CMPE 101: Object Oriented Programming
Worksheet 4A

Istanbul Bilgi University

Spring 2023

Part I

(40 points) Create a `Wizard` class that has the properties given below.

- int health,

- int mana,

- int power.

Write the necessary constructor, get & set, and toString methods. Finally, create a `fireball` method that uses up some mana and returns a random integer value in the range [1,6] as `damage`. Method should not get any input arguments.

Part II

(40 points) Create a `DummyTarget` class that has properties given below.

- string name,

- int health.

Write the necessary constructor, get & set, and toString methods. Finally, write a method named `cry` which does not take any inputs or return any value. It should only print `"Why would you do this to me?   :["` in the terminal.

Part III

(30 points) Create an `Arena` class that takes a `Wizard` and a `DummyTarget` and makes them fight.

Arena should have a method called `startFight` that does not take any inputs. Fight will go on until the `Wizard` is out of mana or `DummyTarget`'s health reaches to 0. Print the information about the objects after each move (eg. Wizard casts fireball, DummyTarget took 3 damage!). Every time `DummyTarget` gets damaged, it should call the `cry` method.