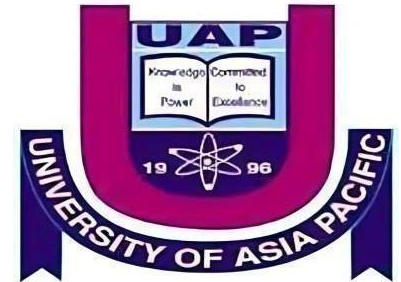


**University of Asia Pacific**  
**Department of Computer Science & Engineering**  
**Spring 2024**



**CSE - 202L**

**Object Oriented Programming I Lab**

**Section: C - 1**

**Project Report**

**Project No.**

01

**Title of the Project: Online Medical Pharmacy Management System**

**Group members: 02**

<i>Sl.</i>	<i>ID</i>	<i>Name</i>
1.	23101122	Md. Fairuz Anam
2.	23101128	Faiaz Masnun Labib

# **TABLE OF CONTENTS**

- 1. Class Diagram***
- 2. Block Diagram***
- 3. GUI Diagram***
- 4. Outputs***

## **1. Class Diagram**

### **1. InvalidOrderException class**

<b><u>PACKAGE</u></b>
med.lib
<b><u>CLASS</u></b>
InvalidOrderException
<b><u>METHOD</u></b>
InvalidOrderException (String orderID)

### **2. InvalidItemException class**

<b><u>PACKAGE</u></b>
med.lib
<b><u>CLASS</u></b>
InvalidItemException
<b><u>METHOD</u></b>
InvalidItemException (String itemID)

### 3. Item Class

#### PACKAGE

med.lib

#### ABSTRACT CLASS

**(Item)**

name: (String)  
id: (String)  
-manufacturer: (String)  
unitPrice: (double)  
quantity: (int)

#### METHOD

Item(name: String, manufacturer: String, unitPrice: double, quantity: int)

addPrefixCodeToId(prefix: String): void  
getName(): String  
setName(name: String): void  
getManufacturer(): String  
setManufacturer(manufacturer: String): void  
getUnitPrice(): double  
setUnitPrice(unitPrice: double): void  
getId(): String  
getQuantity(): int  
increaseQuantity(increasedAmt: int): void  
decreaseQuantity(decreasedAmt: int): boolean  
toString(): String  
getBill(): double

## 4. Order Class

### PACKAGE

med.lib

### CLASS

(Order)

orderId: (String)  
itemId: (String)  
orderBy: (String)  
quantity: (int)  
status: (String)  
orderDate: (LocalDate)  
deliveryDate: (LocalDate)

### METHOD

Order(itemId: String, orderBy: String, quantity: int)

getStatus(): String

setStatus(status: String): void

getItemId(): String

getOrderBy(): String

completeOrder(): void

getOrderId(): String

getQuantity(): int

toString(): String

## 5. MedicalAccessory Class

### PACKAGE

med.lib

### CLASS

**(MedicalAccessory) Extends Item**

modelNo: String  
hasDiscount: boolean

### METHOD

MedicalAccessory(name: String, manufacturer: String, modelNo: String,  
unitPrice: double, quantity: int)

getModelNo(): String

hasDiscount(): boolean

setDiscount(hasDiscount: boolean): void

toString(): String

getBill(): double

## 6. MedPharma Class

### PACKAGE

med.lib

### CLASS

(MedPharma)

name: (String)  
items: ArrayList<Item>  
requestedItems: ArrayList<Order>  
inpStre: (ObjectInputStream)  
outStre: (ObjectOutputStream)

### METHOD

MedPharma(name: String)

getName(): String

findItem(id: String): Item

findOrder(orderId: String): Order

findItems(name: String, manufacturer: String,  
dose: double, unit: String, unitPrice: double,  
expirationDate: String): ArrayList<Medicine>

findExpiredMeds(): ArrayList<Medicine>

findItems(name: String, manufacturer: String,  
modelNo: String, unitPrice: double):  
ArrayList<MedicalAccessory>

findItems(name: String, manufacturer: String):  
ArrayList<Item>

```
addItem(name: String, manufacturer: String,  
dose: double, unit: String, unitPrice: double,  
quantity: int, expirationDate: String): String
```

```
addItem(name: String, manufacturer: String,  
modelNo: String, unitPrice: double, quantity:  
int): String
```

```
acceptOrderRequest(orderId: String): Boolean
```

```
orderItem(medId: String, customerContact:  
String, quantity: int): String
```

```
getMyOrder(customerContact: String):  
ArrayList<Order>
```

```
getNewOrders(): ArrayList<Order>
```



## 7. Medicine Class

### PACKAGE

med.lib

### CLASS

(Medicine)

dose: (double)

unit: (String)

expirationDate: (LocalDate)

### METHOD

+ Medicine(name: String, manufacturer: String,  
dose: double, unit: String, unitPrice:  
double, quantity: int, expirationDate: LocalDate)

Medicine(name: String, manufacturer: String,  
dose: double, unit: String, unitPrice:  
double, quantity: int, expirationDate:String)

getDose(): double

getUnit(): String

getExpirationDate(): LocalDate

hasExpired(): boolean

toString(): String

## **2. BLOCK DIAGRAM**

### **1. Employee Menu**

#### **LOGIN**

- Enter ID (Label)
- Enter Your ID To Login (Text Field)
- Exit / Login (Button)

#### **ADD ITEMS (RB)**

- Medicine / Accessory (RB)
- Name / Manufacturer / Unit Price / Quantity / Model Number / Unit / Dose (Text Field)
- Expiration Date / Day / Month / Year (Label)
- DD / MM / YY (Text Field)
- Add / Login / Menu (Button)

#### **VIEW AND ACCEPT ORDER (RB)**

- View New Orders (Button)
- Tree View (Details)
- Order ID (Text Field)
- Accept Order / Login / Menu (Button)

#### **SEARCH ITEMS (RB)**

- Medicine / Accessory / Both (RB)
- Name / Manufacturer / Unit Price / Model Number / Unit / Dose (Text Field)
- Expiration Date / Day / Month / Year (Label)
- DD / MM / YY (Text Field)
- Search (Button)
- Tree View (Details)
- Login / Menu (Button)

#### **GET EXPIRED MEDICINES (RB)**

- Expired Medicines (Button)
- Table View - (Name, Manufacturer, Unit Price, Dose, Unit, Quantity, Expiration Date)
- Login / Menu (Button)

## **2. Customer Menu**

### **LOGIN**

- Enter ID (Label)
- Enter Your ID To Login (Text Field)
- Exit / Login (Button)

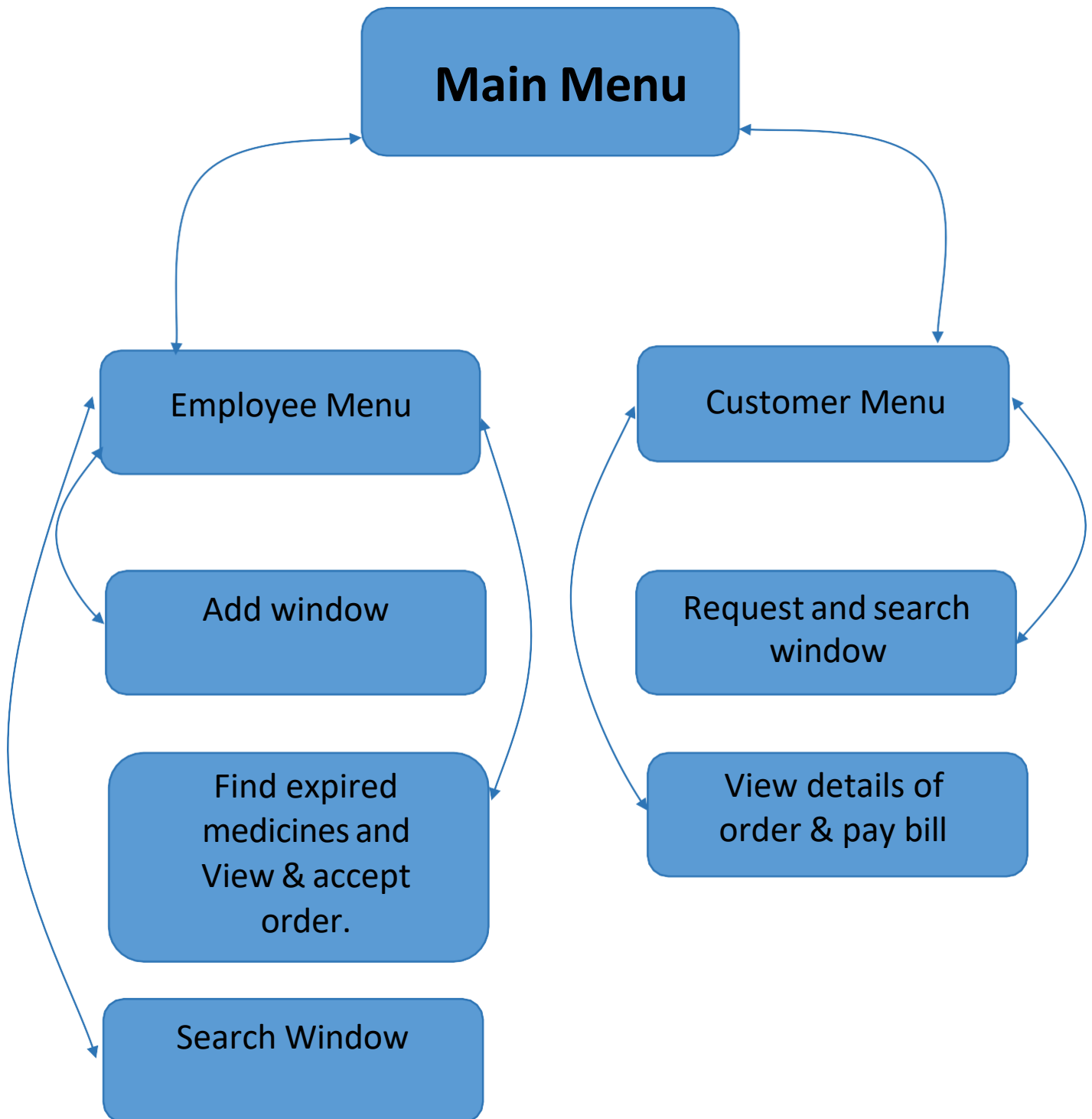
### **SEARCH ITEMS AND REQUEST ORDER (RB)**

