#### CS 240 Final Part 1

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The GitHub folder can be found at https://github.com/Trainzack/CS240/tree/master/Final%20Part%201.

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### 1 src/Inventory.java

```
1 /*import java.io.FileNotFoundException;
2 import java.io.PrintWriter;
3 import java.io.UnsupportedEncodingException;*/
5 import java.io.PrintStream;
6 import java.util.Random;
8 /**
9 * Simulates a simplified model of an In-N-Out.
10 * @author eli
11
  */
12
14 public class Inventory {
      // This is the PrintStream we will be writing to. This is to ease exporting
16
      the output to a file.
      private static final PrintStream output = System.out;
17
      //private static PrintWriter output;
20
      private static Random randomNumberGenerator = new Random();
21
      // What day of the month it is. Starts at DEC 1st, or 301.
      private static int day = 301;
```

```
25
      // What is the last day to simulate (DEC 31st)
26
      private static final int last_date = 331;
27
28
      // How many customers we can hold in line
29
      private static final int CUSTOMER_QUEUE_CAPACITY = 50;
30
31
      // Represents how many days away the next shipment is.
32
      private static int daysUntilNextShipment = 0;
33
34
      // Represents which customer we're serving
      private static int customerNumber = 1;
36
37
      // This array contains the six menu items that customers can order.
38
      @SuppressWarnings("unchecked") // This is okay because the new array is empty
39
      private static ListInterface < FoodType > [] menuItems = new ListInterface [6];
40
41
      // This dictionary contains the stacks of food items.
42
      private static DictionaryInterface<FoodType, StackInterface<FoodItem>> stock =
43
      new SortedDictionaryLinkedData<>();
44
      public static void main(String[] args) {
45
46
47
48
          /*trv {
              output = new PrintWriter("output.txt", "ASCII");
49
          } catch (FileNotFoundException | UnsupportedEncodingException e) {
50
              e.printStackTrace();
51
          1*/
52
          init();
54
55
          for (int i = 0; i < menuItems.length; i++) {</pre>
56
              output.println(i + ": " + menuItems[i].toString());
57
          for (; day <= last_date; day++) {</pre>
61
              runDay();
62
          }
63
64
          output.println("=========");
65
          output.println("=== January 01 Log: ==========");
          output.println("=========");
          output.println();
68
          output.println("This In-N-Out is shut down for having consistently low
69
     sales and customer satisfaction, despite high customer throughput. If only the
     higher-ups at In-N-Out waited until this data got back, then maybe they would
     have noticed that it was their own fault for not supplying the store with
      enough food.");
          output.close();
71
72
73
       * Initializes all of the important variables, like menu items
74
75
      private static void init() {
76
77
          // Add the correct food types to each menu item by creating arrays
```

```
containing the food items first, then making the lists based off of those
      arrays.
79
80
           // (1) Burger - Bun, Patty, Lettuce, Tomato, Onion
           FoodType[] burger = {FoodType.Bun, FoodType.Patty, FoodType.Lettuce,
81
       FoodType.Tomato, FoodType.Onion};
           menuItems[0] = new FixedArrayList<>(burger);
82
83
           // (2) Cheese Burger - Cheese, Bun, Patty, Lettuce, Tomato, Onion
           FoodType[] cheeseBurger = {FoodType.Cheese, FoodType.Bun, FoodType.Patty,
       FoodType.Lettuce, FoodType.Tomato, FoodType.Onion};
           menuItems[1] = new FixedArrayList <> (cheeseBurger);
86
87
           // (3) Vegan lettuce wrap Burger - (NO Bun, No Patty),2 order of Lettuce,
88
       Tomato, Onion
           FoodType[] veganBurger = {FoodType.Lettuce, FoodType.Lettuce, FoodType.
       Tomato, FoodType.Onion};
           menuItems[2] = new FixedArrayList <> (veganBurger);
90
91
           // (4) Burger No Onion - (No Onion), Bun, Patty, Lettuce, Tomato,
92
           FoodType[] burgerNoOnion = {FoodType.Bun, FoodType.Patty, FoodType.Lettuce
93
       , FoodType.Tomato};
           menuItems[3] = new FixedArrayList <> (burgerNoOnion);
94
           // (5) Cheese Burger No Onion - (No Onion), Cheese, Bun, Patty, Lettuce,
96
      Tomato
           FoodType[] cheeseBurgerNoOnion = {FoodType.Cheese, FoodType.Bun, FoodType.
97
      Patty, FoodType.Lettuce, FoodType.Tomato};
           menuItems[4] = new FixedArrayList <> (cheeseBurgerNoOnion);
98
           // (6) Burger No Tomato - (No Tomato), Bun, Patty, Lettuce, Onion
100
           FoodType[] burgerNoTomato = {FoodType.Bun, FoodType.Patty, FoodType.
101
      Lettuce, FoodType.Onion};
           menuItems[5] = new FixedArrayList<>(burgerNoTomato);
102
103
           // Setup the stacks of food items
104
           for (FoodType f : FoodType.values()) {
105
               stock.add(f, new LinkedDataStack < FoodItem > ());
106
107
108
       }
109
110
111
        * Adds 700-1000 new food items of random type to the correct stocks.
112
113
       private static void receiveShipment() {
114
           output.println("A new shipment arrived!");
115
116
           // Create a random number of each type
117
           // Put all new food items into their stacks
           // (the morning shift wants to do as little work as possible, and doesn't
119
       care about FIFO, so they put the new food on top of the old food. If the
      management paid attention, they'd surely be reprimanded.)
120
           // This is the number of food items we are receiving this shipment. We
121
       want 700-1000 items total
           int goal = randomNumberGenerator.nextInt(301) + 700;
122
123
           for (int i = 0; i < goal; i++) {</pre>
124
```

```
125
                // Select a random food type
126
                FoodType newType = FoodType.values()[randomNumberGenerator.nextInt(
127
       FoodType.values().length)];
128
                // Create the new food item
129
                FoodItem newItem = new FoodItem(day, newType);
130
131
                // Add it to the correct stock
132
133
                stock.getValue(newType).push(newItem);
           }
134
135
            // Randomly select the next shipment date
136
            daysUntilNextShipment = randomNumberGenerator.nextInt(3) + 3;
137
       }
138
139
       /**
140
        * Fills up a given line with customers
141
        * Oparam customers The line to put customers in
142
        * Oparam hour What hour it currently is
143
        * @return How many customers were lost this hour
144
145
       private static int createCustomers(QueueInterface < Customer > customers, int
146
       hour) {
147
            // How many customers decide to show up this hour
148
            int customersThisHour = randomNumberGenerator.nextInt(99) + 1;
149
150
            // How many customers couldn't fit into the queue
151
           int lostCustomersHour = 0;
152
153
            for (int i = 0; i < customersThisHour; i++) {</pre>
154
                // Create the new customer
155
                Customer newCustomer = new Customer(customerNumber);
156
                customerNumber++;
157
                // Check if the queue is full
159
                if (i >= CUSTOMER QUEUE CAPACITY) {
160
                    lostCustomersHour++;
161
                } else {
162
                    customers.enqueue(newCustomer);
163
164
           }
165
166
            // Print the results
167
           output.print(hour + ":00 --- " + customersThisHour + " customers arrived")
168
            if (lostCustomersHour > 0) {
169
170
                output.print(" (" + lostCustomersHour + " were turned away)");
            }
171
            output.println(".");
172
173
           return lostCustomersHour;
174
       }
175
176
       /**
177
178
        * @param customerOrder
179
       * @return
180
```

```
*/
181
       private static boolean enoughIngredients(ListInterface<FoodType> customerOrder
182
      ) {
183
           // First, check to see if we are out of any of the food types we need
184
185
           Object[] orderArray = customerOrder.toArray();
186
187
           for (Object f : orderArray) {
188
               // Check to see if we have at least one of each of the food items in
190
      the customer's order
               if (stock.getValue((FoodType)f).size() <= 0) {</pre>
191
                   return false;
192
               }
193
194
           }
195
           // An ugly hack to check for the one item that has double lettuce
196
           if (customerOrder == menuItems[2] && stock.getValue(FoodType.Lettuce).size
197
      () <= 1) {
               return false;
198
           }
199
200
201
           return true;
202
203
204
        * Simulates a single day.
205
        */
206
       private static void runDay() {
207
208
           output.println("==========");
209
           output.println("=== December " + String.format("%02d",(day - 300)) + " Log
210
        output.println("=======""):
211
           output.println();
212
           // Represents how many customers we lost today
214
           int lostCustomerDay = 0;
215
216
           // Represents how many of each menu item was ordered (i.e., the item in
217
      menuItems[0] will have its count in itemsOrdered[0])
           int[] itemsOrdered = {0, 0, 0, 0, 0, 0};
218
219
           // Represents how many of each type of food item has been wasted via
220
      spoiling (today)
           DictionaryInterface < FoodType, Integer > foodWasted = new
221
      SortedDictionaryLinkedData<>();
           for (FoodType f : FoodType.values()) {
222
               foodWasted.add(f, new Integer(0));
           }
224
225
           customerNumber = 1;
226
227
           // Represents customer orders. (Key is customer, value is menu item
228
      ordered)
           DictionaryInterface < Customer, Integer > orders = new
229
      SortedDictionaryLinkedData < Customer, Integer > ();
230
```

```
// Maybe receive shipment
231
            if (daysUntilNextShipment <= 0) {</pre>
232
233
                receiveShipment();
234
           }
235
           // Print out how much stocks we have
236
237
            for (FoodType f : FoodType.values()) {
238
239
                output.println("\t"+ f.getPlural() + " in stock: " + stock.getValue(f)
240
       .size());
241
242
            // Go through every hour of the day (military time)
243
            for (int hour = 10; hour <= 19; hour++) {</pre>
244
245
246
                QueueInterface < Customer > customers = new FixedArrayQueue < > (
247
       CUSTOMER_QUEUE_CAPACITY);
248
                // Generate customers
249
                lostCustomerDay += createCustomers(customers, hour);
250
                // Go through customer queue
                while (!customers.isEmpty()) {
253
                    Customer currentCustomer = customers.dequeue();
254
                    // Select one of the menu items. This is the customer's order
255
                    int orderNumber = randomNumberGenerator.nextInt(6);
256
                    ListInterface < FoodType > curCustomerOrder = menuItems[orderNumber];
257
258
                    // Check to see if we have enough ingredients
259
                    if (enoughIngredients(curCustomerOrder)) {
260
261
                         // Empty off the ingredients we will need
262
                         for (int i = 0; i < curCustomerOrder.size(); i++) {</pre>
263
                             stock.getValue(curCustomerOrder.view(i)).pop();
264
266
                         // Increment the amount of times this was ordered
267
                        itemsOrdered[orderNumber] += 1;
268
269
                         // Log order to dictionary
270
                         orders.add(currentCustomer, new Integer(orderNumber + 1));
271
273
                         // We don't have enough ingredients, so we can't do it!
