The Little Traveler

by CinnyRolls

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1 Preamble

1.1 Introduction

The purpose of this report is to present the overall progress we have made since the submission of the book of specifications, meaning what each member of the group did, how we did it, and the different positive or negative aspects we may have encountered while working on it. We will also include the definitive task distribution and progression for the next presentation.

For now, our project's outline has not changed as it is still a third-person adventure platform-like game named "The Little Traveler". As indicated by its type, the player will have multiple levels to complete, and the main goal will be to collect a defined number of items before finding the exit. The levels are going to contain a certain number of collectibles, enemies, and consumables. There will also be some mini-games to complete to unlock parts of the level. However, we have not decided yet about the difficulty management.

Right now, the project's overall progress is not going as planned as there were many things we did not take in account while making our first progression array. There are some tasks for which we are in advance, such as the website, which is mostly complete except for the content, or the game menu, which is also mostly complete as it only needs to be linked to the rest. And there are others for which we are late, such as the physics, the interface, the save, the artificial intelligence or the multiplayer mode, because each element is linked to things we are currently working on.

1.2 Game scenario and gameplay

The basic storyline of our game is set in a far, far future in which space traveling has been made possible and standardized. Humans discovered a new abundant resource that began to be widely used, mainly for fueling spacecrafts. In such an era, new laws exist to regulate space traveling, thus making new criminals appear: they are space pirates.

Our heroine is an earthling young woman of age twenty-something, named Hayden, who has been an orphan since childhood. She became a space pirate after she was taken in and raised by one, and she has been traveling from planets to planets since then. She mainly attacks space cargo-ships that transport sweets and candies to take and redistribute them to orphans on every planet she stops. Her other goal is to taste every sweet and candy of the universe, which is her main motive for her actions.

We will follow her through her adventure on the ships she encounters and then on the planets she lands on.

As for the gameplay, the main idea is to be able to choose between an infiltration mode or a full-on attack mode. The player can choose to eliminate the enemies or not depending on what they want to do. The main character will also have a side character, a robot companion, that will be artificial intelligence or used in cooperation mode. It is going to be split in levels on space cargo-ships and planets.

1.3 Definitive task distribution

The first task distribution we submitted for the book of specifications was made depending on what each member wanted to or felt capable to do. As we started to work on the project however, the tasks have been naturally redefined as some worked on tasks other than what they were supposed to work on, and others just lost interest in theirs. So here is the final task distribution that we'll keep until the end of the project:

Tasks	Teelry301	Shoppy	S.A.T.A.N.	Sillycium
Website		X	X	
Level design		X		X
Game menu		X	X	
Gameplay	X	X		
Physics	X			X
Interface			X	X
Save	X		X	
A.I.	X			X
Multiplayer			X	X
SFX/Music	X	X		

1.4 Definitive progression

Here is the first progression array we submitted for the book of specifications:

Tasks	First pres.	Second pres.	Final pres.
Website	50%	80%	100%
Level design	20%	60%	100%
Game menu	50%	80%	100%
Gameplay	30%	75%	100%
Physics	30%	50%	100%
Interface	30%	70%	100%
Save	40%	80%	100%
A.I.	10%	70%	100%
Multiplayer	10%	60%	100%
SFX/Music	0%	30%	100%

In the end, we have made more or less progress on some tasks so we had to modify our array according to our progress:

Tasks	First pres.	Second pres.	Final pres.
Website	50%	80%	100%
Level design	20%	60%	100%
Game menu	75%	90%	100%
Gameplay	25%	75%	100%
Physics	0%	50%	100%
Interface	0%	70%	100%
Save	0%	80%	100%
A.I.	0%	70%	100%
Multiplayer	0%	60%	100%
SFX/Music	30%	75%	100%

2 Project progression

2.1 Website

The idea was to make a welcoming and clean looking website using only CSS and HTML, so that is exactly what we did. We wanted our site not to be too charged, so we made three big ”button”-type links under our header that direct us through the few pages we have, meaning: the *About us* page that is supposed to describe the team and each team member, the *News* page that contains all the updates about the game, and the *Downloads* page that contains all the links useful for the game.

Figure 1: The main page of our website

Each page follows the same structure: a big box that contains the content and a link under the box to go back to the main page.

Figure 2: The top of our *About us* page

Figure 3: The bottom of our *About us* page

There is no content nor picture yet but once we add them, the site will surely reflect better the atmosphere we want it to give. We are also making a logo that is not completed yet and that is going to replace the header later on.

