


<b>Assignment Case</b>	
<b>JavaH4 Assignment</b>	
<b>Periode Berlaku</b> Semester Ganjil 2023/2024 <b>Valid on</b> Odd Year 2023/2024	<b>Software Laboratory Center</b> <b>Assistant Recruitment 24-1</b>

**Note: Please focus on the main logic and main features!**

*(Splash screen and design are not scored)*

## Soal

Case

### NijiMart

Mysta wants to make a simple program named NijiMart for his online store, he wants to make the program versatile and user-friendly **CRUD** (Create, Read, Update, Delete) program developed in Java console. This program is designed to manage various types of data efficiently using the principles of **object-oriented programming** and **inheritance**. It utilizes **CSV** (Comma-Separated Values) files as the data storage mechanism and there can be **only 2 files**, 1 to store the **users' data**, and 1 to store the **products' data**, allowing users to seamlessly interact with and manipulate data within a text-based environment.

#### ➤ Home Page

- The home page consists of 3 menus, which are **Login**, **Register**, and **Exit**.
- **Prompt** user to **input chosen menu**. **Validate** the input must be **between 1 and 3 inclusively**, and validate the input must be an Integer.

```
NijiMart
=====
1. Login
2. Register
3. Exit
>>
```

Figure 1. Home page

1. If the user chooses **Login (Menu 1)**, then:
  - **Prompt** user to input their **account username and password**.
  - **Validate** the **username** and **password** must be in the **"users.csv"** file, if the user inputs the right credentials **show the user menu based on the user role** and a **greeting message**

with the account username, and if the user inputs the wrong credentials **show an error message**, if the user **input 0** the program will **return to the Home Page (Figure 1)**.

```
Login
=====
Input your username (input 0 to go back): mysta
Input your password (input 0 to go back): konninit
Please input the right credential!
```

Figure 2. Login (Wrong credentials)

- To login using **admin role**, the user can use **credential** below:

Username	<b>admin</b>
Password	<b>admin123</b>

```
Hello, admin
=====
1. Add Product
2. Product List
3. Update Product
4. Delete Product
5. Add Product to Cart
6. Your Cart
7. Checkout
8. Logout
>>
```

Figure 3. Login (Right credentials)

2. If the user chooses **Register (Menu 2)**, then:

- Prompt** user to input their **account username** and **password** with the following constraints, the **username length** must be **between 5-20 characters** and must be **unique**, and the **password length** must be **between 8-20 characters** and **alphanumeric**, if the user didn't meet the requirements **show an error message** based on the error, if the user **input 0** the program will **return to the Home Page (Figure 1)**, if the user registered the user **write the credential** into "**users.csv**" file with the attribute **based on the inheritance table** below.
- Make the **first user** registered to have an **admin role**, and the rest of it has a **regular role**.

Class	Attribute
User	<ul style="list-style-type: none"> <li>username</li> <li>password</li> </ul>

	<ul style="list-style-type: none"> <li>• point</li> <li>• cart</li> </ul>
<b>Admin</b>	-
<b>Regular</b>	<ul style="list-style-type: none"> <li>• loyaltyPoint</li> </ul>

```

Register
=====
Input your username (username length 5-20 characters and unique | 0 to cancel): luca kaneshirow
Input your password (password length 8-20 characters and alphanumeric | 0 to cancel): POGGG555
User registered succesfully..

```

**Figure 4. Register**

```

Register
=====
Input your username (username length 5-20 characters and unique | 0 to cancel): admin
Username must be unique!

```

**Figure 5. Register (Error)**

3. If the user chooses Exit (Menu 3), then:

- Splash a **goodbye message** to the user, then **exit** the program.