274
                         lostCustomerDay++;
275
                    }
276
277
                }
279
280
           }
281
282
            // Check inventory
283
            // (The evening shift has to sort out morning shift's mess)
                Sort it by copying stack to array, sorting, then copying array to
285
       stack
            for (FoodType f : FoodType.values()) {
286
```

```
287
                StackInterface < FoodItem > stack = stock.getValue(f);
288
289
290
                // For some reason we have to do it this way to avoid an invalid cast
                Object[] temp = stack.toArray();
291
                // Check to make sure the stack isn't empty
292
                if (temp != null) {
293
                    FoodItem[] items = new FoodItem[temp.length];
294
295
296
                    for (int i = 0; i < temp.length; i++) {</pre>
297
                         items[i] = (FoodItem)temp[i];
298
299
                    stack.clear();
300
                    items = IterativeInsertionSort.sort(items);
301
302
                    // Put the items back in the stack
303
                    for (int i = 0; i < items.length; i++) {</pre>
304
                        FoodItem curItem = (FoodItem)items[i];
305
306
                        // Check to see if it is expired
307
                         if (!curItem.isExpired(day)) {
308
                             // It's still good, so put it on the shelf
309
310
                             stack.push(curItem);
311
                        } else {
312
                             // It's gone bad, toss it and record the waste
313
                             foodWasted.add(f, foodWasted.getValue(f) + 1);
314
                        }
315
316
                    }
317
                }
318
319
           }
320
321
322
           daysUntilNextShipment --;
           // Now we print the end of day information log!
324
325
           output.println();
326
327
           output.println("---End of day inventory count---");
328
329
           output.println("Customers lost today: " + lostCustomerDay);
330
           output.println("Food expired today:");
331
           for (FoodType f : FoodType.values()) {
332
                output.println("\t" + f.getPlural() + ": " + foodWasted.getValue(f));
333
           }
334
           output.println("Orders served today:");
335
            for (int i = 0; i < itemsOrdered.length; i++) {</pre>
                output.println("\t#" + (i + 1) + " was ordered " + itemsOrdered[i] + "
337
        time(s).");
           }
338
339
            output.println("Successful customer order log:");
340
           output.println(orders);
342
           output.println("----");
343
           output.println();
344
```

```
345 }
346
347
348 }
```

### 2 src/FoodType.java

```
* Represents the type of a single food item. Each type has an associated name,
      and expiry time (in days)
6 public enum FoodType {
      Bun ("Bun", 5, "Buns"),
      Patty ("Patty", 4, "Patties"),
      Lettuce ("Lettuce", 3, "Lettuce"),
9
      Tomato ("Tomato", 3, "Tomatoes"),
10
      Onion ("Onion", 5, "Onions"),
11
      Cheese ("Cheese", 2, "Cheese Slices")
13
      private final int expirationTime;
14
      private final String name;
15
16
      private final String plural;
17
      private FoodType(String name, int expirationTime, String plural) {
18
           this.name = name;
19
           this.expirationTime = expirationTime;
20
           this.plural = plural;
21
      }
22
23
      @Override
24
      public String toString() {
25
          return name;
26
27
28
29
       * Returns the amount of days that this type of food item lasts for
30
       * @return An int represnting the number of days that this food item lasts for
31
32
      public int getExpirationTime() {
33
          return expirationTime;
34
35
      public String getPlural() {
          return plural;
38
39
40 }
```

# 3 src/FoodItem.java

```
2 * Represents a single, actual ingredient that exists. It has an expiry date and
      everything!
  * @author eli
4
5 */
6 public class FoodItem implements Comparable < FoodItem > {
      public int getExpiryDate() {
          return expiryDate;
10
11
      // The day that this item will expire.
12
      private int expiryDate;
13
14
      // What type of food item this
      private FoodType type;
17
18
19
       * Creates a new food item of the given type, and sets the expiration date
      accordingly
       * Oparam curDate The current day, as an int.
20
21
       * @param type What type of food item this is.
23
      public FoodItem(int curDate, FoodType type) {
          super();
24
          this.type = type;
25
          this.expiryDate = curDate + type.getExpirationTime();
26
      }
27
28
       * Checks whether this food item is expired.
30
       \ast @param curDate The day that it currently is, as an int
31
       * Oreturn True if expired, false if still good.
32
33
      public boolean isExpired(int curDate) {
34
35
          return curDate >= expiryDate;
36
37
      public FoodType getType() {
38
          return type;
39
40
      @Override
43
      public int compareTo(FoodItem arg0) {
44
          return expiryDate - arg0.expiryDate;
45
      }
46
47 }
```

# 4 src/Customer.java

```
2 * Represents a single customer.
  * @author eli
6 public class Customer implements Comparable < Customer > {
      private int number;
      public Customer(int number) {
10
11
           super();
12
           this.number = number;
13
      }
14
      @Override
15
      public String toString() {
16
          return "Customer " + number;
17
18
      @Override
20
      public int compareTo(Customer arg0) {
21
          // TODO Auto-generated method stub
22
          return number - arg0.number;
23
      }
24
25
```

### 5 output.txt

```
2 === December 01 Log: ==========
3 -----
5 A new shipment arrived!
     Buns in stock: 162
     Patties in stock: 124
     Lettuce in stock: 137
     Tomatoes in stock: 188
     Onions in stock: 165
     Cheese Slices in stock: 205
11
12 10:00 --- 10 customers arrived.
13 11:00 --- 32 customers arrived.
14 12:00 --- 30 customers arrived.
15 13:00 --- 21 customers arrived.
16 14:00 --- 31 customers arrived.
17 15:00 --- 79 customers arrived (29 were turned away).
18 16:00 --- 80 customers arrived (30 were turned away).
19 17:00 --- 54 customers arrived (4 were turned away).
20 18:00 --- 81 customers arrived (31 were turned away).
21 19:00 --- 26 customers arrived.
```

```
23 --- End of day inventory count ---
24 Customers lost today: 324
25 Food expired today:
     Buns: 0
      Patties: 0
      Lettuce: 0
28
      Tomatoes: 0
      Onions: 0
30
      Cheese Slices: 0
32 Orders served today:
     #1 was ordered 17 time(s).
34
      #2 was ordered 22 time(s).
      #3 was ordered 17 time(s).
      #4 was ordered 23 time(s).
      #5 was ordered 24 time(s).
      #6 was ordered 17 time(s).
39 Successful customer order log:
40 {Customer 1: 3, Customer 2: 5, Customer 3: 3, Customer 4: 4, Customer 5: 6,
     Customer 6: 4, Customer 7: 2, Customer 8: 1, Customer 9: 6, Customer 10: 1,
     Customer 11: 5, Customer 12: 2, Customer 13: 4, Customer 14: 4, Customer 15: 1,
      Customer 16: 5, Customer 17: 2, Customer 18: 4, Customer 19: 5, Customer 20:
     6, Customer 21: 5, Customer 22: 5, Customer 23: 5, Customer 24: 6, Customer 25:
      6, Customer 26: 6, Customer 27: 4, Customer 28: 4, Customer 29: 5, Customer
     30: 3, Customer 31: 3, Customer 32: 5, Customer 33: 3, Customer 34: 4, Customer
      35: 3, Customer 36: 5, Customer 37: 5, Customer 38: 6, Customer 39: 4,
     Customer 40: 2, Customer 41: 1, Customer 42: 6, Customer 43: 1, Customer 44: 2,
      Customer 45: 3, Customer 46: 2, Customer 47: 4, Customer 48: 6, Customer 49:
     2, Customer 50: 5, Customer 51: 4, Customer 52: 6, Customer 53: 1, Customer 54:
      6, Customer 55: 2, Customer 56: 3, Customer 57: 1, Customer 58: 1, Customer
     59: 5, Customer 60: 1, Customer 61: 4, Customer 62: 6, Customer 63: 4, Customer
      64: 4, Customer 65: 5, Customer 66: 6, Customer 67: 2, Customer 68: 3,
     Customer 69: 2, Customer 70: 1, Customer 71: 1, Customer 72: 6, Customer 73: 5,
      Customer 74: 2, Customer 75: 4, Customer 76: 4, Customer 77: 5, Customer 78:
     2, Customer 79: 3, Customer 80: 5, Customer 81: 1, Customer 82: 2, Customer 83:
      3, Customer 84: 3, Customer 85: 2, Customer 86: 4, Customer 87: 1, Customer
     88: 2, Customer 89: 3, Customer 90: 2, Customer 91: 3, Customer 92: 1, Customer
      93: 6, Customer 94: 1, Customer 95: 2, Customer 96: 5, Customer 97: 4,
     Customer 98: 5, Customer 99: 2, Customer 100: 3, Customer 101: 2, Customer 102:
      4, Customer 103: 4, Customer 104: 5, Customer 105: 2, Customer 106: 3,
     Customer 107: 4, Customer 108: 5, Customer 109: 1, Customer 110: 5, Customer
     111: 4, Customer 112: 4, Customer 113: 6, Customer 114: 6, Customer 115: 5,
     Customer 116: 2, Customer 117: 2, Customer 118: 5, Customer 119: 3, Customer
     120: 1}
43
44 === December 02 Log: ===========
47
      Buns in stock: 59
      Patties in stock: 21
      Lettuce in stock: 0
49
      Tomatoes in stock: 85
50
      Onions in stock: 92
51
      Cheese Slices in stock: 159
53 10:00 --- 58 customers arrived (8 were turned away).
54 11:00 --- 18 customers arrived.
55 12:00 --- 44 customers arrived.
56 13:00 --- 86 customers arrived (36 were turned away).
```

```
57 14:00 --- 74 customers arrived (24 were turned away).
58 15:00 --- 42 customers arrived.
59 16:00 --- 56 customers arrived (6 were turned away).
60 17:00 --- 18 customers arrived.
61 18:00 --- 14 customers arrived.
62 19:00 --- 3 customers arrived.
64 --- End of day inventory count ---
65 Customers lost today: 413
66 Food expired today:
     Buns: 0
      Patties: 0
68
      Lettuce: 0
69
      Tomatoes: 0
70
      Onions: 0
72
      Cheese Slices: 0
73 Orders served today:
      #1 was ordered 0 time(s).
      #2 was ordered 0 time(s).
75
      #3 was ordered 0 time(s).
76
      #4 was ordered 0 time(s).
      #5 was ordered 0 time(s).
      #6 was ordered 0 time(s).
