Lab 3 - Lights, Camera, Conditionals!

> Updated: 2/15/2024

> Due Date: iLearn

Building Blocks

You will be building off of your code from Lab 2. If you need help getting a working copy of lab 2, please see the instructor or TA as soon as possible.

Functions

All functions should be outside of your main function.

We will be adding one new function and modifying an existing one. We will be modifying the *applyDamage()* function by adding a condition that *hp* cannot be less than zero. Below is a sample of the new function and a skeleton example of the modified *applyDamage()* function:

```python
# NOTE: <code> means that you will write code to do what the line says

# NOTE: for easier readability, add a print() to the bottom of your printOutcome()
# this will print a new, empty line

def printOptions():
    # <code> print "Press 1 for Attack"
    # <code> print "Press 2 for Pass"
    # <code> set a variable  'choice' = input("Press 1 or 2 to continue: ")
    # <code> return choice
    # ## NOTE: you will want to convert choice to an integer using int()

def applyDamage(hp, damage):
    # do you calculation from lab 2
    # <code> setup an if statement to check is hp <=0
    # <code> set hp to 0 if true
    # <code> return hp
```

Main

Your main code should still be in a function named *main()*:

All of these changes will be in your existing for loop. We know what a single turn looks like in a battle. We also know what a single attack phase of a pokemon looks like.

We are going to take that existing idea and allow the user to make the decision for both pokemon during their turn. Below is the pseudo code for what you need to build.

```python
# NOTE: <code> means that you will write code to do what the line says

for i in range(turns):
    print("-"*50)
    print(f"Turn {i}")

    # <code> print "{pokemon_1_name}'s turn!" NOTE: use the print(f"")
trick

    # getting choice for pokemon 1
    # <code> set a variable, choice, to printOptions()

    # pokemon_1 attacks pokemon_2
    # <code> if choice is equal to 1:
        damage = calcDamage(pokemon_1_ap, crit_multiplier)
        pokemon_2_hp = applyDamage(pokemon_2_hp, damage)
        printOutcome(pokemon_1_name, pokemon_2_name, damage, pokemon_2_hp)
    # <code> else if choice is equal to 2:
        # <code> print "{pokemon_1_name} passes turn"
    # <code> anything else:
        # <code> print "Not an option! Lost turn"

    # <code> print "{pokemon_2_name}'s turn!"

    # getting choice for pokemon 2
    # <code> set a variable, choice, to printOptions()

    # pokemon_2 attacks pokemon_1
    # <code> if choice is equal to 1:
        damage = calcDamage(pokemon_2_ap, 1)
        pokemon_1_hp = applyDamage(pokemon_1_hp, damage)
        printOutcome(pokemon_2_name, pokemon_1_name, damage, pokemon_1_hp)
    # <code> else if choice is equal to 2:
        # <code> print "{pokemon_1_name} passes turn"
    # <code> anything else:
        # <code> print "Not an option! Lost turn"
```

Example Output

```
Welcome to the Python Pokemon Battle Simulator!
##################################################
--------------------------------------------------
Turn 0
Pikachu's turn!
Option 1: Attack
Option 2: Pass
Press 1 or 2 to continue: 1
Pikachu attacks Charmander for 28.5 damage.
Charmander's HP is now 61.5.

Charmander's turn!
Option 1: Attack
Option 2: Pass
Press 1 or 2 to continue: 2
Charmander passes turn
--------------------------------------------------
Turn 1
Pikachu's turn!
Option 1: Attack
Option 2: Pass
Press 1 or 2 to continue: 1
Pikachu attacks Charmander for 28.5 damage.
Charmander's HP is now 33.0.

Charmander's turn!
Option 1: Attack
Option 2: Pass
Press 1 or 2 to continue: 1
Charmander attacks Pikachu for 23 damage.
Pikachu's HP is now 77.


--------------------------------------------------
Turn 2
Pikachu's turn!
Option 1: Attack
Option 2: Pass
Press 1 or 2 to continue: 1
Pikachu attacks Charmander for 25.5 damage.
Charmander's HP is now 7.5.

Charmander's turn!
Option 1: Attack
Option 2: Pass
Press 1 or 2 to continue: 2
Charmander passes turn
--------------------------------------------------
Turn 3
Pikachu's turn!
Option 1: Attack
```

```
  Option 2: Pass
  Press 1 or 2 to continue: 1
  Pikachu attacks Charmander for 22.5 damage.
  Charmander's HP is now 0.

  Charmander's turn!
  Option 1: Attack                    4 / 4
  Option 2: Pass
  Press 1 or 2 to continue: 1
  Charmander attacks Pikachu for 23 damage.
  Pikachu's HP is now 54.
```

Turning in Assignment

Please zip your file before turning it in through iLearn. This is to prevent iLearn from deleting your file (it can happen).

How to zip file on Windows: https://support.microsoft.com/en-us/windows/zip-and-unzip-files-8d28fa72-f2f9-712f-67df-f80cf89fd4e5

How to zip file on MacOS: https://support.apple.com/guide/mac-help/zip-and-unzip-files-and-folders-on-mac-mchlp2528/mac