

```
1 package com.example.battlegame;
2
3 public class Items {
4     private String name;
5
6     private int damage;
7     private int healing;
8     private int speed;
9     private int addedHealth;
10    private int defense;
11
12    public Items(String name, int damage, int healing
13    , int speed, int addedHealth, int defense){
14        this.name = name;
15
16        this.damage = damage;
17        this.healing = healing;
18        this.speed = speed;
19        this.addedHealth = addedHealth;
20        this.defense = defense;
21    }
22
23    public String getName() {
24        return name;
25    }
26
27    public int getDamage() {
28        return damage;
29    }
30
31    public int getDefense() {
32        return defense;
33    }
34
35    public int getAddedHealth() {
36        return addedHealth;
37    }
38
39    public int getHealing() {
40        return healing;
41    }
```

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

```
1 package com.example.battlegame;
2
3 import java.util.ArrayList;
4
5 public class Attack {
6     private String attackName;
7
8     private int attackDamage;
9
10    public Attack(String attackName, int attackDamage
11    ){
12        this.attackName = attackName;
13        this.attackDamage = attackDamage;
14    }
15
16    public String getAttackName() {
17        return attackName;
18    }
19
20    public int getAttackDamage() {
21        return attackDamage;
22    }
23 }
```

```
1 package com.example.battlegame;
2
3 public class Player {
4     private String name;
5
6     private Classes fighterClass;
7
8     private int[] attributes = {50,50,50,50};//
    Strength, Speed, Health, Defense
9
10    private int playerlevel;
11
12    private Inventory inventory = new Inventory();
13
14    public Player(String name, Classes fighterclass){
15        this.name = name;
16        this.fighterClass = fighterclass;
17        for (int i = 0; i < attributes.length; i++) {
18            attributes[i] += fighterclass.
    getAttributeChanges()[i];
19        }
20        playerlevel = 1;
21    }
22    public Player(Classes fighterclass, Player player
    ){
23        this.fighterClass = fighterclass;
24        for (int i = 0; i < attributes.length; i++) {
25            attributes[i] += fighterclass.
    getAttributeChanges()[i]*player.getPlayerlevel();
26        }
27    }
28
29    public String getName() {
30        return name;
31    }
32
33    public Classes getFighterClass() {
34        return fighterClass;
35    }
36
37    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
```

```

1 package com.example.battlegame;
2
3 import java.lang.reflect.Array;
4 import java.util.ArrayList;
5
6 public class Classes {
7     private String className;
8
9     private int[] attributeChanges;//Strength, Speed
    , Health, Defense
10
11     private ArrayList<Attack> attacks = new ArrayList
    <>();
12
13
14     public Classes(String className){
15         this.className = className;
16         if(className.equals("knight")){
17             this.attributeChanges = new int[]{20,-5,0
18 ,10};
19
20             attacks.add(new Attack("Piercing Stab",
21 15));
22             attacks.add(new Attack("Slice", 5));
23             attacks.add(new Attack("Sharpness++", 0
24 ));
25             attacks.add(new Attack("Lance Dash", 20
26 ));
27             attacks.add(new Attack("Sweep & Slice",
28 10));
29
30         } else if(className.equals("mage")){
31             this.attributeChanges = new int[]{-10,15,
32 20,0};
33
34             attacks.add(new Attack("Fire Rain", 30));
35             attacks.add(new Attack("Shadow Slice", 25
36 ));
37             attacks.add(new Attack("Speed++", 0));
38             attacks.add(new Attack("Sun Spear", 35));
39             attacks.add(new Attack("Water Whip", 10

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32 ));  
33  
34         } else if(className.equals("archer")){  
35             this.attributeChanges = new int[]{-10,25,  
36                 0,10};  
37             attacks.add(new Attack("Piercing Arrows"  
38                 , 10));  
39             attacks.add(new Attack("Exploding Arrows"  
40                 , 25));  
41             attacks.add(new Attack("Speed++", 0));  
42             attacks.add(new Attack("Loudest Arrows",  
43                 10));  
44             attacks.add(new Attack("Multishot", 20));  
45  
46         } else if(className.equals("bard")){  
47             this.attributeChanges = new int[]{20,-5,0  
48                 ,10};  
49             attacks.add(new Attack("Bagpipe Shriek",  
50                 5));  
