Task_2 Python OOP

Harry Potter vs Voldemort game

Project contents:

- main file
- Wizard class file

casting_spell method	Searches for spells in the dictionary and set it to its power
set_energy method	Decreases spell power from its wizard energy
set_wizardShield method	Decreases the number of shields after being used
two_players_game method	Compares the two spells power and decreases one of the wizards' health by the difference
one_player_standing method	Decreases the opponent wizard health by all of spell energy

- Harry potter class file

```Python
class HarryPotter(Wizard):
    # Constructor initialize wizard name and his special spells
    # then passing them to parent constructor
    def __init__(self):
        self._name = "HarryPotter"
        self._harrySpells = {
            "Reducto": 60,
            "Fiendfyre": 50,
            "Nebulus": 40
        }
        super().__init__(self._name, self._harrySpells)

```
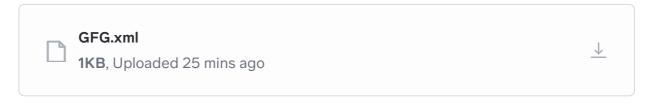
- Voldemort class file

```python
class Voldemort(Wizard):
    # Constructor initialize wizard name and his special spells
    # then passing them to parent constructor
    def __init__(self):
        self._name = "Voldemort"
        self._voldemortSpells = {
            "Taboo": 80,
            "Expulso": 60,
            "Confringo": 55
        }
        super().__init__(self._name, self._voldemortSpells)

```

- XML file

GFG.xml
1KB, Uploaded 25 mins ago

Program features:

- When both players have an energy of more than 20, the game ends when any wizard health reaches 0 (Basic case)

```
Enter the two spells (harry then voldemort)
Reducto Confringo
        HarryPotter      Voldemort
Health : 80              95
Energy : 340             225
Enter the two spells (harry then voldemort)
Imperio AvadaKedavra
        HarryPotter      Voldemort
Health : 0               95
Energy : 320             125
        Voldemort is the winner ..


Process finished with exit code 0
```

- When one of the wizard's energy became less than 20 the game continues for the other wizard and the winner is the wizard with higher health (Regardless of who has higher energy)

```
Enter the two spells (harry then voldemort)
Crucio shield
        HarryPotter      Voldemort
Health : 100             100
Energy : 10              50
Enter one spell (voldemort)
Crucio
        HarryPotter      Voldemort
Health : 60              100
Energy : 10              10
        Voldemort is the winner ..


Process finished with exit code 0
```

- Draw case is reached when both wizards energy became less than 20 and their health are equal (Regardless of who has higher energy)

```
Enter the two spells (harry then voldemort)
shield AvadaKedavra
        HarryPotter      Voldemort
Health : 100             100
Energy : 50              50
Enter the two spells (harry then voldemort)
Crucio Crucio
        HarryPotter      Voldemort
Health : 100             100
Energy : 10              10
        Draw ..


Process finished with exit code 0
```

- Handling case of using a spell that is not in the wizard's dictionary

```
Enter the two spells (harry then voldemort)
Taboo Taboo
HarryPotter spell is not found (Enter one spell only)
Reducto
        HarryPotter     Voldemort
Health : 80             100
Energy : 90             70
```

- Handling case of a wizard is trying to use a shield spell but he used all of his shields

```
Enter the two spells (harry then voldemort)
Crucio shield
Voldemort doesn't have shields to use (Enter one spell only)
Taboo
        HarryPotter     Voldemort
Health : 60             100
Energy : 50             70
```