

COMP 2215 - Object-Oriented Paradigms - Lab 03

Yaşar University

February 25, 2022

You are designing a fighting game where players with different powers fight in an arena. A fighter has its own name, health and damage level and can attack another fighter. All fighters have one chance to attack another fighter in the arena.

Fighter.java

- Create a *Fighter* class with attributes:
 - *String* **name**: nickname
 - *int* **health**: current health level
 - *int* **damage**: attack power
- Implement two constructors:
 - Constructor with only **name** parameter where **health** and **damage** are set to 100 and 10 as default, respectively.
 - Constructor with **name** and **damage** parameters where **health** is set to 100 as default.
- Implement the setters and getters of each attribute:
 - *setHealth()* should set the health to 0 in case of a negative value.
 - *setDamage()* should not allow negative damage values.
- Implement an *attack()* method:
 - Takes a *Fighter* as parameter called **enemy**.
 - Decreases the health of **enemy** by the damage of the attacker fighter.
- Override *toString()* method so that it returns the **name**, **health** and **damage** values as a string.

Arena.java

- Create an *Arena* class,
- Implement a static *listFighters()* method:
 - Takes a *Fighter* array as parameter.
 - Enumerates and prints the names of all fighters in the array.
- Implement a *main* function:
 - Initialize an empty *Fighter* array with size 5,
 - In a loop, create *Fighter* objects with names and damages scanned from the user. Put them in the array you defined.
 - Start the game:
 - Let each fighter attack once to an enemy (chosen by the user).
 - Print the health of the enemy.
 - In the end, print all fighters values.

Listing 1: Example output

```
Enter fighter name:
Jack
Enter fighter damage:
15
Enter fighter name:
Haley
Enter fighter damage:
17
Enter fighter name:
Max
Enter fighter damage:
12
Jack is attacking...
Choose an enemy:
1-Jack 2-Haley 3-Max 2
Jack attacked Haley with damage 15
Health of Haley: 85
-----
Haley is attacking...
Choose an enemy:
1-Jack 2-Haley 3-Max 3
Haley attacked Max with damage 17
Health of Max: 83
-----
Max is attacking...
Choose an enemy:
1-Jack 2-Haley 3-Max 1
Max attacked Jack with damage 12
Health of Jack: 88
-----
Name: Jack
Health: 88
Damage: 15

Name: Haley
Health: 85
Damage: 17

Name: Max
Health: 83
Damage: 12
```