

The code is :

```
import java.util.Random;

class Mouse {
    // Attribute is put into the private area
    private int legs;

    // Constructor
    public Mouse(int a){ legs = a; }

    // Get method
    public int getLegs(){ return legs; }

    // Set method
    public void setLegs(int a){ legs = a; }
}

//test program
public class TestMouse {
    // get a random number less than 5
    private static int getRandomNum()
    {
        Random rand = new Random(); //instance of random class
        int upperbound = 5;
        return rand.nextInt(upperbound);
    }

    public static void main (String args[]) {
        Mouse jerry = new Mouse(4);
        Mouse mickey = new Mouse(4);
        for (;;){
            jerry.setLegs(getRandomNum());
            mickey.setLegs(getRandomNum());
            if (jerry.getLegs() == 4 && mickey.getLegs() < 4){
                System.out.println("the winner is jerry");
                System.out.println("the legs of the loser mickey are " + mickey.getLegs());
                break;
            }
            else if (jerry.getLegs() < 4 && mickey.getLegs() == 4){
                System.out.println("the winner is mickey");
                System.out.println("the legs of the loser jerry are " + jerry.getLegs());
                break;
            }
            else if (jerry.getLegs() < 4 && mickey.getLegs() < 4){
                System.out.println("the legs of the loser jerry are " + jerry.getLegs());
            }
        }
    }
}
```

```

        System.out.println("the legs of the loser mickey are " + mickey.getLegs());
        break;
    }
}
}
}
}
}

```

The screenshot shows an online Java compiler interface. The top part displays the source code of a Java program. The code defines a `Mouse` class with `getLegs()` and `setLegs()` methods. A `TestMouse` class contains a `main` method that creates two `Mouse` objects, `jerry` and `mickey`, and assigns them random leg counts. It then compares their leg counts to determine the winner and prints the loser's leg count.

Below the code editor, the 'Execute Mode, Version, Inputs & Arguments' section shows the configuration: JDK 11.0.4, Interactive mode is unchecked, and there are empty fields for Command Line Arguments and Stdin Inputs. An 'Execute' button is present.

The 'Result' section shows the output of the program: 'the winner is jerry' and 'the legs of the loser mickey are 0'. It also displays performance metrics: CPU Time: 0.24 sec(s), Memory: 33280 kilobyte(s), and a note that the program was compiled and executed in 0.997 sec(s).

```

10 public int getLegs(){ return legs; }
11
12 // Set method
13 public void setLegs(int a){ legs = a; }
14 }
15 //test program
16 public class TestMouse {
17     // get a random number less than 5
18     private static int getRandomNum()
19     {
20         Random rand = new Random(); //instance of random class
21         int upperbound = 5;
22         return rand.nextInt(upperbound);
23     }
24     public static void main (String args[]) {
25         Mouse jerry = new Mouse(4);
26         Mouse mickey = new Mouse(4);
27         for (;;) {
28             jerry.setLegs(getRandomNum());
29             mickey.setLegs(getRandomNum());
30             if (jerry.getLegs() == 4 && mickey.getLegs() < 4){
31                 System.out.println("the winner is jerry");
32                 System.out.println("the legs of the loser mickey are " + mickey.getLegs());
33                 break;
34             }
35             else if (jerry.getLegs() < 4 && mickey.getLegs() == 4){
36                 System.out.println("the winner is mickey");
37                 System.out.println("the legs of the loser jerry are " + jerry.getLegs());
38                 break;
39             }
40             else if (jerry.getLegs() < 4 && mickey.getLegs() < 4){
41                 System.out.println("the legs of the loser jerry are " + jerry.getLegs());
42                 System.out.println("the legs of the loser mickey are " + mickey.getLegs());
43                 break;
44             }
45         }
46     }
47 }
48

```

Execute Mode, Version, Inputs & Arguments

JDK 11.0.4 ☐ Interactive Stdin Inputs

CommandLine Arguments

Execute

Result

CPU Time: 0.24 sec(s), Memory: 33280 kilobyte(s) compiled and executed in 0.997 sec(s)

```

the winner is jerry
the legs of the loser mickey are 0

```

Online Java Compiler - x

https://www.jdoodle.com/online-java-compiler

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```
10 public int getLegs(){ return legs; }
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12 // Set method
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16 public class TestMouse {
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24     public static void main (String args[]) {
25         Mouse jerry = new Mouse(4);
26         Mouse mickey = new Mouse(4);
27         for (;;){
28             jerry.setLegs(getRandomNum());
29             mickey.setLegs(getRandomNum());
30             if (jerry.getLegs() == 4 && mickey.getLegs() < 4){
31                 System.out.println("the winner is jerry");
32                 System.out.println("the legs of the loser mickey are " + mickey.getLegs());
33                 break;
34             }
35             else if (jerry.getLegs() < 4 && mickey.getLegs() == 4){
36                 System.out.println("the winner is mickey");
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41                 System.out.println("the legs of the loser jerry are " + jerry.getLegs());
42                 System.out.println("the legs of the loser mickey are " + mickey.getLegs());
43                 break;
44             }
45         }
46     }
47 }
48 }
```

Execute Mode, Version, Inputs & Arguments

JDK 11.0.4

☐ Interactive

Stdin Inputs

CommandLine Arguments

Execute

...

Result

CPU Time: 0.24 sec(s), Memory: 33608 kilobyte(s) compiled and executed in 0.994 sec(s)

the winner is jerry  
the legs of the loser mickey are 3

15:02  
2020/9/12

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39             }
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41                 System.out.println("the legs of the loser jerry are " + jerry.getLegs());
42                 System.out.println("the legs of the loser mickey are " + mickey.getLegs());
43                 break;
44             }
45         }
46     }
47 }
48 }
```

Execute Mode, Version, Inputs & Arguments

JDK 11.0.4 ☐ Interactive Stdin Inputs

CommandLine Arguments

Result

CPU Time: 0.24 sec(s), Memory: 33360 kilobyte(s) compiled and executed in 1.006 sec(s)

```
the winner is mickey
the legs of the loser jerry are 1
```

15:01 2020/9/12

Online Java Compiler - x

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```
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43                 break;
44             }
45         }
46     }
47 }
48 }
```

Execute Mode, Version, Inputs & Arguments

JDK 11.0.4

☐ Interactive

Stdin Inputs

CommandLine Arguments

Execute

...

Result

CPU Time: 0.23 sec(s), Memory: 33768 kilobyte(s) compiled and executed in 0.908 sec(s)

the legs of the loser jerry are 0  
the legs of the loser mickey are 3

15:01  
2020/9/12