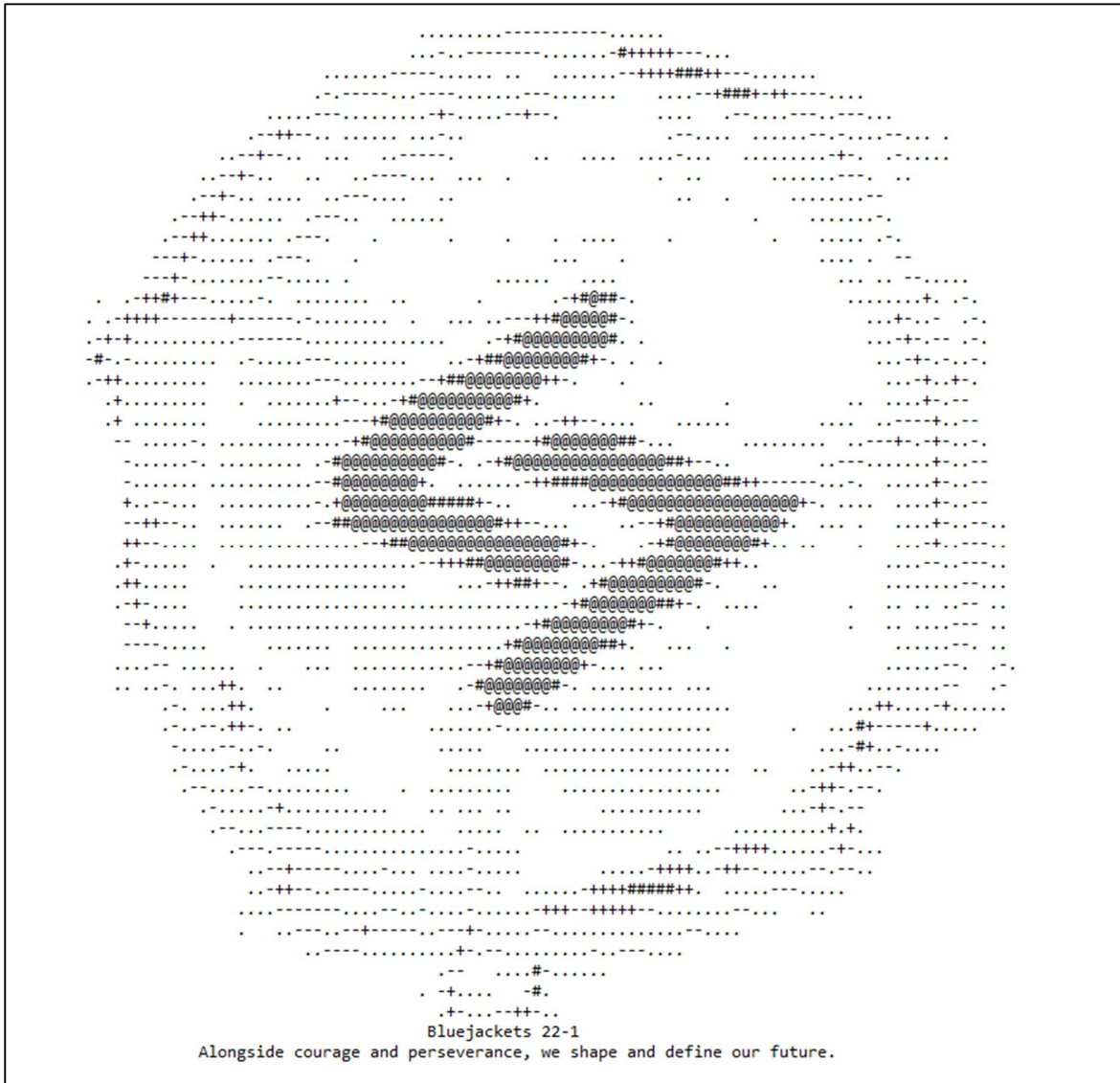


Figure 6. splash screen

## Main Page

After the user logs in, show the main page **based on the user role**, and prompt the user to input the chosen menu. Validate the input must be **between 1 and the last menu number**, and validate that the input must be an **Integer**.

### ➤ Admin Page

```
Hello, admin
=====
1. Add Product
2. Product List
3. Update Product
4. Delete Product
5. Add Product to Cart
6. Your Cart
7. Checkout
8. Logout
>>
```

Figure 7. Main page (Admin)

1. If the user is an **admin** and they choose **Add Product (Menu 1)**, then:
  - Prompt user to input chosen menu. Validate the input must be **between 1 and 4 inclusively**.

```
Add Product
=====
1. Laptop
2. Shirt
3. Novel
4. Cancel
>>
```

Figure 8. Insert product

- If the user **inputs 1**, the program will prompt the user to input a **new laptop with an inheritance** based on the **inheritance table** with the **following constraint**, and if the user doesn't meet the constraint show an **error message** based on the error, if the user met all the requirements write the laptop and its attributes to "**Products.csv**" file.
  - Product ID: "L" + the last product number + 1
  - Name: 5-25 characters (inclusive)
  - Price: 10000-120000 (inclusive)
  - Description: 10-30 characters (inclusive)
  - Screen size: 12.5-18.5 (inclusive)
  - RAM: 4-64 (inclusive)
  - Processor: "ontel" or "SLC" (case sensitive)
  - Warranty period: 1-5 (inclusive)
  - Operating system: "penguin" or "jendela" (case insensitive)

```

Input product name (product name 5-25 characters): laptop 123
Input product price (product price 10000-120000): 12000
Input product description (product description 10-30 characters): laptop gud
Input laptop screen size (laptop screen size 12.5-18.5): 15.6
Input laptop RAM (laptop RAM 4-64): 4
Input laptop processor ("ontel" / "SLC" (case sensitive)): ontel
Input laptop warranty period (laptop warranty period 1-5): 1
Input laptop operating system ("penguin" / "jendela" (case insensitive)): penguin
Product added sucessfully!
Press enter to continue...

