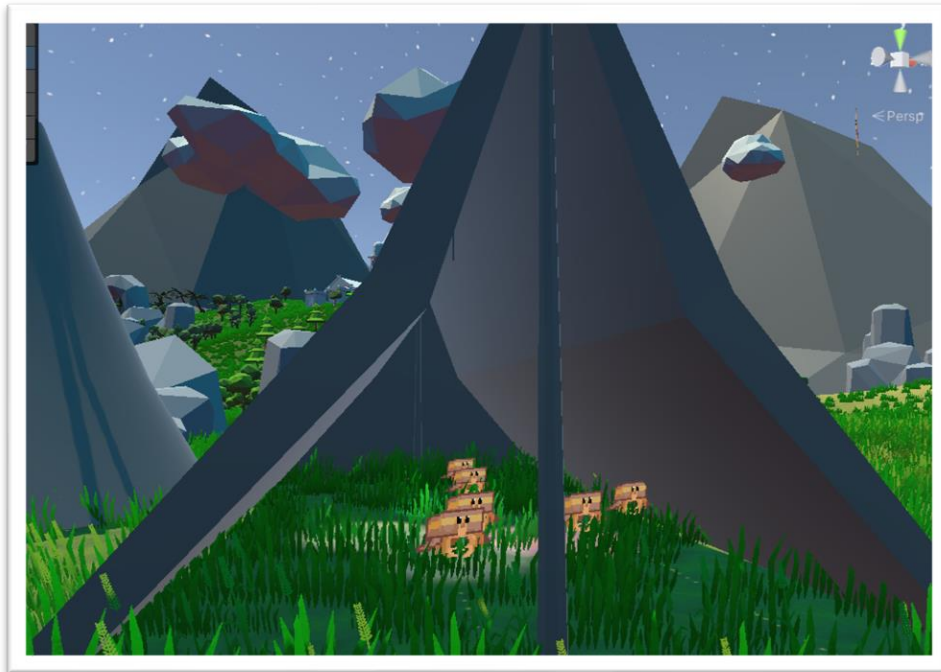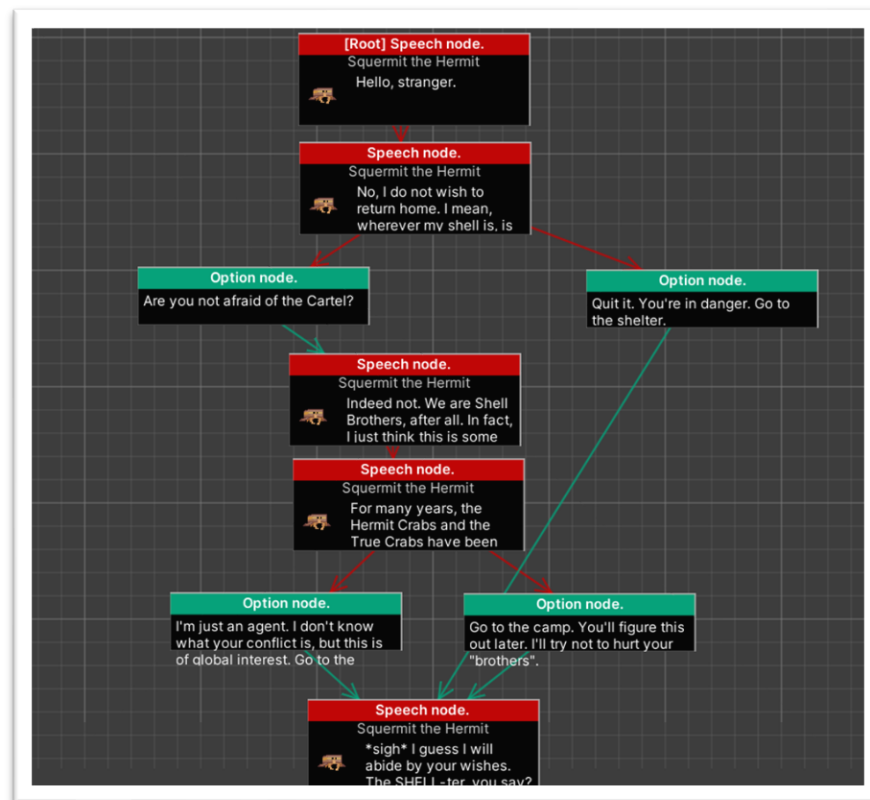

Figure 16 - Hermit talking about brothers

Figure 17 - Turtle animation state machine

Figure 18 - Real turtle attack
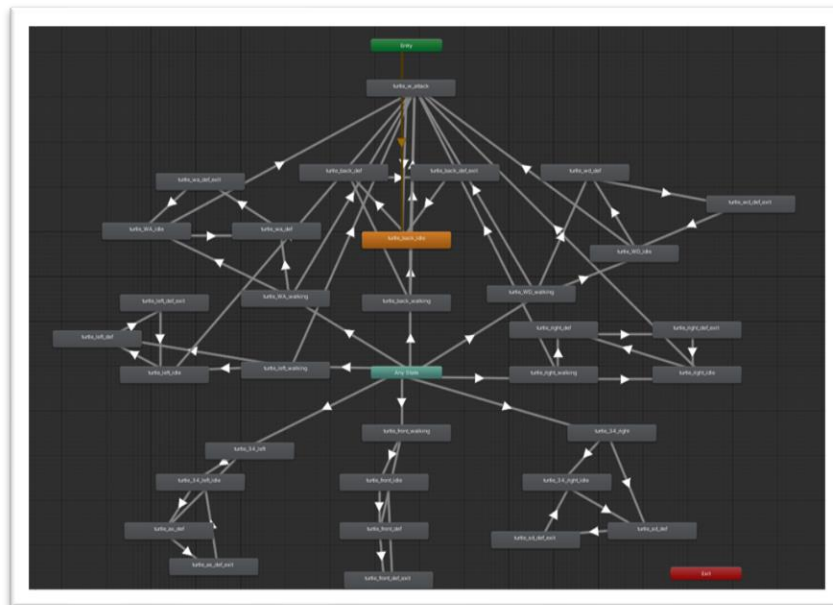
Figure 19 - Turtle Shelling

