

README

LEAGUE OF OOP – stage 2

StandardPlayer - mother class that keeps the basic data for each player. Each hero type gets its own extension, starting from StandardPlayer where specific data is retained for each race.

The Map instance is a **Singleton**. Also added the instances of the spells and the angel-effects by adding those objects as parameters in the Map class.

Moreover the interaction between the heroes are done by a method(**timeForFight**) in Map class, that checks if two players are to be found at the same coordinates. The heroes get to fight by calculating the strike, setting the amount of damage each hero is going to take. Then what remains is to see if any of the heroes died and to make the XP gain for the winner.

The interactions with the angels take place in **spawnAngels**. Initially, players are ordered by the index, after this it is decided eather the angel can interact with the specific player. In positive case the visitor is called, moreover it is set the specific interaction for any kind of angel with any type of hero.

For input and output I used the provided fileIo.jar. Implemented two classes - DataLoader and InputOutputStream- for processing the raw data taken from the input file, parsing it to the fields of the game engine and printing the output in the specific file, using the functions for each printing case.

Spells that affect the heroes and the hero-angel interaction are implemented based on the **Visitor Pattern**. Those implementation are independent from the classes for the heroes. Used **Singleton** in multiple locations such as when creating the **Factories** for the players and for the angels, great mage instance (**Observer**), the game map, and the instaces for each **Strategy** objects (one for each hero type), as during the game the aggressive and the defensive strategy for the heroes doesn't change.