

```
1 import components.queue.Queue;
2
3 /**
4  * {@code Queue} represented as a {@code Sequence} of entries,
5  * with
6  * implementations of primary methods.
7  *
8  * @param <T>
9  *         type of {@code Queue} entries
10  * @correspondence this = $this.entries
11 */
12 public class HelloWorld {
13     public static void main(String[] args) {
14
15     }
16
17     /**
18      * Evaluates a Boolean expression and returns its value.
19      *
20      * @param tokens
21      *         the {@code Queue<String>} that starts with a
22      *         bool-expr string
23      * @return value of the expression
24      * @updates tokens
25      * @requires [a bool-expr string is a prefix of tokens]
26      * @ensures <pre>
27      *         valueOfBoolExpr =
28      *         [value of longest bool-expr string at start of #tokens]
29      * and
30      * #tokens = [longest bool-expr string at start of #tokens]
31      * tokens
32      * </pre>
33      */
34     public static boolean valueOfBoolExpr(Queue<String> tokens)
35     {
36         boolean answer = false;
37         while (tokens.length() > 0
38             && !tokens.front().equals("### END OF INPUT
39             ###")) {
40             String front = tokens.dequeue();
41             switch (front) {
42                 case "T": {
43                     answer = true;
44                 }
45             }
46         }
47     }
48 }
```

```
39         break;
40     }
41     case "F": {
42         answer = false;
43         break;
44     }
45     case "NOT": {
46         answer = !valueOfBoolExpr(tokens);
47         break;
48     }
49     case "(": {
50         answer = valueOfBoolExpr(tokens);
51         break;
52     }
53     case ")": {
54         break;
55     }
56     case "AND": {
57         answer &= valueOfBoolExpr(tokens);
58         break;
59     }
60     case "OR": {
61         answer |= valueOfBoolExpr(tokens);
62         break;
63     }
64     default:
65         break;
66     }
67 }
68 return answer;
69 }
70
71 }
```