Our website is accessible at `https://cinnyrolls.github.io/`

2.2 Level design

For now, we only made one level that serves the purpose of a tutorial to our game. The first level's setting is in a hangar of a cargo ship in space. Our main character, Hayden, starts at the opposite side of the big door on floor zero. The player starts by learning how to move basically, how to jump, how to run, how to roll and how to interact with the environment. Afterwards, they have to go to the first floor to unlock the shipment boxes. Once unlocked, the enemies, that are only on the first floor, spot them and attack them. Then, the player has to learn how to fight, to eliminate the enemies, and to open the door and escape.

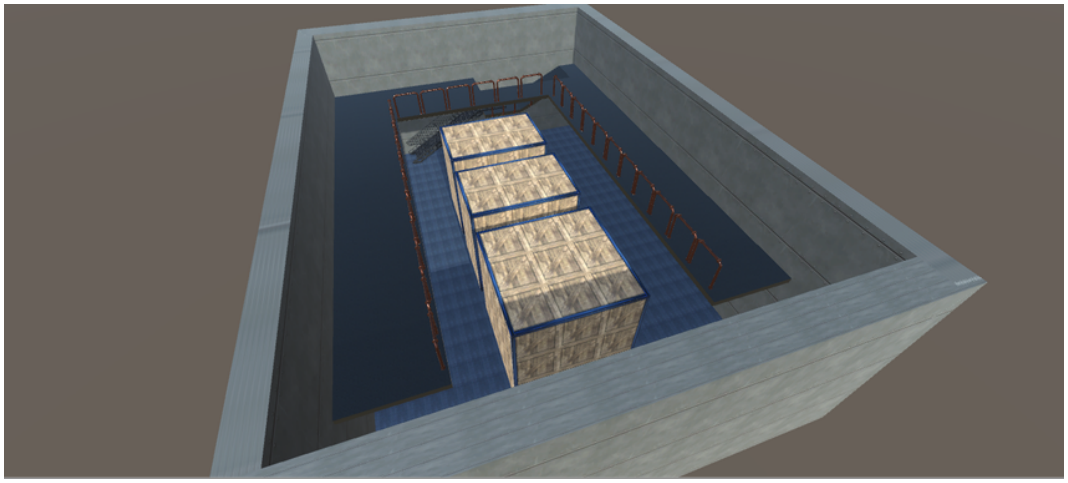

Figure 4: An overview of the set of the first level

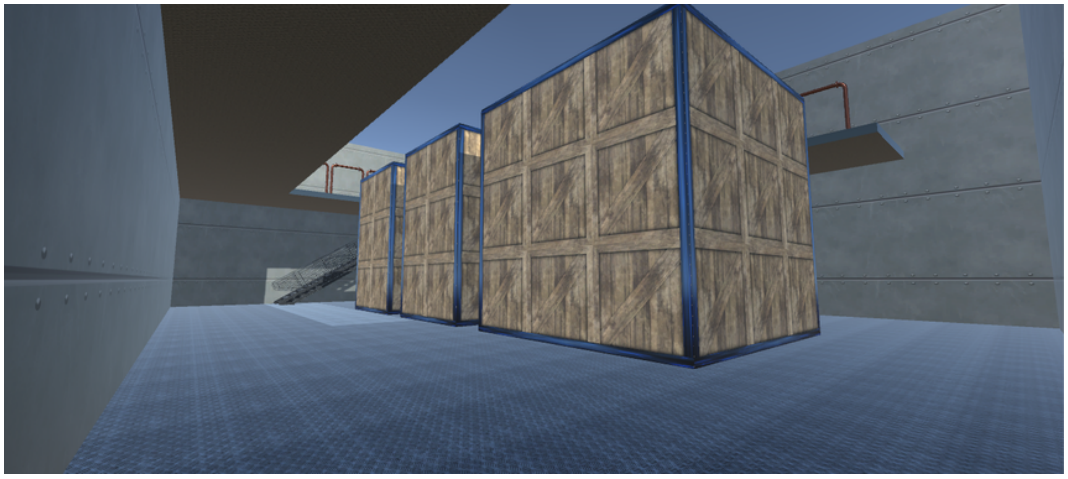

Figure 5: An overview of floor zero

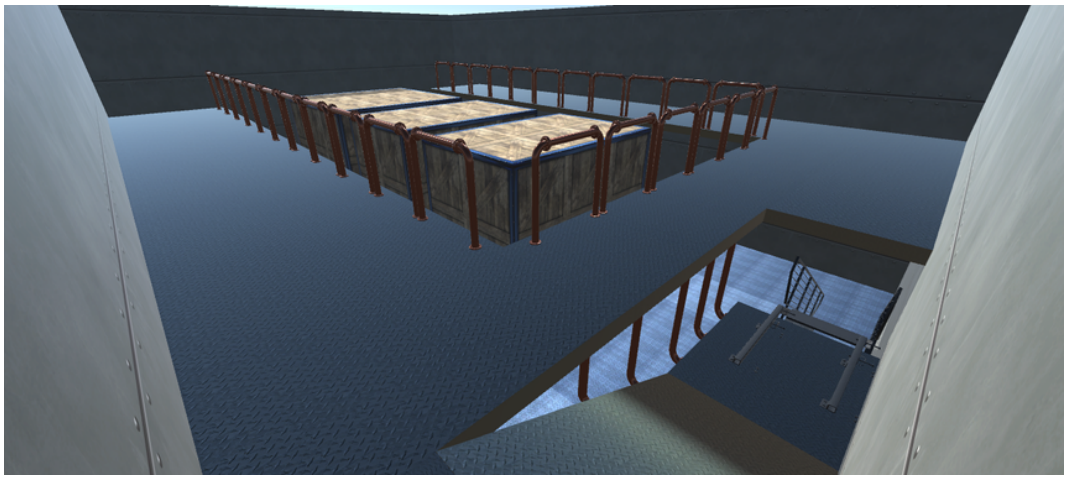

Figure 6: An overview of the first floor

2.3 Game menu

As of now, the game menu has been created, and can launch the first level or let you quit the game. We have planned later on to add settings to eventually be able to choose between full screen mode or windowed screen mode, to change sound volume, and maybe also change visual settings.

Figure 7: The game menu

2.4 Gameplay

For now, our character is able to move forward, backward, to the right, and to the left thanks to the arrows. She moves independently from the camera, which is controlled by the mouse. Since we have not yet implemented the enemies nor any collectible nor consumable, she cannot fight for the moment. She also cannot run, crouch nor jump yet but we are working on it.

2.5 SFX/Music

We have started to record some of the game's sound effects, such as the gun sounds or the water droplet sounds for some of the parts of the game that will have water leaking through for example. Unfortunately, we cannot include any sample in the PDF file...

2.6 Overall review

We actually did not do much for the first presentation, but we worked a long time on it, so it kind of feels like we wasted a lot of time for almost nothing. There was a lot to learn and we learned mostly by trials and errors to complete what we have managed to do. We all agree that we should split the workload and do a bit every x time, so we are thinking about creating a schedule of some sorts. We also need to learn how to work separately in a more efficient way to manage our time more efficiently.

