```
 1
 2 /**
 3  * Created by IntelliJ IDEA.
 4  * User: nilsw
 5  * Date: 22.11.2004
 6  * Time: 13:13:41
 7  */
 8 public class Statistics {
 9     public static void main(String[] args) {
10         int n = 10;
11         int maxValue = 100;
12         int x[] = new int[n];
13         int max = 0;
14         int sum = 0;
15
16         for (int i=0; i<n; i++) {
17             x[i] = (int)(Math.random() * maxValue);
18             System.out.print(x[i]+" ");
19         }
20
21         for (int i=0; i<n; i++) {
22             sum = sum + x[i];
23             if (x[i] > max)
24                 max = x[i];
25         }
26         System.out.println();
27         System.out.println("mean = " +
28                 (double)sum/n + " max = " + max);
29     }
30 }
```

```java
package simpleList;

import java.text.*;

/**
 * Created by IntelliJ IDEA.
 * User: nilsw
 * Date: 22.11.2004
 * Time: 13:18:14
 */
public class Agent {
    int id;
    boolean female;
    double height;

    public Agent(int i, boolean f, double h) {
        id = i;
        female = f;
        height = h;
    }

    public String toString() {
        return new DecimalFormat("###.00").format(height);
    }
}

```

```
 1 package simpleList;
 2
 3 import java.util.ArrayList;
 4 import java.util.Iterator;
 5 import java.util.Collections;
 6 import java.text.DecimalFormat;
 7
 8 /**
 9  * Created by IntelliJ IDEA.
10  * User: nilsw
11  * Date: 22.11.2004
12  * Time: 13:23:24
13  */
14 public class Model {
15     public static void main(String[] args) {
16         int n = 10;
17         boolean female;
18         double height;
19
20         // Creating list
21         ArrayList list = new ArrayList();
22
23         // Initializing list
24         for (int i=0; i<n; i++) {
25             if (Math.random()<0.5) {
26                 female = true;
27                 height = 4.0 + Math.random()*2.0;
28             } else {
29                 female = false;
30                 height = 4.5 + Math.random()*2.5;
31             }
32             Agent a = new Agent(i,female,height);
33             list.add(a);
34             System.out.println(i+" "+
35                     (new DecimalFormat("###.00").format(height))+
36                     " "+female);
37         }
38
39         // Calculating average height
40         double s = 0.0;
41         Iterator it = list.iterator();
42         while (it.hasNext()) {
43             Agent a = (Agent)it.next();
44             s = s + a.height;
45         }
46         System.out.println("Average height: "+
47                 (new DecimalFormat("###.00").format(s/(double)n)));
48
49         // Calculating max height
50         double max = 0.0;
51         for (int i=0; i<list.size(); i++) {
52             Agent a = (Agent)list.get(i);
53             if (a.height > max)
54                 max = a.height;
```

```
55          }
56          System.out.println("Max height: "+
57                  (new DecimalFormat("###.00").format(max)));
58
59          // Sorting list
60          ArrayList temp = new ArrayList();
61          while (!list.isEmpty()) {
62              Agent shortest = (Agent)list.get(0);
63              for (int i=0; i<list.size(); i++) {
64                  Agent a = (Agent)list.get(i);
65                  if (a.height < shortest.height)
66                      shortest = a;
67              }
68              list.remove(shortest);
69              temp.add(shortest);
70          }
71          list = temp;
72          System.out.println("Sorted list: "+list);
73
74          // Creating list of girls
75          ArrayList girls = new ArrayList(list);
76          it = girls.iterator();
77          while (it.hasNext()) {
78            Agent a = (Agent)it.next();
79            if (!a.female)
80              it.remove();
81          }
82          System.out.println("Girls: "+girls);
83
84          // Creating list of boys
85          ArrayList boys = new ArrayList();
86          it = list.iterator();
87          while (it.hasNext()) {
88            Agent a = (Agent)it.next();
89            if (!a.female)
90              boys.add(a);
91          }
92          System.out.println("Boys:  "+boys);
93
94          // Concatenating the two lists
95          ArrayList boysAndGirls = new ArrayList(boys);
96          boysAndGirls.addAll(girls);
97          System.out.println("Boys and girls: "+boysAndGirls);
98
99          // Shuffling the original list
100         Collections.shuffle(list);
101         System.out.println("Scrambled list: "+list);
102     }
103 }
104
```