- For Searching (Label)
- Name / Manufacturer (Text Field)
- Product Details (Label)
- Tree View (Details)
- For Ordering (Label)
- Product ID / Contact Number / Quantity (Text Field)
- Search / Order / Login / Menu (Button)

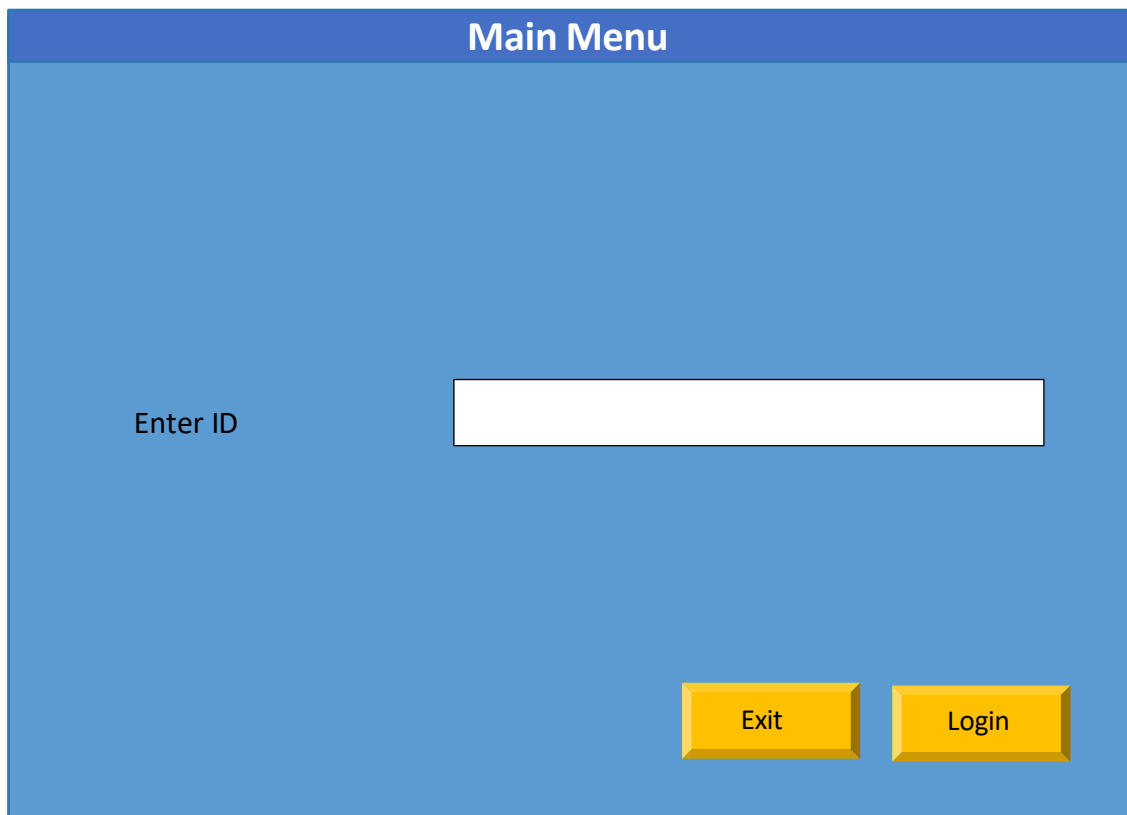
### **VIEW DETAILS OF YOUR ORDER AND PAY BILL (RB)**

- For Searching (Label)
- Contact (Text Field)
- Pay Bill (Label)
- Order ID (Text Field)
- For Order Details (Label)
- Tree View (Details)
- Search / Pay / Login / Menu (Button)

### **3.GUI Diagram**



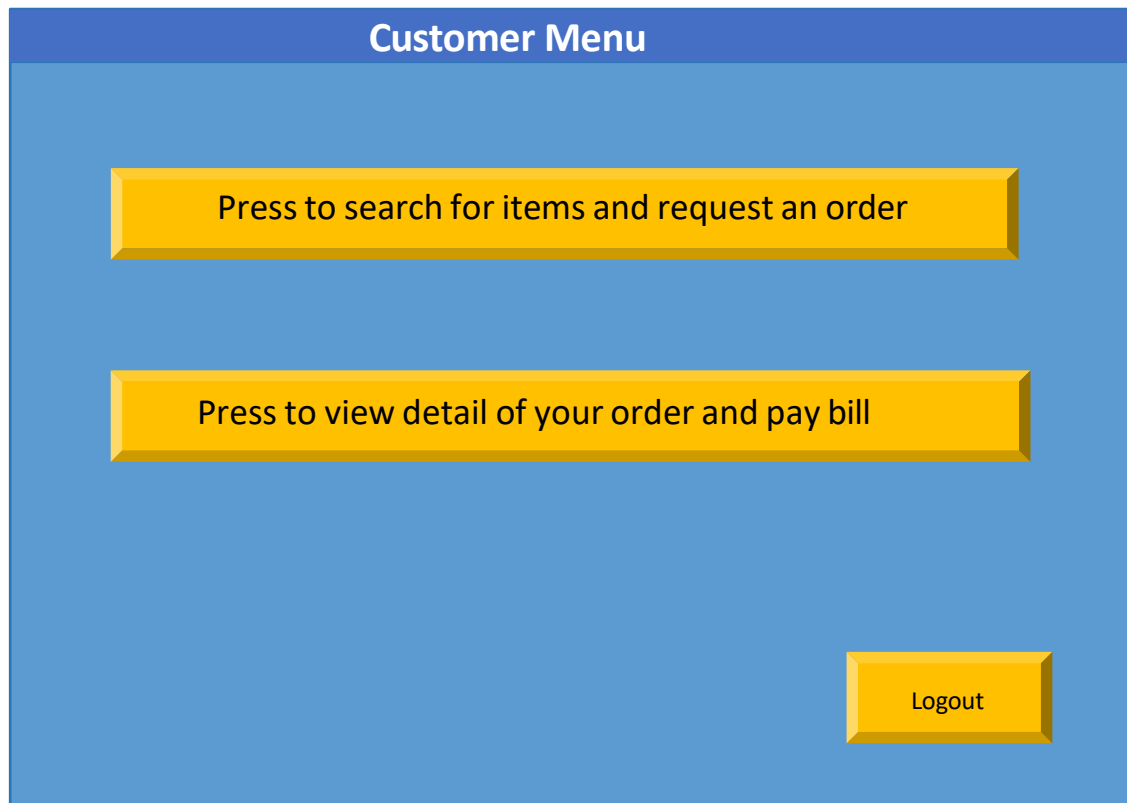
## Main Menu



The Main Menu interface features a blue header bar with the text "Main Menu" in white. Below the header, the background is a solid blue color. On the left side, the text "Enter ID" is displayed in black. To the right of this text is a white rectangular input field with a thin black border. In the bottom right corner, there are two yellow buttons with black text: "Exit" and "Login".

For id= "E", the employee menu will open and for id= "C", customer menu will open.

## Customer Menu



The Customer Menu interface features a blue header bar with the text "Customer Menu" in white. Below the header, the background is a solid blue color. There are two yellow buttons with black text stacked vertically in the center: "Press to search for items and request an order" and "Press to view detail of your order and pay bill". In the bottom right corner, there is a yellow button with black text labeled "Logout".

## Employee Menu

**Employee Menu**

Press to add items

Press to view & accept order

Press to search items

Press to find expired medicines

Logout

## Request and Search Window

**Request and Search**

For Searching	For Ordering
Product name <input type="text"/>	Product ID <input type="text"/>
Manufacturer <input type="text"/>	Contact <input type="text"/>
Product Details <div></div>	Quantity <input type="text"/>
<p>Search</p>	<p>Order</p> <p>Exit</p>

## View details of order & pay bill Window

View details of order & pay bill Window	
<b>For Searching</b>	<b>Order Details</b>
Contact <input type="text"/>	<div></div>
<input type="button" value="Search"/>	
<b>For Paying Bill</b>	
Order ID <input type="text"/>	
<input type="button" value="Pay"/>	<input type="button" value="Exit"/>

## Add window

Add window			
<input type="button" value="Medicine"/>	<input type="button" value="Accessory"/>	<input type="button" value="Add"/>	
Name <input type="text"/>	Unit <input type="text"/>		
Manufacturer <input type="text"/>	Dose <input type="text"/>		
Unit Price <input type="text"/>	Expiration Date		
Amount <input type="text"/>	Day <input type="text"/>	Month <input type="text"/>	Year <input type="text"/>
Model Number <input type="text"/>			
<input type="button" value="Exit"/>			

Text Fields will be deactivated according to the options selected.