```

Figure 9. Insert laptop

- If the user **inputs 2**, the program will prompt the user to input a **new shirt with inheritance** based on the **inheritance table** with the **following constraint**, and if the user doesn't meet the constraint show an **error message** based on the error, if the user met all the requirements write the shirt and its attributes to "**Products.csv**" file.
  - Product ID: "S" + the last product number + 1
  - Name: 5-25 characters (inclusive)
  - Price: 10000-120000 (inclusive)
  - Description: 10-30 characters (inclusive)
  - Color: "black" or "white" or "pink" (case sensitive)
  - Size: "s" or "m" or "l" (case insensitive)
  - Material: "cotton" or "fleece" (case sensitive)
  - Sleeve length: "short" or "long" (case insensitive)
  - Collar type: "turtle neck" or "crew neck" (case sensitive)
  - Fabric pattern: "polka dot" or "checkered" or "strip" (case insensitive)

```

Input product name (product name 5-25 characters): shirt 333
Input product price (product price 10000-120000): 10000
Input product description (product description 10-30 characters): shirt gudd
Input shirt color ("black" / "white" / "pink" (case sensitive)): pink
Input shirt size ("s" / "m" / "l" (case insensitive)): s
Input shirt material ("cotton" / "fleece" (case sensitive)): cotton
Input shirt sleeve length ("short" / "long" (case insensitive)): short
Input shirt collar type ("turtle neck" / "crew neck" (case sensitive)): turtle neck
Input shirt fabric pattern ("polka dot" / "checkered" / "strip" (case insensitive)): strip
Product added sucessfully!
Press enter to continue...

```

Figure 10. Insert Shirt

- If the user **inputs 3**, the program will prompt the user to input a **new novel with inheritance** based on the **inheritance table** with the **following constraint**, and if the user

doesn't meet the constraint show an **error message** based on the error, if the user met all the requirements write the novel and its attributes to **"Products.csv"** file.

- Product ID: "N" + the last product number + 1
- Name: 5-25 characters (inclusive)
- Price: 10000-120000 (inclusive)
- Description: 10-30 characters (inclusive)
- Author name: Starts with "Mr. " or "Mrs. " (case sensitive)
- Genre: "horror" or "thriller" or "mystery" (case insensitive)
- Publication year: 2005-2020 (inclusive)
- Crime type: "murder" or "heist" or "genocide" (case insensitive)
- Detective name: Starts with "Mr. " or "Mrs. " (case insensitive)
- Suspense level: 5-10 (inclusive)

```
Input product name (product name 5-25 characters): novel123
Input product price (product price 10000-120000): 11000
Input product description (product description 10-30 characters): novel 123 gud
Input author name (starts with "Mr. " / "Mrs. " (case sensitive)): Mrs. Rowling
Input novel genre ("horror" / "thriller" / "mystery" (case insensitive)): thriller
Input novel publication year (novel publication year 2005-2020): 2006
Input novel crime type ("murder" / "heist" / "genocide" (case insensitive)): heist
Input detective name (starts with "Mr. " / "Mrs. " (case insensitive)): Mr. Moriarty
Input suspense level (Suspense level 5-10): 6
Product added successfully!
Press enter to continue...
```

Figure 11. Insert novel

Class	Attribute
Product	<ul style="list-style-type: none"> <li>ProductID</li> <li>Name</li> <li>Price</li> <li>Description</li> </ul>
Electronic	<ul style="list-style-type: none"> <li>Screen size</li> <li>RAM</li> <li>Processor</li> <li>Warranty period</li> </ul>
Clothing	<ul style="list-style-type: none"> <li>Size</li> <li>Color</li> <li>Material</li> </ul>
Book	<ul style="list-style-type: none"> <li>Author</li> <li>Genre</li> <li>Publication year</li> </ul>
Laptop	<ul style="list-style-type: none"> <li>Operating system</li> </ul>
Shirt	<ul style="list-style-type: none"> <li>Sleeve length</li> </ul>

