

Week -11

Extra programs

1. class NewThread implements Runnable

```
{ Thread t;
```

```
int sum=0;
```

```
NewThread()
```

```
{ t=new Thread(this, "NThread");
```

```
t.start();
```

```
}
```

```
public void run()
```

```
{ for(int i=1; i<=100; i++)
```

```
{ if (i%2 != 0)
```

```
sum=sum+i;
```

```
}
```

```
System.out.println("Sum of odd numbers  
is : " + sum); }
```

```
class Thread2
```

```
{ public static void main(String args[])
```

```
{ int sum=0;
```

```
NewThread nt=new newThread();
```

```
for(int i=1; i<=100; i++)
```

```
{ if (i%2 == 0)
```

```
sum=sum+i;
```

```
}
```

```
System.out.println("Sum of even numbers is : "  
+ sum);
```

```
}
```

class NewThread implements Runnable

```
{ Thread t;
```

```
int sum=0;
```

```
    NewThread()
```

```
{
```

```
    t=new Thread(this, "NThread");
```

```
    t.start();
```

```
}
```

```
public void run()
```

```
{
```

```
    for(int i=1;i<=100;i++)
```

```
    {
```

```
        if(i%2!=0)
```

```
            sum=sum+i;
```

```
    }
```

```
    System.out.println("Sum of odd numbers is: "+sum);
```

```
}
```

```
}
```

class Thread2

```
{
```

```
    public static void main(String ss[])
```

```
    {
```

```
        int sum=0;
```

```
        NewThread n1=new NewThread();
```

```
        for(int i=1;i<=100;i++)
```

```
        {
```

```
            if(i%2==0)
```

```
                sum=sum+i;
```

```
}  
    System.out.println("Sum of even numbers is: "+sum);  
  
}  
}
```

```
C:\Users\Adithi\Desktop\java_prgs>javac week11_extra1.java  
  
C:\Users\Adithi\Desktop\java_prgs>java Thread2  
Sum of even numbers is: 2550  
Sum of odd numbers is: 2500  
  
C:\Users\Adithi\Desktop\java_prgs>
```

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```

2. class NewThread1 implements Runnable
{
    Thread t1;
    String name;
    NewThread1()
    {
        name = "Thread1";
        t1 = new Thread(this, name);
        t1.start();
    }
    public void run()
    {
        int x = 0;
        for(int i = 1; i <= 5; i++)
        {
            NewThread2 two = new NewThread2();
            NewThread3 three = new NewThread3();
            try {
                x = (int)(Math.random() * 100);
                Thread.sleep(1000);
                System.out.println("Random integer " + i + "
                is : " + x);
                if (x % 2 == 0)
                    two.method2(x, i);
                else
                    three.method3(x, i);
            }
            catch (InterruptedException e)
            {
                System.out.println(name + "Interrupted");
            }
        }
    }
}

```

```

class NewThread2 implements Runnable
{
    Thread t2;
    int a, b;
    String name;
    NewThread2()
    {
        name = "Thread2";
        t2 = new Thread(this, name);
    }
}

```

```

void method2(int a, int i)
{
    a = a; b = i; t2.start();
}

public void run()
{
    Square s = new Square();
    s.call(a, b);
}
}

```

```

class Square
{
    synchronized void call(int a, int b)
    {
        System.out.println("Square of random integer " + b + " is " + (a * a));
    }
}

```

```

class NewThread3 implements Runnable
{
    Thread t3;
    int a, b;
    String name;
    NewThread3()
    {
        name = "Thread3";
        t3 = new Thread(this, name);
    }
}

```

```

void method3(int a, int i)
{
    a = a;
    b = i;
    t3.start();
}
}

```

```

public void run()
{
    Cube c = new Cube();
    c.call(a, b);
}
}

```

```

class Cube
{
    synchronized void call(int a, int b)
    {
        System.out.println("Cube of random integer " + b + " is " + (a * a * a));
    }
}

```

```
class ThreadMain  
{ public static void main(String args[])  
  { NewThread1 one = new NewThread1();  
  }  
}
```

```

class NewThread1 implements Runnable
{
    Thread t1;
    String name;

    NewThread1()
    {
        name="Thread1";
        t1=new Thread(this, name);
        t1.start();
    }

    public void run()
    {
        int r=0;
        for(int i=1;i<=5;i++)
        {
            NewThread2 two = new NewThread2();
            NewThread3 three = new NewThread3();

            try{
                r=(int)(Math.random()*100);
                Thread.sleep(1000);

                System.out.println("Random integer "+i+" is: "+r);

                if(r%2==0)
                    two.method2(r,i);
                else
                    three.method3(r,i);
            }
            catch (InterruptedException e) {
                System.out.println(name + "Interrupted");
            }
        }
    }
}

```



```
}  
}
```

class NewThread2 implements Runnable

```
{  
    Thread t2;  
    int a,b;  
    String name;  
    NewThread2()  
    {  
        name="Thread2";  
        t2=new Thread(this, name);  
    }  
    void method2(int r,int i)  
    {  
        a=r;  
        b=i;  
        t2.start();  
    }  
    public void run()  
    {  
        square s=new square();  
        s.call(a,b);  
    }  
}
```

class square

```
{  
    synchronized void call(int a,int b)  
    {  
        System.out.println("Square of random integer "+b+" is "+(a*a));  
    }  
}
```



```
    }  
}
```

class NewThread3 implements Runnable

```
{  
    Thread t3;  
    int a,b;  
    String name;  
    NewThread3()  
    {  
        name="Thread3";  
        t3=new Thread(this, name);  
    }  
    void method3(int r,int i)  
    {  
        a=r;  
        b=i;  
        t3.start();  
    }  
    public void run()  
    {  
        cube c=new cube();  
        c.call(a,b);  
    }  
}
```

class cube

```
{  
    synchronized void call(int a,int b)  
    {  
        System.out.println("Cube of random integer "+b+" is "+(a*a*a));  
    }  
}
```

```
    }  
}
```

```
class ThreadMain
```

```
{  
    public static void main(String ss[])  
    {  
        NewThread1 one = new NewThread1();  
    }  
}
```

```
C:\Users\Adithi\Desktop\java_prgs>javac week11_extra2.java
```

```
C:\Users\Adithi\Desktop\java_prgs>java ThreadMain
```

```
Random integer 1 is: 95  
Cube of random integer 1 is 857375  
Random integer 2 is: 7  
Cube of random integer 2 is 343  
Random integer 3 is: 25  
Cube of random integer 3 is 15625  
Random integer 4 is: 20  
Square of random integer 4 is 400  
Random integer 5 is: 77  
Cube of random integer 5 is 456533
```

```
C:\Users\Adithi\Desktop\java_prgs>java ThreadMain
```

```
Random integer 1 is: 72  
Square of random integer 1 is 5184  
Random integer 2 is: 68  
Square of random integer 2 is 4624  
Random integer 3 is: 31  
Cube of random integer 3 is 29791  
Random integer 4 is: 69  
Cube of random integer 4 is 328509  
Random integer 5 is: 34  
Square of random integer 5 is 1156
```

```
C:\Users\Adithi\Desktop\java_prgs>
```