LONDON METROPOLITAN UNIVERSITY

ITAHARI INTERNATIONAL COLLEGE

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CS4005NT Emerging programming and platforms

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I confirm that I understand my coursework needs to be submitted online via Google Classroom under the relevant module page before the deadline for my assignment to be accepted and marked. I am fully aware that late submissions will be treated as non-submission and a mark of zero will be awarded.

ABSTRACT

This report includes various aspects regarding the development of an information system application that is designed for Pharmastash. This has been facing problems for effective and efficient management of records for various medical supplies. All tasks in the coursework were divided into each group member who was performed by discussing the work as a team.

Firstly, a development task was carried out for which NetBeans IDE was used. During, the GUI design, various SWING components were used along with some images and icons. After the GUI design coding part was quite challenging which took more time than expected. For validating the work as per the question paper, general testing was carried out and the report of testing with screenshots is prepared.

After development and testing, the final task is to prepare a report by merging the work done by group members. Here, the report consists of an explanation about the use of binary search algorithm during the development phase with the representation of diagram, algorithm steps, flowchart, and Big ‘O’ notation. After that, method description is done using a table that represents the method name, syntax, and concise description. The last task testing is comprehended in the report with all test cases and screenshots for each test case.

Emerging Programming Platforms and Technologies:

Proposal

Pharmastash

Pratik Limbu
Mausam Kumar Chaudhary
Shreyak Kharel
Aakshana Subedi

Information About the System

Project Title: Medicine Information system

This is the proposal for the Pharmastash a pharmacy/medicine store. To keep the record of medicine in the pharmacy about the import, supply, stock of the medicine. In the added medicine we have to make the added medicine. In the added medicine, there are elements like serial no, medicine name, medicine type, manufacturer, unit price, and discount.

Features Used In this System

We have used the JAVA language to complete this system because java language is the familiar language with us and it is also the Object-oriented programing language.

Some of the features we have used for this system are as follow:

I) Customer or Student can easily find the College for their further studies
II) Automatically track the location of the college nearby Searching Students or Customers.
III) Can easily create an account for login and register
IV) Can able to join the extra classes if he/she has registered the app
V) Service for the online classes who live out of the country or are not able to join the classes.

Name	**Data type**	**Destination**
Serial no	String	To store the serial number of the medicine
Medicine name	String	To store the name of the medicine
Manufacturer Company name	String	To store the manufacturer of medicine
Medicine type	JComboBox	There are 2 types of medicine i.e., Local (manufactured in Nepal), imported.
Unit price	Double	To store the amount of medicine per unit price
Discount	String	Discount for the purchasing of medicine.

Tools Used to Developed System

Java:

In the application we are going to develop, Java Tools have been used to develop this system, Java is a popular programming language, created in 1995. It is owned by Oracle, and more than 3 billion devices run Java.

It is used for:

- Mobile applications (especially Android apps)
- Desktop applications
- Web applications
- Web servers and application servers
- Games
- Database connection • And much, much more.

NetBeans:

Apache NetBeans is much more than a text editor. It highlights the source code syntactically and semantically. Let's you easily refactor the code, with a range of handy and powerful tools. NetBeans is the IDE. The NetBeans Platform provides all of these out of the box. You don't need to manually code these or other basic features, yourself, anymore. See what some NetBeans-based applications look like. The platform does not add a lot of overhead to your application — but it can save a huge amount of time and work.

JDK:

The Java Development Kit (JDK) is one of three core technology packages used in Java programming, along with the JVM (Java Virtual Machine) and the JRE (Java Runtime Environment). The JDK allows developers to create Java programs that can be executed and run by the JVM and JRE. You would download a Java EE JDK if you were primarily interested in building Java-based web applications. The Java EE JDK includes the Java Servlet specification, which supports HTTP request handling. Every Java EE JDK implementation also requires a container, which is a server that runs

Acknowledgment

We are quite grateful since we were able to finish our Emerging Programming Platforms and Technologies module group assignments within the RTE department's deadline (IIC). Our team members, Pratik Limbu, Shreyak Kharel, Mausam Kumar Chaudhary, and Aakshana Subedi, cannot finish this job without their efforts and cooperation. We also want to express our gratitude to Mr. Pratik Panta, our lecturer, and tutor, for his help and support in completing the assignment, as well as for instructing us in this module. Last but not least, we would like to thank our friends and responders for their support and willingness to spend time with us filling out the given project.

Thank you

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1. Individual tasks

Member Name	Responsibilities
Pratik Limbu	Binary Search
Shreyak Kharel	Merge Sort
Mausam Kumar Chaudhary	Adding into tables
Aakshana Subedi	File handling

Table 1:- Individual Task

2. Introduction

Sun Microsystems develops in mind or physically Java, a high-level object-oriented programming language. Though it happens connected with the World Wide Web, it predates the inception of computer networks. It was designed only accompanying consumer electronics and telecom tools in mind. It first came into view in the 1990s as a component of online hard work, web services, and a platform-agnostic programming system of words for communication. Previously, C++ was usually used to build object-oriented programming languages, but it happens not platform-independent and bears to be recompiled for each CPU. Under the route of James Goslings, a Sun Microsystems team experience by Patrick Naughton and Mike Sheridan sought to create a cultured programming language for something bettered of consumer electrical results or goods created. They sought to develop in mind or physically new software based on network capacity that can run on a variety of user platforms, in the way that computers and electronic novelty. Oak is a platform-

Figure 1: Java Logo

person unsure that God exists software that was developed in mind or physically in 1991. However, by way of patent issues, it was renamed Java, and Java 1.0 was in an official manner released to the public in fashionable 1995. (Roseindia.net, 2018)

2.1 JDK

JDK stands for Java Development Kit, and it contains all of the tools, executables, and binaries wanted to compile, debug, and run a Java program. JDK is platform-distinguishing, including installers for Windows, Mac, and Unix data processing machines. JDK contains two together the JVM and the JRE and is alone responsible for code carrying out of a task. It is the JDK version that reflects the Java version. (tutorialspoint, 2021)

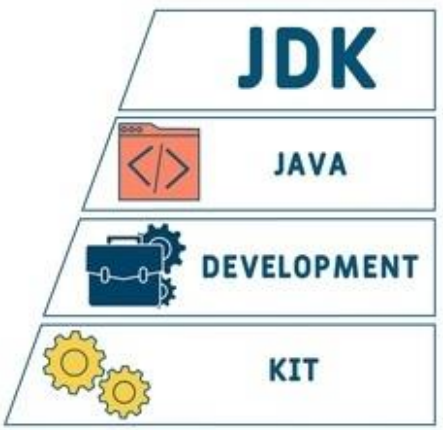


Figure 2:Java Development Kit

2.2 JRE

JRE is a Java runtime environment that is the implementation of JVM, which means that the requirements established in JVM are the start and a corresponding environment for secret language system execution is created. JRE happens mostly made up of Java binaries and other classes that are used to run programs also as JVM does. JRE includes, in addition to Java binaries, several deployment means, user interfaces for interacting accompanying code execution, certain elementary libraries for various range of capabilities, and language, and util-based book repository. (tutorialspoint, 2021)

Figure 3: Java Runtime Environment

2.3 NetBeans

NetBeans is an integrated growth environment (IDE) based on Java (IDE). The phrase in addition to refers to the underlying application platform makeup of the IDE. With features like NetBeans Find Bugs to find and repair held in common Java coding

problems and Debugger to get by complicated rule with field watches, breakpoints, and carrying out of a task monitoring, the IDE is signified to reduce coding errors and allow error adjustment. Although the NetBeans IDE is primarily proposed by Java developers, it in addition to supports C/C++, PHP, Groovy, and HTML5 in addition to Java, JavaScript, and JavaFX. The NetBeans IDE's instrument used to shape and capabilities include a feature-rich word processor with refactoring person who allows himself to be used and code templates, high level and granular views of putting a substance on another, drag and drop GUI design, and versioning via out-of-the-box connection accompanying tools like Git. The NetBeans IDE is compatibly accompanying any operating system that supports a JVM, containing Linux, Windows, and OS X. The underlying NetBeans platform allows for the building of new applications in addition to the extension of current applications through the use of composed of the standardized unit's software part. The NetBeans IDE, being a program running on the NetBeans Platform, is expandable and concede the possibility to be improved to support an additional system of words for communication. Sun Microsystems switched the IDE and Platform to open-source fashionable 2000. Since Sun's acquisition of fashionable 2010, Oracle has carried on to support the NetBeans project. (McKenzie, 2022)

Figure 4: NetBeans Logo

2.4 Swing

Java Swing is a lightweight Java graphical user interface (GUI) widget toolkit with a large number of widgets. It is a component of the Java Foundation Classes (JFC) and contains different packages for developing in mind or physically complex desktop hard work in Java. Swing has included controls for displaying HTTP or rich text layouts, such as trees, figure buttons, tabbed windows, sliders, toolbars, color choosers, tables, and books used in education areas (RTF). Swing components exist composed in Java and hence are platform-independent. (techopedia, n.d.)

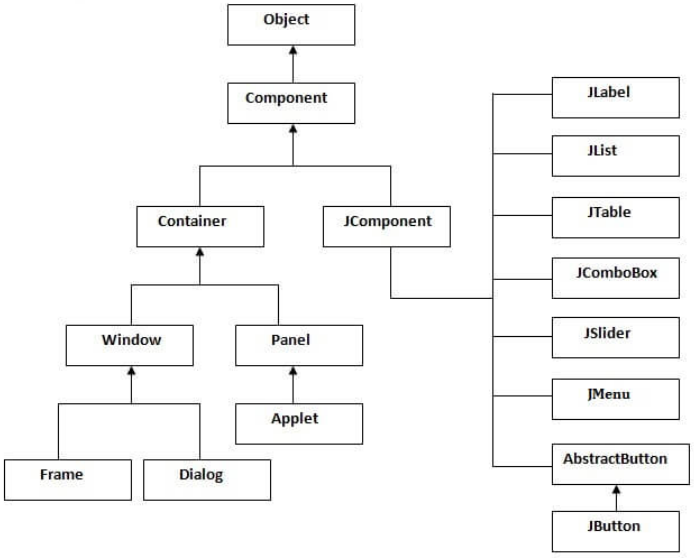


Figure 5: Hierarchy Structure of Java Swing Classes

3. Binary Search Algorithm

The binary search algorithm is an efficient comparison-based search algorithm whose main principle is to reduce the size of the search space by half in each iteration by using a constraint on the search space that is in sorted order. When it is appropriate, binary search is preferred over other search methods. The basic principle is that if a list is sorted and a number is compared to a random number from the list, we can determine if the probable match is on the left or right side of the number. When the number is in the center, we may cut the number of probable matches in half. (OpenGenus, 2022)

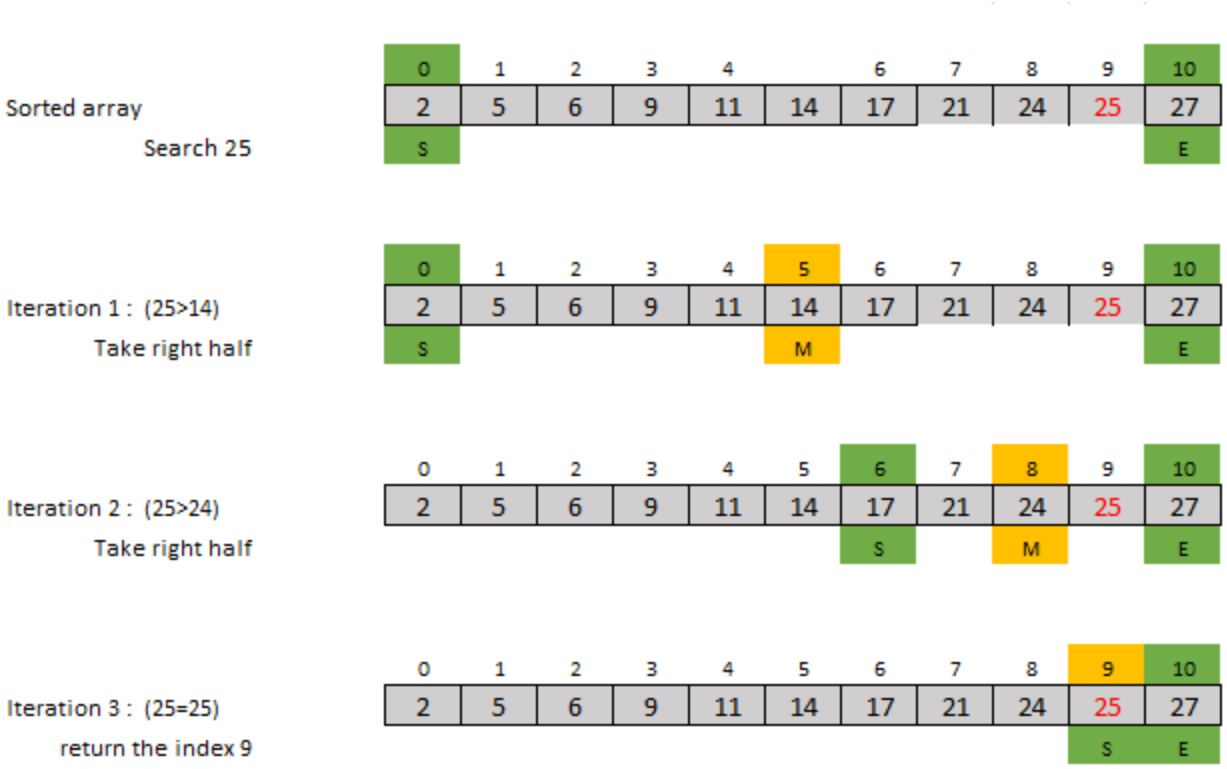


Figure 6: Figure of Binary Search

- In case 1, the algorithm is searching 25 elements on a sorted array, where starting element is 0 index value and the ending element is 10 index value.

