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1BM19BT005

Practice Programs

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

```
import java.lang.*;
import java.util.*;
class OddThread extends Thread
{
    int odd_sum=0;
    OddThread(){
        super("ODD Thread");
        System.out.println("Child thread:"+this);
        start();
    }
    public void run(){
        try{
            for(int i=1;i<=100;i++)
            {
                if(i%2!=0)
                {
                    odd_sum=odd_sum+i;
                    Thread.sleep(100);
                }
            }
        }catch(InterruptedException e){
            System.out.println("Child Interrupted");
        }
        System.out.println("Sum of odd numbers is:"+odd_sum);
    }
}
```

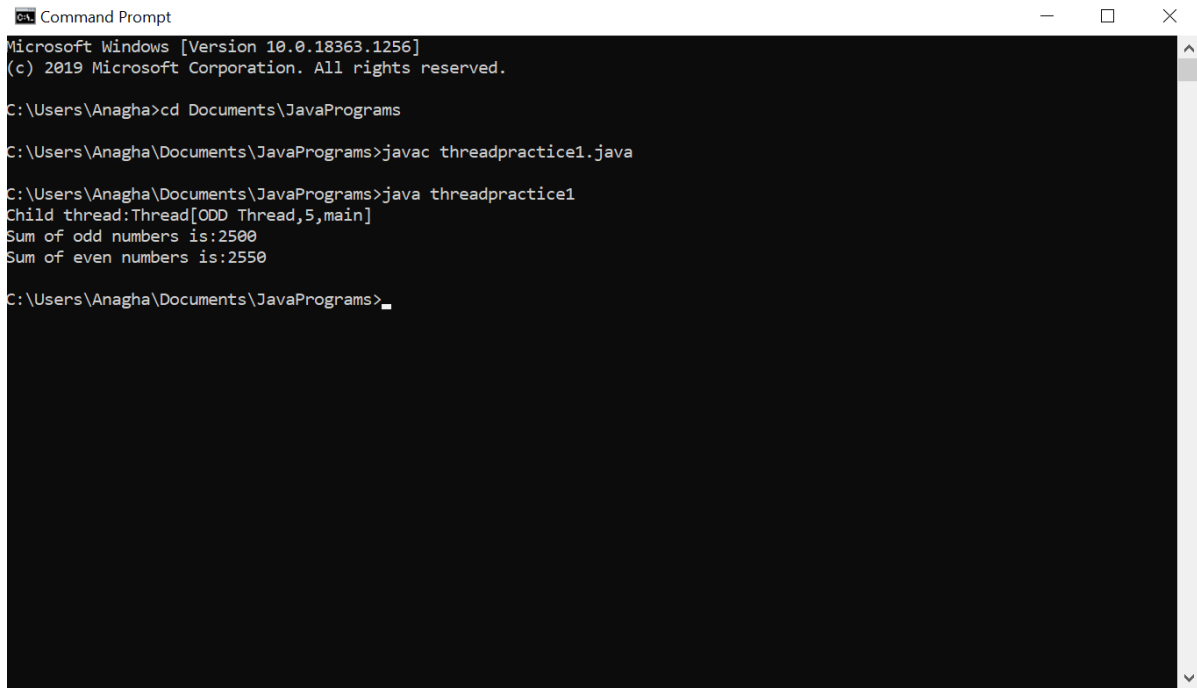
```

    }
}

class threadpractice1
{
    public static void main(String args[])
    {
        int even_sum=0;
        new OddThread();
        try{
            for(int i=1;i<=100;i++)
            {
                if(i%2==0)
                {
                    even_sum=even_sum+i;
                    Thread.sleep(200);
                }
            }
        }catch(InterruptedException e){
            System.out.println("Main thread interrupted");
        }
        System.out.println("Sum of even numbers is:"+even_sum);
    }
}

```

OUTPUT:



```
Command Prompt
Microsoft Windows [Version 10.0.18363.1256]
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C:\Users\Anagha>cd Documents\JavaPrograms

C:\Users\Anagha\Documents\JavaPrograms>javac threadpractice1.java

C:\Users\Anagha\Documents\JavaPrograms>java threadpractice1
Child thread:Thread[ODD Thread,5,main]
Sum of odd numbers is:2500
Sum of even numbers is:2550

C:\Users\Anagha\Documents\JavaPrograms>_
```

