

FileEditSelectionViewGoRunTerminalHelp

week11extra1.java - java - Visual Studio Code

week11.javaweek11extra1.javaSGPAlnher.java

week11extra1.java > ...

```
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  import java.util.*;
4  import java.lang.String;|
5  class NewThread implements Runnable
6  {
7      Thread t;
8      NewThread()
9      {
10         t=new Thread(this,"New Thread");
11         System.out.println("CT:"+t);
12         t.start();
13     }
14     public void run()
15     {
16         int sum=0,i;
17         try
18         {
19             for(i=1;i<=100;i++)
20             {
21                 if(i%2==1)
22                 {
23                     sum=sum+i;
24                 }
25             }
26             System.out.println("Sum of odd numbers "+sum);
27             Thread.sleep(1000);
28         }
29         catch(InterruptedException ie)
30         {
31             System.out.println("Child Thread Interrupted");
32         }
33     }
34 }
35 class ThreadMain
36 {
37     Run | Debug
38     public static void main(String args[])
39     {
40         int sum=0,i;
41         NewThread n1=new NewThread();
42         try
43         {
44             for(i=1;i<=100;i++)
45             {
46                 if(i%2==0)
```

Ln 4, Col 25 Spaces: 4 UTF-8 CRLF Java JavaSE-15

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week11.java week11extra1.java X SGPAInher.java

week11extra1.java > ...

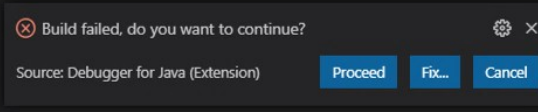
```
20
21     {
22         if(i%2==1)
23         {
24             sum=sum+i;
25         }
26         System.out.println("Sum of odd numbers "+sum);
27         Thread.sleep(1000);
28     }
29     catch(InterruptedException ie)
30     {
31         System.out.println("Child Thread Interrupted");
32     }
33 }
34 }
35 class ThreadMain
36 {
37     Run | Debug
38     public static void main(String args[])
39     {
40         int sum=0,i;
41         NewThread n1=new NewThread();
42         try
43         {
44             for(i=1;i<=100;i++)
45             {
46                 if(i%2==0)
47                 {
48                     sum=sum+i;
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         }
58     }
```

Ln 4, Col 25 Spaces: 4 UTF-8 CRLF Java JavaSE-15

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Visual Studio Code interface showing a Java file named `week11extra2.java` with the following code:

```
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  import java.util.*;
6  import java.lang.String;
7  import java.util.Random;
8  class Square implements Runnable
9  {
10     Thread t2;
11     int num;
12     Square(int number)
13     {
14         num = number;
15         t2=new Thread(this,"child thread");
16         t2.start();
17     }
18
19     public void run()
20     {
21         System.out.println("Square of "+num+" = "+(num*num));
22     }
23 }
24 class Cube implements Runnable
25 {
26     Thread t3;
27     int num;
28     Cube(int number)
29     {
30         num = number;
31         t3=new Thread(this,"child thread");
32         t3.start();
33     }
34
35     public void run()
36     {
37         System.out.println("Cube of "+ num+" = "+(num*num*num));
38     }
39 }
40 class RandomThread implements Runnable
41 {
42     Thread t1;
43     RandomThread()
44 {
```

The code defines three classes: `Square`, `Cube`, and `RandomThread`, each implementing the `Runnable` interface. The `Square` and `Cube` classes have a `run()` method that prints the square and cube of a given number, respectively. The `RandomThread` class is partially defined.

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Visual Studio Code interface showing a Java file named `week11extra2.java` with the following code:

```
40 class RandomThread implements Runnable
41 {
42     Thread t1;
43     RandomThread()
44     {
45         t1=new Thread(this,"child thread");
46         t1.start();
47     }
48     public void run()
49     {
50         Random randnum = new Random();
51         for (int i = 0; i < 10; i++)
52         {
53             int n = randnum.nextInt(100);
54             System.out.println("Random Integer : " + n);
55             if((n%2) == 0)
56             {
57                 Square s= new Square(n);
58             }
59             else
60             {
61                 Cube c= new Cube(n);
62             }
63             try
64             {
65                 Thread.sleep(1000);
66             }
67             catch (InterruptedException e)
68             {
69                 System.out.println("Interrupted");
70             }
71         }
72     }
73 }
74
75 class MultipleThread
76 {
77     Run | Debug
78     public static void main(String args[])
79     {
80         RandomThread r= new RandomThread();
81     }
82 }
```

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week11extra2.java - java - Visual Studio Code

week11.java week11extra1.java week11extra2.java X SGPAInher.java

week11extra2.java > ...

```
40 class RandomThread implements Runnable
41 {
42     Thread t1;
43     RandomThread()
44     {
45         t1=new Thread(this,"child thread");
46         t1.start();
47     }
48     public void run()
49     {
```

PROBLEMS 96 OUTPUT DEBUG CONSOLE TERMINAL

1: powershell

PS C:\Users\Harshita\Desktop\java> javac week11extra2.java
PS C:\Users\Harshita\Desktop\java> java MultipleThread
Random Integer : 70
Square of 70 = 4900
Random Integer : 4
Square of 4 = 16
Random Integer : 30
Square of 30 = 900
Random Integer : 21
Cube of 21 = 9261
Random Integer : 13
Cube of 13 = 2197
Random Integer : 27
Cube of 27 = 19683
Random Integer : 94
Square of 94 = 8836
Random Integer : 29
Cube of 29 = 24389
Random Integer : 57
Cube of 57 = 185193
Random Integer : 39
Cube of 39 = 59319
PS C:\Users\Harshita\Desktop\java>

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