

The code is :

```
import java.util.Random;
class Mouse {
    // Attribute is put into the private area
    private int legs;
    private String name;
    ///////////////////////////////////
    // Helping functions
    ///////////////////////////////////
    public int getRandomNum()
    {
        Random rand = new Random(); //instance of random class
        int upperbound = 5;
        return rand.nextInt(upperbound);
    }
    // Constructor
    ///////////////////////////////////
    // Manager function
    ///////////////////////////////////
    public Mouse(int a, String n ){ legs = a; name = n; }
    ///////////////////////////////////
    // Access function
    ///////////////////////////////////
    // Get method
    public int getLegs(){ return legs; }
    // Set method
    public void setLegs(int a){ legs = a; }
    public boolean isNormal(){return legs == 4;}
    ///////////////////////////////////
    // Implementor function
    ///////////////////////////////////
    public void fight()
    {
        // Step 1: Call getRandomNum()
        this.legs = getRandomNum();
        // Step 2: Set the value of the data member legs
        //          to the number returned from Step 1
    }
}
```

```

public boolean equals(Object obj) {
    Mouse nor;
    if (!(obj instanceof Mouse)) return false;
    nor = (Mouse) obj;
    return (legs == nor.legs);
}

public String toString(){
    return (this.name + " its legs number is " + this.legs);
}

}

//test program
public class TestMouse {
    public static void main (String args[]) {
        Mouse jerry = new Mouse(4, "jerry");
        Mouse mickey = new Mouse(4, "mickey");
        jerry.equals(mickey);
        for (;;){
            jerry.fight();
            mickey.fight();

            if (jerry.isNormal()){
                System.out.print("winner is ");
                System.out.println(jerry);
                break;
            }
            else if (mickey.isNormal()){
                System.out.print("winner is ");
                System.out.println(mickey);
                break;
            }
            else {
                System.out.println(jerry);
                System.out.println(mickey);
                break;
            }
        }
    }
}

```

```

34 // Step 1: Call getRandomNum()
35 this.legs = getRandomNum();
36 // Step 2: Set the value of the data member legs
37 // to the number returned from Step 1
38 }
39 public boolean equals(Object obj) {
40     Mouse nor;
41     if (!(obj instanceof Mouse)) return false;
42     nor = (Mouse) obj;
43     return (legs == nor.legs);
44 }
45 public String toString(){
46     return (this.name + " its legs number is " + this.legs);
47 }
48 }
49 }
50 //test program
51 public class TestMouse {
52     public static void main (String args[]) {
53         Mouse jerry = new Mouse(4, "jerry");
54         Mouse mickey = new Mouse(4, "mickey");
55         jerry.equals(mickey);
56         for (;;){
57             jerry.fight();
58             mickey.fight();
59         }
60         if (jerry.isNormal()){
61             System.out.print("winner is ");
62             System.out.println(jerry);
63             break;
64         }
65         else if (mickey.isNormal()){
66             System.out.print("winner is ");
67             System.out.println(mickey);
68             break;
69         }
70         else {
71             System.out.println(jerry);
72             System.out.println(mickey);
73             break;
74         }
75     }
76 }
77 }

```

Execute Mode, Version, Inputs & Arguments

JDK 11.0.4

☐ Interactive

Stdin Inputs

CommandLine Arguments

Execute

Result

CPU Time: 0.21 sec(s), Memory: 35316 kilobyte(s)

compiled and executed in 0.868 sec(s)

winner is jerry its legs number is 4



```

34     this.legs = getRandomNum();
35     // Step 2: Set the value of the data member legs
36     //         to the number returned from Step 1
37 }
38 }
39 public boolean equals(Object obj) {
40     Mouse nor;
41     if (!(obj instanceof Mouse)) return false;
42     nor = (Mouse) obj;
43     return (legs == nor.legs);
44 }
45 public String toString(){
46     return (this.name + " its legs number is " + this.legs);
47 }
48 }
49 }
50 //test program
51 public class TestMouse {
52     public static void main (String args[]) {
53         Mouse jerry = new Mouse(4, "jerry");
54         Mouse mickey = new Mouse(4, "mickey");
55         jerry.equals(mickey);
56         for (;;){
57             jerry.fight();
58             mickey.fight();
59         }
60         if (jerry.isNormal()){
61             System.out.print("winner is ");
62             System.out.println(jerry);
63             break;
64         }
65         else if (mickey.isNormal()){
66             System.out.print("winner is ");
67             System.out.println(mickey);
68             break;
69         }
70         else {
71             System.out.println(jerry);
72             System.out.println(mickey);
73             break;
74         }
75     }
76 }
77 }

```

Execute Mode, Version, Inputs & Arguments

JDK 11.0.4



Interactive

Stdin Inputs

CommandLine Arguments



Execute



Result

CPU Time: 0.25 sec(s), Memory: 35292 kilobyte(s)

compiled and executed in 0.894 sec(s)

```

jerry its legs number is 1
mickey its legs number is 1