Practice Program-2: Develop a multithreaded Java program to create three threads. First thread generates random integer for every second and if the value is even, second thread computes the square of number and prints. If the value is odd, the third thread will print the value of cube of number

```
import java.util.Random;

class RandomNumberThread extends Thread{

    public void run(){

        Random random=new Random();

        for(int i=0;i<10;i++){

            {

                int random_int=random.nextInt(100);

                System.out.println("The random number generated is:"+random_int);

                if((random_int%2)==0){

                    SquareThread sThread=new SquareThread(random_int);

                    sThread.start();

                }

                else{
```

```

        CubeThread cThread=new CubeThread(random_int);
        cThread.start();
    }
    try{
        Thread.sleep(1000);
    }catch(InterruptedException e){
        System.out.println(e);
    }
}
}
}
}

```

```

class SquareThread extends Thread{
    int number;
    SquareThread(int random_no){
        number=random_no;
    }
    public void run(){
        System.out.println("Square of " +number+ "="+number*number);
    }
}

```

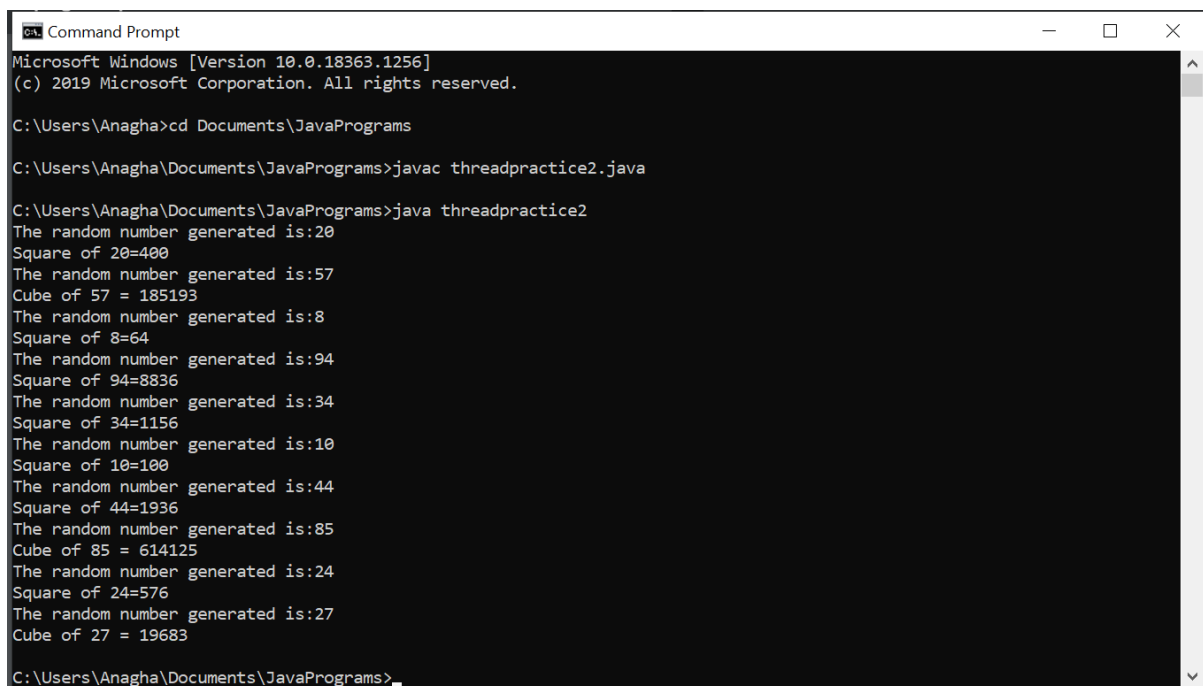
```

class CubeThread extends Thread {
    int number;
    CubeThread(int random_no) {
        number = random_no;
    }
    public void run() {
        System.out.println("Cube of " + number + " = " + number * number * number);
    }
}

```

```
public class threadpractice2{  
  
    public static void main(String args[])  
  
    {  
  
        RandomNumberThread rnThread=new RandomNumberThread();  
  
        rnThread.start();  
  
    }  
}
```

OUTPUT:



```
Microsoft Windows [Version 10.0.18363.1256]  
(c) 2019 Microsoft Corporation. All rights reserved.  
  
C:\Users\Anagha>cd Documents\JavaPrograms  
  
C:\Users\Anagha\Documents\JavaPrograms>javac threadpractice2.java  
  
C:\Users\Anagha\Documents\JavaPrograms>java threadpractice2  
The random number generated is:20  
Square of 20=400  
The random number generated is:57  
Cube of 57 = 185193  
The random number generated is:8  
Square of 8=64  
The random number generated is:94  
Square of 94=8836  
The random number generated is:34  
Square of 34=1156  
The random number generated is:10  
Square of 10=100  
The random number generated is:44  
Square of 44=1936  
The random number generated is:85  
Cube of 85 = 614125  
The random number generated is:24  
Square of 24=576  
The random number generated is:27  
Cube of 27 = 19683  
C:\Users\Anagha\Documents\JavaPrograms>
```