The website was fairly easy to make as the main coder already knew the languages used, meaning CSS and HTML. It took quite a long time, but it is mostly complete and functional as a simple, informative website. Although it lacks the content, which we intend to add little by little, it is ready to be used as it is. We may try to tweak it a bit, make it prettier or add more functionality to it later on.

The level design is fairly easy to do, but very time consuming. Finding the model or the texture we want is a difficult and long process because there is not always exactly what we want and we also have to know how to manipulate them.

Creating the game menu was very easy. For now, we have two buttons. One of them is *Play Game* that is linked to the scene of the first level, to play. The second button is *Quit Game* which just quits the game.

What was easy about the animation was that we already found the character and the animations going with it, so all we had to do was to create an animator that linked the movement of the character to movement values so that it moved correctly. However, the movement was hard to make because we tried to use the velocity of the character, which apparently is independent to its rotation, or where it is facing, so we have to find another way to make the character move correctly.

3 Upcoming updates

3.1 Level design

The idea is to have more than five levels to play at the end of the project. The levels are going to be alternately set in cargo ships and on planets. While in cargo ships, the main goal will be to collect a number of candies. While on planets, the main goal will be to collect a number of mechanical wrenches. Then, to complete a level, the player will have to reach the exit of the level. There are going to be a number of enemies on precise point on each map so that the player can find a way to avoid them if they want to, to enable infiltration or stealth mode in opposite to full-on attack mode. We want to implement an achievement system to give sense to these two modes.

