

```
1 import components.map.Map;
2
3 /**
4  * {@code Queue} represented as a {@code Sequence} of entries, with
5  * implementations of primary methods.
6  *
7  * @param <T>
8  *         type of {@code Queue} entries
9  * @correspondence this = $this.entries
10 */
11 public class HelloWorld {
12
13     public static void main(String[] args) {
14
15     }
16
17     /**
18      * Raises the salary of all the employees in {@code map} whose
19      * name starts
20      * with the given {@code initial} by the given {@code
21      * raisePercent}.
22      *
23      * @param map
24      *         the name to salary map
25      * @param initial
26      *         the initial of names of employees to be given a
27      *         raise
28      * @param raisePercent
29      *         the raise to be given as a percentage of the
30      *         current salary
31      * @updates map
32      * @requires [the salaries in map are positive] and
33      *         raisePercent > 0
34      * @ensures <pre>
35      *         DOMAIN(map) = DOMAIN(#map) and
36      *         [the salaries of the employees in map whose names start with
37      *         the given
38      *         initial have been increased by raisePercent percent (and
39      *         truncated to
40      *         the nearest integer); all other employees have the same
41      *         salary]
42      * </pre>
43      */
44     private static void giveRaise(components.map.Map<String,...
```

```

Integer> map,
37 ..... char initial, int raisePercent) {
38     Map<String, Integer> newMap = map.newInstance();
39     int size = map.size();
40     for (int i = 0; i < size; i++) {
41         components.map.Map.Pair<String, Integer> temp =
map.removeAny();
42         if (temp.key().charAt(0) == initial) {
43             newMap.add(temp.key(), temp.value() *
(raisePercent));
44         } else {
45             newMap.add(temp.key(), temp.value());
46         }
47     }
48     map.transferFrom(newMap);
49 }
50
51 /**
52  * Raises the salary of all the employees in {@code map} whose
name starts
53  * with the given {@code initial} by the given {@code
raisePercent}.
54  *
55  * @param map
56  *     the name to salary map
57  * @param initial
58  *     the initial of names of employees to be given a
raise
59  * @param raisePercent
60  *     the raise to be given as a percentage of the
current salary
61  * @updates map
62  * @requires [the salaries in map are positive] and
raisePercent > 0
63  * @ensures
64  *
65  *     <pre>
66  *     DOMAIN(map) = DOMAIN(#map) and
67  *     [the salaries of the employees in map whose names start with
the given
68  *     initial have been increased by raisePercent percent (and
truncated to
69  *     the nearest integer); all other employees have the same
salary]

```

```
70      *          </pre>
71      */
72      public static void giveRaise(java.util.Map<String, Integer>
map,
73          char initial, int raisePercent) {
74
75          for (java.util.Map.Entry<String, Integer> x :
map.entrySet()) {
76              if (x.getKey().charAt(0) == initial) {
77                  x.setValue(x.getValue() * (initial));
78              }
79          }
80      }
81 }
```