

```

1 import java.util.ArrayList;
2
3 public class Event {
4
5     private String name;
6     private ArrayList<Competitor> competitors;
7
8     Event(String name) {
9         this.name = name;
10        this.competitors = new ArrayList<Competitor>();
11    }
12
13    public ArrayList<Competitor> getCompetitors() {
14        return this.competitors;
15    }
16
17    public static void main(String args[]) {
18
19        Competitor simone = new Competitor("Simone", "USA");
20        Competitor rebeca = new Competitor("Rebeca", "Brazil");
21        Competitor suni = new Competitor("Suni", "USA");
22        simone.setScoreMod(1.2);
23
24        Event allAround = new Event("Women's All-Around Gymnastics");
25        simone.enter(allAround);
26        rebeca.enter(allAround);
27        rebeca.setScoreMod(1.1);
28        suni.enter(allAround);
29        suni.setScoreMod(1.1);
30
31        Competitor goldMedalist = allAround.run();
32        System.out.println("And the gold medal in " + allAround.name +
33            " goes to " + goldMedalist.getName() + "!");
34    }
35
36    Competitor run() {
37        Competitor goldMedalistSoFar = null;
38        double bestScoreSoFar = 0.0;
39        for (int i=0; i<competitors.size(); i++) {
40            double thisAthletesScore = competitors.get(i).compete();
41            if (thisAthletesScore > bestScoreSoFar) {
42                goldMedalistSoFar = competitors.get(i);
43                bestScoreSoFar = thisAthletesScore;
44            }
45        }
46        return goldMedalistSoFar;
47    }
48 }

```

```
50 class Competitor {
51
52     private String name, country;
53     private int trainingHoursRequired;
54     private double scoreMod;
55
56     Competitor(String name, String country) {
57         this.name = name;
58         this.country = country;
59         this.trainingHoursRequired = 1000;
60     }
61
62     String getName() {
63         return this.name;
64     }
65
66     double compete() {
67         return Math.random() * 11 * this.scoreMod;
68     }
69
70     void setScoreMod(double scoreMod) {
71         this.scoreMod = scoreMod;
72     }
73
74     void enter(Event event) {
75         event.getCompetitors().add(this);
76         this.trainingHoursRequired += 200;
77     }
78 }
```