

GameCharacter.java code

```
1 public class GameCharacter {
2
3     //Variable declarations that initialize the variables.
4     private int health = 100, weight = 50, happiness = 75;
5
6     //This will check and set the characteristic
7     public void modifyCharacteristic(int changeAmount, String characterist
8 ic) {
9
10         //This will check and modify the characteristics, if valid.
11         switch(characteristic.toLowerCase()) {
12             case "health":
13                 isValid(changeAmount, health);
14                 setHealth(changeAmount);
15                 break;
16             case "weight":
17                 isValid(changeAmount, weight);
18                 setWeight(changeAmount);
19                 break;
20             case "happiness":
21                 isValid(changeAmount, happiness);
22                 setWeight(changeAmount);
23                 break;
24             default:
25                 throw new IllegalArgumentException("Invalid char.");
26         }
27     } //End modifyCharacteristic()
28
29     //These are the get functions
30     public int getHealth() {
31         return health;
32     } //End getHealth()
33     public int getWeight() {
34         return weight;
35     } //End getWeight()
36     public int getHappiness() {
37         return happiness;
38     } //End getHappiness()
39
40     //This are the set functions
41     private void setHealth(int changeAmount) {
42         this.health += changeAmount;
43     } //End setHealth()
44     private void setWeight(int changeAmount) {
45         this.weight += changeAmount;
46     } //End setWeight()
47     private void setHappiness(int changeAmount) {
48         this.happiness += changeAmount;
49     } //End setHappiness()
50
51     //This will throw an exception if illegal change happens
52     private boolean isValid(int changeAmount, int characteristic) {
53         if (0 <= (characteristic + changeAmount)
54             && (characteristic + changeAmount) <= 100) {
55             return true;
56         } else {
57             throw new IllegalArgumentException("Exceeds bounds.");
58         }
59     } //End isValid()
60 } //End class GameCharacter
```