CLI Inventory Management System – GROUP 11

USER MANUAL

Introduction

Our program is a small CLI based program used to manage an inventory system.
the user will be able to see accurate inventory status and all the information and details about any product in the inventory.

Our project page on GitLab: **https://gitlab.com/adss_group_11/adss_group_11**

Requirements:

- A Windows or UNIX based machine (e.g. Mac/Linux)
- Java 11.0.0 and above running on your system
  (Link to download: Java SE Development Kit 11 Download)

General system information:

The database will store the following tables:
Products,   Discounts,   Stock,   Defects, Category,   Product_Category, Branches , Locations.
Each table have their attributes to implement all the requirements describes in the requirements specification.

On first launch A database file will be created outside of the .jar file.
The database file created by the program will be named: `inventory.db`
The database file will store all of inventory data inserted and managed while using the program.
If you already launched the program a database file was already created, and the program will use that database file to store and manage the inventory system.
In order to reset the database, just delete the `inventory.db` file created and relaunch the program.

Running the program:

<u>On Windows 10/8/7 based machines:</u>

- Launch cmd.exe (right click on start menu and select Command Prompt)
- Navigate to the Program folder and to the 'release' folder using the cd command.
  `" cd YOUR_PATH/ADSS_Group_11/release "`
- Run the program using the following java command:
  `" java -jar adss2019_v02.jar "`

<u>On UNIX Based machines(e.g. Mac/Linux):</u>

- Launch the Terminal by searching for "Terminal".
- Navigate to the Program folder and to the 'release' folder using the cd command.
  `" cd YOUR_PATH/ADSS_Group_11/release "`
- Run the program using the following java command:
  `" java -jar adss2019_v02.jar "`

Using the program:

<u>Main Menu:</u>

After launching the program you will be greeted by the Main Menu screen:

```
GROUP 11 Inventory Management System!
=====================================
Thank you for choosing our system for your business!

~ WELCOME, Choose you action: ~
1 - Manage Store Branch
2 - Open A new Store Branch
3 - Close existing Store branch
4 - Display all Chain Stores
5 - EXIT

CHOICE:
```

You need to choose between the following credentials that is shown on the screen and then press ENTER

In any case the credentials entered are not correct you will get the following error message:

```
GROUP 11 Inventory Management System!
=====================================
ERROR: Invalid menu choice!

~ WELCOME, Choose you action: ~
1 - Manage Store Branch
2 - Open A new Store Branch
3 - Close existing Store branch
4 - Display all Chain Stores
5 - EXIT

CHOICE:
```

You will be able to re-enter the details until you will succeed.

Open a new store branch:

If it is the first time you use the system you should open a new store branch (because there is no store branch exist right now), so if you will press "2" you will get the following screen :

```
GROUP 11 Inventory Management System!
=====================================
Press ENTER to confirm
Enter q\Q to cancel.
Enter new store branch name:
```

In order to open a new store branch you need to follow the instructions that is written on the screen, if you will succeed to open the new branch you will get the following message:

```
MESSAGE: Congratulations! A new store branch named:
'test' has been opened for business.
New branch ID is: 1
```

Manage store branch:

If you will press "1" in the main menu you will need to insert a branch id (details about branches ID's you can get by pressing 4 any time in the main menu, if you will write the correctly branch ID you will see the following screen :

```
MESSAGE: Welcome to Store Branch test No.1

Currently connected to store: test
Store Branch No. 1

Enter a field to manage:
=== Management Menu ===
1 - Products
2 - Product Categories
3 - Branch Stock
4 - Chain Store Discounts
5 - Defected products
6 - Reports And Notifications
7 - Switch Branch
8 - Exit

CHOICE:
```

Now you can choose which step you want to do in the system , all the things you will edit or delete will be changed on the currently branch (on the example its branch No.1)

By pressing "1" you will directed to the product managemet menu :

```
MESSAGE: Choose A product management option:

== Product management menu ==
1 - Insert new product
2 - Update product details
3 - Delete product
4 - Display product details
5 - Display all products
6 - Display product categories
7 - Display products by category
8 - RETURN TO MAIN MENU

CHOICE:
```

Note that if you will choose to insert a new product you need to follow the instructions(you can choose a category to the product,minimal amount, prices , etc.) :

```
Enter (q\Q) to cancel
Enter product BARCODE number:
2
Enter product name:
test
Enter product manufacturer:
test
Enter product cost price:
10
Enter product selling price:
10
Enter product minimal amount:
3

Do you wish to assign categories to product? Y\N :
```

By pressing "2" you will directed to the product categories management menu :

```
MESSAGE: Choose A category management option:

== Category management menu ==
1 - Add A new category
2 - Rename A category
3 - Delete category
4 - Display category details
5 - Display all categories
6 - RETURN TO MAIN MENU

CHOICE:
```