## Find expired medicines and View & accept order Window

**Find expired medicines and View & accept order**

Find expired medicines

To View New Orders

Order ID

Accept Order

Exit

## Search Window

**Search Window**

Medicine

Accessory

Both

Name

Manufacturer

Unit Price

Model Number

Unit

Dose

Expiration Date

Day

Month

Year

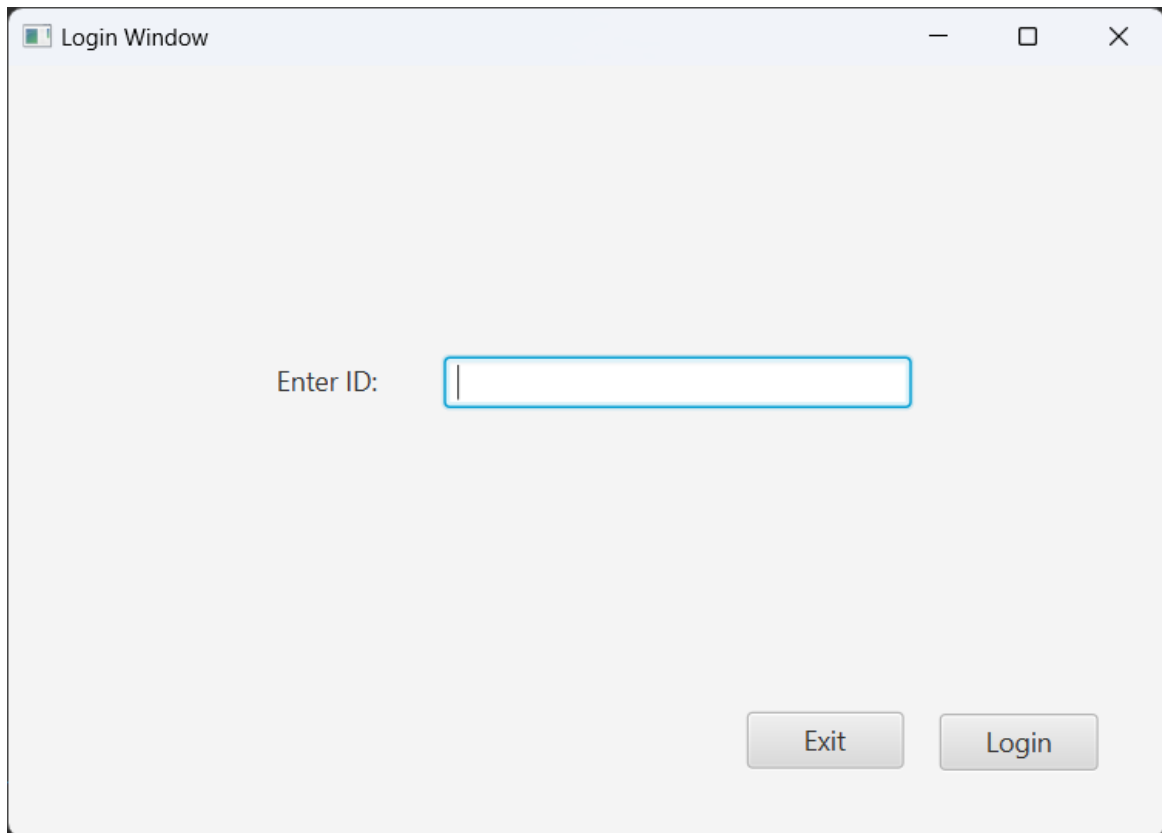
Search

Exit



## 4. OUTPUTS

### Logic Window



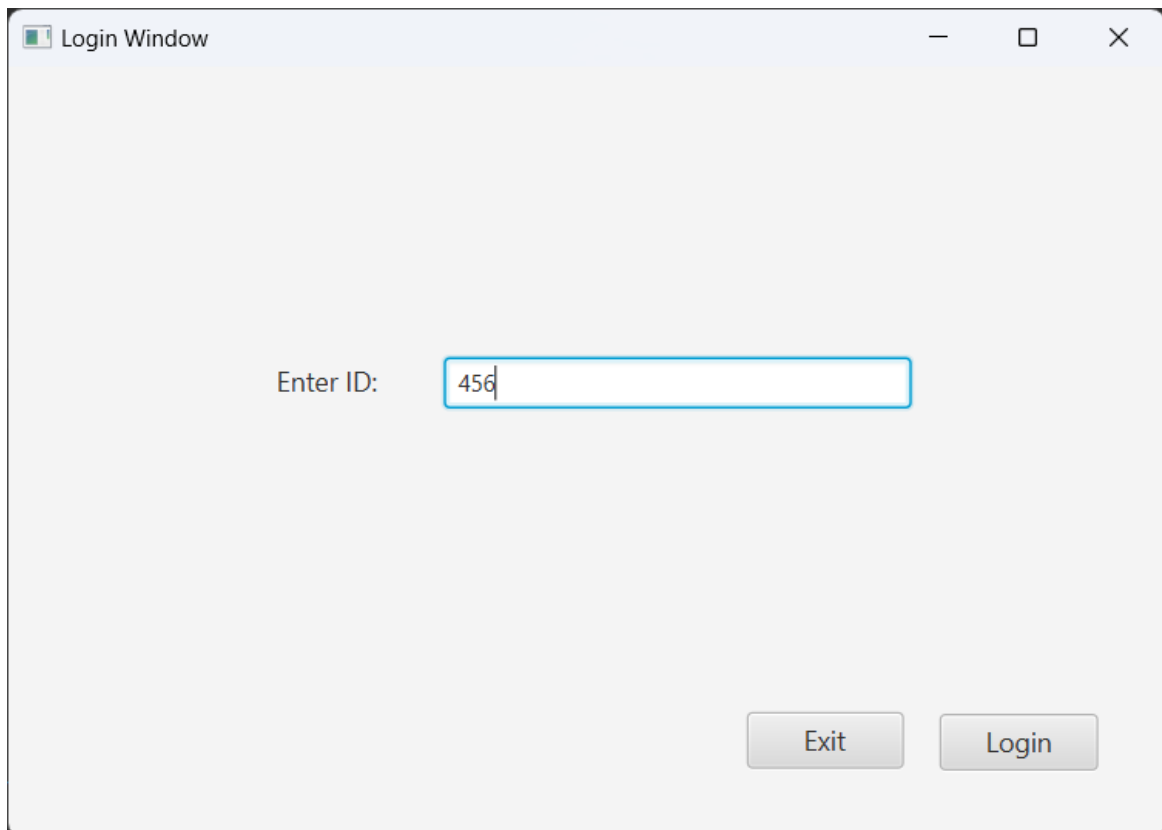
The image shows a screenshot of a software application window titled "Login Window". The window has a standard operating system title bar with a minimize button, a maximize button, and a close button. The main content area is light gray. In the center, there is a label "Enter ID:" followed by a white text input field with a blue border. At the bottom right of the window, there are two buttons: "Exit" and "Login".

Login Window

Enter ID:

Exit Login

## 1. Customer Login Window



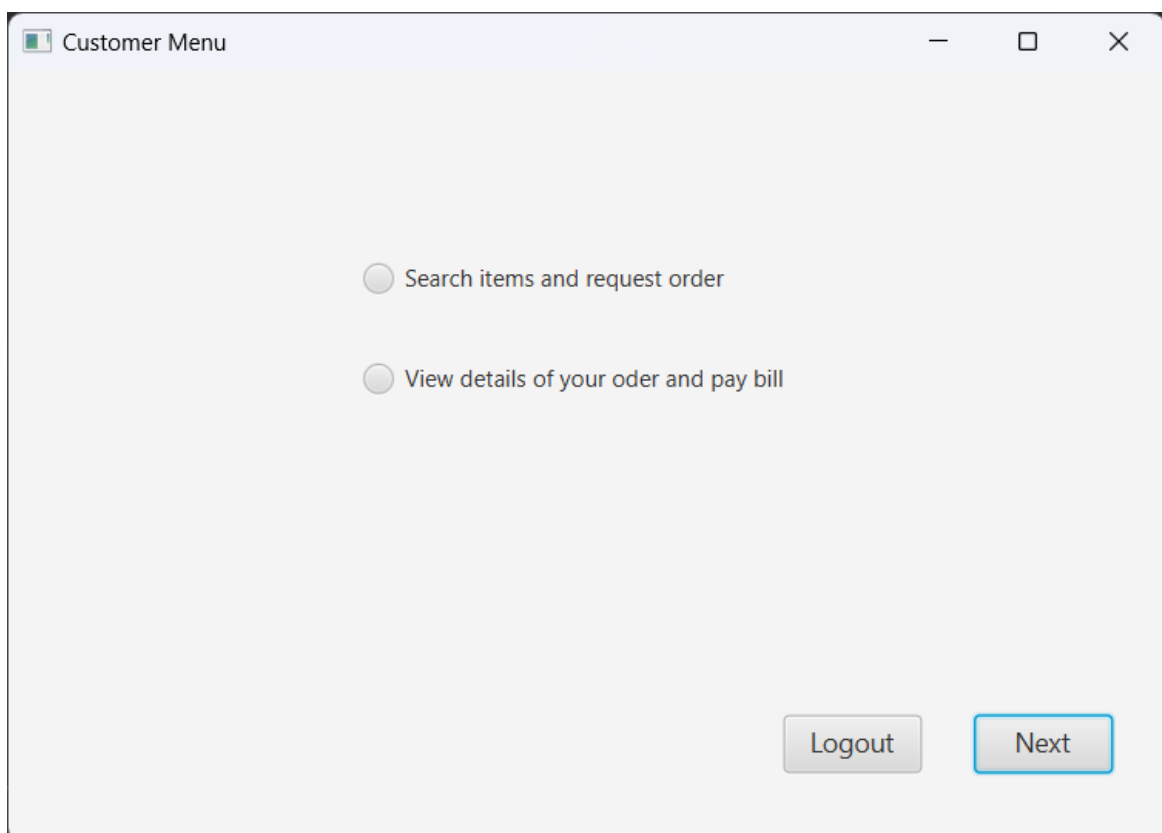
A screenshot of a software window titled "Login Window". The window has a light gray background and a standard Windows-style title bar with minimize, maximize, and close buttons. In the center, there is a label "Enter ID:" followed by a text input field containing the number "456". At the bottom right, there are two buttons: "Exit" and "Login".

Login Window

Enter ID:

Exit Login

## 2. Customer Menu



A screenshot of a software window titled "Customer Menu". The window has a light gray background and a standard Windows-style title bar with minimize, maximize, and close buttons. In the center, there are two radio button options: "Search items and request order" and "View details of your oder and pay bill". At the bottom right, there are two buttons: "Logout" and "Next".

Customer Menu

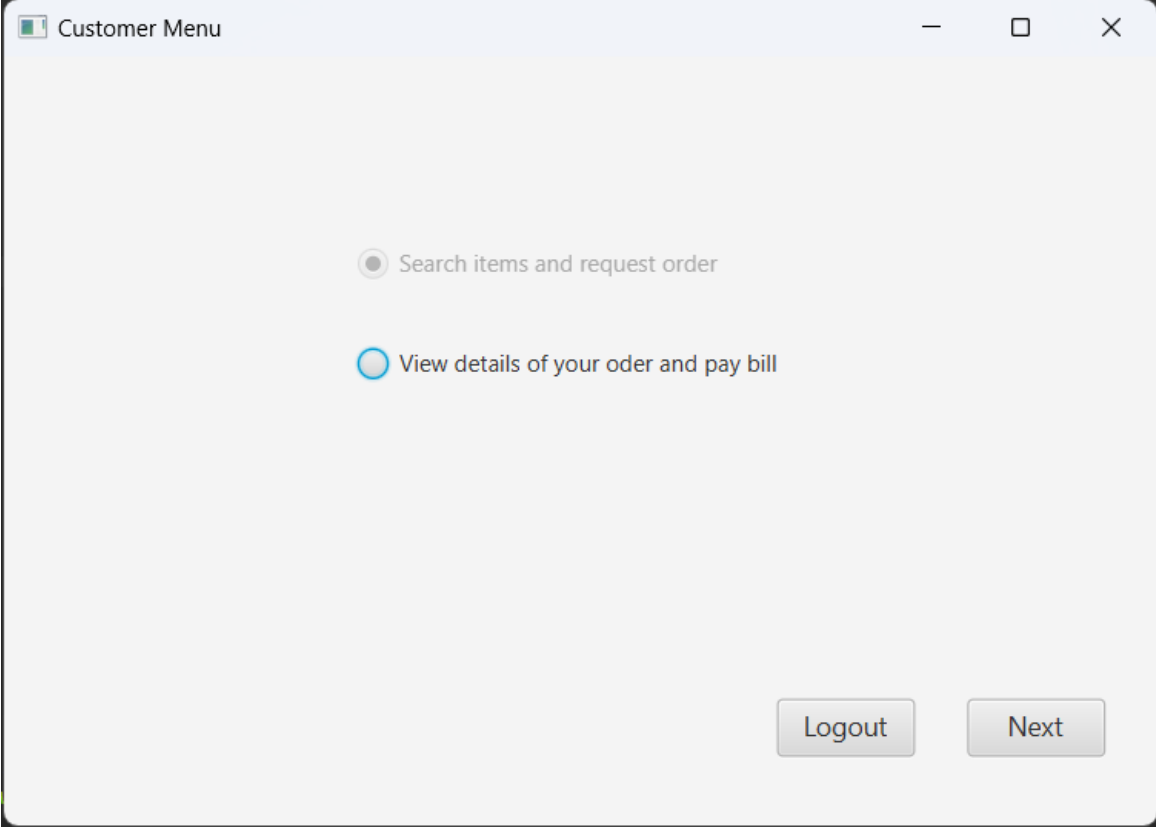
☐ Search items and request order

☐ View details of your oder and pay bill

Logout Next

# 1. Customer Medicine Task

## Search Items & Request Order



Customer Menu

☒ Search items and request order

☐ View details of your order and pay bill

Logout Next

## 1. Customer Search For Medicine

The screenshot shows a web application window titled "Request and Search items". It is divided into two main sections: "For searching" on the left and "For ordering" on the right.

**For searching:**

- Two input fields: "Napa" and "Square". The "Square" field is currently active with a blue border.
- A "Search" button is located at the bottom of this section.
- Product details:** A scrollable area containing:
  - ▼ All products are:
  - ▼ Medicines:
    - 1. Name: Napa, Manufacturer: square, ID: M-7393, Uni
  - Medical Accessories:

**For ordering:**

- Three input fields: "Product ID", "Contact Number", and "Quantity".
- An "Order" button.
- At the bottom, "Login" and "Menu" buttons.

## 2. Customer Order

This screenshot shows the same "Request and Search items" window, but now the "For ordering" section is populated with data, and the "Product details" section is highlighted with a blue border.

**For searching:**

- The "Napa" and "Square" input fields are now populated with their respective values.
- The "Search" button remains at the bottom.

**Product details:** The scrollable area is highlighted with a blue border and contains the same information as in the first screenshot.

**For ordering:**

- The "Product ID" field is now populated with "M-7393".
- The "Contact Number" field is now populated with "01988887710".
- The "Quantity" field is now populated with "1".
- The "Order" button is still present.
- The "Login" and "Menu" buttons are at the bottom.

### 3. Customer Order ID

The screenshot shows a web application window titled "Request and Search items". It is divided into two main sections: "For searching" on the left and "For ordering" on the right. In the "For searching" section, there are two input fields containing "Napa" and "Square". Below them is a "Product details" section with a dropdown menu showing "All products are:" and "Medicines:". Under "Medicines", there is a list item: "1. Name: Napa, Manufacturer: square, ID: M-7393, Uni". Below this is a "Medical Accessories:" section. In the "For ordering" section, there are three input fields containing "M-7393", "01988887710", and "1". Below these is a blue "Order" button. At the bottom of the window, there are "Search", "Login", and "Menu" buttons. A message dialog box is overlaid in the center, titled "Message", with an information icon and the text "O-554". It has an "OK" button.

Request and Search items

For searching

Napa Square

Product details

▼ All products are:

▼ Medicines:

1. Name: Napa, Manufacturer: square, ID: M-7393, Uni

Medical Accessories:

For ordering

M-7393

01988887710

1

Order

Search Login Menu

Message

O-554

OK

### View Details Of Your Oder & Pay Bill

The screenshot shows a web application window titled "Customer Menu". It contains two radio button options. The first option is "Search items and request order" with an unselected radio button. The second option is "View details of your oder and pay bill" with a selected radio button. At the bottom right, there are "Logout" and "Next" buttons.

Customer Menu

☐ Search items and request order

☒ View details of your oder and pay bill

Logout Next

#### 4. Customer Order Search

The screenshot shows a window titled "View Order and Pay Bill". It has two main sections: "For searching" and "Pay Bill".

**For searching:** Contains a text input field with the value "01988887710" and a "Search" button.

**Pay Bill:** Contains a text input field labeled "OrderID" and a "Pay" button.

**For order details:** A large text area displaying the text: "Order [orderId=O-554, itemId=M-7393, orderBy=01988887710, quantity=1,". Below this text area is a horizontal scrollbar.

At the bottom right of the window are two buttons: "Login" and "Menu".

#### 5. Customer Pay Bill & Medicine Cost

This screenshot shows the same "View Order and Pay Bill" window as in the previous image, but with a message dialog box overlaid in the center.

**For searching:** The text input field still contains "01988887710", but the "Search" button is now disabled (grayed out).

