

```
1 import components.set.Set;
2
3 /**
4  * awesome
5  *
6  * @author Gage Farmer
7  */
8 public final class Homework19 {
9
10     /**
11      * No argument constructor--private to prevent instantiation.
12      */
13     private Homework19() {
14         // no code needed here
15     }
16
17     /**
18      * Generates the set of characters in the given {@code String} into the
19      * given {@code Set}.
20      *
21      * @param str
22      *     the given {@code String}
23      * @param charSet
24      *     the {@code Set} to be replaced
25      * @replaces charSet
26      * @ensures charSet = entries(str)
27      */
28     private static void generateElements(String str, Set<Character> charSet) {
29         int i = 0;
30
31         while (i < str.length()) {
32             charSet.add(str.charAt(i));
33         }
34     }
35
36     /**
37      * Returns the first "word" (maximal length string of characters not in
38      * {@code separators}) or "separator string" (maximal length string of
39      * characters in {@code separators}) in the given {@code text} starting at
40      * the given {@code position}.
41      *
42      * @param text
43      *     the {@code String} from which to get the word or separator
44      *     string
45      * @param position
46      *     the starting index
47      * @param separators
48      *     the {@code Set} of separator characters
49      * @return the first word or separator string found in {@code text} starting
50      *     at index {@code position}
51      * @requires 0 <= position < |text|
52      * @ensures <pre>
53      *     nextWordOrSeparator =
54      *     text[position, position + |nextWordOrSeparator|) and
55      *     if entries(text[position, position + 1)) intersection separators = {}
56      *     then
57      *     entries(nextWordOrSeparator) intersection separators = {} and
58      *     (position + |nextWordOrSeparator| = |text| or
59      *     entries(text[position, position + |nextWordOrSeparator| + 1))
```

```
60      *      intersection separators /= {})
61      * else
62      *      entries(nextWordOrSeparator) is subset of separators and
63      *      (position + |nextWordOrSeparator| = |text| or
64      *      entries(text[position, position + |nextWordOrSeparator| + 1))
65      *      is not subset of separators)
66      * </pre>
67      */
68      private static String nextWordOrSeparator(String text, int position,
69          Set<Character> separators) {
70
71          boolean done = false;
72          int i = 0;
73          String word = "";
74
75          while (!done) {
76              if (separators.contains(text.charAt(position + i))) {
77                  done = true;
78              } else {
79                  word = word + text.charAt(position + i);
80              }
81              i++;
82          }
83
84          return word;
85      }
86
87      private static void main() {
88          nextWordOrSeparator(null, 0, null);
89          generateElements(null, null);
90      }
91
92 }
93
```