	<ul style="list-style-type: none"> <li>• Collar type</li> <li>• Fabric pattern</li> </ul>
Novel	<ul style="list-style-type: none"> <li>• Crime type</li> <li>• Detective</li> <li>• Suspense level</li> </ul>

### Inheritance table

2. If the user is an **admin** and they choose **Product List (Menu 2)**, then:
  - Prompt user to input chosen menu. Validate the input must be **between 1 and 4 inclusively**.

```
NijiMart
=====
1. Laptop
2. Shirt
3. Novel
4. Cancel
>>
```

Figure 12. Product list

- If the user **input 1** and there is **no laptop**, show an **empty message**, otherwise **show all laptop** from the “**products.csv**” file, and prompt the user to input the **product ID** they want to see, if they input a valid product ID show the user the **product detail** of the product, otherwise show an **error message**.

```
+=====+
|                                     |
|               NijiMart              |
|-----+-----+-----+-----+-----+
| ID | Name | Price | Warranty | Processor |
|-----+-----+-----+-----+-----+
| L1 | laptop123 | $10000 | 2Y | ontel |
| L6 | asdasd | $12312 | 5Y | SLC |
| L7 | laptop 123 | $12000 | 1Y | ontel |
|-----+-----+-----+-----+-----+
To see the laptop detail please input the type ID (0 to cancel):
```

Figure 13. View laptop

```
Product ID: L7
Product name: laptop 123
Product price: $12000
Product description: laptop gud
Laptop screensize: 15.6'
Laptop RAM: 4GB
Laptop processor: ontel
Laptop warranty period: 1 year
Laptop operating system: penguin
Press enter to continue...
```

Figure 14. Laptop detail



- If the user **input 2** and there is **no shirt**, show an **empty message**, otherwise, **show all shirt** from the “**products.csv**” file, and prompt the user to input the **product ID** they want to see, if they input a valid product ID show the user the **product detail** of the product, otherwise show an **error message**.

```

+=====+
|                                     |
|                                     |
+=====+
| ID | Name | Price | Size | Material |
+=====+
| S5 | asdasdsa | $12323 | m | cotton |
| S8 | shirt 333 | $10000 | s | cotton |
+=====+
To see the shirt detail please input the type ID (0 to cancel):

```

Figure 15. View shirt

```

Product ID: S8
Product name: shirt 333
Product price: $10000
Product description: shirt gudd
Shirt size: s
Shirt color: pink
Shirt material: cotton
Shirt sleeve length: short
Shirt collar type: turtle neck
Shirt fabric pattern: strip
Press enter to continue...

```

Figure 16. Shirt detail

- If the user **input 3** and there is **no novel**, show an **empty message**, otherwise, **show all novel** from the “**products.csv**” file, and prompt the user to input the **product ID** they want to see, if they input a valid product ID show the user the **product detail** of the product, otherwise show an **error message**.

```

+=====+
|                                     |
|                                     |
+=====+
| ID | Name | Price | Author | Genre |
+=====+
| N2 | 3333 novel | $12000 | Mrs. kit | horror |
| N9 | novel123 | $11000 | Mrs. Rowling | thriller |
+=====+
To see the novel detail please input the type ID (0 to cancel):

```

Figure 17. View novel

```
Product ID: N9
Product name: novel123
Product price: $11000
Product description: novel 123 gud
Novel author: Mrs. Rowling
Novel genre: thriller
Novel publication year: 2006
Novel crime type: heist
Novel detective: Mr. Moriarty
Novel suspense level: 6
Press enter to continue...
```

Figure 18. Novel detail

3. If the user is an **admin** and they choose **Update Product (Menu 3)**, then:
- Prompt user to input chosen menu. Validate the input must be between **1 and 4 inclusively**.

```
NijiMart
=====
1. Laptop
2. Shirt
3. Novel
4. Cancel
>>
```

Figure 19. Update product

- If the user **input 1** and there is **no laptop**, show an **empty message**, otherwise **show all laptop** from the “**products.csv**” file, and prompt the user to input the **product ID** they want to **update**. After that prompt the user to input the **updated laptop attribute** with the **following constraints**, otherwise show an **error message** based on the error, if the user meets all the requirements **rewrite** the laptop and its attributes to the “**products.csv**” file.
  - Name: 5-25 characters (inclusive)
  - Price: 10000-120000 (inclusive)
  - Description: 10-30 characters (inclusive)
  - Screen size: 12.5-18.5 (inclusive)
  - RAM: 4-64 (inclusive)
  - Processor: “ontel” or “SLC” (case sensitive)
  - Warranty period: 1-5 (inclusive)
  - Operating system: “penguin” or “jendela” (case insensitive)