Figure 20 - Turtle Attack

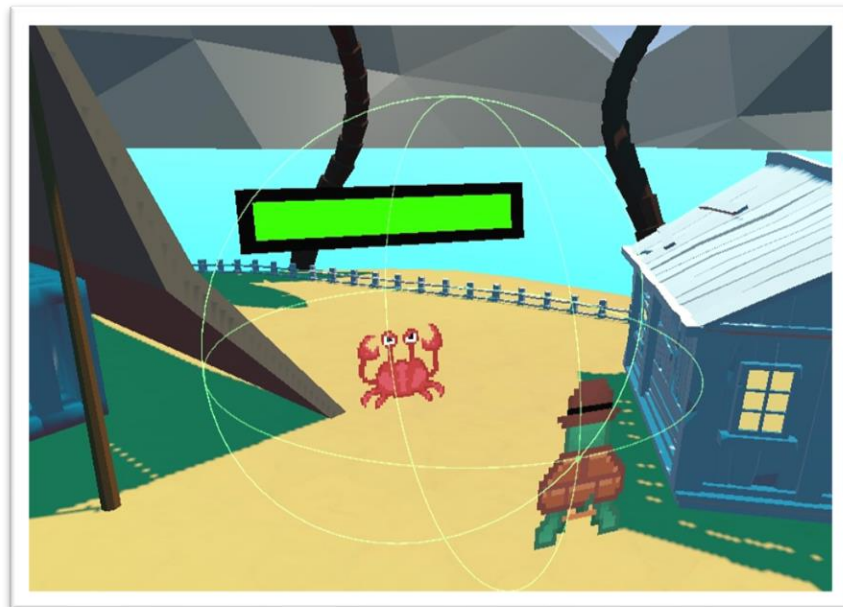*Figure 21 - Capy moving moustache*

Figure 22 - Hermit rising animation

Figure 23 - Turtle attack capsule

Figure 24 - Turtle fighting video
