OOP Text-Based RPG—NYCU

- ## *Preface*

You can watch the demo videos in this play list : https://youtu.be/nFaFNjdoRf4

Also the README.md at https://hackmd.io/@CTFang/ByMLBt9cU

- ## *Introduction*

This is the report for the text-based RPG game name after NYCU. You become a warrior in NYCU. And you have to face different subjects in order to graduate. However, there are some useful tools or books which could enhance you power. For instance, you will find Apple in the game, and you can pickup iPad which could highly enhance your power of fighting with each subject.

- ## *Implementation*
  - Class diagram — There are 9 classes in the game, the inherit relation are shown below
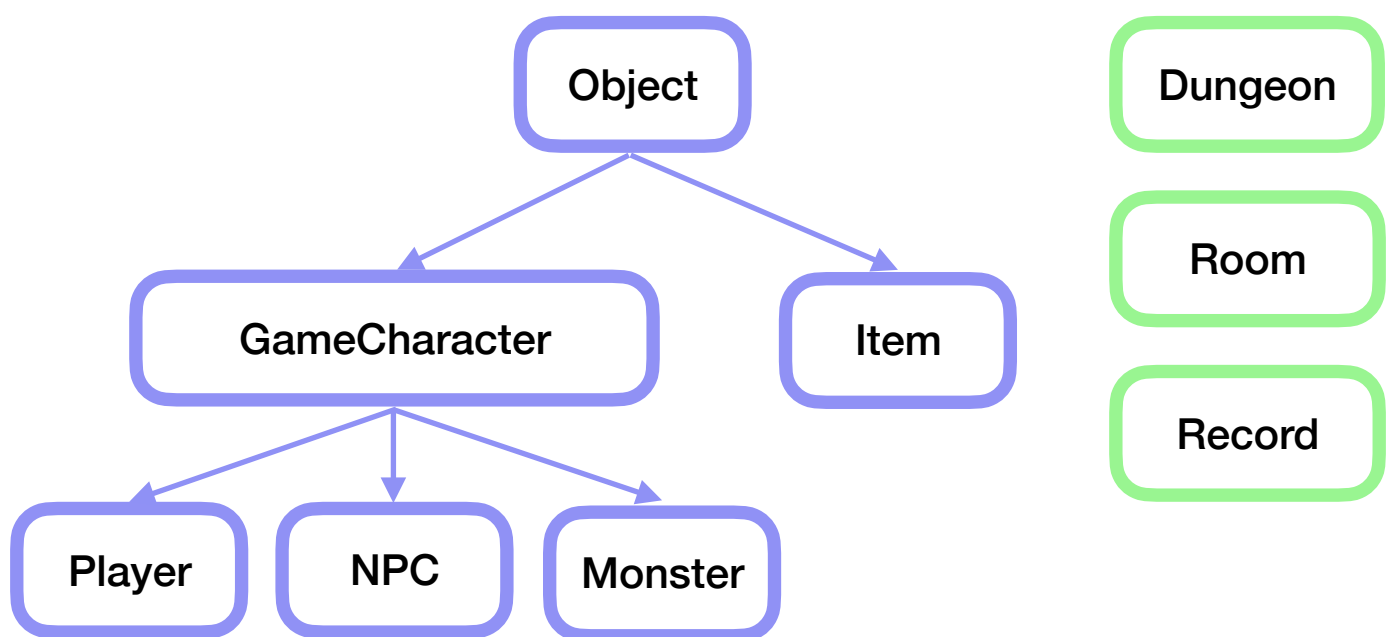
The top class "object" have two properties, "name" and "tag". The inherit classes "Item" and "GameCharacter" share the same properties. And object has two virtual function which are "triggerEvent" and "listInfo". "TriggerEvent" would implement in classes "Item", which use to handle pick up item, "Monster", which use to implement combat system, and "NPC", which use to pick up item from an "NPC". "ListInfo" would implement in each leaves class for output to record more easily.

- Combat System

    We implement the combat system in monster's triggerEvent. When we get the name of the monster you want to attack, the program would call that monster's triggerEvent.

- Record System

    We would save the game to two separate files, "{name}_map.txt", which save the map information and the object in each room, and "{name}_usr.txt" save the item player has and the items. Use the function "listInfo" in each class to make record system looks more clear.

- Monster Spawning

    In order to get strong enough to fight against the boss, "Calculus", I add a monsters spawning system. When entering a room, there is a probability to generate a new monster. Beating each monster would get monster buff.

- Monster and NPC database

    Owing to make the game more extendibility, I add two extra txt file with this game. One is called "Monsters.txt" and the other is called "NPCs.txt". These two file would load at the beginning of the game. Any user could add their own NPC or Monster in corresponding file to make the game more interesting.

- Map Creation

    At the beginning, I was thinking about randomly generate a map. But there is a lot of error doing this. At the end, I decided to create a map by my own. Describing a map in "map.txt" and create this map when creating the map in the program. This is the one thing I could improve.

- *Conclusion*

    There are a lot of detailed when creating a game. I think I knows more deeper about inherit class, virtual function, and friend function…etc. This is not an easy project, but we could have a lot of experience when developing this games.