

Assignment 2

Implementation of encapsulation: Create a class `GameCharacter` that will contain three private variables `health`, `happiness`, and `weight`. Create a `modifyCharacteristic()` method and a getter method.

Pseudocode

```
Class GameCharacter

---Initialization variables for game character---

    ---Private---
    health = 50
    happiness = 50
    weight = 50

    ---Public---
    none

---Method overview---

    ---Private---
    setCharacteristic() (3 methods)
        Takes int changeAmount and adds to specified characteristic.
    isValid()
        This will check to see if changeAmount is valid.

    ---Public---
    modifyCharacteristic()
        Accepts an int changeAmount and String characteristic. calls setCharacteristic
    getCharacteristic() (3 methods)
        Returns value of characteristic

---Method pseudocode---

    modifyCharacteristic():
        Set the characteristic string to all lowercase
        Check to see if the string is a valid characteristic of the character.
            If not, throw an exception.
        Checks isValid()
            If not, isValid() will throw an exception
        Calls setCharacteristic() to modify characteristic

    getCharacteristic():
        Returns characteristic

    isValid():
        Add the characteristic and changeAmount and see if it is in bounds
            If impossible, it will throw an exception

    setCharacteristic():
        Modify the characteristic by changeAmount
```