80 Successful customer order log:
83
85 === December 03 Log: ===========
86
      Buns in stock: 59
      Patties in stock: 21
89
      Lettuce in stock: 0
      Tomatoes in stock: 85
      Onions in stock: 92
      Cheese Slices in stock: 159
94 10:00 --- 18 customers arrived.
95 11:00 --- 33 customers arrived.
96 12:00 --- 3 customers arrived.
97 13:00 --- 90 customers arrived (40 were turned away).
98 14:00 --- 2 customers arrived.
99 15:00 --- 53 customers arrived (3 were turned away).
100 16:00 --- 97 customers arrived (47 were turned away).
101 17:00 --- 37 customers arrived.
102 18:00 --- 76 customers arrived (26 were turned away).
103 19:00 --- 93 customers arrived (43 were turned away).
105 --- End of day inventory count ---
106 Customers lost today: 502
107 Food expired today:
108
      Buns: 0
      Patties: 0
109
      Lettuce: 0
110
      Tomatoes: 0
111
      Onions: 0
112
      Cheese Slices: 159
114 Orders served today:
#1 was ordered 0 time(s).
```

```
#2 was ordered 0 time(s).
117
      #3 was ordered 0 time(s).
      #4 was ordered 0 time(s).
      #5 was ordered 0 time(s).
      #6 was ordered 0 time(s).
121 Successful customer order log:
122 {}
123 ---
125
126 === December 04 Log: ===========
127
128
129 A new shipment arrived!
      Buns in stock: 227
130
      Patties in stock: 194
      Lettuce in stock: 172
      Tomatoes in stock: 256
133
      Onions in stock: 252
134
      Cheese Slices in stock: 146
136\ 10:00 --- 78 customers arrived (28 were turned away).
137 11:00 --- 45 customers arrived.
138 12:00 --- 17 customers arrived.
139 13:00 --- 57 customers arrived (7 were turned away).
140 14:00 --- 10 customers arrived.
141 15:00 --- 46 customers arrived.
142 16:00 --- 32 customers arrived.
143 17:00 --- 99 customers arrived (49 were turned away).
144 18:00 --- 40 customers arrived.
145 19:00 --- 45 customers arrived.
147 --- End of day inventory count ---
148 Customers lost today: 317
149 Food expired today:
      Buns: 0
150
      Patties: 0
      Lettuce: 0
153
      Tomatoes: 85
      Onions: 0
154
      Cheese Slices: 0
155
156 Orders served today:
     #1 was ordered 28 time(s).
157
      #2 was ordered 29 time(s).
158
      #3 was ordered 20 time(s).
159
      #4 was ordered 21 time(s).
160
      #5 was ordered 28 time(s).
161
      #6 was ordered 26 time(s).
163 Successful customer order log:
164 {Customer 1: 6, Customer 2: 1, Customer 3: 4, Customer 4: 3, Customer 5: 5,
      Customer 6: 6, Customer 7: 3, Customer 8: 1, Customer 9: 3, Customer 10: 6,
      Customer 11: 6, Customer 12: 2, Customer 13: 2, Customer 14: 3, Customer 15: 3,
       Customer 16: 5, Customer 17: 2, Customer 18: 2, Customer 19: 5, Customer 20:
      3, Customer 21: 5, Customer 22: 5, Customer 23: 2, Customer 24: 5, Customer 25:
       4, Customer 26: 6, Customer 27: 3, Customer 28: 5, Customer 29: 1, Customer
      30: 4, Customer 31: 1, Customer 32: 4, Customer 33: 6, Customer 34: 2, Customer
       35: 1, Customer 36: 1, Customer 37: 2, Customer 38: 2, Customer 39: 5,
      Customer 40: 4, Customer 41: 5, Customer 42: 5, Customer 43: 3, Customer 44: 2,
       Customer 45: 1, Customer 46: 3, Customer 47: 5, Customer 48: 2, Customer 49:
      5, Customer 50: 1, Customer 79: 6, Customer 80: 2, Customer 81: 1, Customer 82:
```

```
5, Customer 83: 2, Customer 84: 1, Customer 85: 5, Customer 86: 6, Customer
      87: 4, Customer 88: 6, Customer 89: 5, Customer 90: 4, Customer 91: 2, Customer
       92: 2, Customer 93: 2, Customer 94: 5, Customer 95: 2, Customer 96: 3,
      Customer 97: 3, Customer 98: 1, Customer 99: 6, Customer 100: 6, Customer 101:
      2, Customer 102: 1, Customer 103: 4, Customer 104: 5, Customer 105: 2, Customer
       106: 6, Customer 107: 3, Customer 108: 2, Customer 109: 4, Customer 110: 3,
      Customer 111: 6, Customer 112: 2, Customer 113: 1, Customer 114: 4, Customer
      115: 2, Customer 116: 6, Customer 117: 6, Customer 118: 2, Customer 119: 5,
      Customer 120: 2, Customer 121: 4, Customer 122: 5, Customer 123: 6, Customer
      124: 1, Customer 125: 4, Customer 126: 2, Customer 127: 6, Customer 128: 4,
      Customer 129: 5, Customer 130: 1, Customer 131: 5, Customer 132: 3, Customer
      133: 6, Customer 134: 1, Customer 135: 1, Customer 136: 4, Customer 137: 6,
      Customer 138: 6, Customer 139: 6, Customer 140: 5, Customer 141: 6, Customer
      142: 2, Customer 143: 4, Customer 144: 4, Customer 145: 5, Customer 146: 2,
      Customer 147: 6, Customer 148: 6, Customer 149: 6, Customer 150: 4, Customer
      151: 3, Customer 152: 1, Customer 153: 2, Customer 154: 3, Customer 155: 1,
      Customer 156: 5, Customer 157: 6, Customer 158: 4, Customer 159: 3, Customer
      160: 4, Customer 161: 1, Customer 162: 5, Customer 163: 5, Customer 164: 5,
      Customer 165: 2, Customer 166: 1, Customer 167: 1, Customer 168: 1, Customer
      169: 4, Customer 170: 1, Customer 171: 3, Customer 172: 3, Customer 173: 1,
      Customer 174: 2, Customer 175: 1, Customer 176: 3, Customer 177: 1, Customer
      178: 1, Customer 179: 4, Customer 180: 5}
165
167
168 === December 05 Log: ===========
169
170
171
      Buns in stock: 95
      Patties in stock: 62
172
      Lettuce in stock: 0
173
      Tomatoes in stock: 45
174
      Onions in stock: 149
175
      Cheese Slices in stock: 89
177\ 10\!:\!00 --- 72 customers arrived (22 were turned away).
178 11:00 --- 92 customers arrived (42 were turned away).
179\ 12\!:\!00 --- 84 customers arrived (34 were turned away).
180 13:00 --- 52 customers arrived (2 were turned away).
181 14:00 --- 79 customers arrived (29 were turned away).
182\ 15\!:\!00 --- 68 customers arrived (18 were turned away).
183 16:00 --- 77 customers arrived (27 were turned away).
184 17:00 --- 40 customers arrived.
185 18:00 --- 44 customers arrived.
186 19:00 --- 7 customers arrived.
188 --- End of day inventory count ---
189 Customers lost today: 615
190 Food expired today:
      Buns: 0
192
      Patties: 21
      Lettuce: 0
193
      Tomatoes: 0
194
      Onions: 0
195
      Cheese Slices: 0
196
197 Orders served today:
      #1 was ordered 0 time(s).
      #2 was ordered 0 time(s).
      #3 was ordered 0 time(s).
200
     #4 was ordered 0 time(s).
201
```

```
#5 was ordered 0 time(s).
    #6 was ordered 0 time(s).
204 Successful customer order log:
206 -----
208
209 === December 06 Log: ==========
210
211
      Buns in stock: 95
213
      Patties in stock: 41
      Lettuce in stock: 0
214
      Tomatoes in stock: 45
215
      Onions in stock: 149
216
      Cheese Slices in stock: 89
218 10:00 --- 97 customers arrived (47 were turned away).
219 11:00 --- 71 customers arrived (21 were turned away).
220 12:00 --- 59 customers arrived (9 were turned away).
221 13:00 --- 19 customers arrived.
222 14:00 --- 11 customers arrived.
223 15:00 --- 64 customers arrived (14 were turned away).
224 16:00 --- 35 customers arrived.
225 17:00 --- 42 customers arrived.
226 18:00 --- 65 customers arrived (15 were turned away).
227 19:00 --- 39 customers arrived.
228
229 --- End of day inventory count ---
230 Customers lost today: 502
231 Food expired today:
     Buns: 59
     Patties: 0
233
     Lettuce: 0
234
      Tomatoes: 0
235
      Onions: 92
236
     Cheese Slices: 89
238 Orders served today:
     #1 was ordered 0 time(s).
239
     #2 was ordered 0 time(s).
240
     #3 was ordered 0 time(s).
241
     #4 was ordered 0 time(s).
242
     #5 was ordered 0 time(s).
243
      #6 was ordered 0 time(s).
245 Successful customer order log:
247
249
250 === December 07 Log: ==========
251
252
253 A new shipment arrived!
      Buns in stock: 208
254
      Patties in stock: 206
255
      Lettuce in stock: 158
256
      Tomatoes in stock: 192
      Onions in stock: 204
      Cheese Slices in stock: 168
260 10:00 --- 81 customers arrived (31 were turned away).
```

```
261 11:00 --- 75 customers arrived (25 were turned away).
262\ 12\!:\!00 --- 49 customers arrived.
263 13:00 --- 39 customers arrived.
264 14:00 --- 2 customers arrived.
265 15:00 --- 26 customers arrived.
266 16:00 --- 7 customers arrived.
267 17:00 --- 40 customers arrived.
_{268} 18:00 --- 84 customers arrived (34 were turned away).
269 19:00 --- 67 customers arrived (17 were turned away).
271 --- End of day inventory count ---
272 Customers lost today: 335
273 Food expired today:
      Buns: 0
274
      Patties: 0
275
276
      Lettuce: 0
       Tomatoes: 45
       Onions: 0
278
       Cheese Slices: 0
279
280 Orders served today:
      #1 was ordered 21 time(s).
281
      #2 was ordered 25 time(s).
      #3 was ordered 23 time(s).
       #4 was ordered 20 time(s).
285
       #5 was ordered 20 time(s).
       #6 was ordered 26 time(s).
