LIKITHA.B

(WEEK-11)EXTRA PROGRAMS

PROGRAM-1

1. 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.

CODE:

```
class NewThread implements Runnable
{ Thread t;
 NewThread()
 {
 t=new Thread(this, "SUM");
 System.out.println("CT:"+t);
 t.start();
 }


 public void run()
 {
 int sum=0;
 try
 {


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

```java
{
if(n%2!=0)
{
sum=sum+n;
}
else
Thread.sleep(700);
}
System.out.println("Sum of all odd numbers between 1-100\n"+sum);
}
catch(InterruptedException ie)
{
System.out.println("Odd Thread Interrupted");
}
System.out.println("Odd Thread quitting");
}
}
class Main
{
public static void main(String ss[])
{
int sum=0;
NewThread n1=new NewThread();
try
```

```
{

for(int n=1;n<=100;n++)

{

if(n%2==0)

{

sum=sum+n;

}

else

Thread.sleep(700);

}

System.out.println("Sum of all even numbers between 1-100:\n"+sum);

}

catch(InterruptedException ie)

{

System.out.println("Even Main Thread interrupted");

}

System.out.println("Even Main Thread quitting");

}

}
```

OUTPUT:

```
CT:Thread[SUM,5,main]
Sum of all odd numbers between 1-100
2500
Odd Thread quitting
Sum of all even numbers between 1-100:
2550
Even Main Thread quitting


...Program finished with exit code 0
Press ENTER to exit console.
```

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.

CODE:

```java
import java.util.Random;

class Square extends Thread
{
 int x;
 Square(int n)
 {
 x = n;
 }
 public void run()
 {
 int sqr = x * x;
```

```java
      System.out.println("Square of " + x + " = " + sqr );

    }

}

class Cube extends Thread

{

  int x;

  Cube(int n)

  {

    x = n;

  }

  public void run()

  {

    int cub = x * x * x;

    System.out.println("Cube of " + x + " = " + cub );

  }

}

class Number extends Thread

{

  public void run()

  {

    Random rand = new Random();

    for(int i =0; i<8; i++)

    {

      int randominteger = rand.nextInt(100);
```

```java
System.out.println("Random Integer : " + randominteger);

if(randominteger%2==0)

{

System.out.println("Even value");

Square s = new Square(randominteger);

s.start();

}

else{

System.out.println("Odd value");

Cube c = new Cube(randominteger);

c.start();

}

try {

Thread.sleep(1000);

} catch (InterruptedException ex) {

System.out.println(ex);

}

}

}

}

class Main {

public static void main(String args[])

{

Number n = new Number();
```

```
 n.start();

 }

}
```

OUTPUT-

```
Random Integer : 65
Odd value
Cube of 65 = 274625
Random Integer : 81
Odd value
Cube of 81 = 531441
Random Integer : 43
Odd value
Cube of 43 = 79507
Random Integer : 53
Odd value
Cube of 53 = 148877
Random Integer : 76
Even value
Square of 76 = 5776
Random Integer : 62
Even value
Square of 62 = 3844
Random Integer : 79
Odd value
Cube of 79 = 493039
Random Integer : 92
Even value
Square of 92 = 8464


...Program finished with exit code 0
Press ENTER to exit console.
```