- In case 2, it take lowest element= 0 index value, highest element = 10 index value and calculate position for middle element as, M = (L+H)/2 = (0+10)/2 = 5

Therefore, the middle element is 5 index values. In comparison in between given value to the middle element (10>12), it found that the middle element is smallest than the given value. So it took the second half for our next iteration.

- In case 3, it take lowest element= 5 index value, highest element = 10 index value and calculate position for middle element as, M = (L+H)/2 = (5+10)/2 = 7.5 Therefore, middle element is 7. In comparison in between given value to the middle element (14>12), it found that the middle element is greater than the given value. So it took the first half for our next iteration.

- There is only one element in the first half so it found the given element at index 5 and stop the iteration process.

3.1. Algorithm

Step 1. Set L = 0 // L represents lowest index value

Step 2. Set H = 10 // H represents highest index value

Step 3. Set M = (L+H)/ 2

Step 4. Repeat steps 6 and 7

While

((L<= H) and (arr[M] != value))

Step 5. If (value < arr[M]) then Set H = M-1 Else Set L = M+1

End if

Step 6. Set M = (L + H)/ 2 End while Step 7. If (L>H) then Set loc = -1

Else

Set loc = M End if

Step 8. Exit

3.2. Flowchart

The flowchart is a graphical representation of an algorithm. Programmers often use it as a program-planning tool to solve a problem. It makes use of symbols that are connected among them to indicate the flow of information and processing.

3.3. Advantages and Disadvantages

The advantages and disadvantages of binary search algorithm are: ¬

Advantages

♣ It is the best search algorithms through which we can find the exact elements in a short time.

♣ It is suitable for large list arrays.

¬ Disadvantages

♣ It only worked on a sorted array.

♣ It is not suitable for small list arrays.

3.4. Big O Notation

Big O notation is used to measure the time and space of the algorithms. It is a relative representation of the complexity of an algorithm that describes its performance and measurement of it. It is also known as mathematical notation which shows the limited behavior of a given function when the argument draws on a particular value or infinity.

3.4.1. Big O Notation of Binary Search

O (log n) = Worse and average case

O (1) = Best case

ϖ **Worst Case: Worst case is symbolically represented as Big O Notation or O(n).** It will provide us with an asymptotic upper bound for the increment rate of the runtime of an algorithm.

ϖ **Average Case: Average case is symbolically represented as Big Theta or Θ(n).** It is used to represent the asymptotically strong bound on the increment rate of the runtime of an algorithm.

ϖ **Best Case: Best case is symbolically represented as Big Omega or Ω(n).** It will provide us with an asymptotic lower bound for the increment rate of the runtime of an algorithm.

Example of Big O Notation of Binary Search:

There are 25 elements in a sorted ArrayList. So for those 25 elements, it will see the worst case to search an element, which can be expressed in log base 2 as follows:

log2 (25) =4. (freeCodecamp, 2021)

4. User Manual

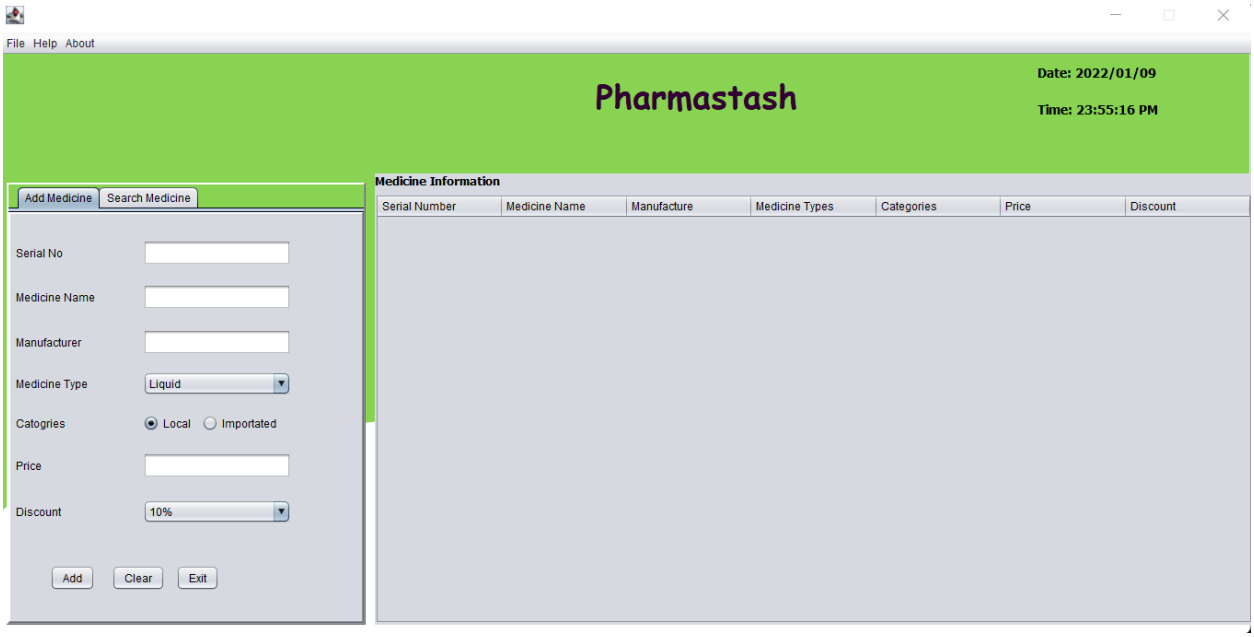


Figure 7: User manual Add Medicine

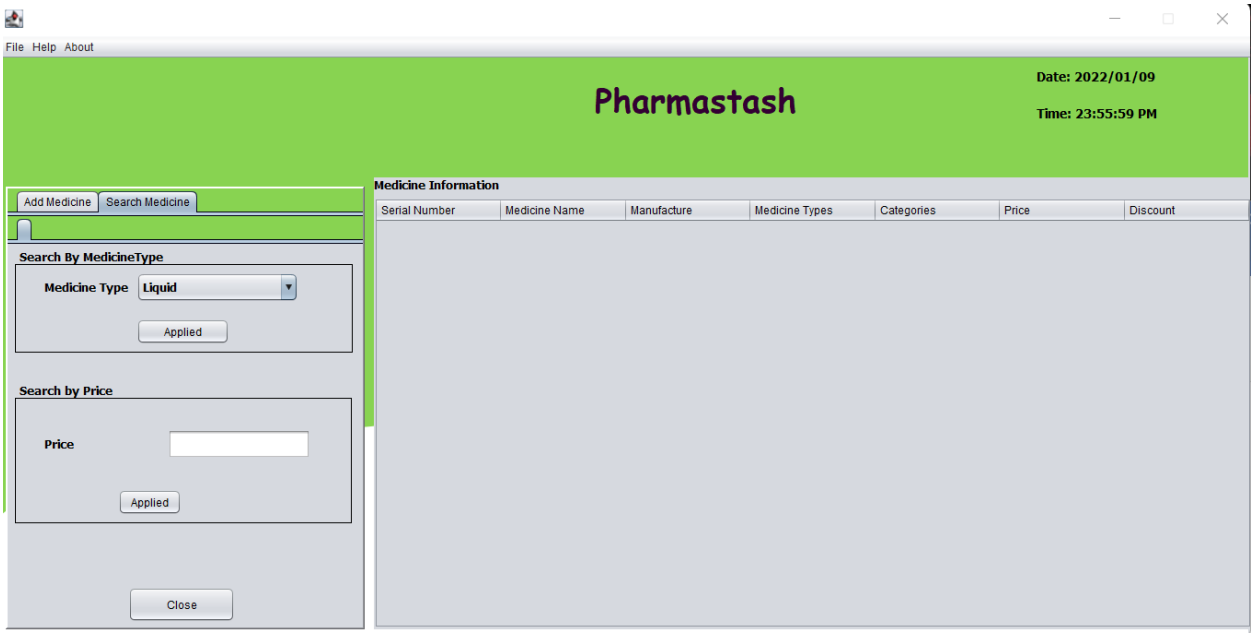


Figure 8: User manual Search Medicine

First of all, In the menu bar, we have three menu options File, Help, and About

1. File: In the File menu, we have two options Open and Exit. We can open another different file with the help of the Open option and we can close the whole program with the help of the Exit option.
2. Help: In the Help menu, the user can find one menu item named FAQs by pressing that user will find the user manual.
3. About: In the About option, Users can find a brief introduction to our system and will be able to know about different features of our system.
4. Add Medicine: When the user press Add button, the system displays a new panel where the user can add a serial number, name, medicine name, manufacture company name, medicine types, category, price, and discount.
5. When the user presses the search button, the system displays a new panel, in the first panel i.e., search by medicine types, and secondly, the user can search by price too.
6. Clear: With the help of the Clear button, users can clear all text-field, combo box, and Radio buttons.
7. Table: In the table, users can store product details like Product Name, Number, Category, Range, Price, and Discount

5. Method Description

Method	**Modifier and Type**	**Description**
Show date()	Private void	Displays current date. This method is called in the constructor and triggered when the program starts.
showTime()	Private void	Displays current time This method is called in the constructor and triggered when the program starts.
setIcon()	Private void	Sets icon for the application window. This method is called in the

		constructor and triggered when the program starts.
miOpenActionPerformed(java.awt.event.ActionEvent evt) ()	Private void	Opens the previously saved file. It is triggered when an Open menu item is clicked.
miExitActionPerformed(java.awt.event.ActionEvent evt) ()	Private void	Asks user to exit the program. It is triggered when the Exit menu item is clicked.
txtSearchByPriceFocusGained(java.awt.event.FocusEvent evt)	Private void	Sets the Text Field text as empty when the given text field is active. This method gets triggered when the txtSearchByPrice text field is clicked or in use.
txtSearchByPriceFocusLost(java.awt.event.FocusEvent evt)	Private void	Sets the Text Field text as “Enter Price to Search” if the text field is not focused and empty.
btnSearchByPriceActionPperformed(java.awt.event.ActionEvent event)	Private void	When the Search by price button is clicked, it calls the btnSearchByPriceActionPerformed() the method which searches for the the keyword as price given by the user in the text field and displays the first matched item details for the given keyword.
btnSearchByCategoryActiperformed(java.awt.event.ActionEvent event)	Private void	When Search by category (Appliance available in the Category) button is clicked, it calls btnSearchByCategoryActionPerformed() that shows all the details of those items for selected category

btnClearActionPerformed(java.awt.event.activeno evt)	Private void	Clears all inserted text in text field and sets to default. It is triggered when the clear button is clicked.
btnAddActionPerformed(java.awt.event.ActionEvent evt)	Private void	It is used to add the inserted data to the table by validating the user input form and hence saving the table data to a .csv file. It is triggered when the Add button is clicked.
save()	Private void	It saves the table data as a .csv file in the given location. This method is called when Save menu item is selected.
txtSerialNumberFocusGained(java.awt.event.FocusEvent evt)	Private void	Sets the Serial Number Text Field text as empty when the text field is active or clicked.
txtSerialNumberFocusLost(java.awt.event.focusvent evt)	Private void	Sets the Serial Number Text Field text as “Enter Serial Number” if the text the field is not focused and empty.
txtPriceFocusGained(java.awt.event.FocusEvent;evt)	Private void	Sets the Price Text Field text is empty when the given text field is active or clicked.
txtPriceFocusLost(java.awt.event.FocusEvent evt)	Private void	Sets the Price Text Field text as “Enter Price” if the text field is not focused and empty.
txtNameFocusGained(java.awt.event.FocusEventevt)	Private void	Sets the Name Text Field text as empty when the given text field is active and clicked.
txtNameFocusLost(java.awt. event.FocusEvent evt)	Private void	Sets the Text Field text as “Enter Name” if the text field is not focused and empty.

miAboutActionPerformed(java.awt.event.active no evt)	Private void	When About menu item is selected miAboutActionPerformed () is called that pops up a dialog box containing information about the company and the appliance information system program.
txtPriceKeyTyped(java.aw t.event.KeyEvent event)	Private void	This method accepts integer values only and restricts other values; it is triggered when any key is pressed.
txtSearchByPriceKeyType d(java.awt.event.Kevin t evt)	Private void	This method accepts integer values only and restricts other values; it is triggered when any key is pressed.
miFAQsActionPerformed(j ava.awt.event.ActionEven t evt)	Private void	In the help menu, when the FAQs submenu is selected then miFAQsActionPerformed () is called that opens a user manual containing the information about using the application program and components.
miImportActionPerformed (java.awt.event.active no evt)	Private void	When an import menu item is clicked, it calls this method which loads the previously saved .csv file in program's table.
miSaveActionPerformed(j ava.awt.event.ActionEven t evt)	Private void	When Save menu item is selected, it calls miSaveActionPerformed () that calls save() method for saving the table data as .csv file.
mergeSort(ArrayList<Ever estComputers> price)	Public void	This method divides the array list into subarrays taking input as price value only. It is called in

		btnAddActionPerformed () method while adding the data into the table.
merge(ArrayList<Pharmastash> first, ArrayList<Pharmastash> second, ArrayList<Pharmastash> price)	Public static void	This method sorts the divided subarrays and merges them into one array. It is called mergeSort () method.
binarySearch(ArrayList<EverestComputers> price search, int low, int high, int key) ()	Public static int	It takes the sorted array list and keyword to be searched as parameter and returns the matched data. This the method is called by btnSearchByPriceActionPerformed () or btnSearchByCategoryActionPerformed ().

