

```
1 import java.util.Scanner;
2 import java.util.regex.Pattern;
3
4 import components.map.Map;
5 import components.map.Map1L;
6 import components.simplereader.SimpleReader;
7 import components.simplereader.SimpleReader1L;
8 import components.simplewriter.SimpleWriter;
9 import components.simplewriter.SimpleWriter1L;
10
11 /**
12  * Simple pizza order manager: inputs orders from a file
13  * and computes and
14  * displays the total price for each order.
15  *
16  * @author Put your name here
17  */
18 public final class PizzaOrderManager {
19
20     /**
21      * Private constructor so this utility class cannot be
22      * instantiated.
23      */
24     private PizzaOrderManager() {}
25
26     /**
27      * Inputs a "menu" of words (items) and their prices
28      * from the given file and
29      * stores them in the given {@code Map}.
30      *
31      * @param fileName
32      *         the name of the input file
```

```
32     * @param priceMap
33     *         the word -> price map
34     * @replaces priceMap
35     * @requires <pre>
36     * [file named fileName exists but is not open, and
    has the
37     * format of one "word" (unique in the file) and one
    price (in cents)
38     * per line, with word and price separated by ',';
    the "word" may
39     * contain whitespace but not ',']
40     * </pre>
41     * @ensures [priceMap contains word -> price mapping
    from file fileName]
42     */
43     private static void getPriceMap(String fileName,
44                                     Map<String, Integer> priceMap) {
45         assert fileName != null : "Violation of: fileName
    is not null";
46         assert priceMap != null : "Violation of: priceMap
    is not null";
47         /*
48         * Note: Precondition not checked!
49         */
50         Scanner sc = new Scanner(fileName);
51         String item = "";
52         Integer price = 0;
53         while (sc.hasNextLine()) {
54             // i did not know how to do this part
    correctly but
55             // i looked for a sequence but the program did
    not catch it
56             // while debugging the variable item would be
    null for some reason
```

```
57         item = sc.findInLine(Pattern.compile("[a-
z]+"));
58         sc.findInLine(",");
59         // same thing here
60         String tempValue =
sc.findInLine(Pattern.compile("[0-9]+"));
61         // I forgot the name of the call to check if
string can be int
62         //if(Integer.parseInt?)else file has an
error
63         if (tempValue != null) {
64             price = Integer.parseInt(tempValue);
65             if (!priceMap.containsKey(item)) {
66                 priceMap.add(tempValue, price);
67             }
68         }
69     }
70 }
71
72 /**
73  * Input one pizza order and compute and return the
total price.
74  *
75  * @param input
76  *         the input stream
77  * @param sizePriceMap
78  *         the size -> price map
79  * @param toppingPriceMap
80  *         the topping -> price map
81  * @return the total price (in cents)
82  * @updates input
83  * @requires <pre>
84  * input.is_open and
85  * [input.content begins with a pizza order consisting
```

```
    of a size
86     * (something defined in sizePriceMap) on the first
    line, followed
87     * by zero or more toppings (something defined in
    toppingPriceMap)
88     * each on a separate line, followed by an empty
    line]
89     * </pre>
90     * @ensures <pre>
91     * input.is_open and
92     * #input.content = [one pizza order (as described
93     *                      in the requires clause)] *
    input.content and
94     * getOneOrder = [total price (in cents) of that pizza
    order]
95     * </pre>
96     */
97     private static int getOneOrder(SimpleReader input,
98                                     Map<String, Integer> sizePriceMap,
99                                     Map<String, Integer> toppingPriceMap) {
100         assert input != null : "Violation of: input is not
    null";
101         assert sizePriceMap != null : "Violation of:
    sizePriceMap is not null";
102         assert toppingPriceMap != null : "Violation of:
    toppingPriceMap is not null";
103         assert input.isOpen() : "Violation of:
    input.is_open";
104         /*
105         * Note: Rest of precondition not checked!
106         */
107         int price = 0;
108         // could not figure out how to stop when there's a
    new line
```

```
109 //      while (!input.nextLine().equals("\r\n")) {
110     String order = input.nextLine();
111     if (sizePriceMap.containsKey(order)) {
112         price = price + sizePriceMap.value(order);
113     }
114     if (toppingPriceMap.containsKey(order)) {
115         price = price + toppingPriceMap.value(order);
116 //      }
117     }
118     return price;
119 }
120
121 /**
122  * Output the given price formatted in dollars and
123  * cents.
124  * @param output
125  *      the output stream
126  * @param price
127  *      the price to output
128  * @updates output
129  * @requires output.is_open = true and 0 <= price
130  * @ensures <pre>
131  * output.is_open and
132  * output.content = #output.content *
133  * [display of price, where price is in cents but
134  * display is formatted in dollars and cents]
135  * </pre>
136  */
137 private static void putPrice(SimpleWriter output, int
138     price) {
139     assert output != null : "Violation of: output is
140     not null";
141     assert output.isOpen() : "Violation of:
```

```
        output.is_open";
140         assert 0 <= price : "Violation of: 0 <= price";
141
142         // TODO - fill in body
143         int cents = price % 100;
144         int dollas = price / 100;
145         output.println("$" + dollas + "." + cents);
146
147     }
148
149     /**
150      * Main method.
151      *
152      * @param args
153      *         the command line arguments
154      */
155     public static void main(String[] args) {
156         SimpleReader in = new
157         SimpleReader1L("data/orders.txt");
158         SimpleWriter out = new SimpleWriter1L();
159         Map<String, Integer> sizeMenu = new Map1L<String,
160         Integer>();
161         Map<String, Integer> toppingMenu = new
162         Map1L<String, Integer>();
163         int orderNumber = 1;
164         /*
165          * Get menus of sizes with prices and toppings
166          with prices
167          */
168         getPriceMap("data/sizes.txt", sizeMenu);
169         getPriceMap("data/toppings.txt", toppingMenu);
170         /*
171          * Output heading for report of pizza orders
172          */
173     }
```

```
169         out.println();
170         out.println("Order");
171         out.println("Number Price");
172         out.println("-----");
173         /*
174          * Process orders, one at a time, from input file
175          */
176         while (!in.atEOS()) {
177             // another attempt of picking one order at a
178             // time
179             if (!in.equals('\r\n')) {
180                 int price = getOneOrder(in, sizeMenu,
181                                     toppingMenu);
182                 out.print(orderNumber + " ");
183                 putPrice(out, price);
184                 out.println();
185                 orderNumber++;
186             } else {
187                 out.println();
188             }
189         }
190         /*
191          * Close input and output streams
192          */
193         in.close();
194         out.close();
195     }
196 }
197 }
```