```



```

33 // Step 1: Call getRandomNum()
34 this.legs = getRandomNum();
35 // Step 2: Set the value of the data member legs
36 // to the number returned from Step 1
37 }
38 }
39 public boolean equals(Object obj) {
40     Mouse nor;
41     if (!(obj instanceof Mouse)) return false;
42     nor = (Mouse) obj;
43     return (legs == nor.legs);
44 }
45 public String toString(){
46     return (this.name + " its legs number is " + this.legs);
47 }
48 }
49 }
50 //test program
51 public class TestMouse {
52     public static void main (String args[]) {
53         Mouse jerry = new Mouse(4, "jerry");
54         Mouse mickey = new Mouse(4, "mickey");
55         jerry.equals(mickey);
56         for (;;) {
57             jerry.fight();
58             mickey.fight();
59         }
60         if (jerry.isNormal()){
61             System.out.print("winner is ");
62             System.out.println(jerry);
63             break;
64         }
65         else if (mickey.isNormal()){
66             System.out.print("winner is ");
67             System.out.println(mickey);
68             break;
69         }
70         else {
71             System.out.println(jerry);
72             System.out.println(mickey);
73             break;
74         }
75     }
76 }
77 }

```

Execute Mode, Version, Inputs & Arguments

JDK 11.0.4

☐ Interactive

Stdin Inputs

CommandLine Arguments

 Execute

...



Result

CPU Time: 0.22 sec(s), Memory: 34560 kilobyte(s)

compiled and executed in 0.945 sec(s)

```

jerry its legs number is 2
mickey its legs number is 1

```

```

33 // Step 1: Call getRandomNum()
34 this.legs = getRandomNum();
35 // Step 2: Set the value of the data member legs
36 // to the number returned from Step 1
37
38 }
39 public boolean equals(Object obj) {
40     Mouse nor;
41     if (!(obj instanceof Mouse)) return false;
42     nor = (Mouse) obj;
43     return (legs == nor.legs);
44 }
45 public String toString(){
46     return (this.name + " its legs number is " + this.legs);
47 }
48
49 }
50 //test program
51 public class TestMouse {
52     public static void main (String args[]) {
53         Mouse jerry = new Mouse(4, "jerry");
54         Mouse mickey = new Mouse(4, "mickey");
55         jerry.equals(mickey);
56         for (;;){
57             jerry.fight();
58             mickey.fight();
59
60             if (jerry.isNormal()){
61                 System.out.print("winner is ");
62                 System.out.println(jerry);
63                 break;
64             }
65             else if (mickey.isNormal()){
66                 System.out.print("winner is ");
67                 System.out.println(mickey);
68                 break;
69             }
70             else {
71                 System.out.println(jerry);
72                 System.out.println(mickey);
73                 break;
74             }
75         }
76     }
77 }

```

Execute Mode, Version, Inputs & Arguments

JDK 11.0.4



Interactive

Stdin Inputs

CommandLine Arguments

Execute



Result

CPU Time: 0.27 sec(s), Memory: 34548 kilobyte(s)

compiled and executed in 0.99 sec(s)

```

jerry its legs number is 0
mickey its legs number is 0

```



```

33 // Step 1: Call getRandomNum()
34 this.legs = getRandomNum();
35 // Step 2: Set the value of the data member legs
36 // to the number returned from Step 1
37 }
38 }
39 public boolean equals(Object obj) {
40     Mouse nor;
41     if (!(obj instanceof Mouse)) return false;
42     nor = (Mouse) obj;
43     return (legs == nor.legs);
44 }
45 public String toString(){
46     return (this.name + " its legs number is " + this.legs);
47 }
48 }
49 }
50 //test program
51 public class TestMouse {
52     public static void main (String args[]) {
53         Mouse jerry = new Mouse(4, "jerry");
54         Mouse mickey = new Mouse(4, "mickey");
55         jerry.equals(mickey);
56         for (;;){
57             jerry.fight();
58             mickey.fight();
59         }
60         if (jerry.isNormal()){
61             System.out.print("winner is ");
62             System.out.println(jerry);
63             break;
64         }
65         else if (mickey.isNormal()){
66             System.out.print("winner is ");
67             System.out.println(mickey);
68             break;
69         }
70         else {
71             System.out.println(jerry);
72             System.out.println(mickey);
73             break;
74         }
75     }
76 }
77 }

```

Execute Mode, Version, Inputs & Arguments

JDK 11.0.4



Interactive

Stdin Inputs

CommandLine Arguments



Execute



Result

CPU Time: 0.22 sec(s), Memory: 35056 kilobyte(s)

compiled and executed in 0.935 sec(s)

winner is mickey its legs number is 4

