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

```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