51             attacks.add(new Attack("Flute Slice", 10  
52                 ));  
53             attacks.add(new Attack("Health Song", 0  
54                 ));  
55             attacks.add(new Attack("Xylophone  
56                 Confusion", 5));  
57             attacks.add(new Attack("Speed Song", 15  
58                 ));  
59  
60         } else if(className.equals("shooter")){  
61             this.attributeChanges = new int[]{20,-5,0  
62                 ,10};  
63             attacks.add(new Attack("Piercing Bullets"  
64                 , 20));  
65             attacks.add(new Attack("Bayonet Slice",  
66                 10));  
67             attacks.add(new Attack("Speed++", 0));  
68             attacks.add(new Attack("Snipe", 100000));  
69             attacks.add(new Attack("MultiShot", 30));  
70  
71         }  
72     }  
73     }  
74 }
```

```
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
```



```
1 package com.example.battlegame;
2
3 import java.util.ArrayList;
4
5 public class Inventory {
6     private ArrayList<OwnedItems> itemsOwned = new
    ArrayList<>();
7
8     public void addItem(OwnedItems ownedItems) {
9         itemsOwned.add(ownedItems);
10    }
11
12    public void setItem(OwnedItems newItem,
    OwnedItems oldItem) {
13        itemsOwned.remove(oldItem);
14        itemsOwned.add(newItem);
15    }
16
17    public void removeItem(OwnedItems ownedItems) {
18        itemsOwned.remove(ownedItems);
19    }
20
21    public ArrayList<OwnedItems> getItemsOwned() {
22        return itemsOwned;
23    }
24 }
25
```

```
1 package com.example.battlegame;
2
3 public class OwnedItems {
4     private Items item;
5
6     private int numItems;
7
8     public OwnedItems(Items item){
9         this.item = item;
10    }
11
12    public Items getItem() {
13        return item;
14    }
15
16    public int getNumItems() {
17        return numItems;
18    }
19
20    public void changeNumItems(int numItems) {
21        this.numItems += numItems;
22    }
23 }
24
```

```
1 package com.example.battlegame;
2
3 import javafx.fxml.FXML;
4 import javafx.scene.control.Label;
5 import javafx.scene.input.MouseEvent;
6
7 import java.util.ArrayList;
8 import java.util.Random;
9
10 public class HelloController {
11     @FXML
12     private Label welcomeText;
13
14     private Classes knight = new Classes("knight");
15     private Classes mage = new Classes("mage");
16     private Classes archer = new Classes("archer");
17     private Classes bard = new Classes("bard");
18     private Classes shooter = new Classes("shooter");
19
20     private Player p1;
21     private ArrayList<Player> compPlayers = new
    ArrayList<>();
22
23     private Classes[] fighterclasses = {knight, mage
    , archer, bard, shooter};
24
25     private Player battleplayer1;
26     private Player battleplayer2;
27
28     @FXML
29     protected void onHelloButtonClick() {
30         p1 = new Player("Ayush", knight);
31         updateCompPlayers();
32         System.out.println(compPlayers);
33         printStats(p1);
34         for (Player player:compPlayers) {
35             printStats(player);
36         }
37
38         startBattle();
39         attack(battleplayer1,battleplayer2);
```

```

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

```

```
70
71     protected void attack(Player attacker, Player
    attacked){
72         int damage = attacker.getFighterClass().
    getAttacks().get(1).getAttackDamage();
73         int damageDealt = attacked.getAttributes()[3
    ] - damage * attacker.getAttributes()[0]/40 *
    attacker.getAttributes()[1]/40;
74         System.out.println(damageDealt);
75         System.out.println(attacked.getAttributes()[
    2]);
76         attacked.changeAttributes(2,damageDealt);
77     }
78
79     @FXML
80     public void showCompStats(MouseEvent mouseEvent
    ) {
81     }
82 }
```

```
1 package com.example.battlegame;
2
3 import javafx.application.Application;
4 import javafx.fxml.FXMLLoader;
5 import javafx.scene.Scene;
6 import javafx.stage.Stage;
7
8 import java.io.IOException;
9
10 public class HelloApplication extends Application {
11     @Override
12     public void start(Stage stage) throws IOException
13     {
14         FXMLLoader fxmlLoader = new FXMLLoader(
15             HelloApplication.class.getResource("hello-view.fxml"
16         ));
17         Scene scene = new Scene(fxmlLoader.load(),
18             320, 240);
19         stage.setTitle("Hello!");
20         stage.setScene(scene);
21         stage.show();
22     }
23
24     public static void main(String[] args) {
25         launch();
26     }
27 }
```