NijiMart				
ID	Name	Price	Warranty	Processor
L1	laptop123	\$10000	2Y	ontel
L6	asdasd	\$12312	5Y	SLC
L7	laptop 123	\$12000	1Y	ontel

Insert the laptop ID you want to update (0 to cancel):

Figure 20. Update laptop

Input product name (product name 5-25 characters): **laptop aser**  
 Input product price (product price 10000-120000): **13500**  
 Input product description (product description 10-30 characters): **acer tonri 12**  
 Input laptop screen size (laptop screen size 12.5-18.5): **15.6**  
 Input laptop RAM (laptop RAM 4-64): **8**  
 Input laptop processor ("ontel" or "SLC" (case sensitive)): **SLC**  
 Input laptop warranty period (laptop warranty period 1-5): **3**  
 Input laptop operating system ("penguin" / "jendela" (case insensitive)): **jendela**

Figure 21. Update laptop prompt

NijiMart				
ID	Name	Price	Warranty	Processor
L1	laptop123	\$10000	2Y	ontel
L6	laptop aser	\$13500	3Y	SLC
L7	laptop 123	\$12000	1Y	ontel

Insert the laptop ID you want to update (0 to cancel):

Figure 22. After update

- If the user **inputs 2** and there is **no shirt**, show an **empty message**, otherwise **show all shirts** from the **"products.csv"** file, and prompt the user to input the **product ID** they want to **update**. After that prompt the user to input the **updated laptop attribute** with the **following constraints**, otherwise show an **error message** based on the error, if the user meets all the requirements **rewrite** the shirt and its attributes to the **"products.csv"** file.
  - Name: 5-25 characters (inclusive)
  - Price: 10000-120000 (inclusive)
  - Description: 10-30 characters (inclusive)
  - Color: "black" or "white" or "pink" (case sensitive)
  - Size: "s" or "m" or "l" (case insensitive)
  - Material: "cotton" or "fleece" (case sensitive)
  - Sleeve length: "short" or "long" (case insensitive)
  - Collar type: "turtle neck" or "crew neck" (case sensitive)

- Fabric pattern: “polka dot” or “checkered” or “strip” (case insensitive)

```

+=====+
|                                     |
|                                     |
+=====+=====+=====+=====+
| ID | Name | Price | Size | Material |
+=====+=====+=====+=====+
| S5 | asdasdsa | $12323 | m | cotton |
| S8 | shirt 333 | $10000 | s | cotton |
+=====+=====+=====+=====+
Insert the shirt ID you want to update (0 to cancel):

```

Figure 23. Update shirt

```

Input product name (product name 5-25 characters): shirt mnh
Input product price (product price 10000-120000): 12300
Input product description (product description 10-30 characters): shirt gudd
Input shirt color ("black" / "white" / "pink" (case sensitive)): white
Input shirt size ("s" / "m" / "l" (case insensitive)): m
Input shirt material ("cotton" / "fleece" (case sensitive)): cotton
Input shirt sleeve length ("short" / "long" (case insensitive)): long
Input shirt collar type ("turtle neck" / "crew neck" (case sensitive)): turtle neck
Input shirt fabric pattern ("polka dot" / "checkered" / "strip" (case insensitive)): polka dot

```

Figure 24. Update shirt prompt

```

+=====+
|                                     |
|                                     |
+=====+=====+=====+=====+
| ID | Name | Price | Size | Material |
+=====+=====+=====+=====+
| S5 | shirt mnh | $12300 | m | cotton |
| S8 | shirt 333 | $10000 | s | cotton |
+=====+=====+=====+=====+
Insert the shirt ID you want to update (0 to cancel):

```

Figure 25. After update

- If the user **input 3** and there is **no novel**, show an **empty message**, otherwise, **show all novel** from the “**products.csv**” file, and prompt the user to input the **product ID** they want to **update**, after that prompt the user to input the **updated laptop attribute** with the **following constraints**, otherwise show an **error message** based on the error, if the user met all the requirements **rewrite** the novel and its attributes to the “**products.csv**” file.
  - Name: 5-25 characters (inclusive)
  - Price: 10000-120000 (inclusive)
  - Description: 10-30 characters (inclusive)
  - Author name: Starts with “Mr. ” or “Mrs. ”(case sensitive)
  - Genre: “horror” or “thriller” or “mystery” (case insensitive)
  - Publication year: 2005-2020 (inclusive)
  - Crime type: “murder” or “heist” or “genocide” (case insensitive)