Table 2: Method Description

6. Testing

Testing or verification or validation is activities that aim at checking the correspondence of implementation with its specifications are called verification activities, whereas the activities that aim at checking the correspondence between a system and users' expectations are called Testing activities.

6.1. Test Scenario A: Running the program in NetBeans

Objective	Run the program in NetBeans
Action	Clicked the Run project button or else the (F9) button is clicked.
Expected Result	The program will be opened successfully.
Actual Result	The program was opened without any error.
Conclusion	Test Successful

Table 3:Test 1

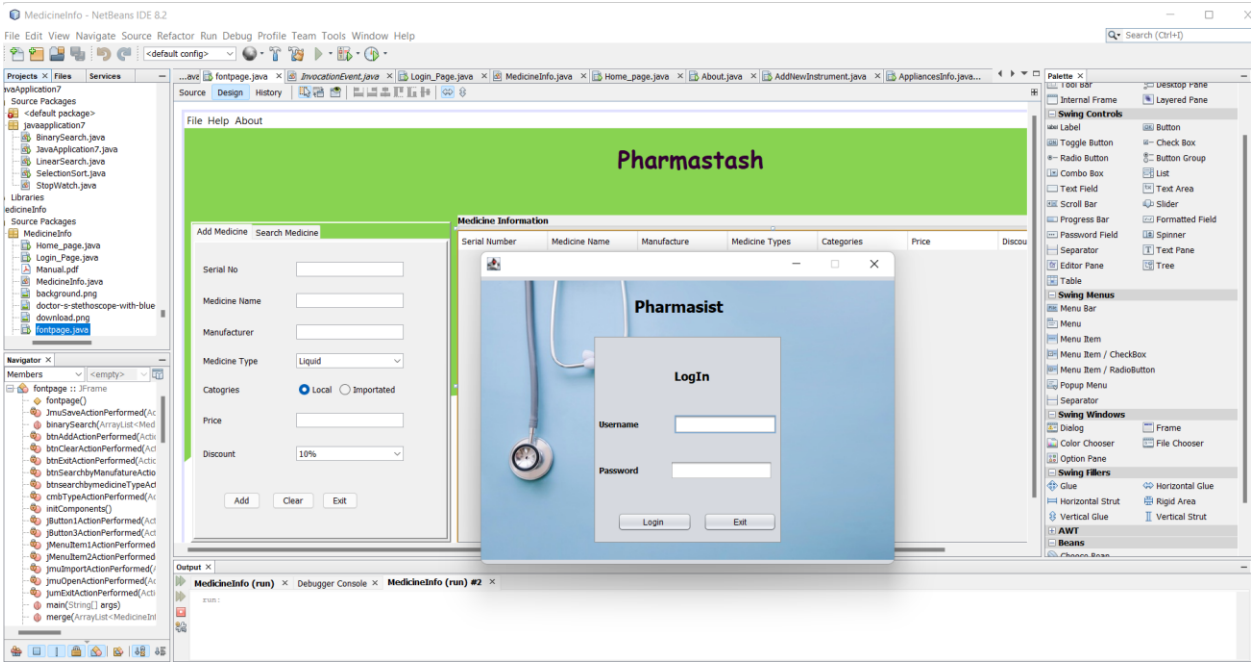


Figure 9: Running Program in NetBeans

6.2. Test Scenario B: Functionality of the Program

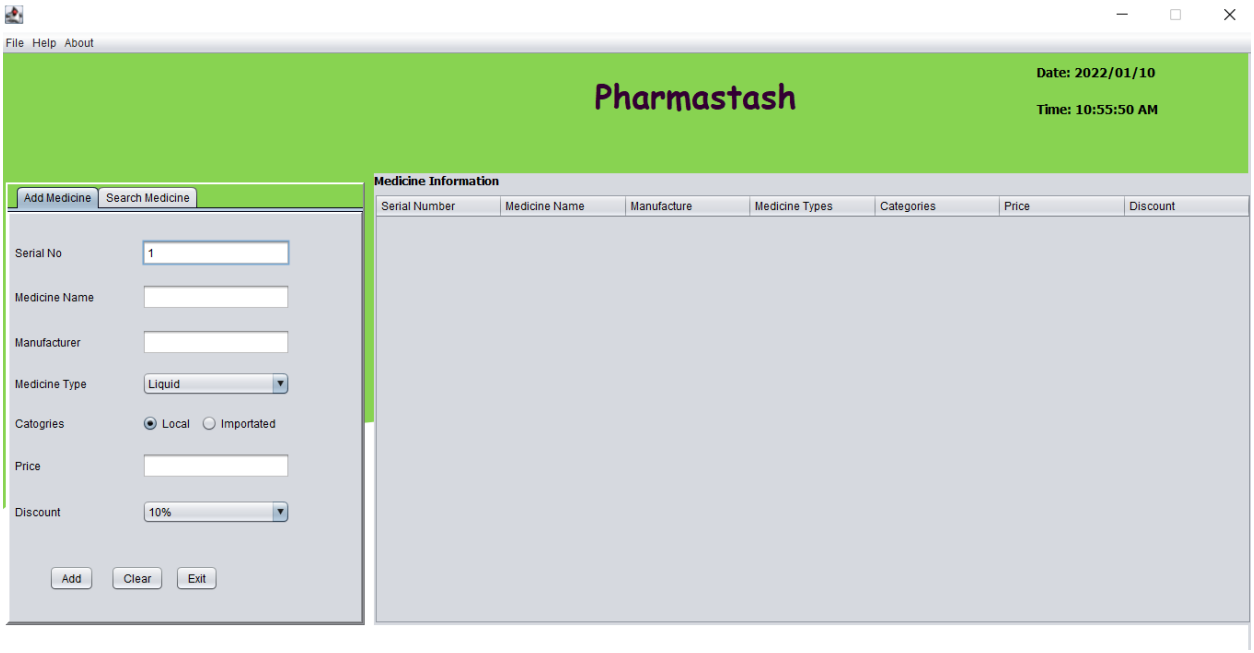


Figure 10: Functionality of the program

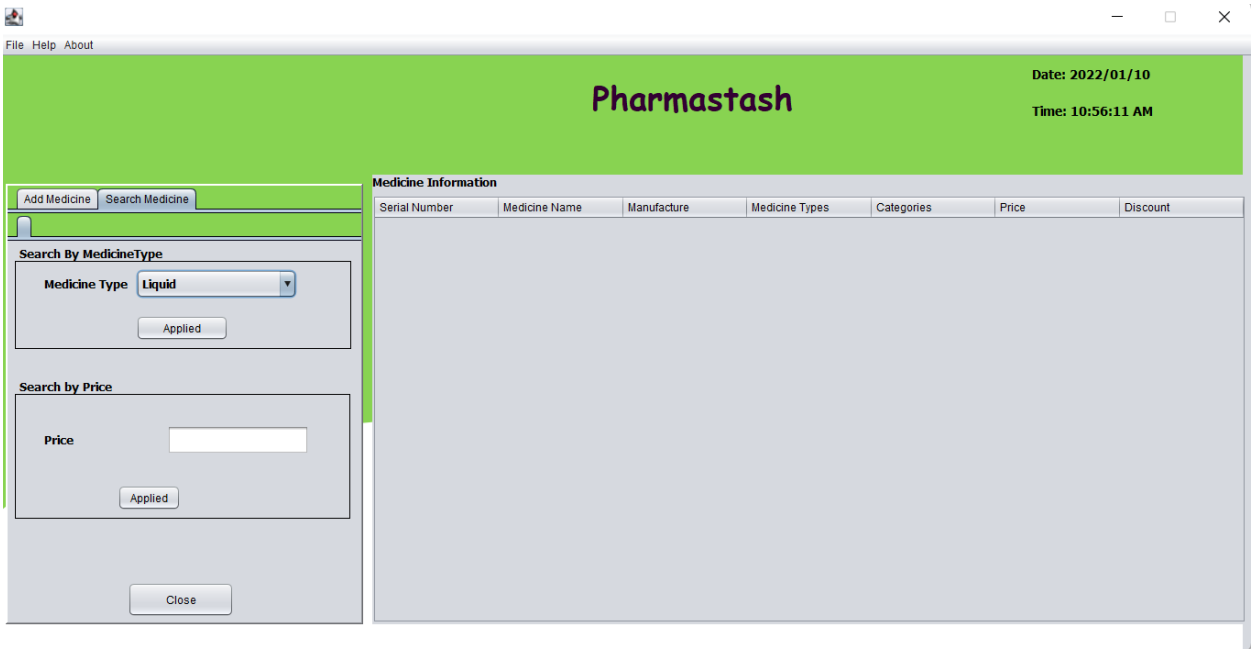


Figure 11:Functionality of the program 2

6.2.1. Test B (1): Adding the Items to the Table.

Objective	Add the items to the table
Action	Insert text field and press add button.
Expected Result	The items should be stored in the table from the text fields.
Actual Result	The items were stored in the table from the text fields.
Conclusion	Test Successful

