Final Project Overview

Estimated Duration: 3 minutes

Learning Objectives

After completing this project, you will be able to comfortably work with:

- Basics of Java programming
- Strings and string operations
- Operators and Data Types
- Exceptions
- `for` Loops and the `while` Loop
- Conditional statements
- Arrays
- Basic methods and functions

About the course project

Welcome to the final project for this course for beginning to learn how to code using Java. In this project, you will apply the knowledge and skills you learned in this course to a simulated scenario.

In this project, you will create a console application for a grocery shop, which will calculate the total of grocery items chosen depending on the unit price and quantity. The tasks in this hands-on project correspond to the activities performed by a Java Developer who is creating a stand-alone console application.

This final project, which will take about 30 minutes to complete, is comprised of eight tasks.

- **Task 1: String array of items**
  Create a String array of items you will buy from a grocery shop. It should be a minimum of 10, but not more than 25.

- **Task 2: float array of unit price**
  Create a float array of unit price for items, which corresponds to the index positions in the items array. The float array should be the same length as the items array.

- **Task 3: Import and create a Scanner object**
  Import and create a scanner object and create an object of scanner object to read from the console.

- **Task 4: Create infinite loop**
  Create an infinite loop that runs as long as the user wants the loop to run. The loop should exit when the user inputs `Exit` (ignoring the case).

- **Task 5: Create for inner infinite loop for purchases**
  Create an infinite loop that runs as long as the user wants to add items. The loop should exit when the user inputs `Complete` (ignoring the case).

- **Task 6: Get user input for item name**
  Get input for item name from the user and check the array for the item. If the item is in the array, get the index of the item and store the item name.

- **Task 7: Get the item price based on the index position**
  Get the item price from the same index position in the array as the item.

- **Task 8: Get the item quantity and find item price**
  Calculate each item's price and add the item prices to the total bill.

- **Task 9: Print the total price**
  When all required items are chosen, print the total bill price.

- **Task 10: Implement Item Search Functionality**
  Create a method to search for an item in the items array.

- **Task 11: Calculate Average Price**
  Create a method to calculate the average price of the items.

- **Task 12: Filter Items Below a Certain Price**
  Create a method to filter items below a specified price.

- **Task 13: Total the Bill with Discounts**
  Modify your program to apply discounts on total bill based on certain conditions.

- **Task 14: Inventory Management**
  Create an inventory management system for tracking available stock of items.

To summarize:

- Read and follow the instructions carefully to complete the project.

Let's get started!

Author(s)

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