The Little Prince

Exploration Through Space

The game based on the famous play The Little Prince

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EXECUTIVE SUMMARY

The Little Prince is a project built by a group of students from Arizona State University. The project is for the course Game Engine Architecture, taught by Professor Ashish Amresh.

The Little Prince is a game based on the famous novella, *Le Petit Prince*, written by French aristocrat Antoine de Saint-Exupéry, in 1943. The novella is one of the most-translated book in the world, and has many merchandise and board games since it came out.
The goal of the project is for the students to be familiar with operating Unreal Engine 4, and for the students to design and build a game of their choice. With the interests in *The Little Prince*, the team felt it is appropriate to create a game based on the famous novella. The game will consist multiple levels that based on the different asteroids, and each level will have a specific task(s) to be completed.

CONTROLS

PC Controls

Mouse + keyboard, basic 3rd person controls

Click/overlap to pick up

‘C’ to talk to NPCs

‘C’ to open chest on geographers planet

Space to jump

‘E’ to use tools

‘P’ to pause

LEVEL DESCRIPTIONS

Businessman's Planet

Summary

This is a spherical level utilizing point gravity. The planet contains flora and fauna that will either aid or harm the player: mushrooms, bushes, stone paths, and grass. There is a single NPC, the Businessman, who spends all his time counting the stars. He requests the Prince's aid in collecting stars.

Objective

The objective of this planet is to collect the correct number of stars. The number is randomly selected and is between 100-300 stars. Upon collection of all stars, the prince needs to return to the businessman NPC. If the prince has too few or too many stars, then the level will not be completed and he will be prompted by the businessman to get the correct amount.

Scoring

There is no scoring on this planet other than meeting the object and either *passing* or *failing* the objective.

Geographer's Planet

Summary

This is a flat, plane landscape. There are four major sections in the geography (plain/forest area, arctic mountain area, desert area, and water area). There is a small objective in each area. The prince's goal is to explore the planet for the geographer.

Objective

The first objective is to simply talk to the geographer. He will then present the prince with the task of exploring the planet.

After entering the arctic mountain area, the prince is prompted by a blue NPC to head up to the top of a mountain in search of her brother. Once there, the prince will talk to the brother and then be required to lead him down back to his sister. After returning her brother, the sister will tell the prince to search the desert to aid in his overall quest for the geographer.

Once in the desert, the prince is prompted by an unnamed desert NPC to collect crystals for him in exchange for a key to a treasure chest. The prince has to stay hydrated by drinking from wells

while collecting the crystals. The NPC explains that this will be of much importance to the prince. After collecting the crystals, the prince receives a key and is told to head forward to find the chest.

Upon heading forward, the prince is presented with a lake/water area. He is then required to search for the chest underwater. It is important to keep rising above the water line and get oxygen. Once the prince locates the treasure chest, he receives a map of the planet.

Then the prince returns to the shore and is immediately fast traveled to the Geographer. He gives the map to the geographer, thus rendering the geographer's life work useless.

Scoring

There is no scoring on this planet other than meeting the object and either *passing* or *failing* the objective.