Table 4: Test 2

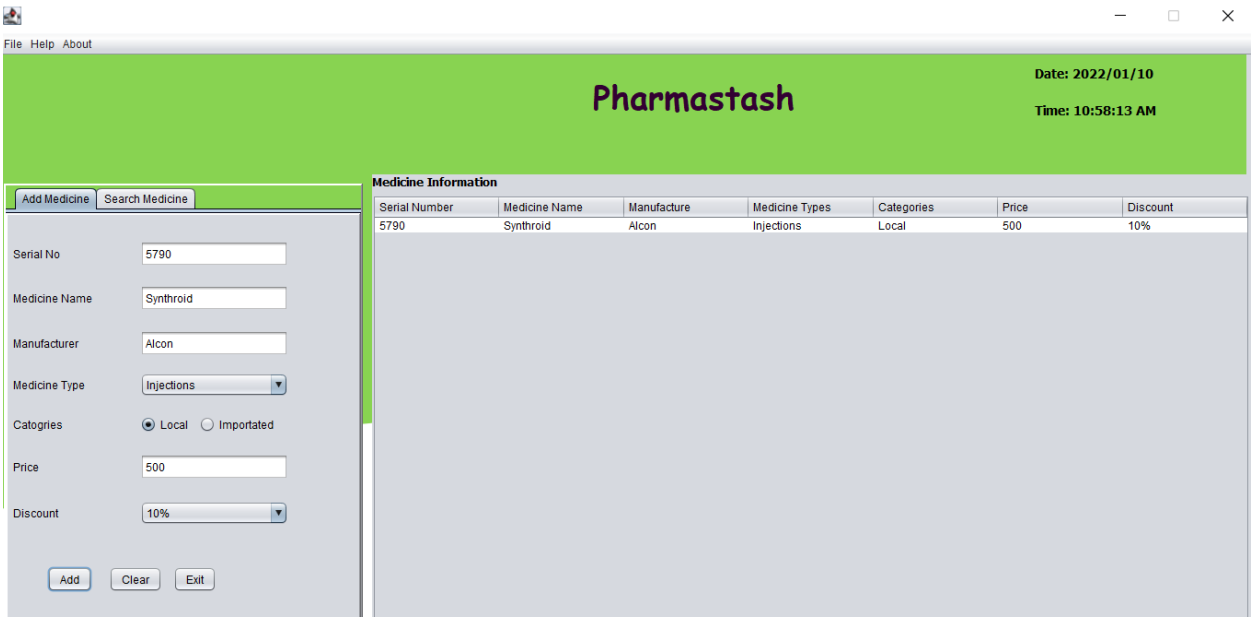


Figure 12: Adding a single item to the table

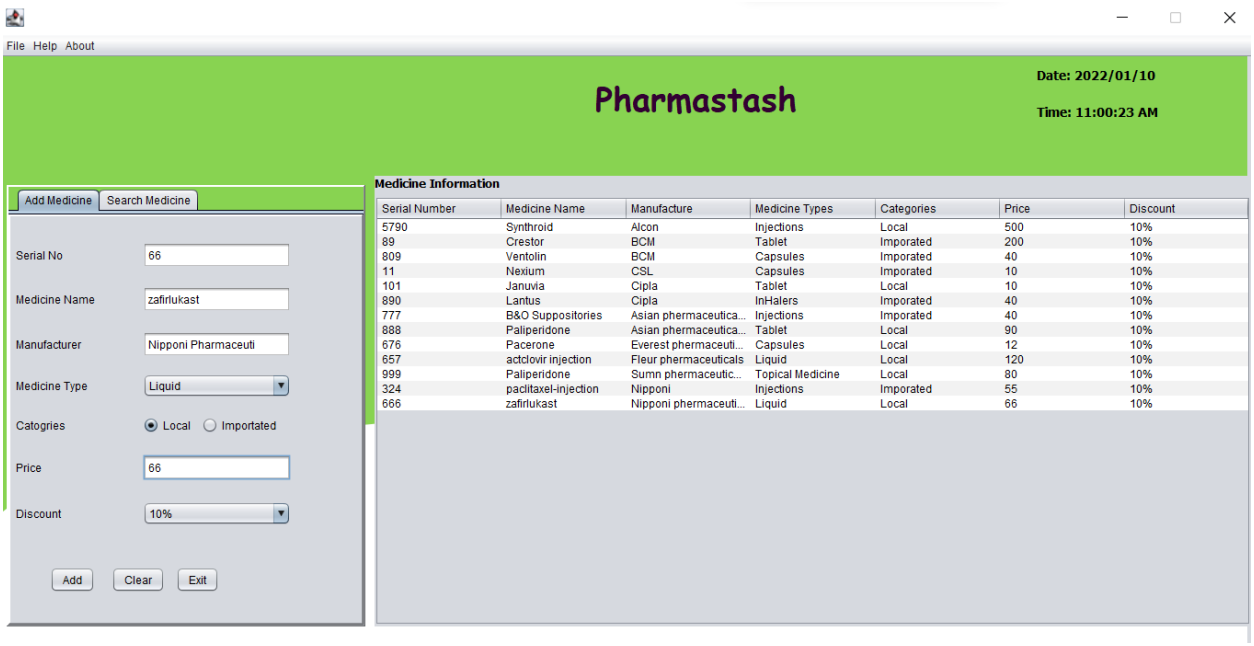


Figure 13: Adding multiple items to the table

6.2.2. Test B (2): Searching for items based on price.

Objective	Search the Items Based on price
Action	Enter the price of medicine.
Expected Result	The program should display the items which have the same price which is being searched.
Actual Result	The items having the same price are displayed.
Conclusion	Test Successful

Table 5: Test 3

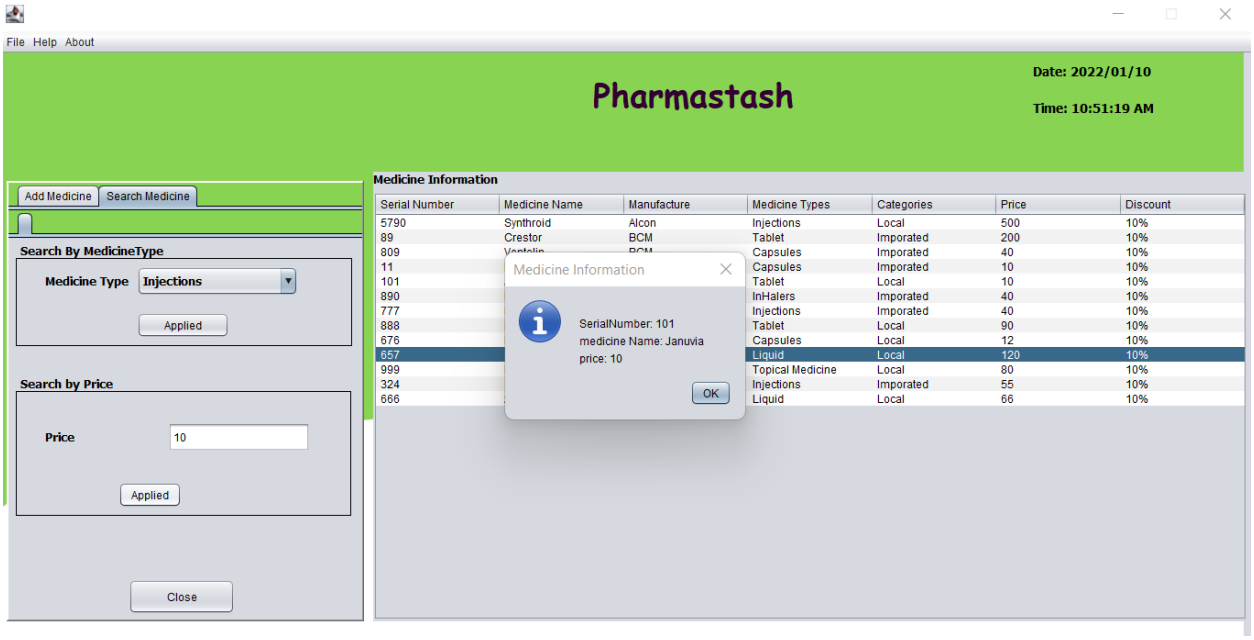


Figure 14: Searching medicine based on price

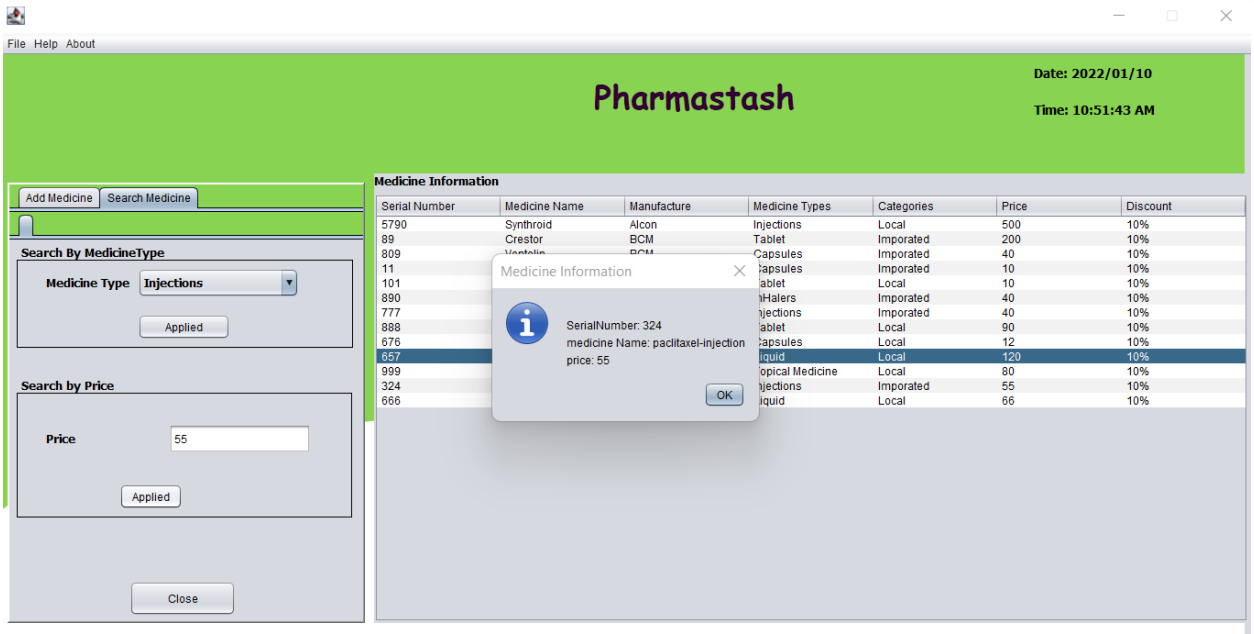


Figure 15: Searching medicine based on Price 2

6.2.3. Test B (3): Searching for several medicines in medicine types.

Objective	Search the Items in Medicine Types
Action	Select medicine types.
Expected Result	The program should display the items which are available in the medicine types.
Actual Result	The items that are present in the medicine types are displayed.
Conclusion	Test Successful

