```java
package com.example.battlegame;

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

public class Shop {
    private ArrayList<Items> itemList = new ArrayList<>();

    public Shop(ArrayList itemList){
        this.itemList = itemList;
    }

    protected void randomizeShop(){
        ArrayList<Items> tempList = new ArrayList<>();

        for (int i = 0; i < 10; i++) {
            Random random = new Random();
            int index = random.nextInt(itemList.size());
            tempList.add((itemList.get(index)));
        }
    }

}

```

```java
package com.example.battlegame;

public class Items {
    private String name;

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

    private int shopPrice;

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

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

    public String getName() {
        return name;
    }

    public int getDamage() {
        return damage;
    }

    public int getDefense() {
        return defense;
    }

    public int getHealing() {
        return healing;
    }

    public int getSpeed() {
        return speed;
```

```
41      }
42
43      public int getShopPrice() {
44          return shopPrice;
45      }
46  }
47
```

```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 int xp;

    private int coins;

    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() {
```

```
38          return fighterClass;
39      }
40
41      public int[] getAttributes() {
42          return attributes;
43      }
44
45      public int getPlayerlevel() {
46          return playerlevel;
47      }
48
49      protected void changeAttributes(int index, int
    change){
50          attributes[index] += change;//Strength, Speed
    , Health, Defense
51      }
52  }
53
```

```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));
            attacks.add(new Attack("Flee", 0));

        } 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));
```

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

```
60              attacks.add(new Attack("Speed++", 0));
61              attacks.add(new Attack("Snipe", 100000
   ));
62              attacks.add(new Attack("MultiShot", 30
   ));
63              attacks.add(new Attack("Flee", 0));
64
65          }
66      }
67
68      public ArrayList<Attack> getAttacks() {
69          return attacks;
70      }
71
72      public int[] getAttributeChanges() {
73          return attributeChanges;
74      }
75
76      public String getClassName() {
77          return className;
78      }
79  }
80
```

```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 removeItem(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.*;
import javafx.scene.image.ImageView;
import javafx.scene.input.MouseEvent;

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

public class HelloController {

    @FXML
    private ListView<?> classesListView;

    @FXML
    private Label classSetup, nameSetup, weaponSetup;
    @FXML
    private ImageView playerSetupPic;

    @FXML
    private TextField nameField;

    @FXML
    private SplitMenuButton weaponMenu;

    @FXML
    private Button createCharacterButton;

    @FXML
    private ListView<String> playerStats,
  inventoryView1, opponentsView, opponentsStats;

    @FXML
    private Label playerStatsLabel, inventoryLabel1,
  opponentsLabel, opponentStatsLabel, goToBattleLabel;

    @FXML
    private ImageView playerPic, compPic;

    @FXML
```

```
40      private ListView<?> playerInventory,
    playerAttacks;
41
42      @FXML
43      private Label battleResultLabel, compHealthLabel
    , compLabel, playerHealthLabel, playerLabel,
    playerInventoryLabel, playerAttackLabel;
44
45      @FXML
46      private ProgressBar compHealthBar,
    playerHealthBar;
47
48      @FXML
49      private Label coinsLabel, inventoryLabel,
    shopLabel, statsLabel;
50
51      @FXML
52      private ListView<?> inventoryView, shopView,
    statsView;
53
54      private Classes knight = new Classes("knight");
55      private Classes mage = new Classes("mage");
56      private Classes archer = new Classes("archer");
57      private Classes bard = new Classes("bard");
58      private Classes shooter = new Classes("shooter");
59
60      private Items leatherArmor = new Items("
    leatherArmor", 0,0,-1,10,20);
61      private Items ironArmor = new Items("ironArmor",
    0,0,-1,20,40);
62      private Items goldArmor = new Items("goldArmor",
    0,0,-1,30,60);
63      private Items diamondArmor = new Items("
    diamondArmor", 0,0,-1,40,80);
64      private Items legendaryArmor = new Items("
    legendaryArmor", 0,0,-1,50,100);
65
66      private Items basicHealthPotion = new Items("
    basicHealthPotion", 0,10,0,0,20);
67      private Items goodHealthPotion = new Items("
    goodHealthPotion", 0,50,0,0,100);
```

```
 68     private Items basicSpeedPotion = new Items("
    basicSpeedPotion", 0,0,10,0,20);
 69     private Items goodSpeedPotion = new Items("
    goodSpeedPotion", 0,0,50,0,100);
 70
 71     private Player p1;
 72     private ArrayList<Player> compPlayers = new
    ArrayList<>();
 73
 74     private Classes[] fighterclasses = {knight, mage
    , archer, bard, shooter};
 75
 76     private Player battleplayer1;
 77     private Player battleplayer2;
 78
 79     @FXML
 80     protected void onHelloButtonClick() {
 81         p1 = new Player("Ayush", knight);
 82         updateCompPlayers();
 83         updateCompPlayers();
 84         updateCompPlayers();
 85         opponentsView.getItems().clear();
 86         for (int i = 1; i <= 3; i++) {
 87             opponentsView.getItems().add(compPlayers
    .get(compPlayers.size()-i).getFighterClass().
    getClassName());
 88         }
 89
 90         goToBattleLabel.setVisible(false);
 91
 92         startBattle();
 93         attack(battleplayer1,battleplayer2);
 94 //         attack(battleplayer2,battleplayer1);
 95     }
 96
 97     @FXML
 98     protected void updateCompPlayers(){
 99         Random random = new Random();
100         int index = random.nextInt(fighterclasses.
    length);
101         compPlayers.add(new Player(fighterclasses[
```

```
101 index], p1));
102     }
103 
104     @FXML
105     protected void printStats(Player player){
106         System.out.println("Name: " + player.getName
    ());
107         System.out.println("Attributes: " + player.
    getAttributes()[2]);
108         System.out.println("Class: " + player.
    getFighterClass().getClassName());
109         System.out.print("Attacks: ");
110         for (Attack attack: player.getFighterClass
    ().getAttacks()) {
111             System.out.print(attack.getAttackName
    () + "," + attack.getAttackDamage() + "  ");
112         }
113         System.out.println("Level: " + player.
    getPlayerlevel());
114     }
115 
116     @FXML
117     protected void startBattle(){
118         battleplayer1 = p1;
119         int index = opponentsView.getSelectionModel
    ().getSelectedIndex();
120         battleplayer2 = compPlayers.get(index);
121         compPlayers.remove(index);
122         goToBattleLabel.setVisible(true);
123     }
124 
125     protected void attack(Player attacker, Player
    attacked){
126         int damage = attacker.getFighterClass().
    getAttacks().get(1).getAttackDamage();
127         int damageDealt = attacked.getAttributes()[3
    ] - damage * attacker.getAttributes()[0]/40 *
    attacker.getAttributes()[1]/40;
128         System.out.println(damageDealt);
129         System.out.println(attacked.getAttributes()[
    2]);
```

```
130             attacked.changeAttributes(2,damageDealt);
131         }
132
133         @FXML
134         public void showCompStats() {
135         }
136
137         public void useItem() {
138         }
139
140         public void buyItem() {
141         }
142
143         public void attack() {
144         }
145 }
```

```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(), 700, 500);
        stage.setTitle("Hello!");
        stage.setScene(scene);
        stage.show();
    }

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