By pressing "3" you will directed to the branch stock management menu :

```
MESSAGE: Choose A stock management option:

PAY ATTENTION: Expired products will not be displayed in stock.
All expired products can be found in defects menu section.

== Branch Stock management menu ==
1 - Add products to stock
2 - Remove products from stock
3 - Move product stock location
4 - Display specific product stock
5 - Display all products in stock
6 - Display products by category
7 - RETURN TO MAIN MENU

CHOICE:
```

By pressing "4" you will directed to the discount management menu:

```
== Discounts management menu ==
Choose the discounter: (Supplier\Store)
Supplier discounts cost price, Store discounts selling price
1 - Store
2 - Supplier
3 - RETURN TO MAIN MENU

CHOICE:
```

by pressing "6" you will directed to reports and notifications menu, in this menu you can print any report that describes in the requirements specification :

```
MESSAGE: Choose A report to issue:

== Reports And Notifications ==
1 - Show recent Notifications
2 - Inventory report
3 - Defected items report
4 - RETURN TO MAIN MENU

CHOICE:
```

by pressing "7" you can switch any branch you want , and anytime you can exit the system by pressing "8".

Note that for any choose you will do, you have always instructions that printed on the screen

Deleting store branch:
You always can delete a store branch, but you have to know that this is irreversible, and it will delete all your inventory information of the branch:

```
WARNING: BEWARE, DELETING A STORE BRANCH WILL DELETE ENTIRE BRANCH STOCK DATA

Press ENTER to confirm.
Enter branch ID number to delete:
```

Display all chain stores:

If you forgot which branches are exist or what is the name of the branches you can always press "4" in the main menu and get information about all the store branches:

```
DISPLAYING ALL CHAIN STORES:

Showing 1 existing opened store branches.


============================
 Store Branch ID | Store Name
-----------------+-----------
 1               | test
============================
```
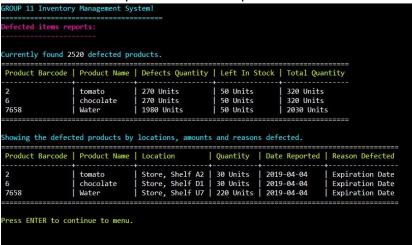
Reports and Notification

On system startup you will be notified of lack of products and items the recently expired.

```
GROUP 11 Inventory Management System!
======================================
NOTIFICATIONS:

Currently found 4 product barcodes that are about to go out of stock.
NOTE: Expired products are not included.
==================================================================================================
 Product Barcode | Product Name | Store Quantity | Warehouse Quantity | Total Quantity | Minimal Amount
-----------------+--------------+----------------+--------------------+----------------+---------------
 9342            | Choclate     | 5              | 0 Units            | 5 Units        | 55 Units
 8890            | Cotton Candy | 0              | 22 Units           | 22 Units       | 99 Units
 3               | cheese       | 0              | 3 Units            | 3 Units        | 3 Units
 7               | cucumber     | 1              | 0 Units            | 1 Units        | 2 Units
==================================================================================================

Press ENTER to continue to menu.
```

Additionally, by choosing the menu option for Reports and Notification you will be able to see the reports again.

You can also see reports of defected products as can be seen in the image below:

```
GROUP 11 Inventory Management System!
======================================
Defected items reports:
-----------------------

Currently found 2520 defected products.
=====================================================================================
 Product Barcode | Product Name | Defects Quantity | Left In Stock | Total Quantity
-----------------+--------------+------------------+---------------+----------------
 2               | tomato       | 270 Units        | 50 Units      | 320 Units
 6               | chocolate    | 270 Units        | 50 Units      | 320 Units
 7658            | Water        | 1980 Units       | 50 Units      | 2030 Units
=====================================================================================

Showing the defected products by locations, amounts and reasons defected.
=====================================================================================
 Product Barcode | Product Name | Location        | Quantity  | Date Reported | Reason Defected
-----------------+--------------+-----------------+-----------+---------------+----------------
 2               | tomato       | Store, Shelf A2 | 30 Units  | 2019-04-04    | Expiration Date
 6               | chocolate    | Store, Shelf D1 | 30 Units  | 2019-04-04    | Expiration Date
 7658            | Water        | Store, Shelf U7 | 220 Units | 2019-04-04    | Expiration Date
=====================================================================================

Press ENTER to continue to menu.
```

Defected Products menu

A user can report defected products in the defective products menu section.
He can also view all defects products that recently got out of stock (due to expiration dates or user reports).

Return to the menus and Exit options:
You can always go back to any menu that you want(you have printed instructions for that)
The Exit option will disconnect the current active user and will close the program operation.

Technical Details:

The program was written in Java and uses SQLite database using a JDBC SQLite module.
Additional modules added and used in the program are:

JANSI - Jansi is a small java library that allows you to use ANSI escape codes to format your console output which works even on windows. (Link: JANSI Github repo).

JLine - JLine is a Java library for handling console input. It is similar in functionality to BSD editline and GNU readline but with additional features that bring it in par with ZSH line editor. (Link: JLine Github repo).