Table 6: Test 4

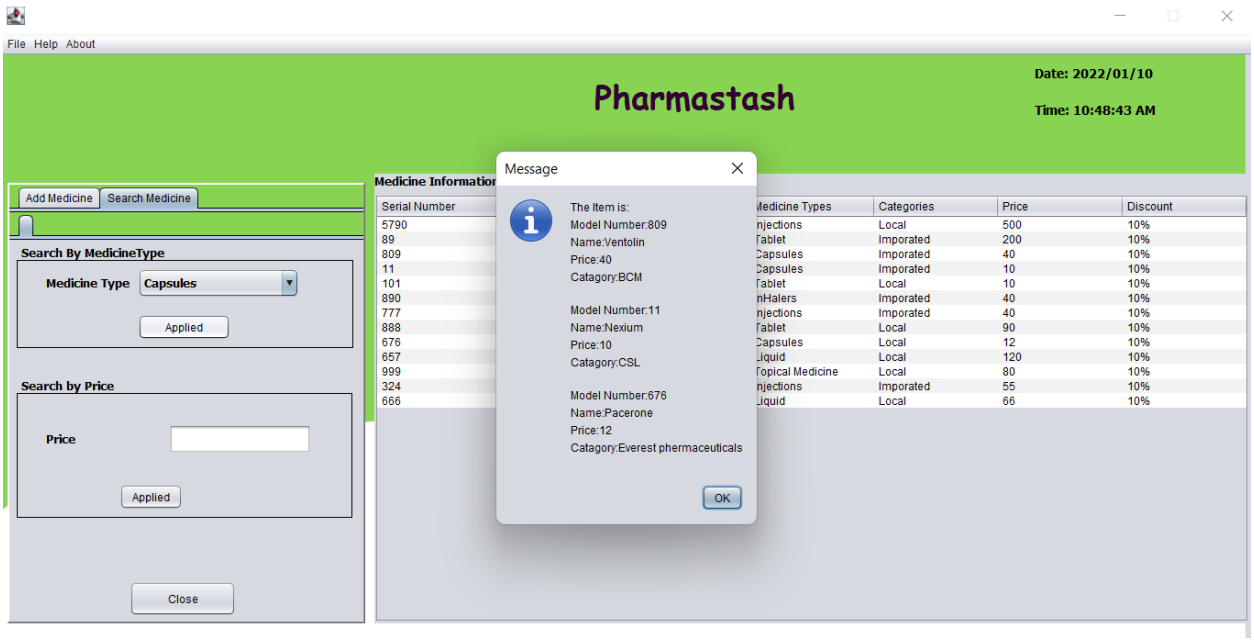


Figure 16: Searching medicine based on type Capsule

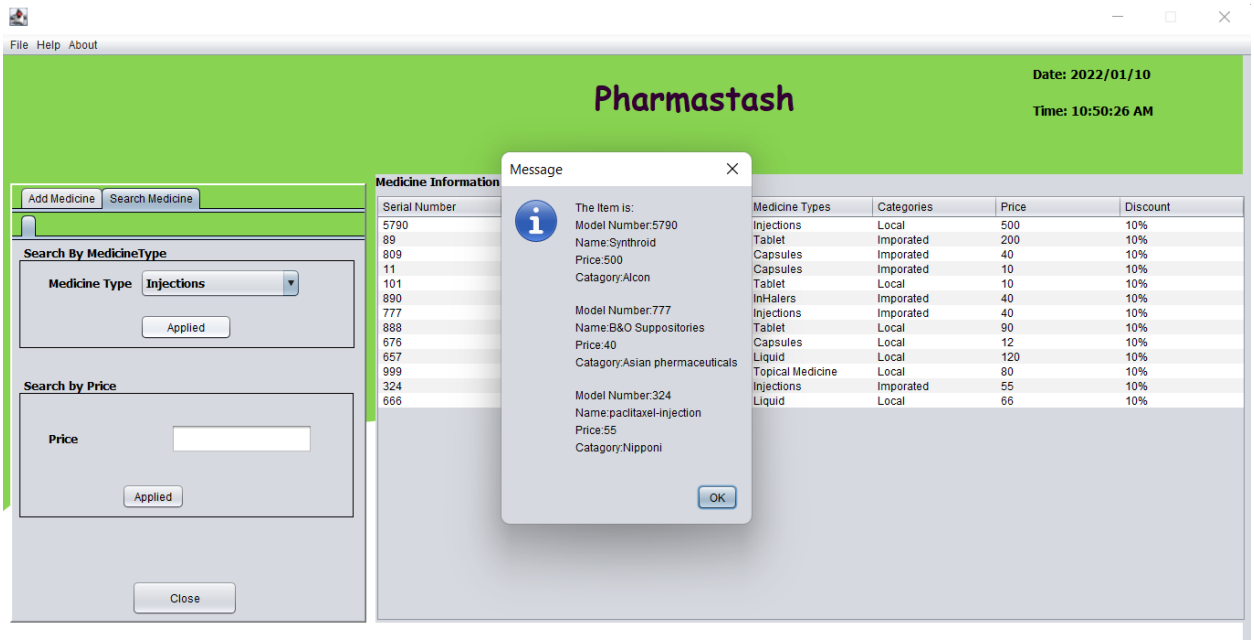


Figure 17:Searching medicine based on type Injections

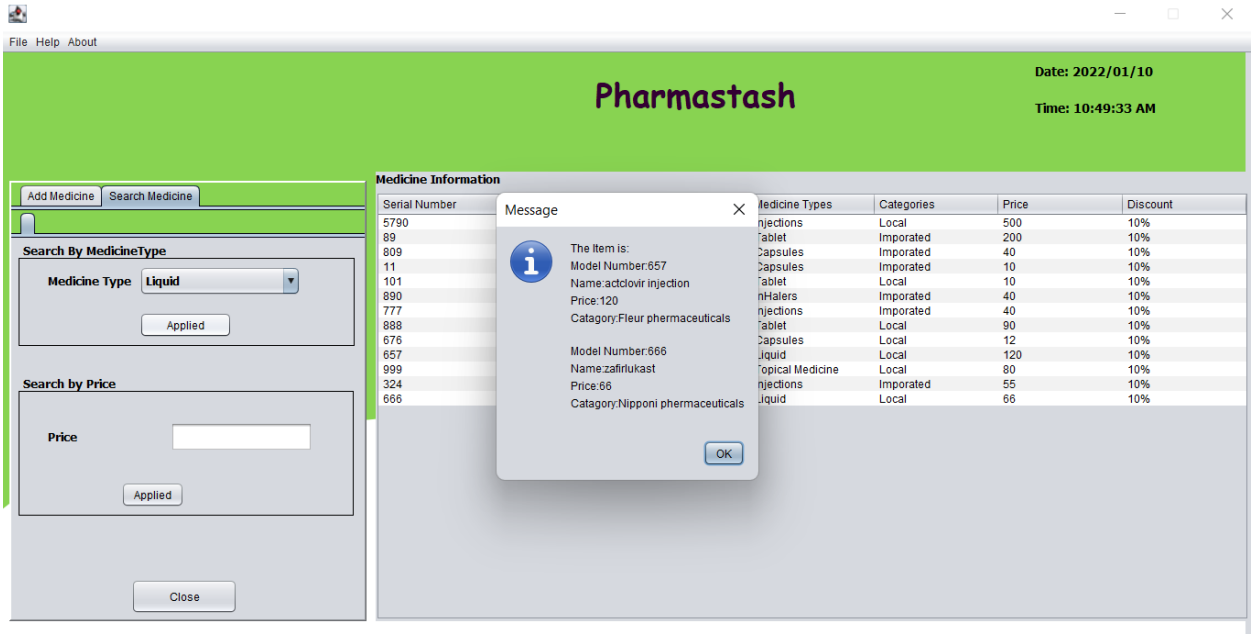


Figure 18:Searching medicine based on type Liquid

6.2.4. Test B (4): Opening a file from the menu

Objective	Open a file from the menu.
Action	Click the file and then click open from the menu bar.
Expected Result	The data of the file will be imported into the table.
Actual Result	The data of the file with the items are imported into the table.
Conclusion	Test Successful

Table 7: Test 5

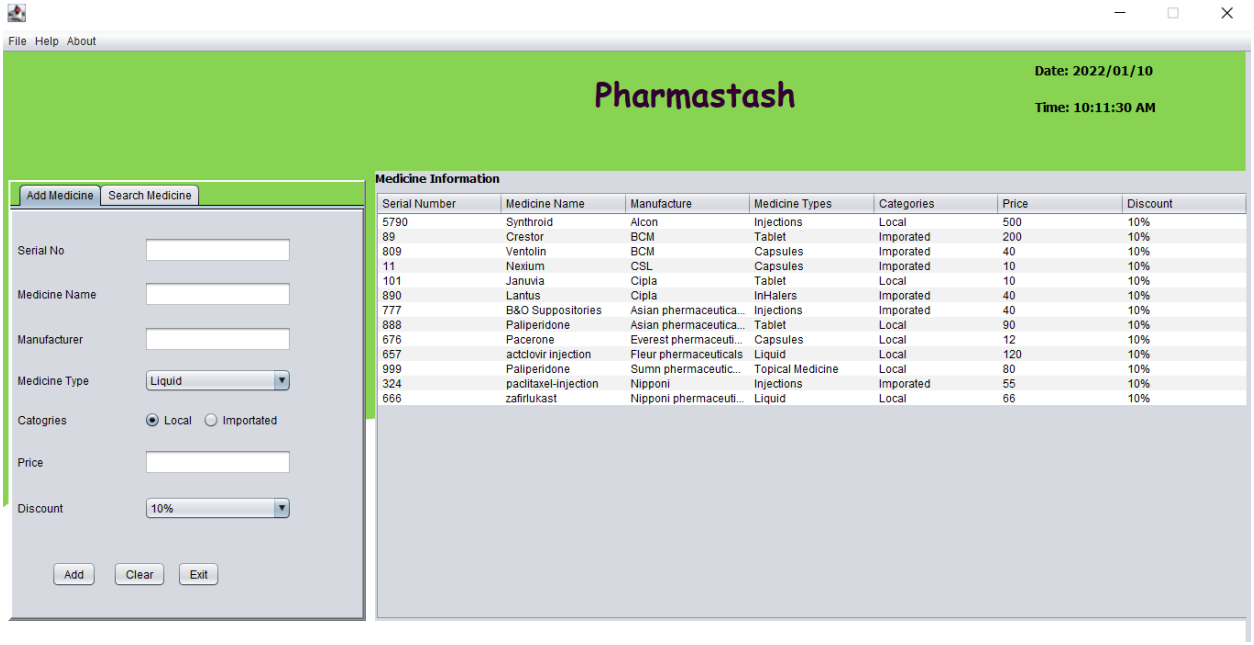
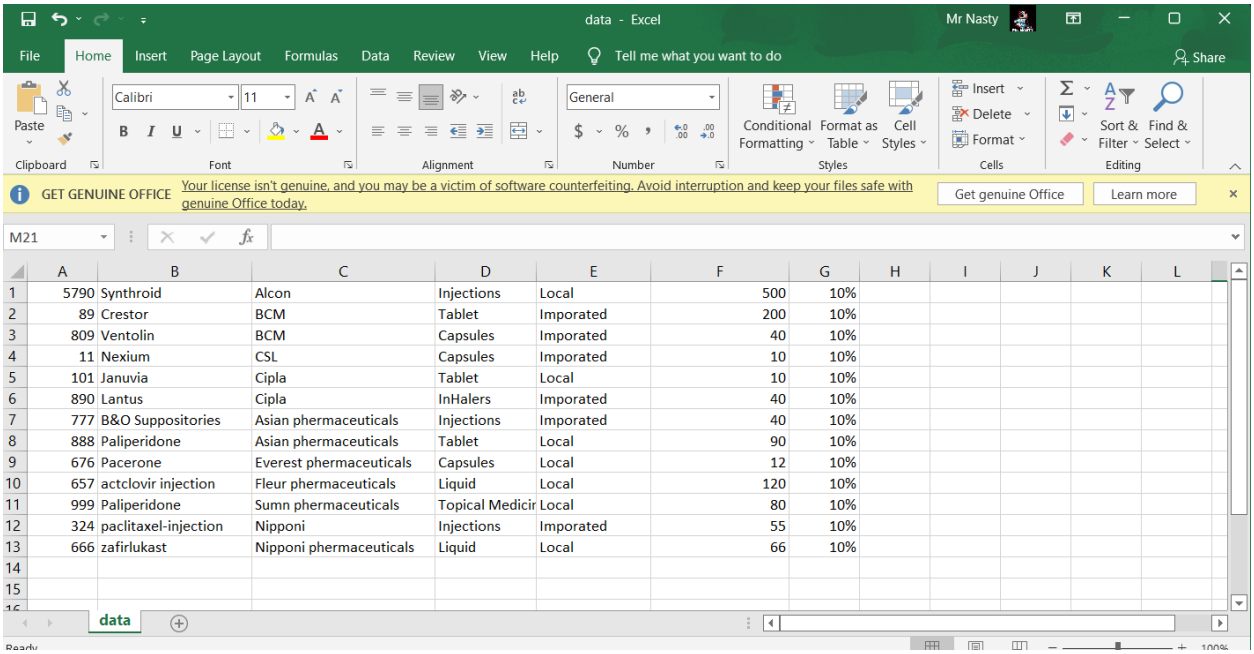


Figure 19: Opening file from Menu



	A	B	C	D	E	F	G
1	5790	Synthroid	Alcon	Injections	Local	500	10%
2	89	Crestor	BCM	Tablet	Imporated	200	10%
3	809	Ventolin	BCM	Capsules	Imporated	40	10%
4	11	Nexium	CSL	Capsules	Imporated	10	10%
5	101	Januvia	Cipla	Tablet	Local	10	10%
6	890	Lantus	Cipla	InHalers	Imporated	40	10%
7	777	B&O Suppositories	Asian phermaceuticals	Injections	Imporated	40	10%
8	888	Paliperidone	Asian phermaceuticals	Tablet	Local	90	10%
9	676	Pacerone	Everest phermaceuticals	Capsules	Local	12	10%
10	657	actclovir injection	Fleur phermaceuticals	Liquid	Local	120	10%
11	999	Paliperidone	Sumn phermaceuticals	Topical Medicir	Local	80	10%
12	324	paclitaxel-injection	Nipponi	Injections	Imporated	55	10%
13	666	zafirlukast	Nipponi phermaceuticals	Liquid	Local	66	10%
14							
15							

Figure 20: Opening file in Excel

6.3. Test Scenario C: System Validation

Objective	Validate the text fields
Action	All the validation was checked one by one manually.
Expected Result	The success of the validation
Actual Result	The validation was successful
Conclusion	Test Successful

