

```
1 import components.queue.Queue;
4
5 /**
6  * Simple HelloWorld program (clear of Checkstyle and FindBugs
7  * warnings).
8  *
9  * @author P. Bucci
10 */
11 public final class HelloWorld {
12     /**
13      * Default constructor--private to prevent instantiation.
14      */
15     private HelloWorld() {
16         // no code needed here
17     }
18
19     /**
20      * Reverses ("flips") {@code this}.
21      *
22      * @param s
23      *         queue that holds values
24      * @updates s
25      * @ensures s = rev(#s)
26      */
27     public static void flip2(Queue s) {
28         int length = s.length(); // get length of queue
29         String [] arr = new String[length]; //make array with same
length
30         int i = length - 1; // start at the end of the queue
31         while (0 < i) {
32             arr [i] = (String) s.dequeue(); //put the queue from the
last to the first in the array
33             i--; //reduce i until it's zero
34         }
35         i = 0; //reset the value in case there was an error, i can
probably take this out
36         while(i < length -1) { //now reputting the value flipped
37             s.enqueue(arr[i]);
```

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38         i++;
39     }
40     // no return statement
41 }
42
43 /**
44  * Reverses ("flips") {@code this}.
45  * @param <T>
46  *
47  * @updates this
48  * @ensures this = rev(#this)
49  */
50 public <T> void flip(Queue <T> s ) {
51     s.flip(); //easy built in flip method
52 }
53
54 /**
55  * Main method.
56  *
57  * @param args
58  *         the command line arguments; unused here
59  */
60 public static void main(String[] args) {
61     SimpleWriter out = new SimpleWriter1L();
62     out.println("Hello World!");
63     out.close();
64 }
65
66 }
67
```