

11.12.2015

Due date: 16.12.2015, 23:55

CENG113 - Programming Basics

HOMEWORK #6 – Gotta Catch 'Em All

Write a “Pokémon Fight Contest” in Python. You will be given a file of Pokémons (Pokedex). The Pokedex has a list of Pokémon;

- Name
- HP (Hit Points/Life)
- Attack Points
- Type
- Weakness

The “Pokémon Fight Contest” runs over 2 players. Each player will have 3 Pokémons and the 3 Pokémons will be assigned randomly from the Pokedex. Please **DO NOT EDIT OR MODIFY** the Pokémon list file.

Before the “Pokémon Fight Contest” begins, you should flip a coin (Heads/Tails) that decides which player should first draw its first Pokémon. The first beginning player has a disadvantage because the second player can develop a strategy against the first player’s Pokémon.

When the “Pokémon Fight Contest” begins, the first player who has drawn its Pokémon first performs the first attack. If the player’s Pokémon has a weakness against his/her rival’s Pokémon, then the Pokémon gets an extra +10 DMG.

Example:

<u>Player 1</u>	<u>Player 2</u>
Charmander	Squirtle
110	100
90	100+10
Fire	Water
Water	Grass

When player 1's Charmander attacks, it decreases Squirtle's HP (**Squirtle's HP – Charmander's Attack Points**).

<u>Player 1</u>	<u>Player 2</u>
Charmander	Squirtle
110	10
90	100+10
Fire	Water
Water	Grass

Squirtle has advantage against Charmander, because Charmander has **weakness against Water**.

<u>Player 1</u>	<u>Player 2</u>
Charmander	Squirtle
110	10
90	100+10
Fire	Water
Water	Grass

On second player's attack **Squirtle's attack points is \geq Charmander's HP**. Therefore, Squirtle beats player 1's Pokémon Charmander.

<u>Player 1</u>	<u>Player 2</u>
Charmander	Squirtle
0	10
90	100+10
Fire	Water
Water	Grass

When a player's Pokémon is defeated, he/she cannot use that Pokémon again and should **remove** from the list. The player has to draw a new Pokémon. Then, the player has to perform his/her attack.

When a player is out of Pokémons, this means that the player has lost and the other player has won. Let's assume that player 2 has won and player 1 has lost. You should print 2 messages, such as;

PLAYER 2 YOU HAVE BECOME A POKÉMON MASTER!!!

PLAYER 1 YOU HAVE TO TRAIN YOUR POKÉMON HARDER...

The necessary functions are given below.

Function #1: Print the winner **and** loser messages at the end of game.

Function #2: Randomly select 3 Pokémons for each player from the Pokémon file (Pokedex). This function should return a list such as;

Player 1's Pokémons:

```
[ ['Bulbasaur', 45, 49, 'Grass', 'Fire'],  
  ['Charmander', 39, 52, 'Fire', 'Water'],  
  ['Squirtle', 44, 48, 'Water', 'Grass']]
```

Player 2's Pokémons:

```
[ ['Metapod', 50, 20, 'Grass', 'Fire'],  
  ['Raichu', 60, 90, 'Electric', 'Normal'],  
  ['Pidgeotto', 38, 41, 'Normal', 'Fighting']]
```

Function #3: This function is responsible for modifying each player's Pokémon stats during a fight. The modifications should be done over HPs. Furthermore, the modifications could be done if there is a weakness situation.

IMPORTANT NOTE: When the weakness situation is over do not forget to set to its original attack points!

Function #4: This function is responsible for removing the defeated Pokémon from the list.

Function #5: This function is responsible for deciding the winner player.

Submission Rules:

1. You should submit your codes through CMS.
2. Your homework should be named as **HW6_StudentID.py**. Students who do NOT follow these rules **WILL BE GRADED AS 0**.
3. Use comments in your code, otherwise you will lose some points.
4. Write your Name, Surname and Student ID as a comment in your code.