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EXPERIMENT No: 9
-Thread Synchronisation.

Aim

Write a java program that shows thread synchronisation.

Input-

Enter the range.

Expected output-

The odd numbers and even numbers are printed seperately using thread synchronisation.

Algorithm

Class Call_me.

1. Declare function call with parameters String s and int n
2. If s = "even"
    2.1 for i=0 to n do
        2.1.1 if i%2 == 0
            2.1.1.1 Display i
        2.1.2 End If
    2.2 Endfor
3. else
    3.1 for i=0 to n do
        3.1.1 if i%2 ≠ 0

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3.1.1.1 'Display i'

3.1.2 End If

3.2 End for

4. End If

5. Inside try block

6. Thread.sleep (1000)

7. Inside catch block

8 Print "Interupted

class caller implements Runnable

1. Declare variables String msg, Call_me target,
   int number, Thread t

2. Declare constructor caller with parameters
   Callme targ, String s and int n
   2.1 target = targ
   2.2 msg = s
   2.3 number = n
   2.4 t = new Thread (this)
   2.5 t.start()

function run()

1. Declare synchronised (target)
   1.1 target.call(msg, number) // synchronized call

Main function.

1. Create an object target of class Call_me
2. Create two objects O_1 and O_2 of class caller
3. Enter the range x from the user

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4. Ob1 = Caller (target, even, x)
5. Ob2 = Caller (target, odd, x)

Result

Output is obtained.

Output—

Enter the limit : 15

[Even numbers are : 0 2 4 6 8 10 12 14]

[Odd numbers are : 1 3 5 7 9 11 13 15]

```
//327
//Devika B
//Section D : Qn 2
//Thread Synchronisation

import java.util.*;
class Callme {
    void call(int n) {
        System.out.print(n+" ");
        }

    try {
            Thread.sleep(1000);
    }
    catch (InterruptedException e) {
            System.out.println("Interrupted");
    }
  }
class Caller implements Runnable {
 String msg;
 Callme target;
 int number;
 Thread t;
 public Caller(Callme targ,int n) {
 target = targ;
 number = n;
 t = new Thread(this);
 t.start();
 }
 public void run() {
 synchronized(target) {
 target.call(number);
 }
 }
}
class sync {
 public static void main(String args[]) {
     Scanner sc = new Scanner(System.in);
     int x;
     System.out.print("Enter the limit : ");
     x = sc.nextInt();
   Callme target = new Callme();
    for(int i=0;i<=n;i++)
   {
          if(i%2==0)
          Caller ob1 = new Caller(target, i);
          else
          Caller ob2 = new Caller(target, i);
     }
try {
ob1.t.join();
ob2.t.join();
} catch(InterruptedException e) {
System.out.println("Interrupted");
}
}
```