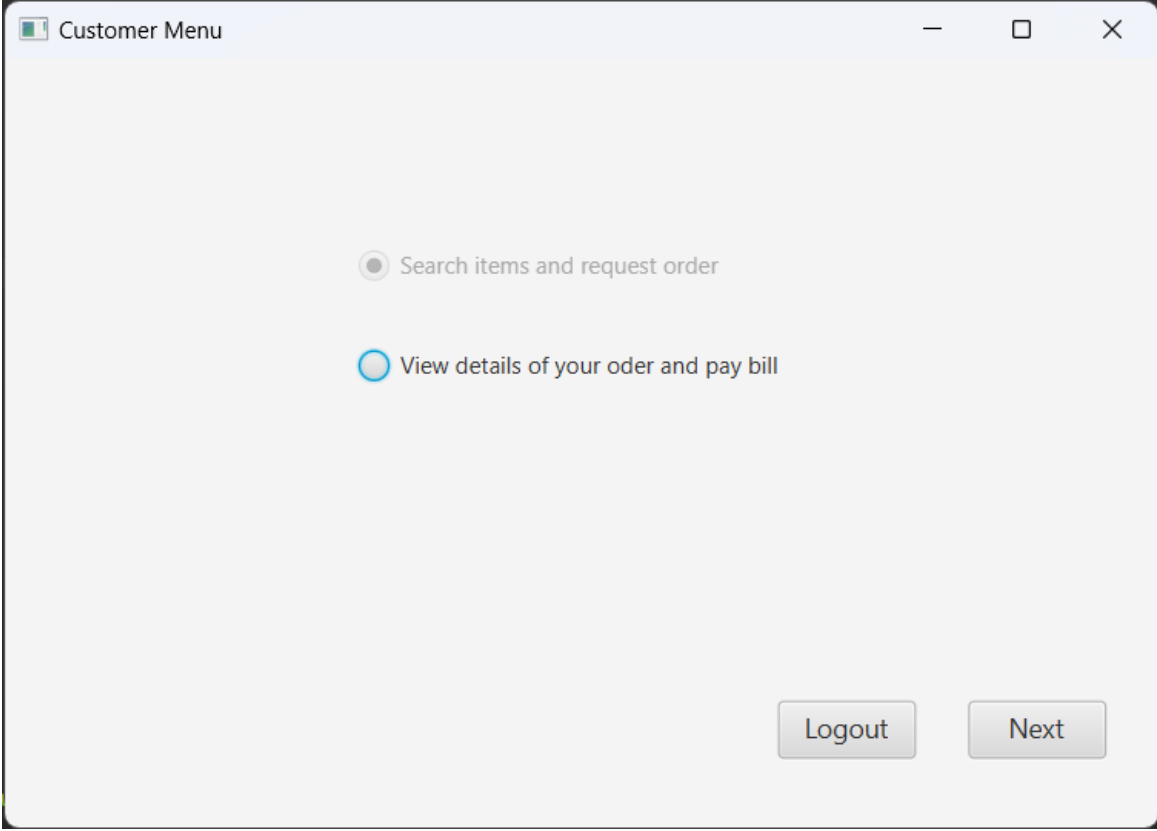
**Pay Bill:** The "OrderID" input field now contains the value "O-554", and the "Pay" button is highlighted with a blue border.

**Message Dialog Box:** A small window titled "Message" with a close button (X) in the top right corner. It contains an information icon (i) and the text "Your total cost is: 300.0". At the bottom of the dialog is an "OK" button.

The "For order details" section and the "Login" and "Menu" buttons at the bottom remain visible behind the dialog box.

## 2. Customer Medicine Accessory Task

### Search Items & Request Order



Customer Menu

☒ Search items and request order

☐ View details of your order and pay bill

Logout Next

## 1. Customer Search For Medicine Accessory

The screenshot shows a web application window titled "Request and Search items". It is divided into two main sections: "For searching" on the left and "For ordering" on the right.

**For searching:**

- There are two input fields: "Injection" (containing the text "Injection") and "Lacix" (containing the text "Lacix").
- Below these fields is a "Product details" section with a list of products.
- The list is titled "▼ All products are:" and contains two sub-sections:
  - Medicines:
  - ▼ Medical Accessories:
    - 1. Name: nebulizer, Manufacturer: square, ID: MA-3909
    - 2. Name: Pressure Machine, Manufacturer: Square, ID:
    - 3. Name: Injection, Manufacturer: Lacix, ID: MA-8475, U

- A "Search" button is located at the bottom of the "For searching" section.

**For ordering:**

- There are three input fields: "Product ID", "Contact Number", and "Quantity".
- An "Order" button is located below these fields.
- At the bottom of the "For ordering" section are "Login" and "Menu" buttons.

## 2. Customer Search Found

The screenshot shows the same "Request and Search items" application window. In this state, the search results for "Lacix" are displayed.

**For searching:**

- The "Injection" field now contains the text "Name" and the "Lacix" field contains the text "Manufacturer".
- The "Product details" section shows the search results:
- The list is titled "▼ All products are:" and contains two sub-sections:
  - Medicines:
  - ▼ Medical Accessories:
    - 1. Name: Injection, Manufacturer: Lacix, ID: MA-8475, U

- A "Search" button is located at the bottom of the "For searching" section.

**For ordering:**

- The "Product ID", "Contact Number", and "Quantity" fields are empty.
- The "Order" button is located below these fields.
- The "Login" and "Menu" buttons are at the bottom.



### 3. Customer Order ID

Request and Search items

For searching

Name

Manufacturer

Product details

▼ All products are:

Medicines:

▼ Medical Accessories:

1. Name: Injection, Manu

Search

For ordering

MA-8475

019888887710

2

Order

Login

Menu

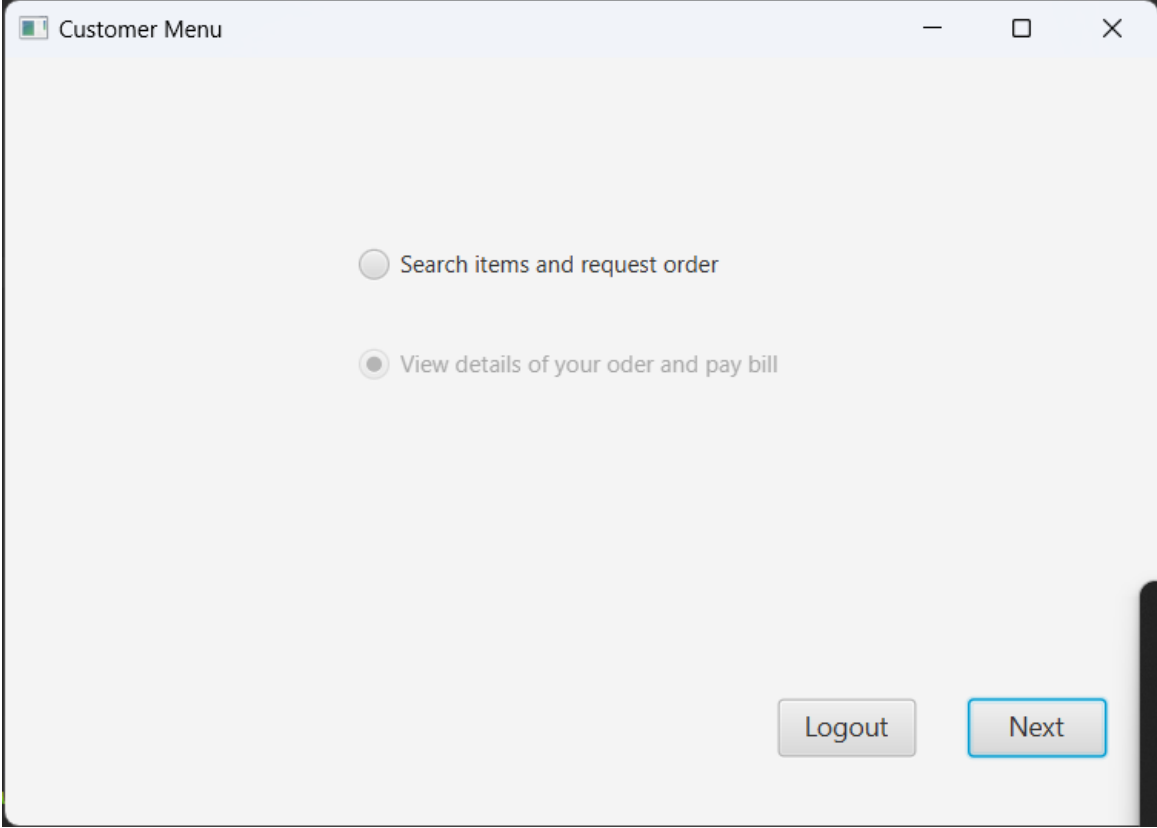
Message

i

O-106

OK

## View Details Of Your Oder & Pay Bill



A screenshot of a software window titled "Customer Menu". It features two radio buttons for navigation: "Search items and request order" (unselected) and "View details of your oder and pay bill" (selected). At the bottom right, there are two buttons: "Logout" and "Next".

