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Final Project

Introduction & Objectives

This project aims to develop Starbucks applications with systems with functions to make users feel comfortable and easy to use. The systems can be separated into three parts.

One is the system for placing the menu, where customers can place orders by selecting items from the menu. The functions allow customers to place an order and check the order summary and total price to pay. The customers can also update the order list by adding new items or correcting the items already added. After the customers decide to purchase and the payment is successfully made, all the quantities from the menu are updated by editing the text file, which contains all the data from the menu. As I was implementing this system, I used the scanner library to get the input from users, and the switch statement used the input to the corresponding case branch. And in each branch, the rest of the menu pages for the order are implemented.

The second system is to support customizing orders with different options. This system is part of the order system in the previous paragraph. I added the cup size and espresso shots for the customizing options. The application has an automatic charging system when specific customized options are added. For example, for the espresso shot's default value of 3 shots, less than three shots is the same as the default price. If the shots are over 4, 50 cents is additionally charged on the coffee to reduce the item. To implement this function, the 'StringBuilder' and 'substring' methods were used with other data structures (HashMap, ArrayList).

The Last system is the menu management system, which allows staff to add, update, and remove items from the menu. This system is separated as another option, 'Update Menu (Manage Menu),' from the 'Order' option from the main menu. Staff can easily use this option by choosing the number for the options. This system is similar in structure to the ordering system, and as soon as the menu is updated, the application updates the data in the text file.

Results & Screenshots of the application with all the views

Main Menu

- 3 options to select (1.Management 2.Order system 3. Quitting the app)

```
Loading complete!
Welcome to StarBucks!
Choose the option(choose number)
1. Update Menu (Manage Menu)
2. Order
3. Quit
```

Order & Customizing System

- 5 types of items to choose

```
2
Order item? (choose number)
1. Drink
2. Food
3. Merchandise
4. Remove the item from the list
5. Go back to main menu
```

Drink menu

- Choose the item in the option list

```
Choose your drink with the number
1. Americano $5.0 (SHORT size (8oz))
2. Cafe Latte $6.0 (SHORT size (8oz))
3. Back to menu
|
```

Choosing size (customize)

- Be able to check size and price

```
What size? (choose number)
1. SHORT (8oz) ( $5.0)
2. TALL (12oz) ( $5.25)
3. GRANDE (16oz) ( $5.95)
4. VENTI (20oz) ( $6.45)
5. Change the Drink (Go Back to Previous Page)
```

Choosing Roast, shots, Quantities (customize)

```
Espresso Roast Options (Choose Option)
Extra charges(50 cents) more than 3 shots
1. Signature Espresso Roast (default : 3 Shots)
2. Blonde Espresso Roast (default : 3 Shots)
3. Decaf Espresso Roast (default : 3 Shots)
```

```
type the shots (1 ~ 9 shots)
```

4

```
How many cups? (the quantity left : 12 )
```

1

The Order Summary

```
The order summary :  
1. Americano  SHORT  x 1  
    Signature Espresso Roast 4 Shots  
The total price : $5.50
```

Check-Out

- Type the how much customer pay
- There will be the amount of change and update the quantity of the item in the stock.

```
The total price : $5.50  
Type the cash amount :  
5.5|
```

```
Complete the Payment  
The change : $ 0.00  
Update successfully!  
You're all set! Thank You!
```

Management system

```
Choose the option to update (choose number)  
1. Add the Menu  
2. Remove  
3. Update Quantity  
4. Check the Quantity  
5. Back to main  
|
```

The process to add the new menu

- The new item will be updated in the text file

```
Select the type of product to add (choose number)
1. Drink
2. Food
3. Merchandise
4. back to update menu
1
Type menu name:
ChaiLatte
Type the price(USD) :
4.5
Type the quantity :
12
Update successfully!
Successfully add the product!
```

The process to remove the menu

- The item is removed from the menu

```
Choose option or the product to remove (choose number)
1. Americano    $5.0
2. Cafe Latte   $6.0
3. ChaiLatte    $4.5
4. Back to Update menu
3
Update successfully!
Successfully update the menu!
```

The process to check the quantity of the item

```
Choose the option to update (choose number)
1. Add the Menu
2. Remove
3. Update Quantity
4. Check the Quantity
5. Back to main
4
Select the type of product to check the quantity
1. Drink
2. Food
3. Merchandise
4. Back to update menu
1
Americano
  Quantity : 11
Cafe Latte
  Quantity : 12
```

The process to Update Quantity

```
Choose the option to update (choose number)
1. Add the Menu
2. Remove
3. Update Quantity
4. Check the Quantity
5. Back to main
3
Choose the product to update the quantity or option (choose number)
1. Americano      x 11
2. Cafe Latte     x 12
3. go back to update menu
1
Type the quantity : 13
Update successfully!
Successfully update the menu!
```

Project High-Level Design (UML Diagram)