286
287 Successful customer order log:
288 {Customer 1: 1, Customer 2: 3, Customer 3: 4, Customer 4: 2, Customer 5: 4,
      Customer 6: 6, Customer 7: 4, Customer 8: 2, Customer 9: 6, Customer 10: 2,
      Customer 11: 6, Customer 12: 2, Customer 13: 6, Customer 14: 6, Customer 15: 2,
       Customer 16: 1, Customer 17: 4, Customer 18: 3, Customer 19: 4, Customer 20:
      6, Customer 21: 3, Customer 22: 1, Customer 23: 6, Customer 24: 5, Customer 25:
       6, Customer 26: 6, Customer 27: 3, Customer 28: 3, Customer 29: 1, Customer
      30: 5, Customer 31: 1, Customer 32: 1, Customer 33: 5, Customer 34: 2, Customer
       35: 6, Customer 36: 5, Customer 37: 2, Customer 38: 5, Customer 39: 4,
      Customer 40: 6, Customer 41: 4, Customer 42: 3, Customer 43: 5, Customer 44: 1,
       Customer 45: 6, Customer 46: 6, Customer 47: 4, Customer 48: 2, Customer 49:
      5, Customer 50: 5, Customer 82: 5, Customer 83: 5, Customer 84: 3, Customer 85:
       6, Customer 86: 3, Customer 87: 1, Customer 88: 2, Customer 89: 2, Customer
      90: 3, Customer 91: 2, Customer 92: 1, Customer 93: 4, Customer 94: 3, Customer
       95: 1, Customer 96: 1, Customer 97: 1, Customer 98: 6, Customer 99: 4,
      Customer 100: 6, Customer 101: 1, Customer 102: 2, Customer 103: 4, Customer
      104: 1, Customer 105: 1, Customer 106: 3, Customer 107: 2, Customer 108: 6,
      Customer 109: 5, Customer 110: 2, Customer 111: 4, Customer 112: 3, Customer
      113: 3, Customer 114: 2, Customer 115: 5, Customer 116: 4, Customer 117: 2,
      Customer 118: 6, Customer 119: 2, Customer 120: 4, Customer 121: 4, Customer
      122: 3, Customer 123: 6, Customer 124: 4, Customer 125: 6, Customer 126: 5,
      Customer 127: 3, Customer 128: 5, Customer 129: 3, Customer 130: 2, Customer
      131: 6, Customer 157: 2, Customer 158: 6, Customer 159: 1, Customer 160: 5,
      Customer 161: 3, Customer 162: 5, Customer 163: 2, Customer 164: 1, Customer
      165: 1, Customer 166: 2, Customer 167: 5, Customer 168: 6, Customer 169: 6,
      Customer 170: 6, Customer 171: 2, Customer 172: 5, Customer 173: 3, Customer
      174: 4, Customer 175: 1, Customer 176: 5, Customer 177: 3, Customer 178: 4,
      Customer 179: 3, Customer 180: 2, Customer 181: 6, Customer 182: 1, Customer
      183: 3, Customer 184: 3, Customer 185: 2, Customer 186: 3, Customer 187: 4,
      Customer 188: 2, Customer 189: 5, Customer 190: 4, Customer 191: 1}
291
```

```
_{292} === December 08 Log: ==========
293
      Buns in stock: 96
      Patties in stock: 94
296
      Lettuce in stock: 0
      Tomatoes in stock: 38
298
      Onions in stock: 109
299
      Cheese Slices in stock: 123
301 10:00 --- 29 customers arrived.
302 11:00 --- 49 customers arrived.
303 12:00 --- 79 customers arrived (29 were turned away).
304 13:00 --- 32 customers arrived.
305 14:00 --- 29 customers arrived.
306\ 15:00 --- 14 customers arrived.
307 16:00 --- 28 customers arrived.
308 17:00 --- 47 customers arrived.
309 18:00 --- 33 customers arrived.
310 19:00 --- 68 customers arrived (18 were turned away).
312 --- End of day inventory count ---
313 Customers lost today: 408
314 Food expired today:
      Buns: 0
      Patties: 41
316
      Lettuce: 0
317
      Tomatoes: 0
318
      Onions: 0
319
      Cheese Slices: 0
320
321 Orders served today:
      #1 was ordered 0 time(s).
      #2 was ordered 0 time(s).
      #3 was ordered 0 time(s).
324
      #4 was ordered 0 time(s).
      #5 was ordered 0 time(s).
      #6 was ordered 0 time(s).
328 Successful customer order log:
329 {}
330 ----
331
332
333 === December 09 Log: ==========
Buns in stock: 96
336
      Patties in stock: 53
337
      Lettuce in stock: 0
338
      Tomatoes in stock: 38
339
      Onions in stock: 109
      Cheese Slices in stock: 123
342 10:00 --- 1 customers arrived.
343 11:00 --- 43 customers arrived.
344 12:00 --- 85 customers arrived (35 were turned away).
345 13:00 --- 38 customers arrived.
346\ 14\!:\!00 --- 4 customers arrived.
347 15:00 --- 95 customers arrived (45 were turned away).
348 16:00 --- 67 customers arrived (17 were turned away).
349 17:00 --- 91 customers arrived (41 were turned away).
350 18:00 --- 45 customers arrived.
```

```
351 19:00 --- 29 customers arrived.
353 --- End of day inventory count ---
354 Customers lost today: 498
355 Food expired today:
      Buns: 36
356
      Patties: 0
357
      Lettuce: 0
358
      Tomatoes: 0
359
      Onions: 57
      Cheese Slices: 123
362 Orders served today:
      #1 was ordered 0 time(s).
363
      #2 was ordered 0 time(s).
364
      #3 was ordered 0 time(s).
365
      #4 was ordered 0 time(s).
      #5 was ordered 0 time(s).
      #6 was ordered 0 time(s).
369 Successful customer order log:
370 {}
371 -----
374 === December 10 Log: ===========
375
376
377 A new shipment arrived!
      Buns in stock: 204
      Patties in stock: 185
379
      Lettuce in stock: 174
      Tomatoes in stock: 180
      Onions in stock: 206
      Cheese Slices in stock: 126
_{\rm 384} 10:00 --- 69 customers arrived (19 were turned away).
_{385} 11:00 --- 79 customers arrived (29 were turned away).
386 12:00 --- 30 customers arrived.
387 13:00 --- 75 customers arrived (25 were turned away).
388 14:00 --- 5 customers arrived.
389 15:00 --- 43 customers arrived.
390 16:00 --- 6 customers arrived.
391 17:00 --- 48 customers arrived.
_{\rm 392} 18:00 --- 70 customers arrived (20 were turned away).
393 19:00 --- 82 customers arrived (32 were turned away).
395 --- End of day inventory count ---
396 Customers lost today: 353
397 Food expired today:
      Buns: 0
398
399
      Patties: 0
      Lettuce: 0
      Tomatoes: 38
401
      Onions: 0
402
      Cheese Slices: 0
403
404 Orders served today:
      #1 was ordered 30 time(s).
405
      #2 was ordered 26 time(s).
      #3 was ordered 20 time(s).
     #4 was ordered 28 time(s).
408
#5 was ordered 27 time(s).
```

```
#6 was ordered 23 time(s).
411 Successful customer order log:
412 {Customer 1: 1, Customer 2: 5, Customer 3: 3, Customer 4: 3, Customer 5: 1,
      Customer 6: 2, Customer 7: 3, Customer 8: 4, Customer 9: 2, Customer 10: 6,
      Customer 11: 5, Customer 12: 1, Customer 13: 5, Customer 14: 4, Customer 15: 4,
       Customer 16: 1, Customer 17: 6, Customer 18: 4, Customer 19: 5, Customer 20:
      4, Customer 21: 3, Customer 22: 4, Customer 23: 4, Customer 24: 6, Customer 25:
       2, Customer 26: 5, Customer 27: 1, Customer 28: 6, Customer 29: 4, Customer
      30: 2, Customer 31: 4, Customer 32: 3, Customer 33: 4, Customer 34: 4, Customer
       35: 2, Customer 36: 1, Customer 37: 6, Customer 38: 6, Customer 39: 5,
      Customer 40: 2, Customer 41: 6, Customer 42: 1, Customer 43: 5, Customer 44: 6,
       Customer 45: 6, Customer 46: 5, Customer 47: 2, Customer 48: 4, Customer 49:
      2, Customer 50: 4, Customer 70: 1, Customer 71: 1, Customer 72: 4, Customer 73:
       1, Customer 74: 4, Customer 75: 4, Customer 76: 6, Customer 77: 6, Customer
      78: 6, Customer 79: 3, Customer 80: 1, Customer 81: 3, Customer 82: 1, Customer
       83: 1, Customer 84: 5, Customer 85: 6, Customer 86: 1, Customer 87: 6,
      Customer 88: 3, Customer 89: 2, Customer 90: 3, Customer 91: 6, Customer 92: 2,
       Customer 93: 5, Customer 94: 1, Customer 95: 3, Customer 96: 4, Customer 97:
      6, Customer 98: 2, Customer 99: 3, Customer 100: 1, Customer 101: 2, Customer
      102: 3, Customer 103: 5, Customer 104: 2, Customer 105: 2, Customer 106: 4,
      Customer 107: 6, Customer 108: 5, Customer 109: 1, Customer 110: 5, Customer
      111: 5, Customer 112: 4, Customer 113: 3, Customer 114: 4, Customer 115: 5,
      Customer 116: 6, Customer 117: 5, Customer 118: 3, Customer 119: 1, Customer
      149: 1, Customer 150: 3, Customer 151: 3, Customer 152: 1, Customer 153: 4,
      Customer 154: 4, Customer 155: 2, Customer 156: 6, Customer 157: 3, Customer
      158: 2, Customer 159: 4, Customer 160: 4, Customer 161: 2, Customer 162: 5,
      Customer 163: 1, Customer 164: 5, Customer 165: 1, Customer 166: 1, Customer
      167: 2, Customer 168: 5, Customer 169: 2, Customer 170: 3, Customer 171: 5,
      Customer 172: 1, Customer 173: 6, Customer 174: 5, Customer 175: 1, Customer
      176: 2, Customer 177: 2, Customer 178: 5, Customer 179: 1, Customer 180: 2,
      Customer 181: 6, Customer 182: 4, Customer 183: 5, Customer 184: 5, Customer
      185: 6, Customer 186: 3, Customer 187: 3, Customer 188: 5, Customer 189: 5,
      Customer 190: 2, Customer 191: 1, Customer 192: 2, Customer 193: 4, Customer
      194: 4, Customer 195: 2, Customer 196: 1, Customer 197: 5, Customer 198: 1,
      Customer 199: 6, Customer 200: 4, Customer 201: 1, Customer 202: 2}
413 -----
415
416 === December 11 Log: ===========
417
418
419
      Buns in stock: 70
      Patties in stock: 51
420
      Lettuce in stock: 0
      Tomatoes in stock: 11
422
      Onions in stock: 107
423
      Cheese Slices in stock: 73
425 10:00 --- 91 customers arrived (41 were turned away).