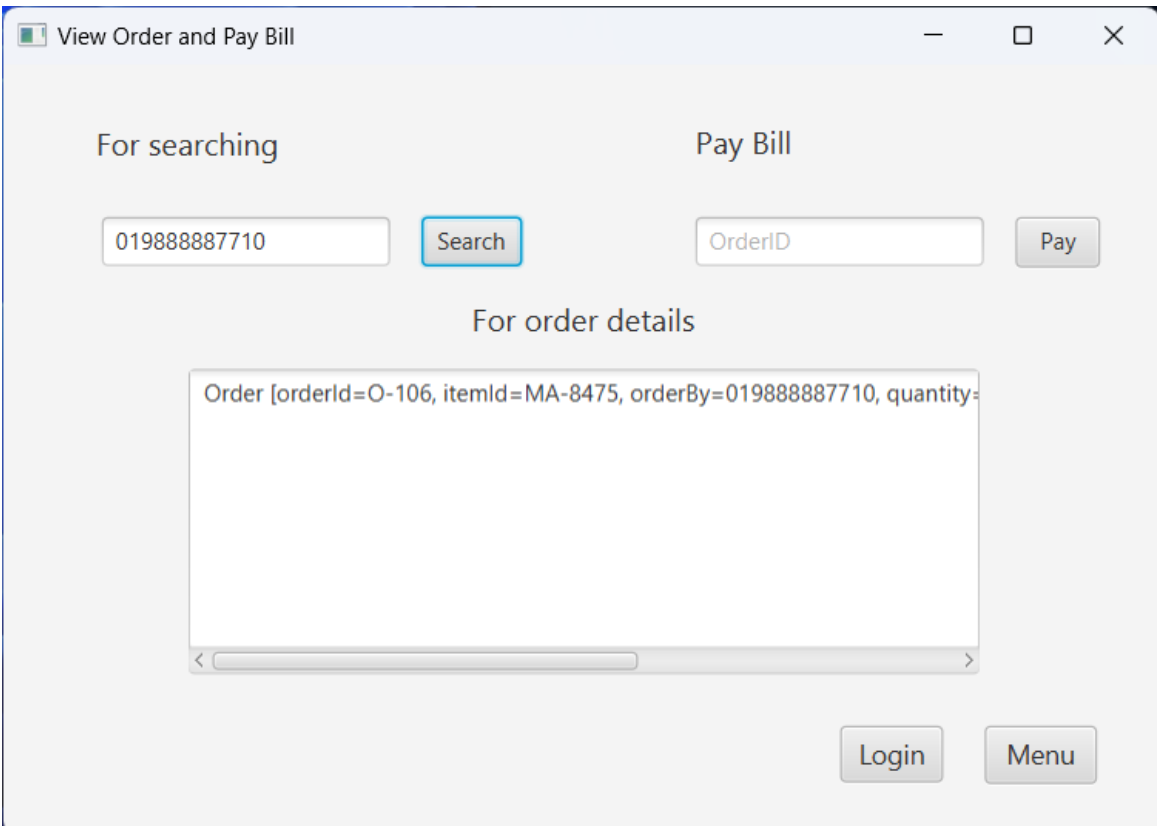
Customer Menu

☐ Search items and request order

☒ View details of your oder and pay bill

Logout Next

## 4. Customer Order Search



A screenshot of a software window titled "View Order and Pay Bill". It is divided into two main sections. The "For searching" section contains a text input field with "019888887710" and a "Search" button. The "Pay Bill" section contains an "OrderID" input field and a "Pay" button. Below these is a section titled "For order details" which contains a scrollable text area displaying the text: "Order [orderId=O-106, itemId=MA-8475, orderBy=019888887710, quantity=...". At the bottom right, there are "Login" and "Menu" buttons.

View Order and Pay Bill

For searching

019888887710 Search

Pay Bill

OrderID Pay

For order details

Order [orderId=O-106, itemId=MA-8475, orderBy=019888887710, quantity=...

Login Menu

## 5. Customer Pay Bill & MA Cost

View Order and Pay Bill

For searching

019888887710

Search

Pay Bill

O-106

Pay

For order details

Order [orderId=O-106, itemId=MA-8475, orderBy=019888887710, quantity=

Message

i

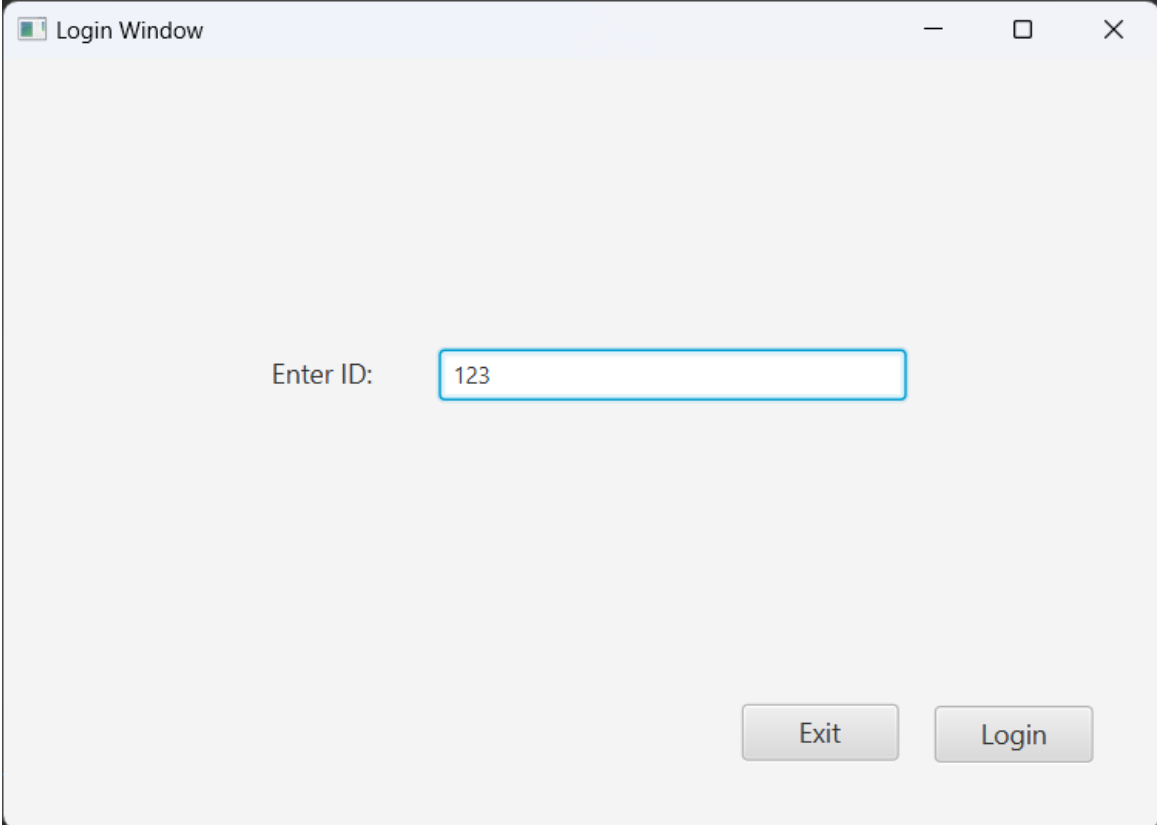
Your total cost is: 40.0

OK

Login

Menu

## 1. Employee Login Window



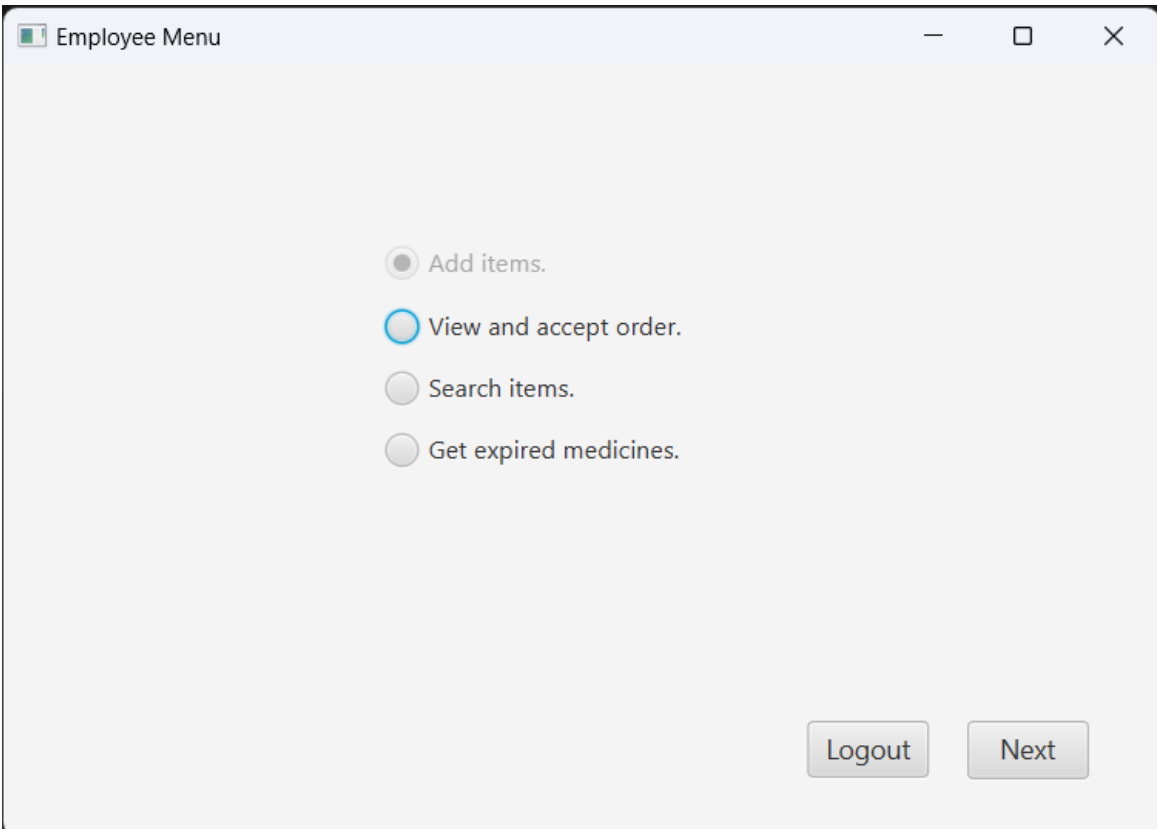
A screenshot of a software window titled "Login Window". The window has a light gray background and standard window controls (minimize, maximize, close) in the top right corner. In the center, there is a label "Enter ID:" followed by a text input field containing the number "123". At the bottom right, there are two buttons: "Exit" and "Login".