TECHNICAL DETAILS

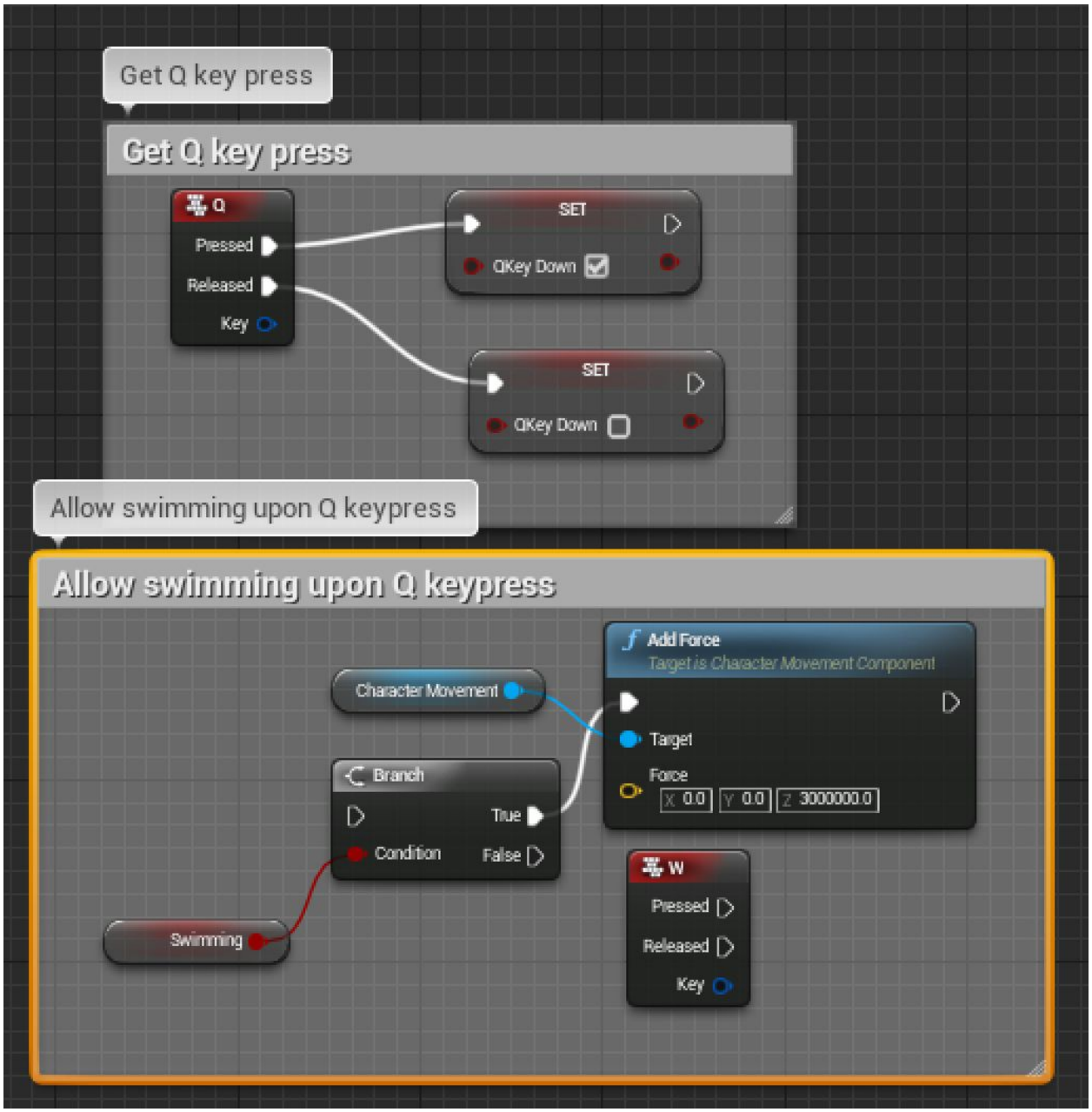
Throughout the creation of the Little Prince: An Exploration through space, we encountered a variety of small issues.

The first and foremost being small issues with Github Desktop. Most of our member were new to Github Desktop, so it took some time to get used to. There were several instances where old githubs were not synced and pushed onto the master branch, overwriting changes that were made. These were always mild changes, but the fact that we had to go back and change things that we weren't 100% sure were changed to begin with definitely added several hours to the project.

We also had a few problems with synching a map to the github repository. In fact, the map was just downright too large and ended up having to be completely recreated. While the new map ended up being better overall, it added about 8 wasted hours to the project.

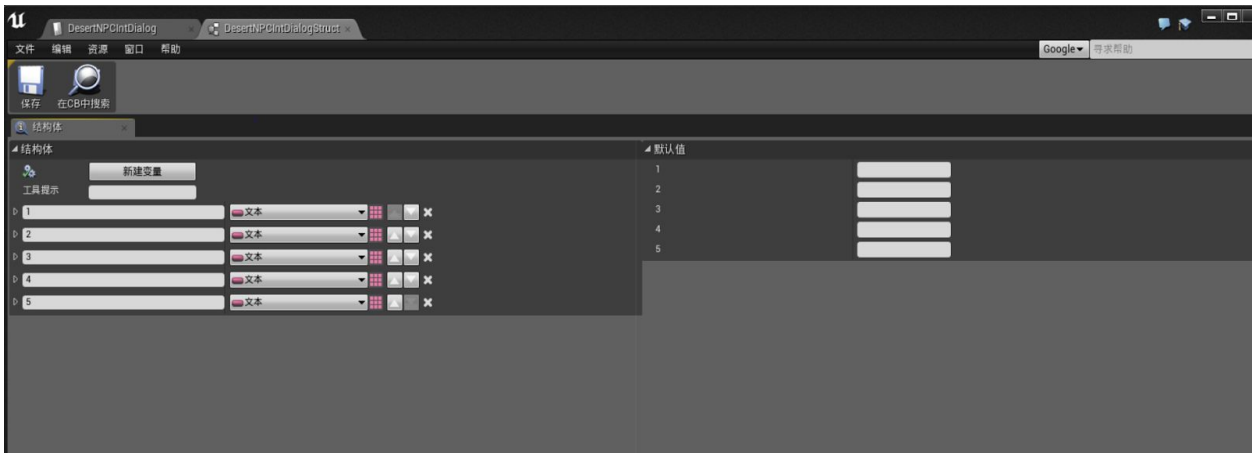
Swimming system:

There were also some difficulties with implementing the swimming effect. Initially we believed that swimming was going to be easier to implement, since there is an option to set a volume as a “water body”, as well the option to set your character’s buoyancy. However, we ended up have to use a workaround to create the swimming effect. We had to use a key press (‘q’) to “add force” to the player’s character only when he’s underwater. We had to make the force so high that it would send the player flying into the sky. To counteract this we then added invisible collision walls above the water. While it makes the prince look like an awkward swimming, it worked well enough for the scope of the project.

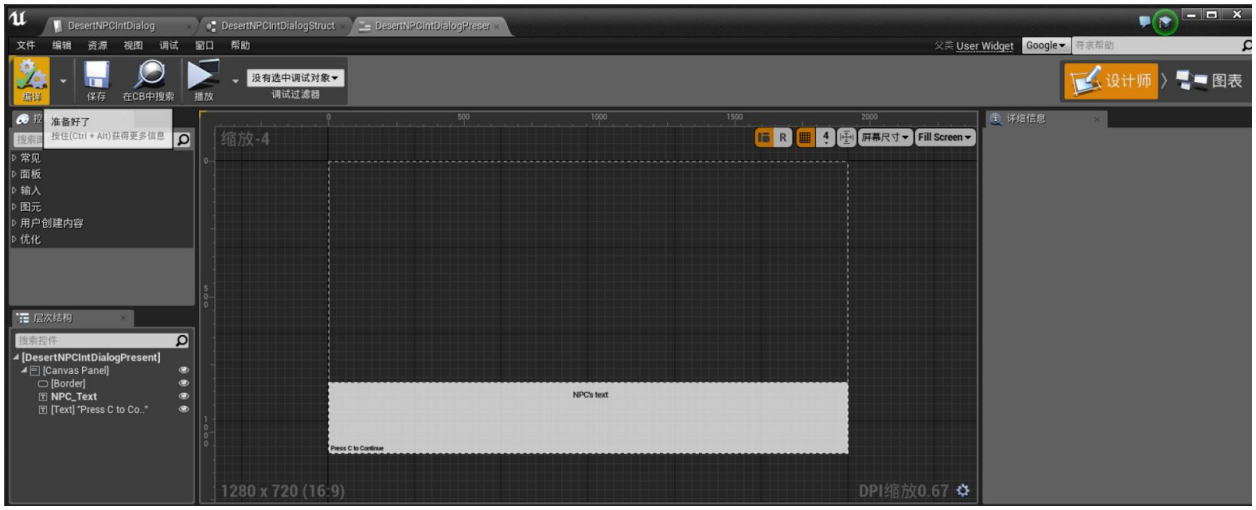


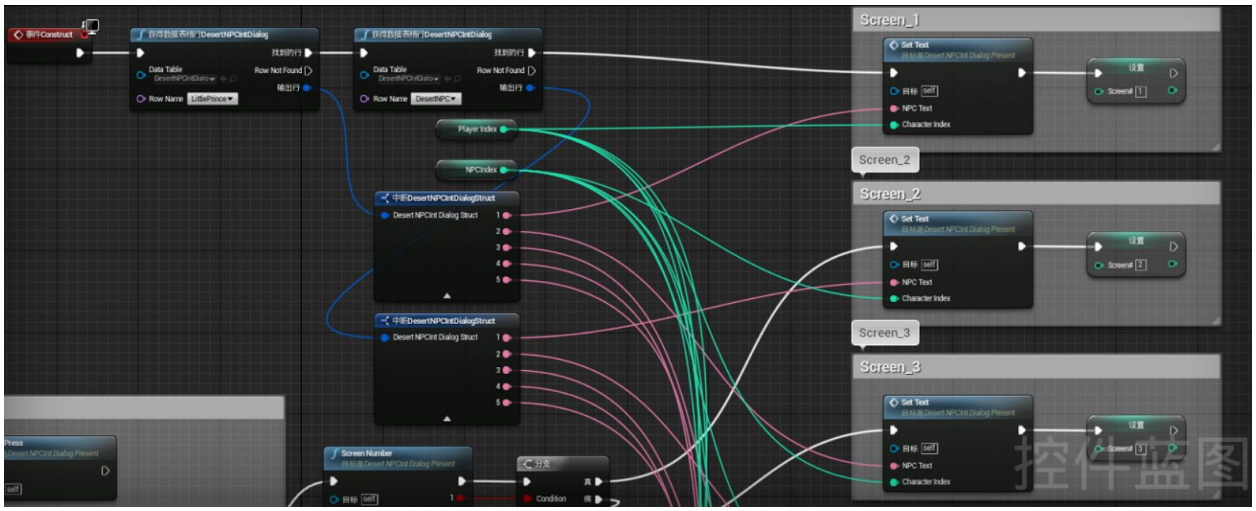
Dialogue system:

About the in-game difficulties, the dialogue system is one of the major issue we met. It includes how to import the dialogue to the game, how to display the dialogue to the screen, and how to advance the dialogue.
We imported our dialogue from .css file, and use a structure to format the dialogue text, finally it become a data table stored in our game.

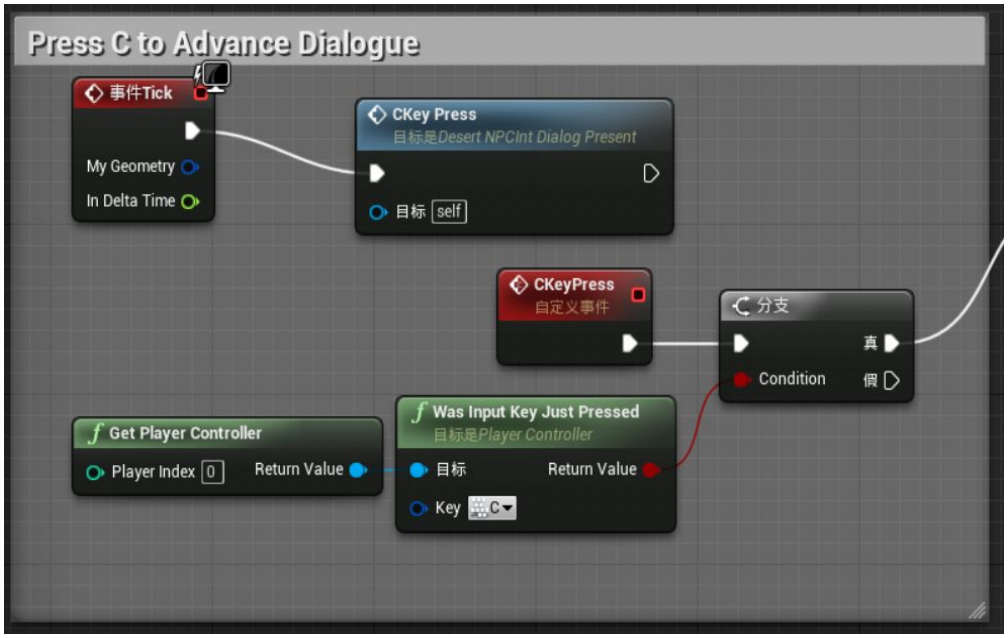


We used widgets to show the dialogue, and used screen number to record where is the dialogue goes now.





And the last part we completed is to make pressing C to advance the dialogue:



FEATURES IMPLEMENTED FROM THE DESIGN DOCUMENT

Story:

We have insisted to use the famous novel --The Little Prince, as our original script, and all the game content in each planet is connected the story we know. Which makes our game be attractive to children around 6-12, especially for those who have already read the novel

Small planet and Gravity:

We also followed the feature of the original story that, some planet (like our businessman's planet) are small sphere, and we have the gravity towards to centre of the planet, which will allow for more intricate gameplay and more detailed interactions with NPC and make players feel special about our game.

FUTURE WORK

Going forward, our team would like to add more levels. Ideally we would like to implement one level for each planet in the Little Prince novel.

- The little prince's planet
- The king's planet
- The vain man's planet
- The drunkard/tippler's planet

- The lamplighter’s planet
- The earth

That would add an additional 6 levels to our current 2 levels, for a total of 8 levels. Ideally each level would be 10 minutes max, as this game was created for children.

Preferably we wanted the game to be played on a mobile device which would mean reworking the motion controls as is to make them function better on mobile phones.

Lastly, we would like to create custom models for all the assets currently in the game. Especially the Little Prince and all the other NPCs.