Table 8: Test 6

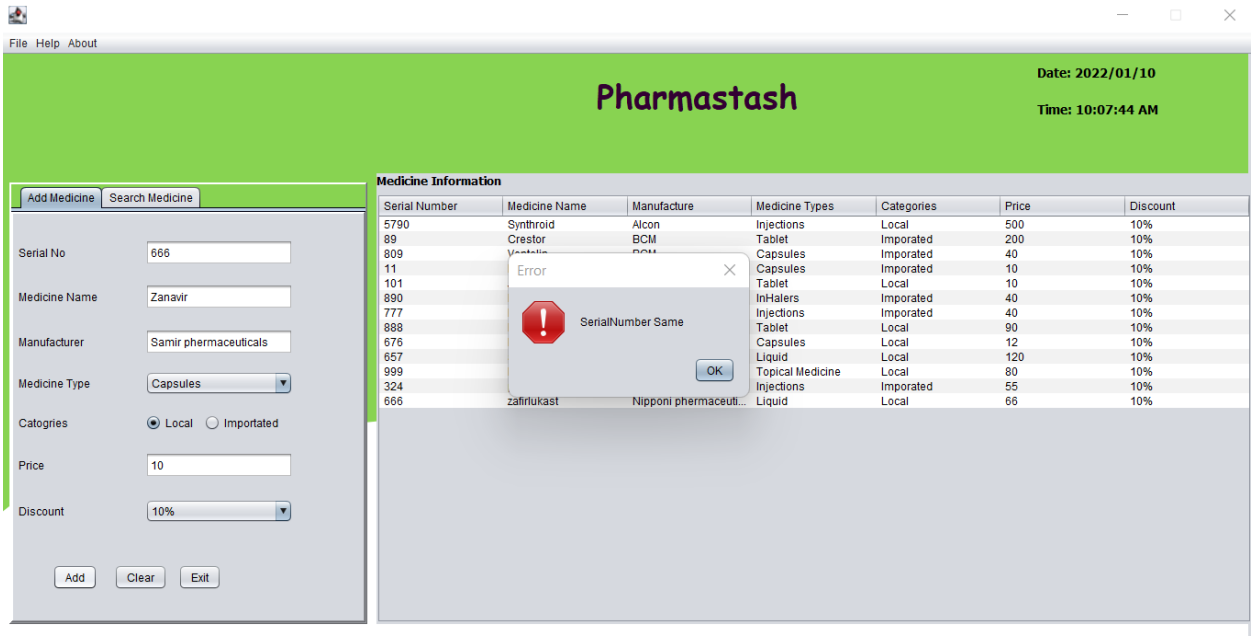


Figure 21: System validation 1

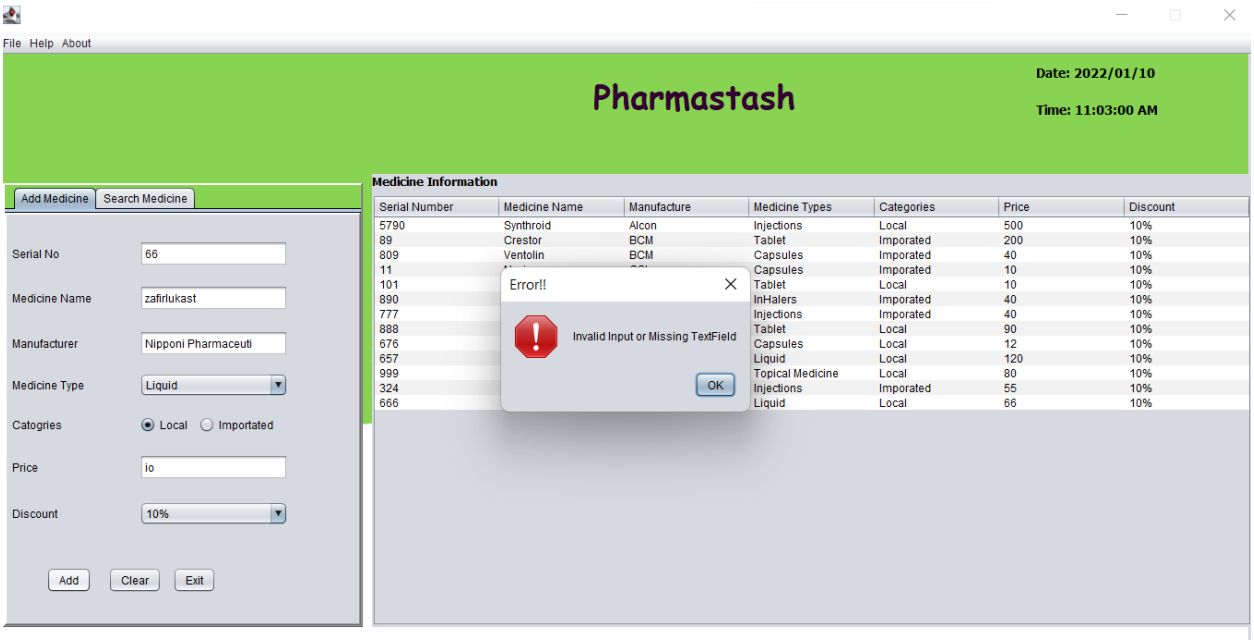


Figure 22: System validation 2

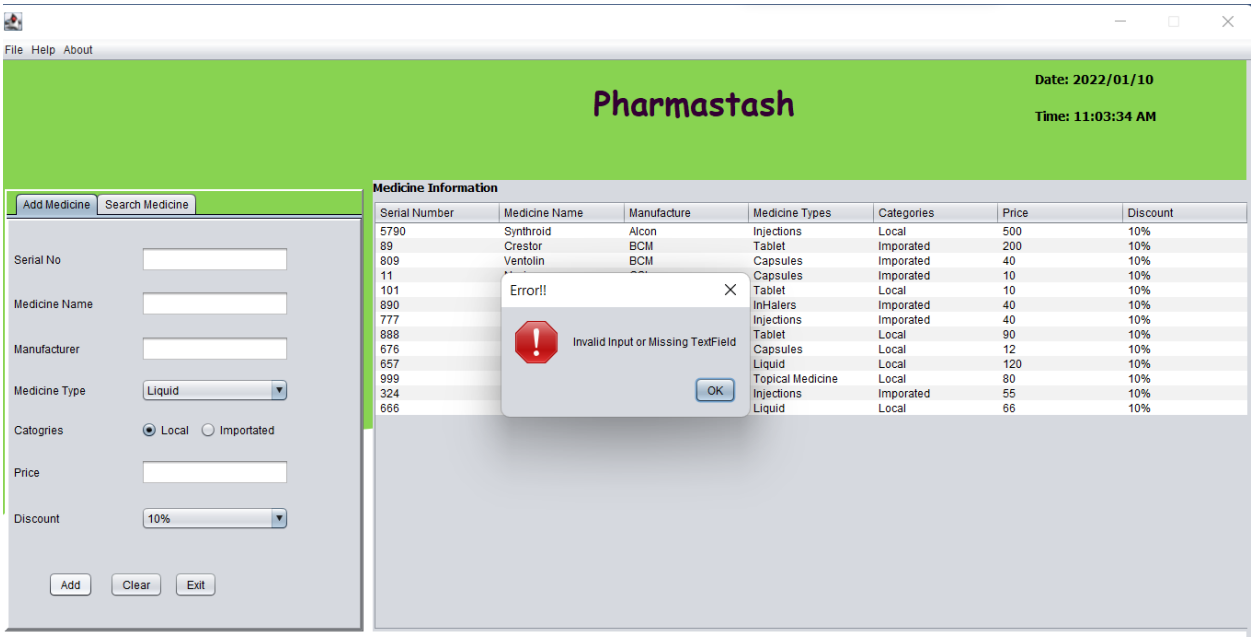


Figure 23: System validation 3

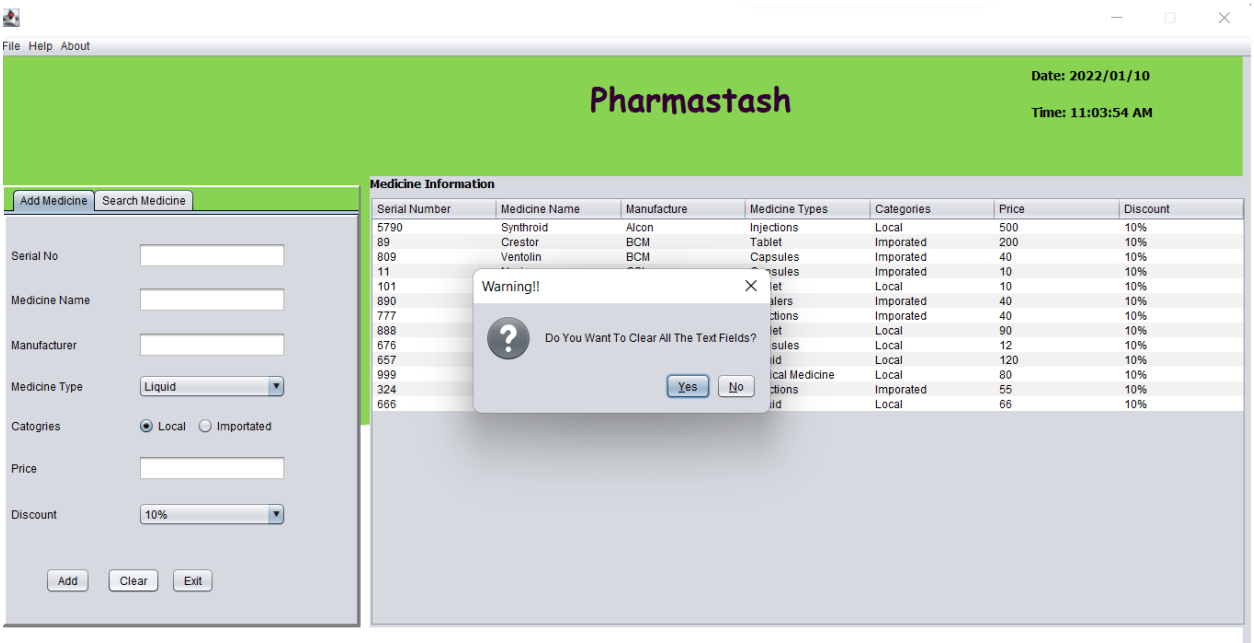


Figure 24: System validation 4

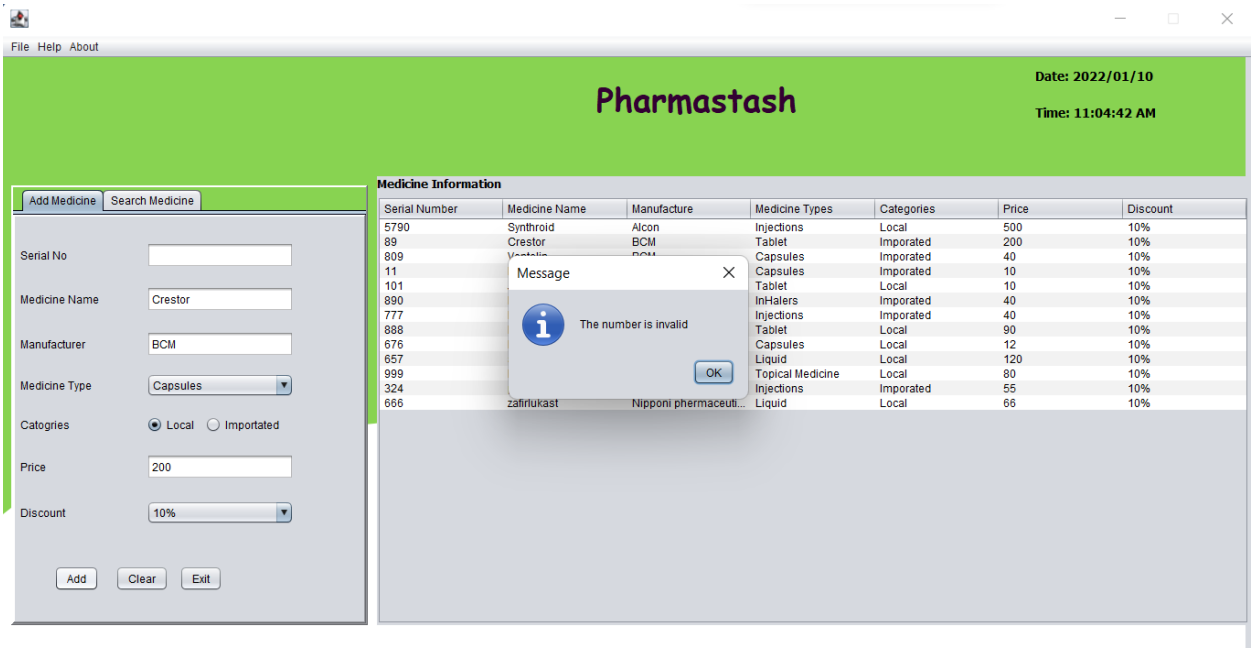


Figure 25: System validation 5

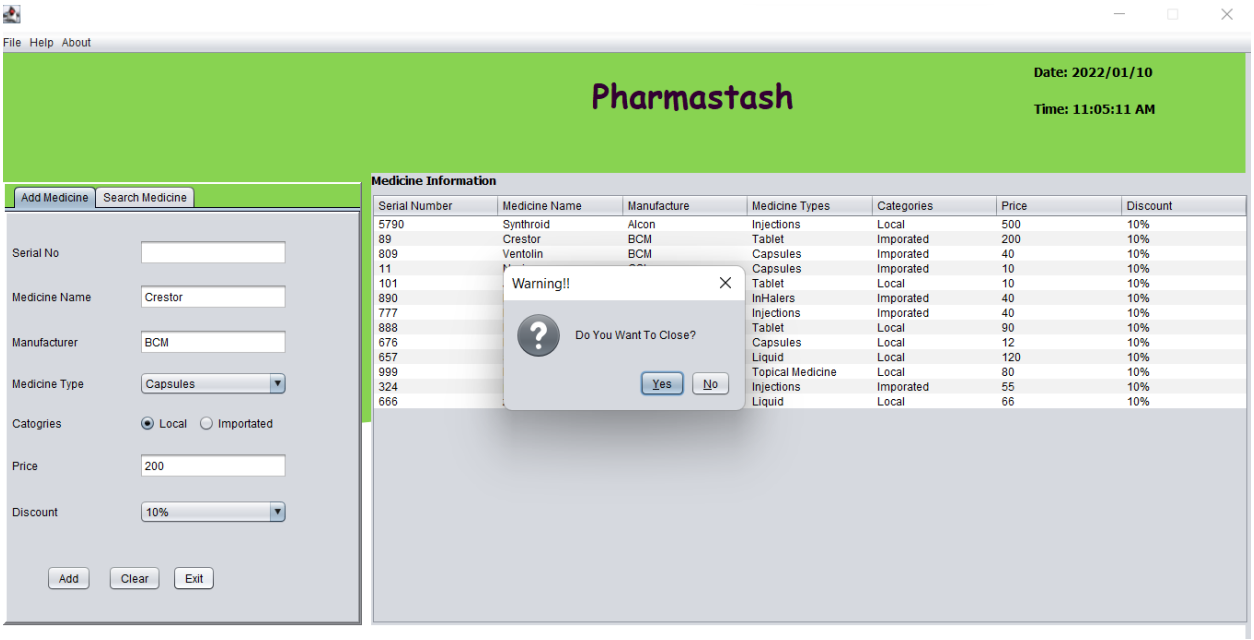


Figure 26: System validation 6

7. Conclusion

The Above project is the first coursework of the Emerging Technologies and platform which was provided for this semester. The project was divided into three parts which are Proposal, Coding, and Report. All the members of our team worked together and real hard to create a very beautiful and easy to use, user-friendly system that can store the data of the Medical Store; that is provided by the User and also display all the information about the products which are available based on price and category.

