QUEUE SORT USING ONE STACK

```java
package com.wipro;
import java.util.LinkedList;
import java.util.Queue;
import java.util.Stack;


public class QUEUESort_oneStack {

        public static void sortQueue(Queue<Integer> queue) {
            Stack<Integer> stack = new Stack<>();
            while (!queue.isEmpty()) {
                int current = queue.poll();
                while (!stack.isEmpty() && stack.peek() < current) {
                    queue.offer(stack.pop());
                }
                stack.push(current);
            }
            while (!stack.isEmpty()) {
                queue.offer(stack.pop());
            }
        }

        public static void main(String[] args) {
            Queue<Integer> queue = new LinkedList<>();
            queue.offer(289);
            queue.offer(96);
            queue.offer(64);
            queue.offer(104);
            queue.offer(44);
            queue.offer(89);

            System.out.println("Queue before sorting: " + queue);

            sortQueue(queue);

            System.out.println("Queue after sorting: " + queue);
        }
    }
```

```java
 7  public class QUEUESort_oneStack {
 8
 9      public static void sortQueue(Queue<Integer> queue) {
10          Stack<Integer> stack = new Stack<>();
11          while (!queue.isEmpty()) {
12              int current = queue.poll();
13              while (!stack.isEmpty() && stack.peek() < current) {
14                  queue.offer(stack.pop());
15              }
16              stack.push(current);
17          }
18          while (!stack.isEmpty()) {
19              queue.offer(stack.pop());
20          }
21      }
22
23      public static void main(String[] args) {
24          Queue<Integer> queue = new LinkedList<>();
25          queue.offer(289);
26          queue.offer(96);
27          queue.offer(64);
28          queue.offer(104);
29          queue.offer(44);
30          queue.offer(89);
31
32          System.out.println("Queue before sorting: " + queue);
33
34          sortQueue(queue);
35
```

Outline

- com.wipro
- QUEUESort_oneStack
  - sortQueue(Queue<Integer>) : void
  - main(String[]) : void

Markers | Properties | Terminal | Console ⊠ | Coverage

<terminated> QUEUESort_oneStack [Java Application] C:\Users\Nikita\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_16.0.2.v20210721-1149\jre\bin\javaw.exe (Jun 4, 2024, 11:31:21 AM –

```
Queue before sorting: [289, 96, 64, 104, 44, 89]
Queue after sorting: [44, 64, 89, 96, 104, 289]
```