

# FIT1048 Assignment 3 Reflection

Jonathan Nicholas (27923517)

The class is designed by creating a base Character class, since every character, regardless of the role in the game, have similar attributes, and same basic functionality, such as returning name, health points, attack points, defense points, and adding attack and defense points, and decrementing health points. Then a Special class is built, by inheriting the Character class. This class will be used for Boss and serves as the base for Hero class. The reason is because both Boss and Hero has Special Attack attributes, which is unnecessary on the regular enemy object. It includes some methods necessary for the Special Attack to work, such as returning Special Attack value, disabling Special Attack after usage, and reset of Special Attack usage status after each battle. Then the Hero class is built, by inheriting the Special class, and adding the attributes and methods that is related to Prize Money which is unique to the Hero class. In order to facilitate the interaction between characters, a Logic class is created, which includes a vector containing pointers to the Character objects, which will be casted to Hero object and Special object as necessary, using polymorphism. Data validation are done from another function, which is not part of any classes, in order to maintain reusability.

The coding process of the object oriented design were fairly easy to do, excluding some initial issues with my understanding of how pointers work, and initialization of objects to point by the pointer.

If I were to redo the design, I would make so that there will be only one instance of Logic class can be made using Simpletons, separate I/O operations from the Logic class, and changing some of the hardcoded numbers used for the program control flow, especially on the decision between boss' turn and regular enemies' turn.