426 11:00 --- 15 customers arrived.
427 12:00 --- 14 customers arrived.
428 13:00 --- 94 customers arrived (44 were turned away).
429 14:00 --- 54 customers arrived (4 were turned away).
430 15:00 --- 1 customers arrived.
431 16:00 --- 6 customers arrived.
432 17:00 --- 25 customers arrived.
433 18:00 --- 84 customers arrived (34 were turned away).
434 19:00 --- 69 customers arrived (19 were turned away).
436 --- End of day inventory count ---
```

```
437 Customers lost today: 453
438 Food expired today:
      Buns: 0
      Patties: 51
      Lettuce: 0
441
      Tomatoes: 0
442
      Onions: 0
443
      Cheese Slices: 0
444
445 Orders served today:
   #1 was ordered 0 time(s).
      #2 was ordered 0 time(s).
      #3 was ordered 0 time(s).
448
      #4 was ordered 0 time(s).
449
      #5 was ordered 0 time(s).
450
      #6 was ordered 0 time(s).
451
452 Successful customer order log:
454
456
457 === December 12 Log: ==========
458
      Buns in stock: 70
      Patties in stock: 0
461
      Lettuce in stock: 0
462
      Tomatoes in stock: 11
463
      Onions in stock: 107
464
      Cheese Slices in stock: 73
466 10:00 --- 95 customers arrived (45 were turned away).
467 11:00 --- 86 customers arrived (36 were turned away).
468 12:00 --- 82 customers arrived (32 were turned away).
469 13:00 --- 85 customers arrived (35 were turned away).
470 14:00 --- 59 customers arrived (9 were turned away).
471 15:00 --- 26 customers arrived.
472 16:00 --- 29 customers arrived.
473 17:00 --- 75 customers arrived (25 were turned away).
474 18:00 --- 66 customers arrived (16 were turned away).
475\ 19\!:\!00 --- 84 customers arrived (34 were turned away).
476
477 --- End of day inventory count ---
478 Customers lost today: 687
479 Food expired today:
     Buns: 60
480
      Patties: 0
481
      Lettuce: 0
482
      Tomatoes: 0
483
      Onions: 52
484
      Cheese Slices: 73
485
486 Orders served today:
      #1 was ordered 0 time(s).
487
      #2 was ordered 0 time(s).
488
      #3 was ordered 0 time(s).
489
      #4 was ordered 0 time(s).
490
      #5 was ordered 0 time(s).
      #6 was ordered 0 time(s).
493 Successful customer order log:
```

```
498 === December 13 Log: ===========
499
501
      Buns in stock: 10
      Patties in stock: 0
502
      Lettuce in stock: 0
      Tomatoes in stock: 11
      Onions in stock: 55
      Cheese Slices in stock: 0
507 10:00 --- 93 customers arrived (43 were turned away).
508 11:00 --- 67 customers arrived (17 were turned away).
509 12:00 --- 28 customers arrived.
510 13:00 --- 13 customers arrived.
511 14:00 --- 44 customers arrived.
512 15:00 --- 58 customers arrived (8 were turned away).
513 16:00 --- 66 customers arrived (16 were turned away).
514 17:00 --- 86 customers arrived (36 were turned away).
515 18:00 --- 35 customers arrived.
516 19:00 --- 72 customers arrived (22 were turned away).
518 --- End of day inventory count ---
519 Customers lost today: 562
520 Food expired today:
      Buns: 0
521
      Patties: 0
522
      Lettuce: 0
523
      Tomatoes: 11
524
      Onions: 0
      Cheese Slices: 0
527 Orders served today:
     #1 was ordered 0 time(s).
      #2 was ordered 0 time(s).
529
      #3 was ordered 0 time(s).
530
      #4 was ordered 0 time(s).
      #5 was ordered 0 time(s).
      #6 was ordered 0 time(s).
534 Successful customer order log:
535 {}
536 -----
539 === December 14 Log: ===========
541
      Buns in stock: 10
542
      Patties in stock: 0
543
      Lettuce in stock: 0
544
      Tomatoes in stock: 0
      Onions in stock: 55
      Cheese Slices in stock: 0
547
548 10:00 --- 52 customers arrived (2 were turned away).
549\ 11\!:\!00 --- 64 customers arrived (14 were turned away).
550 12:00 --- 27 customers arrived.
551 13:00 --- 29 customers arrived.
552 14:00 --- 5 customers arrived.
553 15:00 --- 93 customers arrived (43 were turned away).
554 16:00 --- 24 customers arrived.
```

```
555 17:00 --- 35 customers arrived.
556 18:00 --- 56 customers arrived (6 were turned away).
557 19:00 --- 52 customers arrived (2 were turned away).
559 --- End of day inventory count ---
560 Customers lost today: 437
561 Food expired today:
      Buns: 0
562
      Patties: 0
563
      Lettuce: 0
      Tomatoes: 0
566
      Onions: 0
      Cheese Slices: 0
567
568 Orders served today:
     #1 was ordered 0 time(s).
569
      #2 was ordered 0 time(s).
      #3 was ordered 0 time(s).
      #4 was ordered 0 time(s).
      #5 was ordered 0 time(s).
573
      #6 was ordered 0 time(s).
574
575 Successful customer order log:
576 {}
577 -----
579
580 === December 15 Log: ===========
581 -----
582
583 A new shipment arrived!
     Buns in stock: 163
      Patties in stock: 159
      Lettuce in stock: 155
586
      Tomatoes in stock: 147
587
      Onions in stock: 226
      Cheese Slices in stock: 158
590 10:00 --- 36 customers arrived.
591 11:00 --- 76 customers arrived (26 were turned away).
592 12:00 --- 39 customers arrived.
593 13:00 --- 46 customers arrived.
594 14:00 --- 59 customers arrived (9 were turned away).
595 15:00 --- 60 customers arrived (10 were turned away).
596 16:00 --- 65 customers arrived (15 were turned away).
597 17:00 --- 21 customers arrived.
598 18:00 --- 75 customers arrived (25 were turned away).
599 19:00 --- 46 customers arrived.
600
601 --- End of day inventory count---
602 Customers lost today: 393
603 Food expired today:
      Buns: 10
604
      Patties: 0
      Lettuce: 0
606
      Tomatoes: 0
607
      Onions: 55
608
      Cheese Slices: 0
610 Orders served today:
     #1 was ordered 28 time(s).
      #2 was ordered 20 time(s).
#3 was ordered 25 time(s).
```

```
#4 was ordered 13 time(s).
      #5 was ordered 24 time(s).
615
      #6 was ordered 20 time(s).
617 Successful customer order log:
618 (Customer 1: 5, Customer 2: 6, Customer 3: 5, Customer 4: 6, Customer 5: 4,
      Customer 6: 6, Customer 7: 3, Customer 8: 5, Customer 9: 6, Customer 10: 1,
      Customer 11: 1, Customer 12: 5, Customer 13: 1, Customer 14: 4, Customer 15: 1,
       Customer 16: 5, Customer 17: 3, Customer 18: 6, Customer 19: 4, Customer 20:
      5, Customer 21: 5, Customer 22: 1, Customer 23: 6, Customer 24: 2, Customer 25:
       1, Customer 26: 4, Customer 27: 2, Customer 28: 4, Customer 29: 5, Customer
      30: 4, Customer 31: 3, Customer 32: 5, Customer 33: 2, Customer 34: 2, Customer
       35: 5, Customer 36: 6, Customer 37: 6, Customer 38: 6, Customer 39: 2,
      Customer 40: 2, Customer 41: 3, Customer 42: 1, Customer 43: 3, Customer 44: 6,
       Customer 45: 1, Customer 46: 3, Customer 47: 2, Customer 48: 1, Customer 49:
      3, Customer 50: 5, Customer 51: 5, Customer 52: 3, Customer 53: 4, Customer 54:
       3, Customer 55: 1, Customer 56: 4, Customer 57: 3, Customer 58: 2, Customer
      59: 1, Customer 60: 3, Customer 61: 5, Customer 62: 2, Customer 63: 2, Customer
       64: 6, Customer 65: 5, Customer 66: 1, Customer 67: 2, Customer 68: 6,
      Customer 69: 4, Customer 70: 1, Customer 71: 1, Customer 72: 5, Customer 73: 6,
       Customer 74: 1, Customer 75: 1, Customer 76: 6, Customer 77: 3, Customer 78:
      1, Customer 79: 1, Customer 80: 3, Customer 81: 5, Customer 82: 3, Customer 83:
       6, Customer 84: 4, Customer 85: 5, Customer 86: 3, Customer 113: 4, Customer
      114: 2, Customer 115: 6, Customer 116: 2, Customer 117: 1, Customer 118: 5,
      Customer 119: 2, Customer 120: 6, Customer 121: 2, Customer 122: 3, Customer
      123: 1, Customer 124: 5, Customer 125: 6, Customer 126: 6, Customer 127: 3,
      Customer 128: 1, Customer 129: 3, Customer 130: 3, Customer 131: 3, Customer
      132: 4, Customer 133: 5, Customer 134: 5, Customer 135: 1, Customer 136: 2,
      Customer 137: 1, Customer 138: 2, Customer 139: 6, Customer 140: 2, Customer
      141: 1, Customer 142: 1, Customer 143: 3, Customer 144: 4, Customer 145: 3,
      Customer 146: 1, Customer 147: 2, Customer 148: 5, Customer 149: 3, Customer
      150: 3, Customer 151: 5, Customer 152: 1, Customer 153: 3, Customer 154: 1,
      Customer 155: 2, Customer 156: 5}
620
621
622 === December 16 Log: ==========
623
624
      Buns in stock: 48
625
      Patties in stock: 54
626
      Lettuce in stock: 0
627
      Tomatoes in stock: 37
628
      Onions in stock: 78
      Cheese Slices in stock: 114
631 10:00 --- 39 customers arrived.
632 11:00 --- 48 customers arrived.
633 12:00 --- 54 customers arrived (4 were turned away).
634 13:00 --- 51 customers arrived (1 were turned away).
635 14:00 --- 68 customers arrived (18 were turned away).
636 15:00 --- 8 customers arrived.
637 16:00 --- 38 customers arrived.
638 17:00 --- 68 customers arrived (18 were turned away).
639 18:00 --- 83 customers arrived (33 were turned away).
640 19:00 --- 53 customers arrived (3 were turned away).
642 --- End of day inventory count ---
643 Customers lost today: 510
644 Food expired today:
645 Buns: 0
```

```
Patties: 0
646
      Lettuce: 0
647
      Tomatoes: 0
      Onions: 0
      Cheese Slices: 0
651 Orders served today:
     #1 was ordered 0 time(s).
