thread1.java | thread2.java | thread3.java

```java
/*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.*/
class SumThread implements Runnable{
    Thread t;
    String name;
    int sum=0,i;
    SumThread(String tname){
        name=tname;
        t=new Thread(this,name);
        t.start();
    }
    public void run(){
        try{
            for(i=1;i<100;i++){
                if(i%2==1)
                    sum=sum+i;
            }
            Thread.sleep(50);
        }
        catch(InterruptedException e){
            System.out.println(name +"Interrupted");
        }
        System.out.println("Sum of odd number="+sum);
    }
}
class MainThread{
    public static void main(String args[]){
        int sum=0,i;
        SumThread n1=new SumThread("Sum");
        try{
            for(i=1;i<=100;i++){
```

```
13          try{
14              for(i=1;i<100;i++){
15                  if(i%2==1)
16                      sum=sum+i;
17              }
18              Thread.sleep(50);
19          }
20          catch(InterruptedException e){
21              System.out.println(name +"Interrupted");
22          }
23          System.out.println("Sum of odd number="+sum);
24      }
25  }
26  class MainThread{
27      public static void main(String args[]){
28          int sum=0,i;
29          SumThread n1=new SumThread("Sum");
30          try{
31              for(i=1;i<=100;i++){
32                  if(i%2==0)
33                      sum=sum+i;
34              }
35              Thread.sleep(50);
36          }
37          catch(InterruptedException e){
38              System.out.println("Interrupted");
39          }
40          System.out.println("Sum of even numbers="+sum);
41      }
42  }
```

```
C:\Program Files\Java\bin\basic>javac thread2.java

C:\Program Files\Java\bin\basic>java MainThread
Sum of odd number=2500
Sum of even numbers=2550

C:\Program Files\Java\bin\basic>
```

thread1.java | thread2.java | thread3.java

```java
/*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 Thread1 implements Runnable{
    String name1;
    Thread t;
    static int rand;
    int i,n,seconds;
    Random rd = new Random();
    Thread1(String name,int sec,int num){
        name1=name;
        seconds=sec;
        n=num;
        t=new Thread(this,name1);
        t.start();
    }
    public void run(){
    try{
        if(n==1){
        for(i=0;i<3;i++){
        rand=rd.nextInt(20);
        System.out.println("random no:"+rand);
        Thread.sleep(seconds);
    }
    }
    else if(n==2){
        for(i=0;i<3;i++){
            if((rand%2)==0){
                System.out.println("random no:"+rand+" square:"+rand*rand);
```

thread1.java | thread2.java | thread3.java

```
    else if(n==2){
        for(i=0;i<3;i++){
            if((rand%2)==0){
                System.out.println("random no:"+rand+" sqaure:"+rand*rand);
            }
            Thread.sleep(seconds);
        }
    }
    else if(n==3){
        for(i=0;i<3;i++){
            if(rand%2!=0){
                System.out.println("random no:"+rand+" cube:"+rand*rand*rand);
            }
            Thread.sleep(seconds);
        }
    }
}
    catch(InterruptedException e){
        System.out.println(name1+" Caught");
    }
}
}
class ThreadMain{
    public static void main(String args[]){
        Thread1 t1=new Thread1("name 1",1000,1);
        Thread1 t2=new Thread1("name 2",1000,2);
        Thread1 t3=new Thread1("name 3",1000,3);

    }
}
```

```
C:\Program Files\Java\bin\basic>javac thread2.java

C:\Program Files\Java\bin\basic>java MainThread
Sum of odd number=2500
Sum of even numbers=2550

C:\Program Files\Java\bin\basic>javac thread3.java

C:\Program Files\Java\bin\basic>java ThreadMain
random no:2
random no:2 sqaure:4
random no:11
random no:2 sqaure:121
random no:11
random no:11 cube:1331

C:\Program Files\Java\bin\basic>javac thread3.java

C:\Program Files\Java\bin\basic>java ThreadMain
random no:14
random no:14 sqaure:196
random no:6 sqaure:36
random no:6
random no:19
random no:19 cube:6859
random no:19 sqaure:361

C:\Program Files\Java\bin\basic>
```