

<b>KING SAUD UNIVERSITY</b> <b>COLLEGE OF COMPUTER AND INFORMATION SCIENCES</b> <b>Computer Science Department</b>	
<b>CSC 111</b> <b>Computer Programming - I</b>	<b>Project</b> Phase#1

### Self-Checkout Software

**Description:**

This project involves developing a self-checkout software for a retail store to enhance its customers' shopping experience. The software enables customers to independently select items, specify quantities, and complete their purchases.

Your task is to create a user-friendly Java program with the following features:

1. Item Management: The software will manage a selection of at least five items in the store, each identified by an item number, name, available quantity, and price. These items should be pre-defined and not require any user input.

2. User Interface (Main Menu): Upon starting the program, users will be greeted with a friendly welcome message and prompted to choose their role: customer or store owner. If the user selects "customer," then the customer menu described in point 3 should be displayed. Otherwise, if "store owner" was selected, then the menu outlined in point 4 should be displayed. Users should be allowed to terminate the program by choosing "exit".

3. Customer Self-Checkout Menu: Customers can select items and specify quantities from a menu. They can continue adding items until they choose to checkout or cancel. Upon checkout, the program will generate an invoice displaying selected items, quantities, prices, and total cost. After that, the store's inventory will be updated accordingly, and the program will return to the main menu. Alternatively, if the customer cancels, no changes will be made, and the program should return to the main menu.

4. Store Owner Menu: Store owners will have access to a menu showing options to view total profit, view the most popular item, or return to the main menu. The menu should persist until the user chooses to return to the main menu.

- Total Profit: The software will calculate and display the total profit from all transactions.
- Most Popular Item: Based on customer purchases, the software will identify and display the most popular item.

Your group should select a name and function for the retail store and add at least five items to the store's inventory.

**Note:**

- 1- Organize the output for both the menu and invoice using skip characters like tabs or substring with the item name for fixed character display. Alternatively, explore the use of printf for enhanced formatting. If you decide to use printf be prepared to answer questions regarding it.

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- 2- The store should terminate when no items are available.
- 3- You are not allowed to use concept that have not been covered on the course. You are not allowed to use arrays and you are not allowed to create more than one class. (We will explore the use of more than one class on phase#2)