Login Window

Enter ID: 123

Exit Login

## 2. Add Items Options



A screenshot of a software window titled "Employee Menu". The window has a light gray background and standard window controls (minimize, maximize, close) in the top right corner. In the center, there are four radio button options: "Add items.", "View and accept order.", "Search items.", and "Get expired medicines.". The "View and accept order." option is selected, indicated by a blue outline around its radio button. At the bottom right, there are two buttons: "Logout" and "Next".

Employee Menu

☒ Add items.  
☒ View and accept order.  
☐ Search items.  
☐ Get expired medicines.

Logout Next

### 3. Employee Medicine & Exp Date Add

**Add Medicines & Medical Accessory**

☒ Medicine ☐ Accessory Add

Name:

Strength:

Quantity:

Model Number:

Expiration Date:

Day	Month	Year
<input type="text" value="12"/>	<input type="text" value="12"/>	<input type="text" value="2024"/>

**Message** ×

i **M-9686**

OK

Login Menu

### 4. Employee Medicine Accessory Add

**Add Medicines & Medical Accessory**

☐ Medicine ☒ Accessory Add

Name:

Strength:

Quantity:

Model Number:

Unit:

Dose:

Expiration Date:

Day	Month	Year
<input type="text" value="DD"/>	<input type="text" value="MM"/>	<input type="text" value="YY"/>

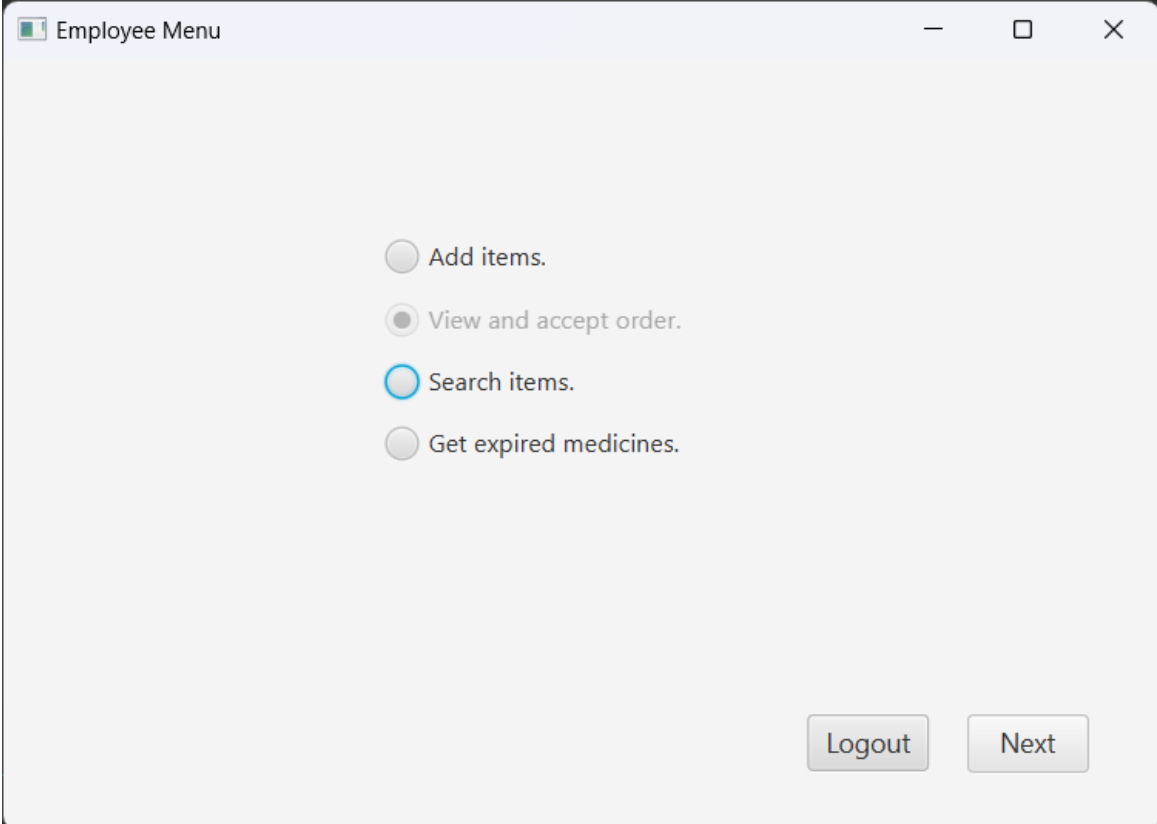
**Message** ×

i **MA-6469**

OK

Login Menu

## 5. View & Accept Order Option



Employee Menu

☐ Add items.

☒ View and accept order.

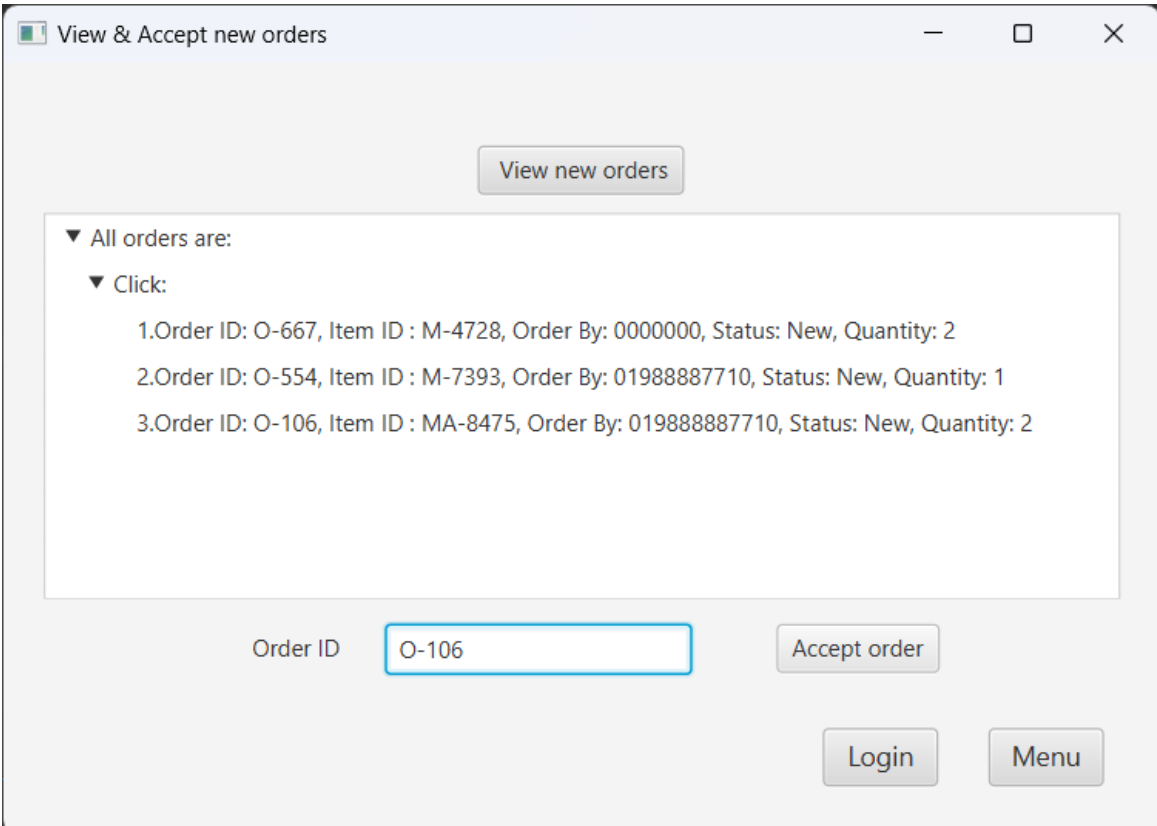
☐ Search items.

☐ Get expired medicines.

Logout Next

This screenshot shows a window titled "Employee Menu". It contains four radio button options: "Add items.", "View and accept order." (which is selected), "Search items.", and "Get expired medicines.". At the bottom right, there are two buttons: "Logout" and "Next".

