S.No: 29	Exp. Name: ***Create multiple threads to access the contents of a stack***	Date:2023-12-31

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Aim:

Create multiple threads to access the contents of a stack. Synchronize thread to prevent simultaneous access to push and pop operations.

Note: Please don't change the package name.

Source Code:

q29795/StackThreads.java

```
package q29795;
import java.util.*;
class NewThread implements Runnable {
   Thread t;
   int n;
   Stack<Integer> STACK=new Stack<Integer>();
   NewThread(int size) {
      n=size;
      t=new Thread(this);
      t.start();
   }
   synchronized public void run() {
      STACK.push(n);
      System.out.println(STACK.pop());
   }
}
class StackThreads {
   public static void main(String args[]) {
      System.out.println("Enter the size of the stack");
      Scanner sc = new Scanner(System.in);
      int k=sc.nextInt();
      for(int i=1;i<=k;i++)
         {
            NewThread ob=new NewThread(i);
         }
   }
}
```

Execution Results - All test cases have succeeded!

Test Case - 1
User Output
Enter the size of the stack 4
1
2
3
4

Test Case - 2
User Output
Enter the size of the stack 9
1
2
3
4
5
6
7
8
9