As we already mentioned earlier, the first level serves the purpose of a tutorial. The player starts by learning how to do basic moves first, then they have to interact with their environment to trigger enemy reaction. Afterwards, they learn how to fight and complete the tutorial by eliminating every enemy on the level.

The second level marks the start of Hayden's, our main character's adventure. She crashes on a planet and has to repair her spaceship. As the player collect wrenches, they will also encounter the robot companion at some point. We have not yet decided about how our second character will impact the gameplay, if the player can interact with it or not. However, we wanted the levels to look different if there are two players, with the robot companion being essential in the cooperation mode.

We have not yet decided if the rest of the levels were going to have their own special characteristics.

3.2 Gameplay

As for the gameplay, we want our character to be able to have different moves beside walking on all four directions. We want her to be able to run, to crouch, to jump and also to roll maybe. We want the character to move totally independently from the camera, which would be controlled by the mouse, to make it more intuitive for the player.

After that, we will need to implement the use of consumable items, such as different types of firearms (guns, rifles, etc.) and different types of bladed weapons (small knives, larger blades, sabers, etc). They will be present on levels in limited quantities and maybe also on enemies, that are going to drop them once eliminated. If we decide to implement a chest-type of box, we may also make it possible for the player to get some items from it.

Another type of consumable we could implement would be regenerative items, such as health point potions for instance. It would depend on what we decide to put on the user interface (the health point, the energy, etc.). We could implement a bundle of regenerative items to help the player. We could also implement some items that would give penalties to make the game a bit harder.

We may try to add some easter eggs inside the game that would be triggered by interacting with the environment, but that is just an extra idea for the moment.

3.3 Interface

As for the interface, we want to make a simple but informative and complete head-up display for the player. The idea would be to have a really refined display, but still very distinctive and visible for the player to be able to overview everything and manage themselves.

Here is a sketch of how we want it to look like, once implemented:

Figure 8: A sketch of a head-up display

The idea is to have it look like, for instance, *The Legend of Zelda*'s:

Figure 9: *The Legend of Zelda: Ocarina of Time* head-up display

3.4 Artificial intelligence

Since the players and the robot have not been implemented yet, no artificial intelligence have been done. We plan on having done the enemies, since the robot will be harder to implement since it also relies on multiplayer. For the second presentation, we will have the enemies be able to detect the player once she has picked up all the candies on the map on the first level, and then try shooting at her.

Overall, the enemies are supposed to move around the point where they are going to be placed. They will have an aggro zone around them and, as long as the player does not go in the aggro zone, they should be safe. However, if they go in the aggro zone, the enemies will detect them and attack them. We have not yet decided if triggering one enemy triggers every enemy present, or if it just triggers enemies present in a certain radius around the first enemy triggered, or if it just triggers the one enemy that is triggered.

About the robot companion, we have not really decided how it will act on solo mode. It may either only rely on artificial intelligence to help the player or it may rely both on artificial intelligence and player's command to help the player. We want the robot companion to be able to help the player trigger some elements of the environment or eliminate enemies when needed or show some hints about what to do next maybe.

We have not yet decided to implement or not any non playable characters at this moment.

3.5 Multiplayer

The multiplayer, or cooperation mode, is going to consist in the robot being the second player and being able to help the main character in her quest. We have not yet decided but the idea would be to make the maps a bit differently to have the second player have a more important part in the adventure.

The second player will be able to shoot and collect candies too. They will also have a special power since they cannot go in stealth mode, they will be able to fly undetected for a few seconds every x time (we have not yet decided about the period).

We will try to make the levels a bit different so that there are some elements in the environment that can only be triggered by the second player. Like some button mechanisms that have to be triggered at the same time or things such as this. The big idea would be that a single player would not be able to play in multiplayer mode alone.

We will also have to make it so the storyline for the multiplayer mode would also be different from the one we have for the solo player mode. The multiplayer mode will eventually not be able to be played unless the player already met the robot companion in solo mode maybe.

3.6 Overall review

Overall, we still have a lot to do. Our game is not even in the playable state yet, so we will have to work on it more thoroughly for the next presentation.

The idea would be to have our character be able to do every move we want her to do, meaning walking, running, jumping, crouching, rolling, using consumables (weapons and regenerative items) and interacting with the environment.

We would want to have at least three complete levels with the collectibles and the enemies ready so the game can be played.

4 Conclusion

In conclusion, we will have to start working as soon as the first presentation finishes. Our progress right now is way behind schedule, but we will do our best to compensate every part we are lacking right now, so to present a playable game for the next presentation.