Firstly, we created a proposal of the System that is to be provided to the Customer/ User. We need to research various models, products, problems, and solutions to face them that occur in the store. The proposal describes the need or importance of the system in their store with the features problems they are facing and how the system solves them. The coding or the development part was one of the primary focuses of our team which was one of the difficult parts in the process of creating a product. We came across different problems and to solve those problems we need to go through different books, articles, journals, and the most important help from the module teacher. The instruction that was provided by the instructor was very helpful, those instructions helped us to solve every problem that we were facing in the process and complete the system. As we know this is not an individual part so all the parts were equally divided to all the members of our team and at last, all the answers were verified by each of the members, and the final report was generated. Eventually, we learned about various algorithms, methods, techniques, and the way to research through different kinds of stuff to find the best solution that can solve the problem that we are facing during the process of system creation. The system helped every member to gain an understanding of different swing components and GUI designing in Java. All this understand and knowledge is a very essential part of all of us and will be very helpful shortly.

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Appendix

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package MedicineInfo;


import java.awt.Desktop;
import java.awt.HeadlessException;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import java.io.BufferedReader;
import java.io.File;
import java.io.FileNotFoundException;
import java.io.FileReader;
import java.io.FileWriter;
import java.io.IOException;
import java.text.SimpleDateFormat;
import java.util.ArrayList;
import java.util.Date;
import java.util.logging.Level;
import java.util.logging.Logger;
```

```
import java.util.regex.Pattern;
import javax.swing.JOptionPane;
import javax.swing.Timer;
import javax.swing.table.DefaultTableModel;


/**
 *
 * @author User
 *
 */

public class fontpage extends javax.swing.JFrame {
            private ArrayList<MedicineInfo> Item = new ArrayList<>();
            int count = 0 ;
    public fontpage() {
        initComponents();
        showDate();
        showTime();
    }
        private void showDate() {
        Date d = new Date();
        SimpleDateFormat s = new SimpleDateFormat("yyyy/MM/dd");
        lblDate.setText("Date: " + s.format(d)); //Displays current date in lblDate
```

```
    }


    private void showTime() {
        new Timer(0, new ActionListener() {
            @Override
            public void actionPerformed(ActionEvent e) {
                Date d = new Date();
                SimpleDateFormat s = new SimpleDateFormat("H:mm:ss a");
                lblTime.setText("Time: " + s.format(d)); ////Displays current time in lblTime
            }
        }).start();
    }




    /**
     * This method is called from within the constructor to initialize the form.
     * WARNING: Do NOT modify this code. The content of this method is always
     * regenerated by the Form Editor.
     */
    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
```

```
    private void initComponents() {


        btnCatogries = new javax.swing.ButtonGroup();
        jLabel12 = new javax.swing.JLabel();
        jTextField1 = new javax.swing.JTextField();
        jDialog1 = new javax.swing.JDialog();
        jPanel6 = new javax.swing.JPanel();
        jLabel10 = new javax.swing.JLabel();
        jLabel11 = new javax.swing.JLabel();
        jLabel13 = new javax.swing.JLabel();
        jLabel14 = new javax.swing.JLabel();
        jLabel7 = new javax.swing.JLabel();
        jLabel9 = new javax.swing.JLabel();
        jLabel8 = new javax.swing.JLabel();
        jButton1 = new javax.swing.JButton();
        jTabbedPane1 = new javax.swing.JTabbedPane();
        jPanel2 = new javax.swing.JPanel();
        lblCode = new javax.swing.JLabel();
        lblName = new javax.swing.JLabel();
        lblAddress = new javax.swing.JLabel();
        lblType = new javax.swing.JLabel();
        lblRanking = new javax.swing.JLabel();
        lblFee = new javax.swing.JLabel();
```

```
lblDiscount = new javax.swing.JLabel();
txtName = new javax.swing.JTextField();
txtManufacture = new javax.swing.JTextField();
cmbType = new javax.swing.JComboBox<>();
rbtnLocal = new javax.swing.JRadioButton();
rbtImport = new javax.swing.JRadioButton();
txtprice = new javax.swing.JTextField();
cmbDiscount = new javax.swing.JComboBox<>();
btnAdd = new javax.swing.JButton();
btnClear = new javax.swing.JButton();
btnExit = new javax.swing.JButton();
txtSerialno = new javax.swing.JTextField();
jTabbedPane2 = new javax.swing.JTabbedPane();
jPanel3 = new javax.swing.JPanel();
jPanel4 = new javax.swing.JPanel();
jLabel4 = new javax.swing.JLabel();
btnsearchbymedicineType = new javax.swing.JButton();
cmbMedicineType = new javax.swing.JComboBox<>();
jPanel5 = new javax.swing.JPanel();
btnSearchbyManufature = new javax.swing.JButton();
txtSearchbyfee = new javax.swing.JTextField();
jLabel2 = new javax.swing.JLabel();
jButton3 = new javax.swing.JButton();
```

```
jPanel1 = new javax.swing.JPanel();

jScrollPane2 = new javax.swing.JScrollPane();

tableInfo = new javax.swing.JTable();

jLabel1 = new javax.swing.JLabel();

jLabel6 = new javax.swing.JLabel();

jLabel5 = new javax.swing.JLabel();

lblTime = new javax.swing.JLabel();

lblDate = new javax.swing.JLabel();

jLabel3 = new javax.swing.JLabel();

jMenuBar1 = new javax.swing.JMenuBar();

jMenu1 = new javax.swing.JMenu();

jmuOpen = new javax.swing.JMenuItem();

JmuSave = new javax.swing.JMenuItem();

jmuImport = new javax.swing.JMenuItem();

jumExit = new javax.swing.JMenuItem();

jMenu2 = new javax.swing.JMenu();

jMenuItem1 = new javax.swing.JMenuItem();

jMenu3 = new javax.swing.JMenu();

jMenuItem2 = new javax.swing.JMenuItem();


jLabel12.setText("jLabel12");


jTextField1.setText("jTextField1");
```

```
jDialog1.setPreferredSize(new java.awt.Dimension(600, 700));
jDialog1.setSize(new java.awt.Dimension(700, 500));

jPanel6.setBorder(javax.swing.BorderFactory.createLineBorder(new
java.awt.Color(0, 0, 0)));

jLabel10.setText("of medicine, stock in the table such as serial number, name, ");

jLabel11.setText("medicine types, manufacture, category, price, and discount. ");

jLabel13.setText(" to various medicine items by selecting the specific medicine
types or prices");

jLabel14.setText("This application makes the user easily search and navigate to
various medicine items by selecting the specific medicine types or prices");

jLabel7.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N
jLabel7.setText("Pharmastash");

jLabel9.setText("This application system is developed for managing data ");

jLabel8.setText("Pharmastash is software that's sales medicine of all types.");
```

```
        jButton1.setText("OK");
        jButton1.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButton1ActionPerformed(evt);
            }
        });

        javax.swing.GroupLayout jPanel6Layout = new javax.swing.GroupLayout(jPanel6);
        jPanel6.setLayout(jPanel6Layout);
        jPanel6Layout.setHorizontalGroup(

jPanel6Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel6Layout.createSequentialGroup()
                .addContainerGap()

.addGroup(jPanel6Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LE
ADING)
                    .addGroup(jPanel6Layout.createSequentialGroup()

.addGroup(jPanel6Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LE
ADING)
                            .addGroup(jPanel6Layout.createSequentialGroup()
                                .addGap(19, 19, 19)
```

```
                    .addComponent(jLabel8,
javax.swing.GroupLayout.PREFERRED_SIZE, 364,
javax.swing.GroupLayout.PREFERRED_SIZE))

                .addGroup(jPanel6Layout.createSequentialGroup()

                    .addGap(10, 10, 10)


.addGroup(jPanel6Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LE
ADING)

                        .addComponent(jLabel11,
javax.swing.GroupLayout.PREFERRED_SIZE, 351,
javax.swing.GroupLayout.PREFERRED_SIZE)

                        .addComponent(jLabel9,
javax.swing.GroupLayout.PREFERRED_SIZE, 341,
javax.swing.GroupLayout.PREFERRED_SIZE)

                        .addComponent(jLabel10,
javax.swing.GroupLayout.PREFERRED_SIZE, 370,
javax.swing.GroupLayout.PREFERRED_SIZE)))

                .addComponent(jLabel14,
javax.swing.GroupLayout.PREFERRED_SIZE, 350,
javax.swing.GroupLayout.PREFERRED_SIZE)

                .addComponent(jLabel13,
javax.swing.GroupLayout.PREFERRED_SIZE, 342,
javax.swing.GroupLayout.PREFERRED_SIZE))

            .addContainerGap())

        .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel6Layout.createSequentialGroup()
```

```
                .addComponent(jLabel7, javax.swing.GroupLayout.PREFERRED_SIZE,
280, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(36, 36, 36))))
            .addGroup(jPanel6Layout.createSequentialGroup()
                .addGap(138, 138, 138)
                .addComponent(jButton1))
        );
        jPanel6Layout.setVerticalGroup(

jPanel6Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel6Layout.createSequentialGroup()
                .addGap(29, 29, 29)
                .addComponent(jLabel7)
                .addGap(18, 18, 18)
                .addComponent(jLabel8, javax.swing.GroupLayout.PREFERRED_SIZE, 66,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(29, 29, 29)

.addGroup(jPanel6Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LE
ADING)
                    .addGroup(jPanel6Layout.createSequentialGroup()
                        .addGap(50, 50, 50)
                        .addComponent(jLabel11))
```

```
                .addComponent(jLabel9, javax.swing.GroupLayout.PREFERRED_SIZE,
27, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGroup(jPanel6Layout.createSequentialGroup()
                    .addGap(20, 20, 20)
                    .addComponent(jLabel10,
javax.swing.GroupLayout.PREFERRED_SIZE, 33,
javax.swing.GroupLayout.PREFERRED_SIZE)))
            .addGap(4, 4, 4)

.addGroup(jPanel6Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LE
ADING)
                .addComponent(jLabel14, javax.swing.GroupLayout.PREFERRED_SIZE,
60, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGroup(jPanel6Layout.createSequentialGroup()
                    .addGap(30, 30, 30)
                    .addComponent(jLabel13,
javax.swing.GroupLayout.PREFERRED_SIZE, 60,
javax.swing.GroupLayout.PREFERRED_SIZE)))
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
            .addComponent(jButton1)
            .addContainerGap(14, Short.MAX_VALUE))
        );

        javax.swing.GroupLayout jDialog1Layout = new
javax.swing.GroupLayout(jDialog1.getContentPane());
```

```
        jDialog1.getContentPane().setLayout(jDialog1Layout);

        jDialog1Layout.setHorizontalGroup(

jDialog1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

            .addGroup(jDialog1Layout.createSequentialGroup()

                .addGap(130, 130, 130)

                .addComponent(jPanel6, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)

                .addContainerGap(112, Short.MAX_VALUE))

        );

        jDialog1Layout.setVerticalGroup(

jDialog1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

            .addGroup(jDialog1Layout.createSequentialGroup()

                .addGap(32, 32, 32)

                .addComponent(jPanel6, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)

                .addContainerGap(289, Short.MAX_VALUE))

        );


        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

        setResizable(false);
```

```
        getContentPane().setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());


jTabbedPane1.setBorder(javax.swing.BorderFactory.createBevelBorder(javax.swing.border.BevelBorder.RAISED));


jPanel2.setBorder(javax.swing.BorderFactory.createBevelBorder(javax.swing.border.BevelBorder.RAISED));

        lblCode.setText("Serial No");

        lblName.setText("Medicine Name ");

        lblAddress.setText("Manufacturer");

        lblType.setText("Medicine Type");

        lblRanking.setText("Catogries ");

        lblFee.setText("Price ");

        lblDiscount.setText("Discount");
```

```
        txtManufacture.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                txtManufactureActionPerformed(evt);
            }
        });

        cmbType.setModel(new javax.swing.DefaultComboBoxModel<>(new String[] {
"Liquid", "Tablet", "Capsules", "Topical Medicine", "Drops", "InHalers", "Injections" }));
        cmbType.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                cmbTypeActionPerformed(evt);
            }
        });

        btnCatogries.add(rbtnLocal);
        rbtnLocal.setSelected(true);
        rbtnLocal.setText("Local");

        btnCatogries.add(rbtImport);
        rbtImport.setText("Importated");

        cmbDiscount.setModel(new javax.swing.DefaultComboBoxModel<>(new String[] {
"10%", "20%", "30%", "40%", "50%", "60%", "70%", "80%", "90%", "100%" }));
```

```
btnAdd.setText("Add");
btnAdd.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        btnAddActionPerformed(evt);
    }
});

btnClear.setText("Clear");
btnClear.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        btnClearActionPerformed(evt);
    }
});

btnExit.setText("Exit");
btnExit.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        btnExitActionPerformed(evt);
    }
});

javax.swing.GroupLayout jPanel2Layout = new javax.swing.GroupLayout(jPanel2);
```

