```java
package com.example.battlegame;

public class Items {
    private String name;

    private int damage;
    private int healing;
    private int speed;
    private int addedHealth;
    private int defense;

    public Items(String name, int damage, int healing
, int speed, int addedHealth, int defense){
        this.name = name;

        this.damage = damage;
        this.healing = healing;
        this.speed = speed;
        this.addedHealth = addedHealth;
        this.defense = defense;
    }

    public String getName() {
        return name;
    }

    public int getDamage() {
        return damage;
    }

    public int getDefense() {
        return defense;
    }

    public int getAddedHealth() {
        return addedHealth;
    }

    public int getHealing() {
        return healing;
    }
```

```
41
42      public int getSpeed() {
43          return speed;
44      }
45  }
46
```

```java
package com.example.battlegame;

import java.util.ArrayList;

public class Attack {
    private String attackName;

    private int attackDamage;

    public Attack(String attackName, int attackDamage
){
        this.attackName = attackName;
        this.attackDamage = attackDamage;
    }

    public String getAttackName() {
        return attackName;
    }

    public int getAttackDamage() {
        return attackDamage;
    }
}

```

```java
package com.example.battlegame;

public class Player {
    private String name;

    private Classes fighterClass;

    private int[] attributes = {50,50,50,50};// Strength, Speed, Health, Defense

    private int playerlevel;

    private Inventory inventory = new Inventory();

    public Player(String name, Classes fighterclass){
        this.name = name;
        this.fighterClass = fighterclass;
        for (int i = 0; i < attributes.length; i++) {
            attributes[i] += fighterclass.getAttributeChanges()[i];
        }
        playerlevel = 1;
    }
    public Player(Classes fighterclass, Player player){
        this.fighterClass = fighterclass;
        for (int i = 0; i < attributes.length; i++) {
            attributes[i] += fighterclass.getAttributeChanges()[i]*player.getPlayerlevel();
        }
    }

    public String getName() {
        return name;
    }

    public Classes getFighterClass() {
        return fighterClass;
    }

    public int[] getAttributes() {
```

```
38          return attributes;
39      }
40
41      public int getPlayerlevel() {
42          return playerlevel;
43      }
44
45      protected void changeAttributes(int index, int
    change){
46          attributes[index] += change;//Strength, Speed
    , Health, Defense
47      }
48  }
49
```

```java
package com.example.battlegame;

import java.lang.reflect.Array;
import java.util.ArrayList;

public class Classes {
    private String className;

    private int[] attributeChanges;//Strength, Speed, Health, Defense

    private ArrayList<Attack> attacks = new ArrayList<>();


    public Classes(String className){
        this.className = className;
        if(className.equals("knight")){
            this.attributeChanges = new int[]{20,-5,0,10};

            attacks.add(new Attack("Piercing Stab", 15));
            attacks.add(new Attack("Slice", 5));
            attacks.add(new Attack("Sharpness++", 0));
            attacks.add(new Attack("Lance Dash", 20));
            attacks.add(new Attack("Sweep & Slice", 10));

        } else if(className.equals("mage")){
            this.attributeChanges = new int[]{-10,15,20,0};

            attacks.add(new Attack("Fire Rain", 30));
            attacks.add(new Attack("Shadow Slice", 25));
            attacks.add(new Attack("Speed++", 0));
            attacks.add(new Attack("Sun Spear", 35));
            attacks.add(new Attack("Water Whip", 10
```

```
32 ));
33
34         } else if(className.equals("archer")){
35             this.attributeChanges = new int[]{-10,25,
   0,10};
36
37             attacks.add(new Attack("Piercing Arrows"
   , 10));
38             attacks.add(new Attack("Exploding Arrows"
   , 25));
39             attacks.add(new Attack("Speed++", 0));
40             attacks.add(new Attack("Loudest Arrows",
   10));
41             attacks.add(new Attack("Multishot", 20));
42
43         } else if(className.equals("bard")){
44             this.attributeChanges = new int[]{20,-5,0
   ,10};
45
46             attacks.add(new Attack("Bagpipe Shriek",
   5));
47             attacks.add(new Attack("Flute Slice", 10
   ));
48             attacks.add(new Attack("Health Song", 0
   ));
49             attacks.add(new Attack("Xylophone
   Confusion", 5));
50             attacks.add(new Attack("Speed Song", 15
   ));
51
52         } else if(className.equals("shooter")){
53             this.attributeChanges = new int[]{20,-5,0
   ,10};
54             attacks.add(new Attack("Piercing Bullets"
   , 20));
55             attacks.add(new Attack("Bayonet Slice",
   10));
56             attacks.add(new Attack("Speed++", 0));
57             attacks.add(new Attack("Snipe", 100000));
58             attacks.add(new Attack("MultiShot", 30));
59
```

```
60          }
61      }
62
63      public ArrayList<Attack> getAttacks() {
64          return attacks;
65      }
66
67      public int[] getAttributeChanges() {
68          return attributeChanges;
69      }
70
71      public String getClassName() {
72          return className;
73      }
74  }
75
```

```java
package com.example.battlegame;

public class Powerups {
}

