

threadevenodd.java > NewThread > run()

```
1  /*Write a program to create a thread and find the sum of odd numbers from 1 to 100 in
2  this thread. Find the sum of even numbers for the same range in the main thread.*/
```

```
3
4  class NewThread implements Runnable
5  {
6      Thread t;
7      NewThread()
8      {
9          t=new Thread(this,"New Thread");
10         System.out.println("CT:"+t);
11         t.start();
12     }
13     public void run()
14     {
15         int sum=0,i;
16         try
17         {
18             for(i=1;i<=100;i++)
19             {
20                 if(i%2==1)
21                 {
22                     sum=sum+i;
23                 }
24             }
25             System.out.println("Sum of odd numbers "+sum);
26             Thread.sleep(1000);
27         }
28         catch(InterruptedException ie)
29         {
30             System.out.println("Child Thread Interrupted");
31         }
32     }
33 }
34 class ThreadMain
35 {
36     Run | Debug
37     public static void main(String args[])
38     {
39         int sum=0,i;
40         NewThread n1=new NewThread();
```

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```
22         sum=sum+i;
23     }
24 }
25     System.out.println("Sum of odd numbers "+sum);
26     Thread.sleep(1000);
27 }
28 catch(InterruptedException ie)
29 {
30     System.out.println("Child Thread Interrupted");
31 }
32 }
33 }
34 class ThreadMain
35 {
36     Run | Debug
37     public static void main(String args[])
38     {
39         int sum=0,i;
40         NewThread n1=new NewThread();
41         try
42         {
43             for(i=1;i<=100;i++)
44             {
45                 if(i%2==0)
46                 {
47                     sum=sum+i;
48                 }
49             }
50             Thread.sleep(2000);
51             System.out.println("Sum of even numbers "+sum);
52         }
53         catch(InterruptedException ie)
54         {
55             System.out.println("Child Thread Interrupted");
56         }
57     }
```

OUTPUT DEBUG CONSOLE TERMINAL

```
C:\Users\akki\Desktop\java files>javac threadevenodd.java
```

```
C:\Users\akki\Desktop\java files>java ThreadMain
```

```
CT:Thread[New Thread,5,main]
```

```
Sum of odd numbers 2500
```

```
Sum of even numbers 2550
```

```
C:\Users\akki\Desktop\java files>|
```

thread2.java

threadrandom.java

threadevenodd.java

threadrandom.java > RandomThread

```
1  /*Develop a multithreaded Java program to create three threads. First thread generates
2  random integer for every second and if the value is even, second thread computes the
3  square of number and prints. If the value is odd, the third thread will print the value of
4  cube of number.*/
5
6  import java.util.Random;
7  class Square implements Runnable
8  {
9      Thread t2;
10     int num;
11     Square(int number)
12     {
13         num = number;
14         t2=new Thread(this,"child thread");
15         t2.start();
16     }
17
18     public void run()
19     {
20         System.out.println("Square of "+num+" = "+(num*num));
21     }
22 }
23 class Cube implements Runnable
24 {
25     Thread t3;
26     int num;
27     Cube(int number)
28     {
29         num = number;
30         t3=new Thread(this,"child thread");
31         t3.start();
32     }
33
34     public void run()
35     {
36         System.out.println("Cube of "+ num+" = "+(num*num*num));
37     }
38 }
39 class RandomThread implements Runnable
40 {
```

```
38 }
39 class RandomThread implements Runnable
40 {
41     Thread t1;
42     RandomThread()
43     {
44         t1=new Thread(this,"child thread");
45         t1.start();
46     }
47     public void run()
48     {
49         Random randnum = new Random();
50         for (int i = 0; i < 10; i++)
51         {
52             int n = randnum.nextInt(100);
53             System.out.println("Random Integer : " + n);
54             if((n%2) == 0)
55             {
56                 Square s= new Square(n);
57             }
58             else
59             {
60                 Cube c= new Cube(n);
61             }
62             try
63             {
64                 Thread.sleep(1000);
65             }
66             catch (InterruptedException e)
67             {
68                 System.out.println("Interrupted");
69             }
70         }
71     }
72 }
73
74 class MultipleThread
75 {
76     Run | Debug
```

thread2.java

threadrandom.java

threadevenodd.java

threadrandom.java

RandomThread

```
53     if(n%2 == 0)
54     {
55         Square s= new Square(n);
56     }
57     else
58     {
59         Cube c= new Cube(n);
60     }
61     try
62     {
63         Thread.sleep(1000);
64     }
65     catch (InterruptedException e)
66     {
67         System.out.println("Interrupted");
68     }
69 }
70 }
71 }
72 }
```

class MultipleThread

```
74 {
75     Run | Debug
76     public static void main(String args[])
77     {
78         RandomThread r= new RandomThread();
79     }
80 }
```

```
threadrandom.java > RandomThread
54 System.out.println("Random Integer : " + n);
55 if((n%2) == 0)
56 {
57     Square = pow.Square(n);
```

OUTPUT DEBUG CONSOLE TERMINAL

C:\Users\akki\Desktop\java files>javac threadrandom.java

C:\Users\akki\Desktop\java files>java MultipleThread

Random Integer : 51

Cube of 51 = 132651

Random Integer : 8

Square of 8 = 64

Random Integer : 9

Cube of 9 = 729

Random Integer : 76

Square of 76 = 5776

Random Integer : 38

Square of 38 = 1444

Random Integer : 84

Square of 84 = 7056

Random Integer : 60

Square of 60 = 3600

Random Integer : 7

Cube of 7 = 343

Random Integer : 73

Cube of 73 = 389017

Random Integer : 77

Cube of 77 = 456533

C:\Users\akki\Desktop\java files>