

Task 2 Documentation

In this task I created 2 classes, a wizard class and a Battleground class. The wizard class has health, energy, spells, shields, and current spell attributes. In terms of methods, the wizard class has add spell, use shield, select spell, select shield, and confirm spell methods along with some setters and getters. The methods are very self-explanatory, but I will explain them more with the battleground class.

The battleground class has wizards, game, and winner as the main attributes. This class is more method focused. It has 2 main methods, battle and read spells. First, the read spells method opens the spells.txt file in read mode and stores all lines in a list. Then, we go through each line in that list and check that it has the correct format and then call the add spell method to the correct wizard according to the input. Finally, the method closes the file and ends. The battle method is where all the action happens, and everything is tied together. First, we read 2 space separated spells from the user and check that the input is exactly 2 space separated methods using “input().split(' ’)” and “len()” methods. After making sure that we have 2 spells, we start parsing them. The select spell method first checks that this spell exists then returns the spell power or an error code depending on whether it ran into any

errors. Next, we display errors accordingly. Moving on from spell selection, we confirm spells for both wizards which reduces energy and reduces shield depending on what was used and get their power using list comprehension, if either wizard used a shield the function returns and this round ends. After that, we deal damage to both wizards equal to the difference in power between both spells, one of the differences will be positive and the other will be negative, only the positive one will count. Finally we check if either of them is out of health and thus the game ends, otherwise the function returns to be run again.