

CSC111 Winter 2024 Project 1

Ao Tian

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Enhancements

1. Combine Items and Open Chest

- Brief description of what the enhancement is (if it's a puzzle, also describe what steps the player must take to solve it): This puzzle requires players to pick up two specific items(stone and abrasive tool), and after that, the "combine" action will appear for players. After players type "combine" in their console, it will first display the player's inventory and ask players to select two specific items. Only if "Stone" and "Abrasive tool" are selected, the combined process will succeed. After players obtain the combined item "Stone Key", it won't be useful until players reach the location of the chest. The "open chest" action will pop up for players. Notice that the chest can only be opened once, once players type "open chest" in the console, they will get the items that are essential to winning the game. This puzzle is solved.
- Complexity level (choose from low/medium/high): medium
- Reasons you believe this is the complexity level (e.g. mention implementation details, how much code did you have to add/change from the baseline, what challenges did you face, etc.) For all the puzzles in the game, I create a separate class called puzzle class, the overall implementation is not very complex but requires a deep interaction with all the main functionalities in the baseline part of the game like inventory and the player's updated location. Quite a lot of code is added including the combine item class, open chest class as well as corresponding components in other files of the game. The main difficulty comes from combining this new puzzle into the main body of the game. Many bugs were encountered and many new functions were required. Also to make the whole puzzle class more integrated, every single puzzle in the puzzle class is an inheritance of the parent Puzzle.

2. Missile Launch

- Basic description of what the enhancement is: This puzzle requires players to pick up one specific item called "launch pad", and after that, the "type password" action will appear for players. After players type "type password" in their console, it will ask players to type out the specific password(1890169), and the hint for the password is spread around the campus(two pieces of info). Players will need a bit of patience to find them through reading the description of the location. Once the player types the correct password, the missile will be launched and a place called "Super Castle" will be destroyed. The item will fly to players' hands directly due to explosion(In other words, once the correct password is typed, the item will be appended to players' inventory automatically). This puzzle is solved.
- Complexity level (low/medium/high): medium
- Reasons you believe this is the complexity level (e.g. mention implementation details): After the combined item and open chest is implemented, this missile launch is quite similar to the previous one, with the same type of interaction with players' inventory. The only different component

is that a specific password needs to be input to solve the puzzle. Also after the missile launch, that specific location will be labeled as destroyed, this part requires the interaction with the description of the location in the baseline component of the game. The Missile Launch Class is also a child class of the main Puzzle Class.

3. Businessman Trading

- Basic description of what the enhancement is: The puzzle requires players to go to the location of the "businessman token", where the businessman is located. Once you are at the location of the businessman, you can trade with him(only once, once you trade with him and come back to the same location, you won't be able to trade with him again). This part is quite interesting because the item you choose to trade with him is extremely important, if you choose items to trade with the businessman that is crucial to you(like items that are required to win the game), you will lose the game directly and the businessman will laugh at you. The game will shut down directly as a sign of ridicule. To ensure players don't trade important items with the businessman, there is much junk on the map like "socks", "coca-cola", "cheeseburgers" and "Nintendo Switch". After you trade with the businessman, you will obtain the item that's crucial for you to win the game. This puzzle is solved.
- Complexity level (low/medium/high): medium
- Reasons you believe this is the complexity level (e.g. mention implementation details): This puzzle is quite different from the last two, it requires deep interaction with players' inventory, updated location, the property of first visited or not, as well as the winning condition component of the baseline of the game. The overall implementation of this puzzle is not complex but requires a certain amount of effort in combining it with the whole game. The whole businessman trading class is added as well as many corresponding chunks in different classes and adventure.py. I have encountered many bugs in implementing this part, especially when trying to blend it into the adventure.py part. However, since I also gained some experience in the implementation of the first puzzle, it is overall not very hard to implement.

Extra Gameplay Files

If you have any extra `gameplay#.txt` files, describe them below.