## 6. View & Order Accept



View & Accept new orders

View new orders

▼ All orders are:

▼ Click:

- 1.Order ID: O-667, Item ID : M-4728, Order By: 0000000, Status: New, Quantity: 2
- 2.Order ID: O-554, Item ID : M-7393, Order By: 01988887710, Status: New, Quantity: 1
- 3.Order ID: O-106, Item ID : MA-8475, Order By: 019888887710, Status: New, Quantity: 2

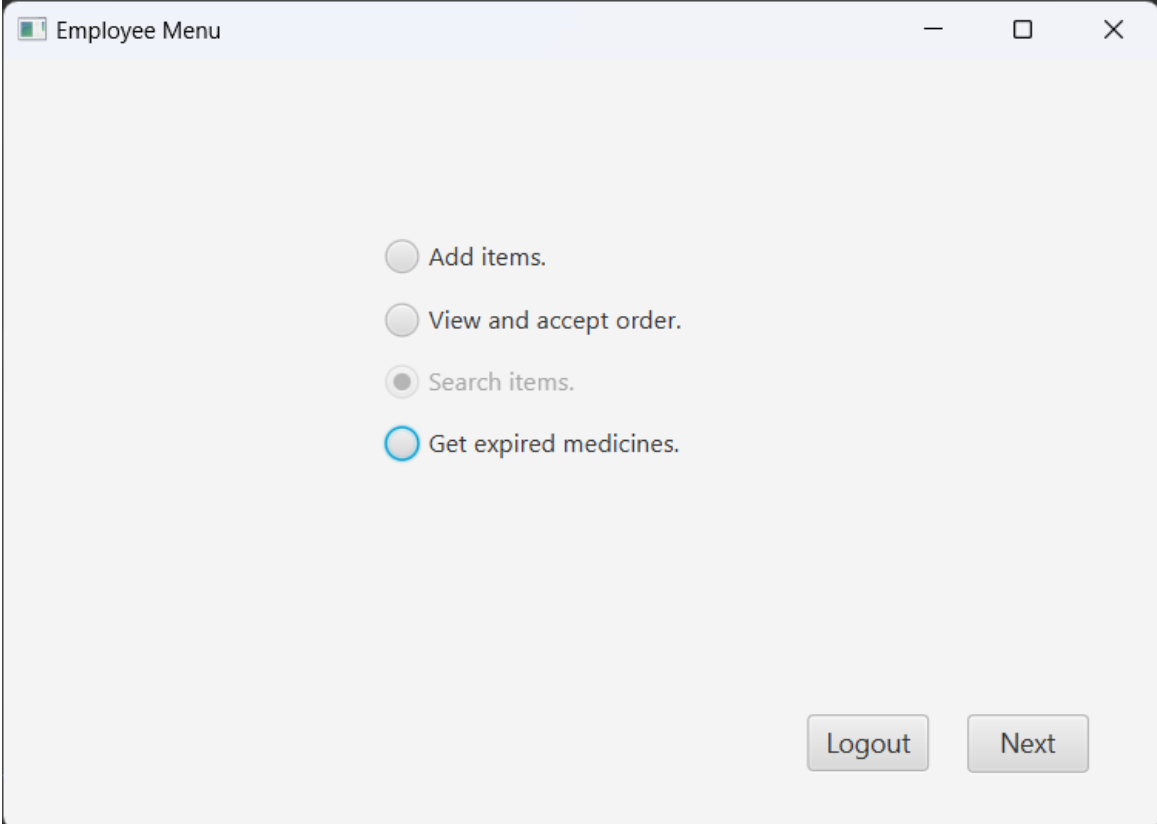
Order ID

Accept order

Login Menu

This screenshot shows a window titled "View & Accept new orders". At the top, there is a "View new orders" button. Below it, a section titled "▼ All orders are:" contains a list of three orders under the heading "▼ Click:". The orders are: 1. Order ID: O-667, Item ID: M-4728, Order By: 0000000, Status: New, Quantity: 2; 2. Order ID: O-554, Item ID: M-7393, Order By: 01988887710, Status: New, Quantity: 1; 3. Order ID: O-106, Item ID: MA-8475, Order By: 019888887710, Status: New, Quantity: 2. At the bottom, there is a label "Order ID" followed by a text input field containing "O-106". To the right of the input field is an "Accept order" button. At the bottom right, there are two more buttons: "Login" and "Menu".

## 7. Search Items Option



Employee Menu

☐ Add items.

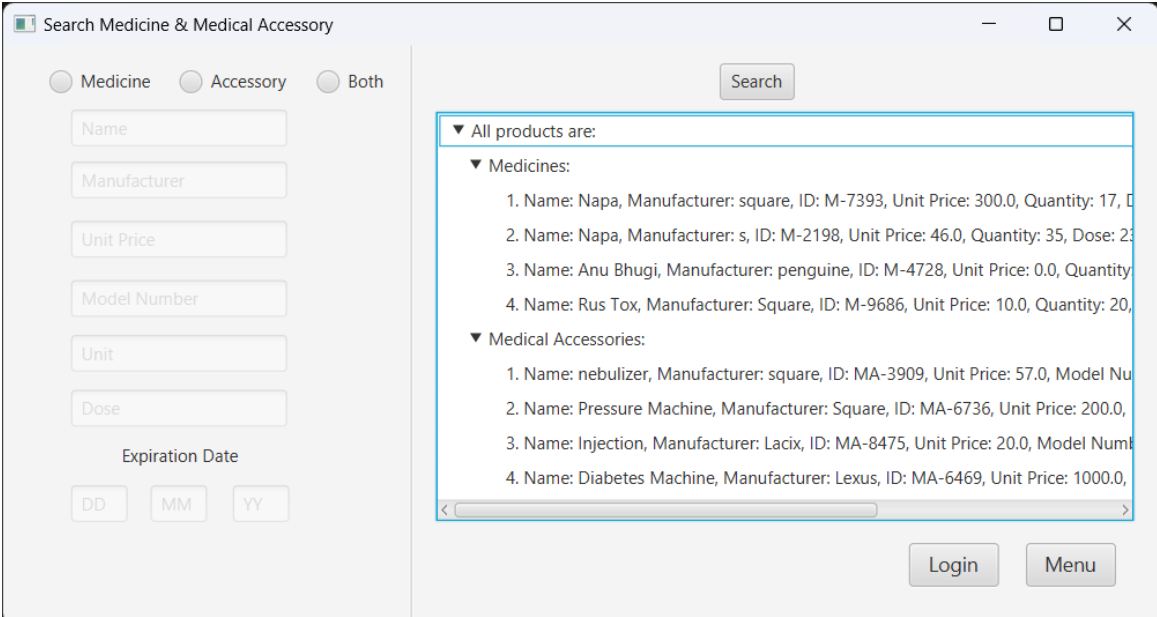
☐ View and accept order.

☒ Search items.

☐ Get expired medicines.

Logout Next

## 8. Search Items



Search Medicine & Medical Accessory

☐ Medicine ☐ Accessory ☐ Both

Search

Name

Manufacturer

Unit Price

Model Number

Unit

Dose

Expiration Date

DD MM YY

▼ All products are:

▼ Medicines:

1. Name: Napa, Manufacturer: square, ID: M-7393, Unit Price: 300.0, Quantity: 17, D
2. Name: Napa, Manufacturer: s, ID: M-2198, Unit Price: 46.0, Quantity: 35, Dose: 23
3. Name: Anu Bhugi, Manufacturer: penguin, ID: M-4728, Unit Price: 0.0, Quantity:
4. Name: Rus Tox, Manufacturer: Square, ID: M-9686, Unit Price: 10.0, Quantity: 20,

▼ Medical Accessories:

1. Name: nebulizer, Manufacturer: square, ID: MA-3909, Unit Price: 57.0, Model Nu
2. Name: Pressure Machine, Manufacturer: Square, ID: MA-6736, Unit Price: 200.0,
3. Name: Injection, Manufacturer: Lacix, ID: MA-8475, Unit Price: 20.0, Model Num
4. Name: Diabetes Machine, Manufacturer: Lexus, ID: MA-6469, Unit Price: 1000.0,

Login Menu

## 9. Both Search items

Search Medicine & Medical Accessory

☐ Medicine ☐ Accessory ☒ Both

Diabetes Machine

Lexus

Unit Price

Model Number

Unit

Dose

Expiration Date

DD MM YY

Search

▼ All products are:

Medicines:

▼ Medical Accessories:

1. Name: Diabetes Machine, Manufacturer: Lexus, ID: MA-6469, Unit Price: 1000.0,

Login Menu

## 10. Get Exp Medicine

Employee Menu

☐ Add items.

☐ View and accept order.

☐ Search items.

☒ Get expired medicines.

Logout Next



## 11. Exp Medicine List

Expired Medicines

Expired Medicines

Name	Manufacturer	Unit Price	Dose	Unit	Quantity	Expiration Date
Napa	square	300.0	10.0	2	17	2024-08-09
Napa	s	46.0	234.0	547	35	2024-12-09
Rus Tox	Square	10.0	2.0	30	20	2024-12-12

<

>

Login

Menu