      #2 was ordered 0 time(s).
653
      #3 was ordered 0 time(s).
      #4 was ordered 0 time(s).
      #5 was ordered 0 time(s).
      #6 was ordered 0 time(s).
658 Successful customer order log:
659 {}
660 -----
662
663 === December 17 Log: ===========
665
      Buns in stock: 48
666
      Patties in stock: 54
667
      Lettuce in stock: 0
      Tomatoes in stock: 37
      Onions in stock: 78
670
      Cheese Slices in stock: 114
671
672 10:00 --- 59 customers arrived (9 were turned away).
_{673} 11:00 --- 92 customers arrived (42 were turned away).
674 12:00 --- 19 customers arrived.
675 13:00 --- 56 customers arrived (6 were turned away).
676 14:00 --- 77 customers arrived (27 were turned away).
677 15:00 --- 72 customers arrived (22 were turned away).
678 16:00 --- 76 customers arrived (26 were turned away).
679 17:00 --- 38 customers arrived.
680 18:00 --- 35 customers arrived.
681\ 19\!:\!00 --- 97 customers arrived (47 were turned away).
_{\rm 683} ---End of day inventory count---
684 Customers lost today: 621
685 Food expired today:
      Buns: 0
686
      Patties: 0
687
      Lettuce: 0
      Tomatoes: 0
689
      Onions: 0
690
      Cheese Slices: 114
691
692 Orders served today:
     #1 was ordered 0 time(s).
693
      #2 was ordered 0 time(s).
      #3 was ordered 0 time(s).
      #4 was ordered 0 time(s).
      #5 was ordered 0 time(s).
697
      #6 was ordered 0 time(s).
699 Successful customer order log:
700 {}
701 -----
704 === December 18 Log: ===========
```

```
705
706
707 A new shipment arrived!
      Buns in stock: 176
709
       Patties in stock: 187
       Lettuce in stock: 120
710
       Tomatoes in stock: 160
711
       Onions in stock: 187
712
       Cheese Slices in stock: 119
714 10:00 --- 44 customers arrived.
715 11:00 --- 85 customers arrived (35 were turned away).
716 12:00 --- 87 customers arrived (37 were turned away).
717 13:00 --- 65 customers arrived (15 were turned away).
_{718} 14:00 --- 75 customers arrived (25 were turned away).
719 15:00 --- 97 customers arrived (47 were turned away).
720 16:00 --- 51 customers arrived (1 were turned away).
721 17:00 --- 13 customers arrived.
722 18:00 --- 48 customers arrived.
723 19:00 --- 89 customers arrived (39 were turned away).
725 --- End of day inventory count ---
726 Customers lost today: 546
727 Food expired today:
       Buns: 0
729
       Patties: 0
       Lettuce: 0
730
       Tomatoes: 37
731
       Onions: 0
732
       Cheese Slices: 0
733
734 Orders served today:
       #1 was ordered 19 time(s).
       #2 was ordered 14 time(s).
736
       #3 was ordered 12 time(s).
737
       #4 was ordered 22 time(s).
738
       #5 was ordered 20 time(s).
739
       #6 was ordered 21 time(s).
741 Successful customer order log:
_{742} {Customer 1: 1, Customer 2: 5, Customer 3: 1, Customer 4: 2, Customer 5: 1,
      Customer 6: 5, Customer 7: 3, Customer 8: 3, Customer 9: 4, Customer 10: 1,
      Customer 11: 4, Customer 12: 5, Customer 13: 4, Customer 14: 4, Customer 15: 1,
       Customer 16: 3, Customer 17: 2, Customer 18: 2, Customer 19: 1, Customer 20:
      4, Customer 21: 6, Customer 22: 5, Customer 23: 5, Customer 24: 2, Customer 25:
       5, Customer 26: 2, Customer 27: 3, Customer 28: 3, Customer 29: 1, Customer
      30: 2, Customer 31: 5, Customer 32: 2, Customer 33: 4, Customer 34: 6, Customer
       35: 5, Customer 36: 6, Customer 37: 1, Customer 38: 1, Customer 39: 5,
      Customer 40: 4, Customer 41: 4, Customer 42: 6, Customer 43: 5, Customer 44: 1,
       Customer 45: 4, Customer 46: 4, Customer 47: 6, Customer 48: 4, Customer 49:
      4, Customer 50: 2, Customer 51: 5, Customer 52: 1, Customer 53: 2, Customer 54:
       5, Customer 55: 4, Customer 56: 6, Customer 57: 5, Customer 58: 3, Customer
      59: 1, Customer 60: 5, Customer 61: 6, Customer 62: 5, Customer 63: 4, Customer
       64: 6, Customer 65: 6, Customer 66: 6, Customer 67: 4, Customer 68: 6,
      Customer 69: 5, Customer 70: 4, Customer 71: 6, Customer 72: 2, Customer 73: 6,
       Customer 74: 3, Customer 75: 1, Customer 76: 1, Customer 77: 6, Customer 78:
      5, Customer 79: 4, Customer 80: 1, Customer 81: 6, Customer 82: 6, Customer 83:
       3, Customer 84: 2, Customer 85: 3, Customer 86: 4, Customer 87: 2, Customer
      88: 6, Customer 89: 6, Customer 90: 5, Customer 91: 4, Customer 92: 3, Customer
       93: 4, Customer 94: 6, Customer 130: 6, Customer 131: 1, Customer 132: 2,
      Customer 133: 4, Customer 134: 4, Customer 135: 5, Customer 136: 1, Customer
      137: 5, Customer 138: 3, Customer 139: 1, Customer 140: 2, Customer 141: 6,
```

```
Customer 142: 3, Customer 143: 1}
743
745
746 === December 19 Log: ===========
748
      Buns in stock: 80
749
      Patties in stock: 91
750
      Lettuce in stock: 0
      Tomatoes in stock: 36
753
      Onions in stock: 121
      Cheese Slices in stock: 85
754
_{755} 10:00 --- 84 customers arrived (34 were turned away).
756 11:00 --- 98 customers arrived (48 were turned away).
757 12:00 --- 23 customers arrived.
758 13:00 --- 55 customers arrived (5 were turned away).
759 14:00 --- 11 customers arrived.
760 15:00 --- 85 customers arrived (35 were turned away).
_{761} 16:00 --- 58 customers arrived (8 were turned away).
_{762} 17:00 --- 52 customers arrived (2 were turned away).
763 18:00 --- 11 customers arrived.
764 19:00 --- 92 customers arrived (42 were turned away).
766 --- End of day inventory count ---
767 Customers lost today: 569
768 Food expired today:
      Buns: 0
769
      Patties: 54
770
      Lettuce: 0
771
      Tomatoes: 0
      Onions: 0
773
     Cheese Slices: 0
774
775 Orders served today:
    #1 was ordered 0 time(s).
776
777
      #2 was ordered 0 time(s).
      #3 was ordered 0 time(s).
      #4 was ordered 0 time(s).
779
      #5 was ordered 0 time(s).
780
      #6 was ordered 0 time(s).
781
782 Successful customer order log:
783 {}
784 -----
786
787 === December 20 Log: ==========
788
789
      Buns in stock: 80
790
      Patties in stock: 37
      Lettuce in stock: 0
792
      Tomatoes in stock: 36
793
      Onions in stock: 121
794
      Cheese Slices in stock: 85
795
796 10:00 --- 9 customers arrived.
797 11:00 --- 52 customers arrived (2 were turned away).
798 12:00 --- 52 customers arrived (2 were turned away).
799 13:00 --- 83 customers arrived (33 were turned away).
800 14:00 --- 34 customers arrived.
```

```
801 15:00 --- 18 customers arrived.
802\ 16\!:\!00 --- 34 customers arrived.
803 17:00 --- 83 customers arrived (33 were turned away).
804 18:00 --- 39 customers arrived.
805 19:00 --- 58 customers arrived (8 were turned away).
807 --- End of day inventory count---
808 Customers lost today: 462
809 Food expired today:
810
      Buns: 48
      Patties: 0
812
      Lettuce: 0
      Tomatoes: 0
813
      Onions: 78
814
      Cheese Slices: 85
815
816 Orders served today:
     #1 was ordered 0 time(s).
      #2 was ordered 0 time(s).
818
      #3 was ordered 0 time(s).
819
      #4 was ordered 0 time(s).
820
      #5 was ordered 0 time(s).
821
      #6 was ordered 0 time(s).
823 Successful customer order log:
825
826
827 -----
828 === December 21 Log: ==========
829
831 A new shipment arrived!
     Buns in stock: 171
      Patties in stock: 202
833
      Lettuce in stock: 146
      Tomatoes in stock: 197
      Onions in stock: 182
      Cheese Slices in stock: 120
838 10:00 --- 20 customers arrived.
839 11:00 --- 39 customers arrived.
840 12:00 --- 36 customers arrived.
841 13:00 --- 73 customers arrived (23 were turned away).
842 14:00 --- 13 customers arrived.
843 15:00 --- 1 customers arrived.
844 16:00 --- 12 customers arrived.
845 17:00 --- 9 customers arrived.
846 18:00 --- 15 customers arrived.
847 19:00 --- 37 customers arrived.
849 --- End of day inventory count ---
850 Customers lost today: 132
851 Food expired today:
852
      Buns: 0
      Patties: 0
853
      Lettuce: 0
854
      Tomatoes: 36
855
      Onions: 0
      Cheese Slices: 0
858 Orders served today:
#1 was ordered 23 time(s).
```

```
#2 was ordered 23 time(s).
      #3 was ordered 23 time(s).
861
      #4 was ordered 24 time(s).
      #5 was ordered 12 time(s).
      #6 was ordered 18 time(s).