- Detective name: Starts with “Mr. ” or “Mrs. ”(case insensitive)
- Suspense level: 5-10 (inclusive)

```

+=====+
|                               NijiMart                               |
+=====+=====+=====+=====+=====+=====+
| ID | Name | Price | Author | Genre |
+=====+=====+=====+=====+=====+=====+
| N2 | 3333 novel | $12000 | Mrs. kit | horror |
| N9 | novel123 | $11000 | Mrs. Rowling | thriller |
+=====+=====+=====+=====+=====+=====+
Insert the novel ID you want to update (0 to cancel):

```

Figure 26. Update novel

```

Input product name (product name 5-25 characters): ripper jack
Input product price (product price 10000-120000): 12500
Input product description (product description 10-30 characters): jack the ripper novel
Input author name (starts with "Mr. " / "Mrs. " (case sensitive)): Mr. Cornwell
Input novel genre ("horror" / "thriller" / "mystery" (case insensitive)): horror
Input novel publication year (novel publication year 2005-2020): 2005
Input novel crime type ("murder" / "heist" / "genocide" (case insensitive)): murder
Input detective name (starts with "Mr. " / "Mrs. " (case insensitive)): Mr. Holmes
Input suspense level (Suspense level 5-10): 8

```

Figure 27. Update novel prompt

```

+=====+
|                               NijiMart                               |
+=====+=====+=====+=====+=====+=====+
| ID | Name | Price | Author | Genre |
+=====+=====+=====+=====+=====+=====+
| N2 | ripper jack | $12500 | Mr. Cornwell | horror |
| N9 | novel123 | $11000 | Mrs. Rowling | thriller |
+=====+=====+=====+=====+=====+=====+
Insert the novel ID you want to update (0 to cancel):

```

Figure 28. After update

4. If the user is an **admin** and they choose **Delete Product (Menu 4)**, then:
- Prompt user to input chosen menu. Validate the input must be between **1 and 4 inclusively**.

```

NijiMart
=====
1. Laptop
2. Shirt
3. Novel
4. Cancel
>>

```

Figure 29. Delete product

- If the user **input 1**, show **all laptop** from the “**products.csv**” file, and prompt the user to input the **product ID** they want to **delete**, if the user input a **valid product ID** prompt a **confirmation message** to the user, if the user input “**Y**” (**case sensitive**) **delete** the product

that have the **product ID** from “products.csv” file, and if the user input “N” (**case sensitive**) **cancel** the process, otherwise show an **error message** based on the error.

```

+=====+
|                                     |
|                                     | NijiMart |
|=====+=====+=====+=====+=====+
| ID | Name | Price | Warranty | Processor |
|=====+=====+=====+=====+=====+
| L1 | laptop123 | $10000 | 2Y | ontel |
| L6 | laptop aser | $13500 | 3Y | SLC |
| L7 | laptop 123 | $12000 | 1Y | ontel |
|=====+=====+=====+=====+=====+
Insert the laptop ID you want to delete (0 to cancel): L1
Are you sure you want to delete this laptop? ("Y" to proceed "N" to cancel | case sensitive): Y
Laptop deleted succesfully!
Press enter to continue...

```

Figure 30. Delete laptop

```

+=====+
|                                     |
|                                     | NijiMart |
|=====+=====+=====+=====+=====+
| ID | Name | Price | Warranty | Processor |
|=====+=====+=====+=====+=====+
| L6 | laptop aser | $13500 | 3Y | SLC |
| L7 | laptop 123 | $12000 | 1Y | ontel |
|=====+=====+=====+=====+=====+
Insert the laptop ID you want to delete (0 to cancel):

```

Figure 31. After delete

- If the user **input 2** and there is **no shirt**, show an **empty message**, otherwise **show all shirt** from the “products.csv” file, and prompt the user to input the **product ID** they want to **delete**, if the user input a **valid product ID** prompt a **confirmation message** to the user, if the user input “Y” (**case sensitive**) **delete** the product that have the **product ID** from “products.csv” file, and if the user input “N” (**case sensitive**) **cancel** the process, otherwise show an **error message** based on the error.

```

+=====+
|                                     |
|                                     | NijiMart |
|=====+=====+=====+=====+=====+
| ID | Name | Price | Size | Material |
|=====+=====+=====+=====+=====+
| S5 | shirt mnh | $12300 | m | cotton |
| S8 | shirt 333 | $10000 | s | cotton |
|=====+=====+=====+=====+=====+
Insert the shirt ID you want to delete (0 to cancel): S5
Are you sure you want to delete this shirt? ("Y" to proceed "N" to cancel | case sensitive): Y
Shirt deleted succesfully!
Press enter to continue...

