

Lab 11: pyRPG 2.0



Objectives:

- To practice working with classes
- To practice creating class methods
- To learn about game design

pyRPG 2.0:

Now that you have a character class in python to create game characters, you need to extend the functionality of that code to create a text-based adventure game. To complete this assignment, you will be given a python file with starter code. The starter code file has comments marked with "TODO:." These sections mark the portions of the code you need to change to get the assignment working. You can use your code from last week's lab by copying the adventure function from the starter code into the previous week's lab or just use the starter code. The adventure function allows the user the option to adventure until the player's character runs out of health. In this function the user has 3 options - fight, heal, and level up. You will need to add methods to your player's class to allow the player to heal, level up, and fight. You need to add experience points, next level, potion count, and heal rate attributes to the player's character class. Your fight method lowers the hp of the characters fighting by the damage of the other character. Your level up method should increase the stats of the user's character if the user has enough experience points and then reset experience points to 0. The level up method should double the experience points needed to level up again, increase hp by 1.5, damage by 1.3, and healing rate by 1.3. Your heal method should increase the user's character by the user character's heal rate attribute. You also need to create another class for enemies. The enemy class needs to have attributes for name, hp, damage, and points. All of the data in your classes needs to be private with accessor methods to get the data.

Program Requirements:

- Use the correct comment block
- Use a good code layout, good use of whitespace, and functions
- Comment your code
- Use a class to create a character with correct methods
- Use a class to create an enemy class

Sample Executions:

Tyler the Mage has 54 hp
you can lvl up
1. Heal
2. Level up
3. Continue through the dungeon
You have 54 hp.
You have 3 potions.
You need 0 more xp to lvl up.
What would you like to do next? 2
1. Heal
2. Level up
3. Continue through the dungeon
You have 81.0 hp.
You have 3 potions.
You need 20 more xp to lvl up.
What would you like to do next? 3
Tyler the Mage lost 4 hp
cat lost 6.5 hp
Tyler the Mage has 77.0 hp
cat has 23.5 hp
Tyler the Mage lost 4 hp

Tyler the Mage lost 4 hp
cat lost 5 hp
Tyler the Mage has 30 hp
You defeated him. You need 4 more exp.
1. Heal
2. Level up
3. Continue through the dungeon
You have 30 hp.
You have 7 potions.
You need 4 more xp to lvl up.
What would you like to do next? 1
1. Heal
2. Level up
3. Continue through the dungeon
You have 35 hp.
You have 6 potions.
You need 4 more xp to lvl up.
What would you like to do next? 1
1. Heal

Tyler the Mage has 54 hp
you can lvl up
1. Heal
2. Level up
3. Continue through the dungeon
You have 54 hp.
You have 3 potions.
You need 0 more xp to lvl up.
What would you like to do next? 2
1. Heal
2. Level up
3. Continue through the dungeon
You have 81.0 hp.
You have 3 potions.
You need 20 more xp to lvl up.
What would you like to do next? 3
Tyler the Mage lost 4 hp
cat lost 6.5 hp
Tyler the Mage has 77.0 hp
cat has 23.5 hp
Tyler the Mage lost 4 hp

Deliverables:

Submit files and lab report according to TA instructions

Grading:

Task	Points
Character class with fight, level up, and heal methods	75
Enemy class	25