865 Successful customer order log:
866 {Customer 1: 6, Customer 2: 2, Customer 3: 3, Customer 4: 1, Customer 5: 2,
      Customer 6: 2, Customer 7: 4, Customer 8: 2, Customer 9: 2, Customer 10: 5,
      Customer 11: 1, Customer 12: 2, Customer 13: 6, Customer 14: 3, Customer 15: 2,
       Customer 16: 2, Customer 17: 3, Customer 18: 6, Customer 19: 2, Customer 20:
      6, Customer 21: 4, Customer 22: 1, Customer 23: 2, Customer 24: 1, Customer 25:
       1, Customer 26: 1, Customer 27: 2, Customer 28: 4, Customer 29: 6, Customer
      30: 6, Customer 31: 4, Customer 32: 6, Customer 33: 5, Customer 34: 2, Customer
       35: 6, Customer 36: 3, Customer 37: 5, Customer 38: 4, Customer 39: 2,
      Customer 40: 3, Customer 41: 4, Customer 42: 3, Customer 43: 3, Customer 44: 6,
       Customer 45: 4, Customer 46: 1, Customer 47: 2, Customer 48: 2, Customer 49:
      2, Customer 50: 3, Customer 51: 5, Customer 52: 6, Customer 53: 4, Customer 54:
       4, Customer 55: 2, Customer 56: 3, Customer 57: 3, Customer 58: 1, Customer
      59: 1, Customer 60: 6, Customer 61: 3, Customer 62: 4, Customer 63: 3, Customer
       64: 5, Customer 65: 4, Customer 66: 4, Customer 67: 4, Customer 68: 4,
      Customer 69: 2, Customer 70: 6, Customer 71: 5, Customer 72: 6, Customer 73: 4,
       Customer 74: 1, Customer 75: 4, Customer 76: 2, Customer 77: 4, Customer 78:
      3, Customer 79: 1, Customer 80: 6, Customer 81: 5, Customer 82: 4, Customer 83:
       1, Customer 84: 1, Customer 85: 4, Customer 86: 1, Customer 87: 5, Customer
      88: 2, Customer 89: 3, Customer 90: 1, Customer 91: 4, Customer 92: 3, Customer
       93: 1, Customer 94: 1, Customer 95: 4, Customer 96: 3, Customer 97: 6,
      Customer 98: 1, Customer 99: 1, Customer 100: 2, Customer 101: 1, Customer 102:
       5, Customer 103: 5, Customer 104: 3, Customer 105: 3, Customer 106: 4,
      Customer 107: 5, Customer 108: 3, Customer 109: 1, Customer 110: 3, Customer
      111: 1, Customer 112: 3, Customer 113: 6, Customer 114: 6, Customer 115: 4,
      Customer 116: 2, Customer 117: 3, Customer 118: 4, Customer 119: 6, Customer
      120: 2, Customer 121: 5, Customer 122: 1, Customer 123: 3}
869
870 === December 22 Log: ==========
871
872
      Buns in stock: 71
873
      Patties in stock: 102
874
      Lettuce in stock: 0
875
      Tomatoes in stock: 56
876
      Onions in stock: 95
      Cheese Slices in stock: 85
879 10:00 --- 94 customers arrived (44 were turned away).
880 11:00 --- 78 customers arrived (28 were turned away).
881 12:00 --- 16 customers arrived.
882\ 13\!:\!00 --- 60 customers arrived (10 were turned away).
883 14:00 --- 36 customers arrived.
884 15:00 --- 86 customers arrived (36 were turned away).
885 16:00 --- 29 customers arrived.
886 17:00 --- 93 customers arrived (43 were turned away).
887 18:00 --- 51 customers arrived (1 were turned away).
888 19:00 --- 79 customers arrived (29 were turned away).
890 --- End of day inventory count ---
891 Customers lost today: 622
892 Food expired today:
893 Buns: 0
```

```
Patties: 37
894
895
      Lettuce: 0
      Tomatoes: 0
      Onions: 0
      Cheese Slices: 0
899 Orders served today:
      #1 was ordered 0 time(s).
900
      #2 was ordered 0 time(s).
901
      #3 was ordered 0 time(s).
      #4 was ordered 0 time(s).
      #5 was ordered 0 time(s).
905
      #6 was ordered 0 time(s).
906 Successful customer order log:
907 {}
908 -----
910
911 === December 23 Log: ===========
912
913
      Buns in stock: 71
914
      Patties in stock: 65
915
      Lettuce in stock: 0
      Tomatoes in stock: 56
      Onions in stock: 95
918
      Cheese Slices in stock: 85
919
920 10:00 --- 21 customers arrived.
921 11:00 --- 24 customers arrived.
922 12:00 --- 16 customers arrived.
923 13:00 --- 44 customers arrived.
924 14:00 --- 44 customers arrived.
925 15:00 --- 93 customers arrived (43 were turned away).
926 16:00 --- 71 customers arrived (21 were turned away).
927 17:00 --- 56 customers arrived (6 were turned away).
928 18:00 --- 1 customers arrived.
929 19:00 --- 1 customers arrived.
931 --- End of day inventory count---
932 Customers lost today: 371
933 Food expired today:
      Buns: 32
934
      Patties: 0
935
      Lettuce: 0
      Tomatoes: 0
937
      Onions: 43
938
      Cheese Slices: 85
939
940 Orders served today:
    #1 was ordered 0 time(s).
941
      #2 was ordered 0 time(s).
942
      #3 was ordered 0 time(s).
      #4 was ordered 0 time(s).
      #5 was ordered 0 time(s).
945
      #6 was ordered 0 time(s).
947 Successful customer order log:
948 {}
949 -----
951
952 === December 24 Log: ==========
```

```
953
954
       Buns in stock: 39
       Patties in stock: 65
       Lettuce in stock: 0
       Tomatoes in stock: 56
958
       Onions in stock: 52
959
       Cheese Slices in stock: 0
960
961 10:00 --- 49 customers arrived.
_{962} 11:00 --- 83 customers arrived (33 were turned away).
963 12:00 --- 9 customers arrived.
964 13:00 --- 76 customers arrived (26 were turned away).
965 14:00 --- 67 customers arrived (17 were turned away).
_{\rm 966} 15:00 --- 61 customers arrived (11 were turned away).
967\ 16\!:\!00 --- 4 customers arrived.
968 17:00 --- 55 customers arrived (5 were turned away).
969 18:00 --- 45 customers arrived.
970 19:00 --- 2 customers arrived.
972 --- End of day inventory count ---
973 Customers lost today: 451
974 Food expired today:
       Buns: 0
975
976
       Patties: 0
977
       Lettuce: 0
       Tomatoes: 56
978
       Onions: 0
979
       Cheese Slices: 0
980
981 Orders served today:
     #1 was ordered 0 time(s).
       #2 was ordered 0 time(s).
       #3 was ordered 0 time(s).
984
       #4 was ordered 0 time(s).
985
       #5 was ordered 0 time(s).
       #6 was ordered 0 time(s).
988 Successful customer order log:
990 -----
991
992
993 === December 25 Log: ==========
994
996 A new shipment arrived!
       Buns in stock: 179
997
       Patties in stock: 193
998
       Lettuce in stock: 120
999
       Tomatoes in stock: 104
1000
1001
       Onions in stock: 193
       Cheese Slices in stock: 106
1003 10:00 --- 67 customers arrived (17 were turned away).
1004 11:00 --- 59 customers arrived (9 were turned away).
1005 12:00 --- 34 customers arrived.
1006\ 13\!:\!00 --- 97 customers arrived (47 were turned away).
1007 14:00 --- 78 customers arrived (28 were turned away).
1008 15:00 --- 75 customers arrived (25 were turned away).
1009 16:00 --- 3 customers arrived.
1010 17:00 --- 34 customers arrived.
1011 18:00 --- 29 customers arrived.
```

```
1012\ 19\!:\!00 --- 81 customers arrived (31 were turned away).
1013
1014 --- End of day inventory count ---
1015 Customers lost today: 450
1016 Food expired today:
1017
       Buns: 0
1018
       Patties: 65
       Lettuce: 0
1019
       Tomatoes: 0
1020
1021
       Onions: 0
1022
       Cheese Slices: 0
1023 Orders served today:
       #1 was ordered 25 time(s).
1024
       #2 was ordered 16 time(s).
1025
       #3 was ordered 13 time(s).
1026
1027
       #4 was ordered 20 time(s).
       #5 was ordered 15 time(s).
       #6 was ordered 18 time(s).
1030 Successful customer order log:
1031 {Customer 1: 5, Customer 2: 4, Customer 3: 2, Customer 4: 6, Customer 5: 4,
       Customer 6: 6, Customer 7: 3, Customer 8: 3, Customer 9: 4, Customer 10: 2,
       Customer 11: 1, Customer 12: 5, Customer 13: 4, Customer 14: 2, Customer 15: 2,
        Customer 16: 4, Customer 17: 3, Customer 18: 6, Customer 19: 4, Customer 20:
       3, Customer 21: 5, Customer 22: 4, Customer 23: 1, Customer 24: 3, Customer 25:
       1, Customer 26: 3, Customer 27: 3, Customer 28: 6, Customer 29: 6, Customer
       30: 5, Customer 31: 4, Customer 32: 2, Customer 33: 3, Customer 34: 1, Customer
       35: 4, Customer 36: 3, Customer 37: 6, Customer 38: 4, Customer 39: 1,
       Customer 40: 1, Customer 41: 1, Customer 42: 4, Customer 43: 6, Customer 44: 2,
       Customer 45: 1, Customer 46: 1, Customer 47: 6, Customer 48: 6, Customer 49:
       5, Customer 50: 5, Customer 68: 5, Customer 69: 5, Customer 70: 1, Customer 71:
       4, Customer 72: 5, Customer 73: 5, Customer 74: 2, Customer 75: 2, Customer
       76: 6, Customer 77: 5, Customer 78: 1, Customer 79: 1, Customer 80: 1, Customer
       81: 2, Customer 82: 3, Customer 83: 1, Customer 84: 5, Customer 85: 4,
       Customer 86: 2, Customer 87: 4, Customer 88: 1, Customer 89: 6, Customer 90: 1,
        Customer 91: 5, Customer 92: 6, Customer 93: 2, Customer 94: 6, Customer 95:
       2, Customer 96: 6, Customer 97: 4, Customer 98: 2, Customer 99: 2, Customer
       100: 4, Customer 101: 4, Customer 102: 1, Customer 103: 4, Customer 104: 6,
       Customer 105: 1, Customer 106: 1, Customer 107: 1, Customer 108: 6, Customer
       109: 3, Customer 110: 1, Customer 111: 2, Customer 112: 1, Customer 113: 1,
       Customer 114: 1, Customer 115: 2, Customer 116: 6, Customer 117: 5, Customer
       127: 5, Customer 128: 6, Customer 129: 4, Customer 130: 3, Customer 131: 3,
       Customer 132: 4, Customer 133: 1}
1032 -----
1034
1035 === December 26 Log: ===========
1037
1038
       Buns in stock: 85
1039
       Patties in stock: 34
       Lettuce in stock: 0
1040
       Tomatoes in stock: 15
1041
       Onions in stock: 121
1042
       Cheese Slices in stock: 75
1043
1044 10:00 --- 50 customers arrived.
1045 11:00 --- 81 customers arrived (31 were turned away).
1046 12:00 --- 46 customers arrived.
1047 13:00 --- 83 customers arrived (33 were turned away).
1048 14:00 --- 30 customers arrived.
```

```
1049 15:00 --- 94 customers arrived (44 were turned away).
_{1050} 16:00 --- 24 customers arrived.