```

Figure 32. Delete shirt



NijiMart				
ID	Name	Price	Size	Material
S8	shirt 333	\$10000	s	cotton

Insert the shirt ID you want to delete (0 to cancel):

Figure 33. After delete

- If the user input **3** and there is **no novel**, show an **empty message**, otherwise **show all novel** from the “**products.csv**” file, and prompt the user to input the **product ID** they want to **delete**, if the user input a **valid product ID** prompt a **confirmation message** to the user, if the user input “**Y**” (**case sensitive**) **delete** the product that have the **product ID** from “**products.csv**” file, and if the user input “**N**” (**case sensitive**) **cancel** the process, otherwise show an **error message** based on the error.

NijiMart				
ID	Name	Price	Author	Genre
N2	ripper jack	\$12500	Mr. Cornwell	horror
N9	novel123	\$11000	Mrs. Rowling	thriller

Insert the novel ID you want to delete (0 to cancel): **N9**  
 Are you sure you want to delete this novel? ("Y" to proceed "N" to cancel | case sensitive): **Y**  
 Novel deleted succesfully!  
 Press enter to continue...

Figure 34. Delete novel

NijiMart				
ID	Name	Price	Author	Genre
N2	ripper jack	\$12500	Mr. Cornwell	horror

Insert the novel ID you want to delete (0 to cancel):

Figure 35. After delete

5. If the user is an **admin** and they choose **Add product to cart (Menu 5)**, then
  - Prompt user to input chosen menu. Validate the input must be **between 1 and 4 inclusively**.

```

NijiMart
=====
1. Laptop
2. Shirt
3. Novel
4. Cancel
>>

```

Figure 36. Add product to cart page

- If the user **input 1** and there is **no laptop**, show an **empty message**, otherwise show **all laptop** from the “**products.csv**” file, and prompt the user to input the **product ID** they want to **add to the cart**, if the user input a **valid product ID** show the **detail** of the product, and then prompt the user to input the **quantity** they want to **add (maximum of 9)**, and if the user met the requirement **rewrite “users.csv”** file with the **updated user cart**, otherwise show an **error message**.

```

+=====+
|                               |
|                               |
+-----+-----+-----+-----+
| ID | Name | Price | Warranty | Processor |
+-----+-----+-----+-----+
| L6 | laptop aser | $13500 | 3Y | SLC |
| L7 | laptop 123 | $12000 | 1Y | ontel |
+-----+-----+-----+-----+
To see the laptop detail please input the type ID (0 to cancel):

```

Figure 37. Add laptop to cart page

```

Product ID: L6
Product name: laptop aser
Product price: $13500
Product description: acer tonri 12
Laptop screensize: 15.6'
Laptop RAM: 8GB
Laptop processor: SLC
Laptop warranty period: 3 year
Laptop operating system: jendela
Input the quantity you want to add to your cart [max 9] (0 to cancel): 2
Press enter to continue...

```

Figure 38. Add laptop to cart

- If the user **input 2** and there is **no shirt**, show an **empty message**, otherwise **show all shirt** from the “**products.csv**” file, and prompt the user to input the **product ID** they want to **add to the cart**, if the user input a **valid product ID** show the **detail** of the product, and then prompt the user to input the **quantity** they want to **add (maximum of 9)**, and if the user met the requirement **rewrite “users.csv”** file with the **updated user cart**, otherwise show an **error message**.



```

+=====+
|                                     NijiMart                                     |
+=====+=====+=====+=====+=====+=====+
| ID | Name | Price | Size | Material |
+=====+=====+=====+=====+=====+=====+
| S8 | shirt 333 | $10000 | s | cotton |
+=====+=====+=====+=====+=====+=====+
To see the shirt detail please input the type ID (0 to cancel):

```

Figure 39. Add shirt to cart page

```

Product ID: S8
Product name: shirt 333
Product price: $10000
Product description: shirt gudd
Shirt size: s
Shirt color: pink
Shirt material: cotton
Shirt sleeve length: short
Shirt collar type: turtle neck
Shirt fabric pattern: strip
Input the quantity you want to add to your cart [max 9] (0 to cancel): 2
Press enter to continue...