```

```java
package com.example.battlegame;

import java.util.ArrayList;

public class Inventory {
    private ArrayList<OwnedItems> itemsOwned = new ArrayList<>();

    public void addItem(OwnedItems ownedItems) {
        itemsOwned.add(ownedItems);
    }

    public void setItem(OwnedItems newItem, OwnedItems oldItem) {
        itemsOwned.remove(oldItem);
        itemsOwned.add(newItem);
    }

    public void setItem(OwnedItems ownedItems) {
        itemsOwned.remove(ownedItems);
    }

    public ArrayList<OwnedItems> getItemsOwned() {
        return itemsOwned;
    }
}

```

```java
package com.example.battlegame;

public class OwnedItems {
    private Items item;

    private int numItems;

    public OwnedItems(Items item){
        this.item = item;
    }

    public Items getItem() {
        return item;
    }

    public int getNumItems() {
        return numItems;
    }

    public void changeNumItems(int numItems) {
        this.numItems += numItems;
    }
}

```

```java
package com.example.battlegame;

import javafx.fxml.FXML;
import javafx.scene.control.Label;

import java.util.ArrayList;
import java.util.Random;

public class HelloController {
    @FXML
    private Label welcomeText;

    private Classes knight = new Classes("knight");
    private Classes mage = new Classes("mage");
    private Classes archer = new Classes("archer");
    private Classes bard = new Classes("bard");
    private Classes shooter = new Classes("shooter");

    private Player p1;
    private ArrayList<Player> compPlayers = new ArrayList<>();

    private Classes[] fighterclasses = {knight, mage, archer, bard, shooter};

    private Player battleplayer1;
    private Player battleplayer2;

    @FXML
    protected void onHelloButtonClick() {
        p1 = new Player("Ayush", knight);
        updateCompPlayers();
        System.out.println(compPlayers);
        printStats(p1);
        for (Player player:compPlayers) {
            printStats(player);
        }

        startBattle();
        attack(battleplayer1,battleplayer2);
        attack(battleplayer2,battleplayer1);
```

```
40
41          System.out.println(battleplayer1.
   getAttributes()[2]);
42          System.out.println(battleplayer2.
   getAttributes()[2]);
43      }
44
45      @FXML
46      protected void updateCompPlayers(){
47          Random random = new Random();
48          int index = random.nextInt(fighterclasses.
   length);
49          compPlayers.add(new Player(fighterclasses[
   index], p1));
50      }
51
52      @FXML
53      protected void printStats(Player player){
54          System.out.println("Name: " + player.getName
   ());
55          System.out.println("Attributes: " + player.
   getAttributes()[2]);
56          System.out.println("Class: " + player.
   getFighterClass().getClassName());
57          System.out.print("Attacks: ");
58          for (Attack attack: player.getFighterClass().
   getAttacks()) {
59              System.out.print(attack.getAttackName
   () + "," + attack.getAttackDamage() + "  ");
60          }
61          System.out.println("Level: " + player.
   getPlayerlevel());
62      }
63
64      protected void startBattle(){
65          battleplayer1 = p1;
66          battleplayer2 = compPlayers.get(compPlayers.
   size()-1);
67      }
68
69      protected void attack(Player attacker, Player
```

```
attacked){
        int damage = attacker.getFighterClass().
getAttacks().get(1).getAttackDamage();
        attacked.changeAttributes(2,-1 * damage *
attacker.getAttributes()[0]/40 * attacker.
getAttributes()[1]/30);
    }


}
```

```java
package com.example.battlegame;

import javafx.application.Application;
import javafx.fxml.FXMLLoader;
import javafx.scene.Scene;
import javafx.stage.Stage;

import java.io.IOException;

public class HelloApplication extends Application {
    @Override
    public void start(Stage stage) throws IOException {
        FXMLLoader fxmlLoader = new FXMLLoader(HelloApplication.class.getResource("hello-view.fxml"));
        Scene scene = new Scene(fxmlLoader.load(), 320, 240);
        stage.setTitle("Hello!");
        stage.setScene(scene);
        stage.show();
    }

    public static void main(String[] args) {
        launch();
    }
}
```