1051 17:00 --- 41 customers arrived.
1052 18:00 --- 24 customers arrived.
1053 19:00 --- 5 customers arrived.
1054
1055 --- End of day inventory count---
1056 Customers lost today: 478
1057 Food expired today:
1058
      Buns: 39
1059
       Patties: 0
       Lettuce: 0
1060
1061
       Tomatoes: 0
       Onions: 52
1062
       Cheese Slices: 0
1063
1064 Orders served today:
     #1 was ordered 0 time(s).
      #2 was ordered 0 time(s).
1066
      #3 was ordered 0 time(s).
1067
       #4 was ordered 0 time(s).
1068
       #5 was ordered 0 time(s).
1069
       #6 was ordered 0 time(s).
1070
1071 Successful customer order log:
1073 -----
1074
1075
1076 === December 27 Log: ==========
1077
1078
       Buns in stock: 46
1079
       Patties in stock: 34
1080
       Lettuce in stock: 0
1081
       Tomatoes in stock: 15
1082
       Onions in stock: 69
1083
       Cheese Slices in stock: 75
1085 10:00 --- 76 customers arrived (26 were turned away).
1086 11:00 --- 4 customers arrived.
1087 12:00 --- 30 customers arrived.
1088 13:00 --- 84 customers arrived (34 were turned away).
_{1089} 14:00 --- 46 customers arrived.
1090 15:00 --- 34 customers arrived.
1091 16:00 --- 9 customers arrived.
1092 17:00 --- 79 customers arrived (29 were turned away).
1093 18:00 --- 74 customers arrived (24 were turned away).
1094 19:00 --- 30 customers arrived.
1096 --- End of day inventory count ---
1097 Customers lost today: 466
1098 Food expired today:
       Buns: 0
1099
1100
       Patties: 0
       Lettuce: 0
1101
       Tomatoes: 0
1102
       Onions: 0
1103
       Cheese Slices: 75
1105 Orders served today:
#1 was ordered 0 time(s).
#2 was ordered 0 time(s).
```

```
#3 was ordered 0 time(s).
     #4 was ordered 0 time(s).
1109
     #5 was ordered 0 time(s).
1110
     #6 was ordered 0 time(s).
1112 Successful customer order log:
1113 {}
1114 -----
1115
1116
1117 === December 28 Log: ==========
1118
1119
      Buns in stock: 46
1120
     Patties in stock: 34
1121
     Lettuce in stock: 0
1122
1123
     Tomatoes in stock: 15
     Onions in stock: 69
      Cheese Slices in stock: 0
1126 10:00 --- 51 customers arrived (1 were turned away).
1127 11:00 --- 43 customers arrived.
1128 12:00 --- 40 customers arrived.
1129 13:00 --- 59 customers arrived (9 were turned away).
1130 14:00 --- 84 customers arrived (34 were turned away).
1131 15:00 --- 74 customers arrived (24 were turned away).
1132 16:00 --- 23 customers arrived.
1133 17:00 --- 64 customers arrived (14 were turned away).
1134 18:00 --- 40 customers arrived.
1135 19:00 --- 72 customers arrived (22 were turned away).
1136
1137 --- End of day inventory count ---
1138 Customers lost today: 550
1139 Food expired today:
     Buns: 0
1140
     Patties: 0
1141
      Lettuce: 0
1142
1143
      Tomatoes: 15
1144
      Onions: 0
      Cheese Slices: 0
1145
1146 Orders served today:
#1 was ordered 0 time(s).
     #2 was ordered 0 time(s).
1148
     #3 was ordered 0 time(s).
1149
     #4 was ordered 0 time(s).
     #5 was ordered 0 time(s).
1151
      #6 was ordered 0 time(s).
1152
1153 Successful customer order log:
1154 {}
1155
1157
1158 === December 29 Log: ===========
1159
1160
1161 A new shipment arrived!
     Buns in stock: 177
1162
      Patties in stock: 140
     Lettuce in stock: 111
1165
     Tomatoes in stock: 134
1166 Onions in stock: 208
```

```
1167 Cheese Slices in stock: 110
1168 10:00 --- 76 customers arrived (26 were turned away).
1169 11:00 --- 39 customers arrived.
1170 12:00 --- 57 customers arrived (7 were turned away).
1171 13:00 --- 84 customers arrived (34 were turned away).
1172 14:00 --- 97 customers arrived (47 were turned away).
1173 15:00 --- 36 customers arrived.
1174 16:00 --- 91 customers arrived (41 were turned away).
17:00 --- 68 customers arrived (18 were turned away).
1176 18:00 --- 30 customers arrived.
1177 19:00 --- 20 customers arrived.
1178
1179 --- End of day inventory count ---
1180 Customers lost today: 502
1181 Food expired today:
       Buns: 0
       Patties: 34
1183
       Lettuce: 0
1184
       Tomatoes: 0
1185
       Onions: 0
1186
       Cheese Slices: 0
1187
1188 Orders served today:
      #1 was ordered 10 time(s).
1190
       #2 was ordered 15 time(s).
1191
       #3 was ordered 15 time(s).
       #4 was ordered 22 time(s).
1192
       #5 was ordered 17 time(s).
1193
       #6 was ordered 17 time(s).
1195 Successful customer order log:
1196 {Customer 1: 3, Customer 2: 4, Customer 3: 4, Customer 4: 2, Customer 5: 2,
       Customer 6: 4, Customer 7: 1, Customer 8: 2, Customer 9: 2, Customer 10: 6,
       Customer 11: 4, Customer 12: 1, Customer 13: 4, Customer 14: 6, Customer 15: 4,
       Customer 16: 5, Customer 17: 5, Customer 18: 5, Customer 19: 3, Customer 20:
       2, Customer 21: 3, Customer 22: 5, Customer 23: 4, Customer 24: 4, Customer 25:
       6, Customer 26: 5, Customer 27: 4, Customer 28: 6, Customer 29: 5, Customer
       30: 3, Customer 31: 2, Customer 32: 4, Customer 33: 5, Customer 34: 6, Customer
        35: 1, Customer 36: 5, Customer 37: 3, Customer 38: 2, Customer 39: 3,
       Customer 40: 3, Customer 41: 2, Customer 42: 5, Customer 43: 1, Customer 44: 2,
       Customer 45: 4, Customer 46: 5, Customer 47: 5, Customer 48: 6, Customer 49:
       6, Customer 50: 4, Customer 77: 5, Customer 78: 2, Customer 79: 3, Customer 80:
       5, Customer 81: 6, Customer 82: 6, Customer 83: 1, Customer 84: 4, Customer
       85: 3, Customer 86: 6, Customer 87: 6, Customer 88: 2, Customer 89: 5, Customer
       90: 5, Customer 91: 3, Customer 92: 4, Customer 93: 6, Customer 94: 4,
       Customer 95: 2, Customer 96: 3, Customer 97: 2, Customer 98: 4, Customer 99: 3,
       Customer 100: 2, Customer 101: 6, Customer 102: 3, Customer 103: 2, Customer
       104: 6, Customer 105: 4, Customer 106: 1, Customer 107: 4, Customer 108: 4,
       Customer 109: 4, Customer 110: 1, Customer 111: 5, Customer 112: 4, Customer
       113: 6, Customer 114: 1, Customer 115: 1, Customer 116: 1, Customer 117: 3,
       Customer 118: 4, Customer 119: 5, Customer 120: 3, Customer 121: 6, Customer
       122: 6}
1197
1198
1199
1200 === December 30 Log: ===========
Buns in stock: 96
1203
       Patties in stock: 25
1204
     Lettuce in stock: 0
1205
```

```
Tomatoes in stock: 55
       Onions in stock: 151
1207
       Cheese Slices in stock: 78
1209 10:00 --- 30 customers arrived.
1210 11:00 --- 61 customers arrived (11 were turned away).
1211 12:00 --- 98 customers arrived (48 were turned away).
1212 13:00 --- 24 customers arrived.
1213 14:00 --- 31 customers arrived.
1214 15:00 --- 91 customers arrived (41 were turned away).
1215 16:00 --- 97 customers arrived (47 were turned away).
1216 17:00 --- 48 customers arrived.
1217 18:00 --- 90 customers arrived (40 were turned away).
1218 19:00 --- 20 customers arrived.
1219
1220 --- End of day inventory count ---
1221 Customers lost today: 590
1222 Food expired today:
      Buns: 46
       Patties: 0
1224
      Lettuce: 0
1225
      Tomatoes: 0
1226
       Onions: 69
1227
1228
     Cheese Slices: 0
1229 Orders served today:
    #1 was ordered 0 time(s).
1230
       #2 was ordered 0 time(s).
1231
      #3 was ordered 0 time(s).
1232
       #4 was ordered 0 time(s).
1233
       #5 was ordered 0 time(s).
1234
       #6 was ordered 0 time(s).
1236 Successful customer order log:
1237 {}
1238 ----
       -----
1239
1240
1241 === December 31 Log: ===========
1242
1243
       Buns in stock: 50
1244
       Patties in stock: 25
1245
       Lettuce in stock: 0
1246
       Tomatoes in stock: 55
1247
       Onions in stock: 82
       Cheese Slices in stock: 78
1250 10:00 --- 93 customers arrived (43 were turned away).
1251 11:00 --- 28 customers arrived.
1252 12:00 --- 13 customers arrived.
1253 13:00 --- 34 customers arrived.
1254 14:00 --- 62 customers arrived (12 were turned away).
1255 15:00 --- 89 customers arrived (39 were turned away).
1256 16:00 --- 17 customers arrived.
1257 17:00 --- 90 customers arrived (40 were turned away).
1258 18:00 --- 81 customers arrived (31 were turned away).
1259 19:00 --- 66 customers arrived (16 were turned away).
1261 --- End of day inventory count ---
1262 Customers lost today: 573
1263 Food expired today:
1264 Buns: 0
```

```
Patties: 0
     Lettuce: 0
1266
     Tomatoes: 0
1267
1268
      Onions: 0
     Cheese Slices: 78
1269
1270 Orders served today:
     #1 was ordered 0 time(s).
1271
     #2 was ordered 0 time(s).
1272
     #3 was ordered 0 time(s).
1273
1274
     #4 was ordered 0 time(s).
     #5 was ordered 0 time(s).
     #6 was ordered 0 time(s).
1276
1277 Successful customer order log:
1278 {}
1279
1281
1282 === January 01 Log: ==========
1283
_{1285} This In-N-Out is shut down for having consistently low sales and customer
      satisfaction, despite high customer throughput. If only the higher-ups at In-N-
      Out waited until this data got back, then maybe they would have noticed that it
   was their own fault for not supplying the store with enough food.
```