```

Figure 40. Add shirt to cart

- If the user **input 3** and there is **no novel**, show an **empty message**, otherwise **show all novel** from the “**products.csv**” file, and prompt the user to input the **product ID** they want to **add to the cart**, if the user input a **valid product ID** show the **detail** of the product, and then prompt the user to input the **quantity** they want to **add (maximum of 9)**, and if the user met the requirement **rewrite “users.csv”** file with the **updated user cart**, otherwise show an **error message**.

```

+=====+
|                                     NijiMart                                     |
+=====+=====+=====+=====+=====+=====+
| ID | Name | Price | Author | Genre |
+=====+=====+=====+=====+=====+=====+
| N2 | ripper jack | $12500 | Mr. Cornwell | horror |
+=====+=====+=====+=====+=====+=====+
To see the novel detail please input the type ID (0 to cancel):

```

Figure 41. Add novel to cart page

```

Product ID: N2
Product name: ripper jack
Product price: $12500
Product description: jack the ripper novel
Novel author: Mr. Cornwell
Novel genre: horror
Novel publication year: 2005
Novel crime type: murder
Novel detective: Mr. Holmes
Novel suspense level: 8
Input the quantity you want to add to your cart [max 9] (0 to cancel): 2
Press enter to continue...

```

Figure 42. Add novel to cart

6. If the user is an **admin** and they choose **Your cart (Menu 6)**, then:

- ```
=====+
|                               |
|               NijiMart       |
|                               |
+-----+-----+-----+-----+
|   Name   | Quantity | Price | Total |
+-----+-----+-----+-----+
laptop aser	2	13500	$27000
shirt 333	2	10000	$20000
ripper jack	2	12500	$25000
+-----+-----+-----+-----+
Your total is: 72000$
Press enter to continue...
```

7. If the user is an **admin** and they choose **Checkout (Menu 7)**, then:
  - If the user have an **empty cart** show an **empty message**, otherwise show **all product** that are in the **user's cart**, show the **total price** of the products in **their cart**, and then prompt the user with a **confirmation message** if they input **“Y”** **clear** the cart and **delete** all product from the **user cart** in **“users.csv”** file, and **add** a certain amount of **point** to the user account with the following **formula**, and if they input **“N”** **cancel** the checkout process.

```

=====+
|                               |
|               NijiMart       |
|                               |
+-----+-----+-----+-----+
|   Name   |   Quantity   |   Price   |   Total   |
+-----+-----+-----+-----+
laptop aser	2	13500	$27000
shirt 333	2	10000	$20000
ripper jack	2	12500	$25000
+-----+-----+-----+-----+
Your total is: 72000$
Input "Y" to proceed and "N" to cancel (case insensitive): Y
Press enter to continue...

```

8. If the user is an **admin** and they choose **Checkout (Menu 8)**, then:
  - **Log out** the current user, and **show** the **login page**.

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```

Hello, mystaa rias
=====
1. Add Product to Cart
2. Product List
3. Your Cart
4. Checkout
5. Logout
>>

```

Figure 46. Main page (Regular)

1. If the user is a **regular** and they choose **Add product to cart (Menu 1)**, then show same menu like “**Add Product to Cart**” in admin menu.
2. If the user is a **regular** and chooses **Product list (Menu 2)**, then show menu like “**Product List**” in admin menu.
3. If the user is a **regular** and chooses **Your cart (Menu 3)**, then, show menu like “**Your Cart**” in admin menu.
4. If the user is a **regular** and they choose **Checkout (Menu 4)**, then:
  - If the user have an **empty cart** show an **empty message**, otherwise **show all product** that are in the **user's cart**, show the **total price** of the products in their cart, and then prompt the user with a **confirmation message** if they input “**Y**” **clear** the cart and **delete** all product from the **user cart** in “**users.csv**” file, and **add** a certain amount of **point** and **loyalty point** to the user account with the following **formula**, and if they input “**N**” **cancel** the checkout process.

$$\text{Point} = \text{SUM}(\text{price} * 0.01)$$

$$\text{Loyalty point} = \text{SUM}(\text{price} * 0.02)$$

```

=====+
|                                     |
|                               NijiMart |
|-----+-----+-----+-----+
| Name | Quantity | Price | Total |
|-----+-----+-----+-----+
laptop aser	2	13500	$27000
shirt 333	2	10000	$20000
ripper jack	2	12500	$25000
-----+-----+-----+-----+			
Your total is: 72000$
Input "Y" to procees and "N" to cancel (case insensitive): Y
Press enter to continue...

```

Figure 47. Checkout page

5. If the user is a **regular** and they choose **Logout (Menu 5)**, then:
- **Log out** the current user, and show the **login page**.

```
Login
====
Input your username (input 0 to go back):
```

Figure 48. Login page

**Please run the EXE file to see the sample program.**