```java
package ch.publicept;

import javax.swing.*;
import java.util.ArrayList;
import java.util.Scanner;

/**
 * ch.publicept.Main
 *
 * main(String[] args)
 *
 * printInstructions()
 * addItem()
 * modifyItem()
 * removeItem()
 * searchForItem()
 * processArrayList()
 *
 * @author created by Urs Albisser, on 2020-01-27
 * @version 0.1
 */
public class Main {



    // == fields ==
    private static Scanner scanner = new Scanner(System.in);
    private static GroceryList groceryList = new GroceryList();



    // == public methods ==
    /**
     * main()
     * @param args args
     */
    public static void main(String[] args) {

        boolean quit = false;
        int choice = 0;
        printInstructions();

        while (!quit) {
            System.out.println("Enter your choice: ");
            choice = scanner.nextInt();
            scanner.nextLine();

            switch (choice) {
                case 0:
                    printInstructions();
                    break;
                case 1:
                    groceryList.printGroceryList();
                    break;
                case 2:
                    addItem();
                    break;
                case 3:
                    modifyItem();
                    break;
                case 4:
                    removeItem();
                    break;
                case 5:
                    searchForItem();
                    break;
                case 6:
                    processArrayList();
                case 7:
                    quit = true;
                    break;
                default:
                    // do nothing
            }
        }
    }


    /**
     * printInstructions()
     */
    public static void printInstructions() {
        System.out.println("\nPress ");
        System.out.println("\t 0 - To print choice options.");
        System.out.println("\t 1 - To print the list of grocery items.");
        System.out.println("\t 2 - To add an item to the list.");
        System.out.println("\t 3 - To modify an item in the list.");
        System.out.println("\t 4 - To remove an item from the list.");
        System.out.println("\t 5 - To search for an item in the list.");
        System.out.println("\t 6 - To quit the application.");
    }


    /**
     * addItem()
     */
    public static void addItem() {
```

```
98          System.out.print("Please enter the grocery item: ");
99          groceryList.addGroceryItem(scanner.nextLine());
100     }
101
102
103     /**
104      * modifyItem()
105      */
106     public static void modifyItem() {
107         System.out.print("Enter item number: ");
108         String currentItem = scanner.nextLine();
109
110         System.out.print("Enter replacement item: ");
111         String newItem = scanner.nextLine();
112         groceryList.modifyGroceryItem(currentItem, newItem);
113     }
114
115
116     /**
117      * removeItem()
118      */
119     public static void removeItem() {
120         System.out.print("Enter an item name to remove: ");
121         String item = scanner.nextLine();
122         groceryList.removeGroceryItem(item);
123     }
124
125
126     /**
127      * searchForItem()
128      */
129     public static void searchForItem() {
130         System.out.print("Item to search for: ");
131         String searchItem = scanner.nextLine();
132         if(groceryList.isItemInList(searchItem)) {
133             System.out.println("Found " + searchItem + " in  our grocery list");
134         } else {
135             System.out.println(searchItem + " is not in the shopping list");
136         }
137     }
138
139
140     /**
141      * processArrayList()
142      * Showcase of several ArrayList copy and initialization concepts.
143      * Showcase of ArrayList-to-Array conversion.
144      */
145     public static void processArrayList() {
146         // 1. create new ArrayList
147         ArrayList<String> newArrayList = new ArrayList<>();
148
149         /*
150          * ArrayList.addAll(anotherArrayList)
151          */
152         // 2. copy the full groceryList's entire contents to the new arrayList
153         newArrayList.addAll(groceryList.getGroceryList());
154
155         /*
156          * ArrayList<String> arrayList = new ArrayList<>(initializeWithAnotherArrayList);
157          */
158         // initialize the ArrayList directly with the groceryList's contents
159         ArrayList<String> nextArrayList = new ArrayList<>(groceryList.getGroceryList());
160
161         /*
162          * String[] array = new String[anyArray.size()];
163          */
164         // copy the groceryList's entire contents to a regular array
165         // initialize the array directly with the groceryList's size
166         String[] myArray = new String[groceryList.getGroceryList().size()];
167
168         /*
169          * ArrayList.toArray(arrayToConvert)
170          */
171         myArray = groceryList.getGroceryList().toArray(myArray);
172     }
173 }
174
```