CCC102 Programming Project

I. ASSESSMENT LEARNING OUTCOMES

1. Ability to write a program using structured and event-driven programming approaches.
2. Ability to design graphical user interfaces for programs utilizing AWT and Swing components.
3. Ability to apply the proper control structure, manipulate strings, create arrays, and debug issues.
4. Ability to construct methods for retrieving and storing records from and to a text file.

II. INTRODUCTION OF THE SOFTWARE

A new grocery store has been opened in your town and the owner wants to have a system that manages the sales of its items. The owner taps you to develop for them this system. You were advised to create a program that has four basic functions the Create, Read, Update and Delete (CRUD) to manage the item orders and sales. As a developer, you are also entitled to add additional features in the system such as generating the sales of items and others.

III. PROGRAM MODULES

Create the program using Java programming language via Netbeans IDE that applies the concepts of Sequence, Selection, Iteration, GUI using Swing, Error Handling and File Handling.

CREATE	
Add New Product	The system enables the user to add new product in the stockroom. It will be stored in a text file named as "products.txt". The product information is as follows: **Product Code** – the product code must be an 8 character-digit format value, the first 4 characters will be based on the first 4 letters of the Product Name and the remaining 4 digits must be a random number and at the same time unique. You may use the Random Class. Ex. Quick Chow -> QUIC6930 **Product Name** – the name of the product. **Product Price** – the price of the product. **Quantity** – the beginning stock quantity of the product.
Order Products	The system will display all products and will allow the user to choose the product code/s that is/are sold and ask for its quantities. Furthermore, it will ask for the amount given by the customer and will provide the change based on the total sum of product prices that were sold. The quantities of the ordered products will also be reduced. At the same time the system will provide proper error/info notification to the user. The order information are as follows: **Product Code** – The code of the product to be sold. **Quantity** – The quantity to be deducted to the existing products. **Product Price** - the price of the product. **Total Amount** – the total amount of the products sold.

	Amount Given – The amount given by the customer. The information will be stored in a text file named as "sales.txt".
READ	
View All Products	The system can display the list of products (Product Code, Product Name, Product Price, existing Quantity) in the stockroom.
View All Sales	The system can display all sales information including the grand total sales.
UPDATE	
Update Product Information	The system allows the user to update a particular product's name, price or quantity from the stockroom based on the chosen product code.
DELETE	
Delete Product	The system will allow the user to delete products that are not yet ever sold.

To summarize the functionalities of the system the modules hierarchy has been provided as given below:

1. Create
    a. Add New Product
    b. Order Products
2. Read (*You may use a JTable for display*)
    a. View All Products
    b. View All sales
3. Update
    a. Update Product Information
4. Delete
    a. Delete a Product

As a developer you are required to create proper notifications and proper display of error/system user warnings. Furthermore, the system must be bug-free.

IV. PROJECT REQUIREMENTS

1. An at most 10-minute video presentation of your program. Present what your system can do and discuss also your code (what you did).
   Upload your presentation in Youtube, set the video as "Unlisted" and then share the link with me in Google Classroom.
2. Copy of the Netbeans Java Project named "SystemLastName".
   Ex. SystemGulfan
   The project file will be compressed/zipped. The compressed/zipped file will be named "Project_LastName.zip" or "Project_LastName.rar"
   Ex. Project_Gulfan.zip or Project_Gulfan.rar
   The compressed/zipped file will be uploaded in the Google Classroom.

V. ASSESSMENT CRITERIA

Criteria	**Score**
Program Design	20
Program Execution	20
Specifications Satisfaction	20
Coding Style	20
Comments	10
Creativity	10
Total Score	**100**