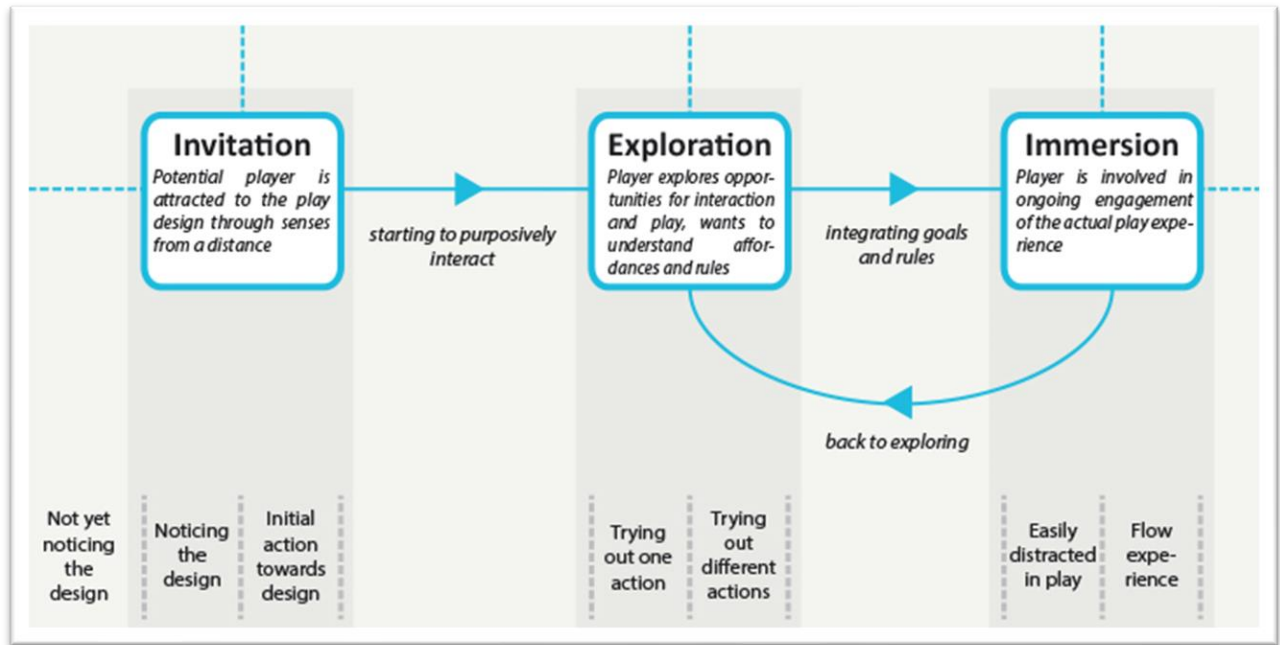

Figure 25 - Bossfight Concept

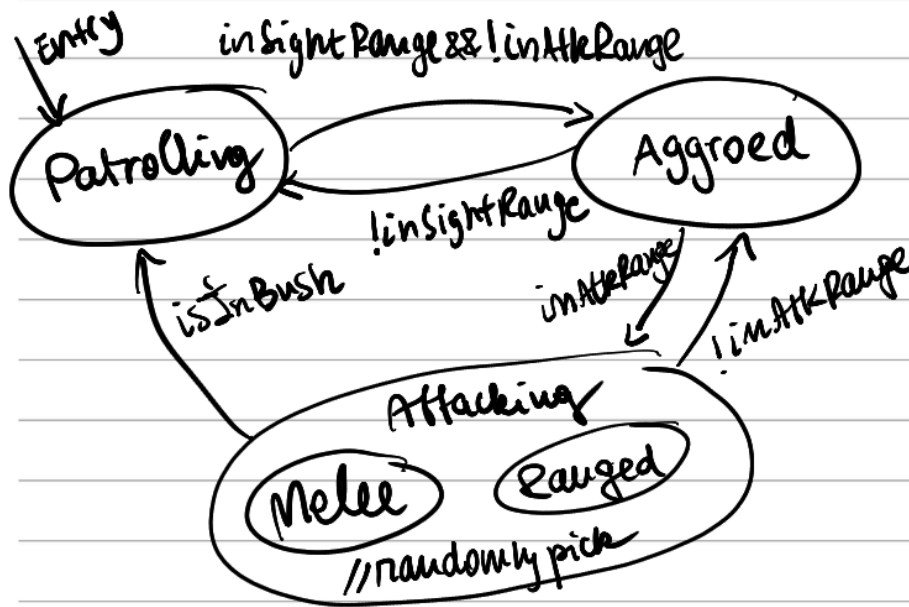*Figure 26 - The Three Stages of Play (Valk, 2015)*

Figure 27 – Video of hiding in bushes

Figure 28 - State Machine of Crab