```
        jPanel2.setLayout(jPanel2Layout);
        jPanel2Layout.setHorizontalGroup(

jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel2Layout.createSequentialGroup()

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addGroup(jPanel2Layout.createSequentialGroup()
                    .addContainerGap()

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false)
                        .addComponent(lblCode, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                        .addComponent(lblName, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                        .addComponent(lblAddress, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                        .addComponent(lblType, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                        .addComponent(lblRanking, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
```

```
                .addComponent(lblFee, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                .addComponent(lblDiscount,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE))
            .addGap(49, 49, 49)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LE
ADING, false)
                .addComponent(txtName)
                .addComponent(txtManufacture)
                .addComponent(cmbType, 0, 161, Short.MAX_VALUE)
                .addGroup(jPanel2Layout.createSequentialGroup()
                    .addComponent(rbtnLocal)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
                    .addComponent(rbtImport))
                .addComponent(cmbDiscount, 0, 161, Short.MAX_VALUE)
                .addComponent(txtprice)
                .addComponent(txtSerialno)))
            .addGroup(jPanel2Layout.createSequentialGroup()
                .addGap(43, 43, 43)
                .addComponent(btnAdd)
                .addGap(18, 18, 18)
```

```
                .addComponent(btnClear)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
                .addComponent(btnExit)))
            .addContainerGap(64, Short.MAX_VALUE))
        );
        jPanel2Layout.setVerticalGroup(

jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel2Layout.createSequentialGroup()
                .addGap(28, 28, 28)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BA
SELINE)
                .addComponent(lblCode, javax.swing.GroupLayout.PREFERRED_SIZE,
25, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(txtSerialno,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))
                .addGap(18, 18, 18)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BA
SELINE)
                .addComponent(lblName, javax.swing.GroupLayout.PREFERRED_SIZE,
33, javax.swing.GroupLayout.PREFERRED_SIZE)
```

```
                .addComponent(txtName, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))

            .addGap(18, 18, 18)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BA
SELINE)

                .addComponent(lblAddress, javax.swing.GroupLayout.PREFERRED_SIZE,
24, javax.swing.GroupLayout.PREFERRED_SIZE)

                .addComponent(txtManufacture,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))

            .addGap(18, 18, 18)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BA
SELINE)

                .addComponent(lblType, javax.swing.GroupLayout.PREFERRED_SIZE,
26, javax.swing.GroupLayout.PREFERRED_SIZE)

                .addComponent(cmbType, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))

            .addGap(18, 18, 18)

.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BA
SELINE)
```

```
                .addComponent(lblRanking, javax.swing.GroupLayout.PREFERRED_SIZE,
25, javax.swing.GroupLayout.PREFERRED_SIZE)

                .addComponent(rbtnLocal)

                .addComponent(rbtImport))

            .addGap(18, 18, 18)


.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BA
SELINE)

                .addComponent(lblFee, javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE)

                .addComponent(txtprice, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))

            .addGap(18, 18, 18)


.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BA
SELINE)

                .addComponent(lblDiscount,
javax.swing.GroupLayout.PREFERRED_SIZE, 34,
javax.swing.GroupLayout.PREFERRED_SIZE)

                .addComponent(cmbDiscount,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))

            .addGap(41, 41, 41)
```

```
.addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BA
SELINE)
                .addComponent(btnAdd)
                .addComponent(btnClear)
                .addComponent(btnExit))
            .addContainerGap(43, Short.MAX_VALUE))
        );

        jTabbedPane1.addTab("Add Medicine", jPanel2);


jPanel4.setBorder(javax.swing.BorderFactory.createTitledBorder(javax.swing.BorderFa
ctory.createLineBorder(new java.awt.Color(0, 0, 0)), "Search By MedicineType",
javax.swing.border.TitledBorder.DEFAULT_JUSTIFICATION,
javax.swing.border.TitledBorder.DEFAULT_POSITION, new java.awt.Font("Tahoma", 1,
13))); // NOI18N

        jLabel4.setFont(new java.awt.Font("Tahoma", 1, 13)); // NOI18N
        jLabel4.setText("Medicine Type");

        btnsearchbymedicineType.setText("Applied");
        btnsearchbymedicineType.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                btnsearchbymedicineTypeActionPerformed(evt);
```

```
        }
    });

    cmbMedicineType.setFont(new java.awt.Font("Tahoma", 1, 13)); // NOI18N
    cmbMedicineType.setModel(new javax.swing.DefaultComboBoxModel<>(new
String[] { "Liquid", "Tablet", "Capsules", "Topical Medicine", "Drops", "InHalers",
"Injections" }));

    javax.swing.GroupLayout jPanel4Layout = new javax.swing.GroupLayout(jPanel4);
    jPanel4.setLayout(jPanel4Layout);
    jPanel4Layout.setHorizontalGroup(

jPanel4Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(jPanel4Layout.createSequentialGroup()
            .addGap(29, 29, 29)
            .addComponent(jLabel4, javax.swing.GroupLayout.PREFERRED_SIZE, 94,
javax.swing.GroupLayout.PREFERRED_SIZE)
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

.addGroup(jPanel4Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LE
ADING)
                .addComponent(btnsearchbymedicineType,
javax.swing.GroupLayout.PREFERRED_SIZE, 101,
javax.swing.GroupLayout.PREFERRED_SIZE)
```

```
                .addComponent(cmbMedicineType,
javax.swing.GroupLayout.PREFERRED_SIZE, 176,
javax.swing.GroupLayout.PREFERRED_SIZE))
            .addContainerGap(56, Short.MAX_VALUE))
        );
        jPanel4Layout.setVerticalGroup(

jPanel4Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel4Layout.createSequentialGroup()
                .addContainerGap()

.addGroup(jPanel4Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BA
SELINE)
                .addComponent(jLabel4, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                .addComponent(cmbMedicineType,
javax.swing.GroupLayout.DEFAULT_SIZE, 32, Short.MAX_VALUE))
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
18, Short.MAX_VALUE)
            .addComponent(btnsearchbymedicineType)
            .addContainerGap())
        );


jPanel5.setBorder(javax.swing.BorderFactory.createTitledBorder(javax.swing.BorderFa
```

```
ctory.createLineBorder(new java.awt.Color(0, 0, 0)), "Search by Price ",
javax.swing.border.TitledBorder.DEFAULT_JUSTIFICATION,
javax.swing.border.TitledBorder.DEFAULT_POSITION, new java.awt.Font("Tahoma", 1,
13))); // NOI18N


    btnSearchbyManufature.setText("Applied");
    btnSearchbyManufature.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            btnSearchbyManufatureActionPerformed(evt);
        }
    });

    txtSearchbyfee.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            txtSearchbyfeeActionPerformed(evt);
        }
    });

    jLabel2.setFont(new java.awt.Font("Tahoma", 1, 13)); // NOI18N
    jLabel2.setText("Price");

    javax.swing.GroupLayout jPanel5Layout = new javax.swing.GroupLayout(jPanel5);
    jPanel5.setLayout(jPanel5Layout);
```

```
        jPanel5Layout.setHorizontalGroup(

jPanel5Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel5Layout.createSequentialGroup()
                .addGap(29, 29, 29)
                .addComponent(jLabel2, javax.swing.GroupLayout.PREFERRED_SIZE, 100,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
34, Short.MAX_VALUE)
                .addComponent(txtSearchbyfee,
javax.swing.GroupLayout.PREFERRED_SIZE, 155,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(42, 42, 42))
            .addGroup(jPanel5Layout.createSequentialGroup()
                .addGap(109, 109, 109)
                .addComponent(btnSearchbyManufature)
                .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE))
        );
        jPanel5Layout.setVerticalGroup(

jPanel5Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel5Layout.createSequentialGroup()
                .addContainerGap(31, Short.MAX_VALUE)
```

```
.addGroup(jPanel5Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BA
SELINE)
                .addComponent(txtSearchbyfee,
javax.swing.GroupLayout.PREFERRED_SIZE, 32,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(jLabel2, javax.swing.GroupLayout.PREFERRED_SIZE,
32, javax.swing.GroupLayout.PREFERRED_SIZE))
            .addGap(33, 33, 33)
            .addComponent(btnSearchbyManufature)
            .addContainerGap())
        );

        jButton3.setText("Close");
        jButton3.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButton3ActionPerformed(evt);
            }
        });

        javax.swing.GroupLayout jPanel3Layout = new javax.swing.GroupLayout(jPanel3);
        jPanel3.setLayout(jPanel3Layout);
        jPanel3Layout.setHorizontalGroup(
```

```
jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(jPanel3Layout.createSequentialGroup()

.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel3Layout.createSequentialGroup()
                .addContainerGap()
                .addComponent(jPanel4, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))
            .addGroup(jPanel3Layout.createSequentialGroup()
                .addGap(131, 131, 131)
                .addComponent(jButton3,
javax.swing.GroupLayout.PREFERRED_SIZE, 116,
javax.swing.GroupLayout.PREFERRED_SIZE)))
            .addGap(0, 0, Short.MAX_VALUE))
        .addGroup(jPanel3Layout.createSequentialGroup()
            .addContainerGap()
            .addComponent(jPanel5, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
            .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE))
    );
```

```
        jPanel3Layout.setVerticalGroup(

jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel3Layout.createSequentialGroup()
                .addContainerGap()
                .addComponent(jPanel4, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(31, 31, 31)
                .addComponent(jPanel5, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
40, Short.MAX_VALUE)
                .addComponent(jButton3, javax.swing.GroupLayout.PREFERRED_SIZE, 38,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addContainerGap())
        );


        jTabbedPane2.addTab("", jPanel3);


        jTabbedPane1.addTab("Search Medicine", jTabbedPane2);


        getContentPane().add(jTabbedPane1, new
org.netbeans.lib.awtextra.AbsoluteConstraints(10, 140, 390, 480));
```

```
        jTabbedPane1.getAccessibleContext().setAccessibleName("Add Medicine ");


        jPanel1.setToolTipText("Data");


        tableInfo.setModel(new javax.swing.table.DefaultTableModel(
            new Object [][] {
                {null, null, null, null, null, null, null},
                {null, null, null, null, null, null, null},
                {null, null, null, null, null, null, null},
                {null, null, null, null, null, null, null},
                {null, null, null, null, null, null, null},
                {null, null, null, null, null, null, null},
                {null, null, null, null, null, null, null},
                {null, null, null, null, null, null, null},
                {null, null, null, null, null, null, null},
                {null, null, null, null, null, null, null},
                {null, null, null, null, null, null, null},
                {null, null, null, null, null, null, null},
                {null, null, null, null, null, null, null}
            },
            new String [] {
                "Serial Number ", "Medicine Name ", "Manufacture", "Medicine Types",
"Categories", "Price ", "Discount"
```

```
        }
    ) {
        boolean[] canEdit = new boolean [] {
            false, false, false, false, false, false, false
        };

        public boolean isCellEditable(int rowIndex, int columnIndex) {
            return canEdit [columnIndex];
        }
    });
    jScrollPane2.setViewportView(tableInfo);
    if (tableInfo.getColumnModel().getColumnCount() > 0) {
        tableInfo.getColumnModel().getColumn(0).setResizable(false);
        tableInfo.getColumnModel().getColumn(1).setResizable(false);
        tableInfo.getColumnModel().getColumn(2).setResizable(false);
        tableInfo.getColumnModel().getColumn(3).setResizable(false);
        tableInfo.getColumnModel().getColumn(4).setResizable(false);
        tableInfo.getColumnModel().getColumn(5).setResizable(false);
        tableInfo.getColumnModel().getColumn(6).setResizable(false);
    }

    jLabel1.setFont(new java.awt.Font("Tahoma", 1, 13)); // NOI18N
    jLabel1.setText("Medicine Information ");
```

```
javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);
jPanel1.setLayout(jPanel1Layout);
jPanel1Layout.setHorizontalGroup(

jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(jPanel1Layout.createSequentialGroup()
        .addComponent(jLabel1, javax.swing.GroupLayout.PREFERRED_SIZE, 194,
javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGap(0, 0, Short.MAX_VALUE))
    .addGroup(jPanel1Layout.createSequentialGroup()
        .addComponent(jScrollPane2, javax.swing.GroupLayout.DEFAULT_SIZE,
948, Short.MAX_VALUE)
        .addContainerGap())
);
jPanel1Layout.setVerticalGroup(

jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(jPanel1Layout.createSequentialGroup()
        .addComponent(jLabel1, javax.swing.GroupLayout.PREFERRED_SIZE, 16,
javax.swing.GroupLayout.PREFERRED_SIZE)
        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
        .addComponent(jScrollPane2, javax.swing.GroupLayout.PREFERRED_SIZE,
467, javax.swing.GroupLayout.PREFERRED_SIZE)
```

```
            .addContainerGap())
        );

        getContentPane().add(jPanel1, new
org.netbeans.lib.awtextra.AbsoluteConstraints(410, 130, 960, 490));

        jLabel6.setFont(new java.awt.Font("Comic Sans MS", 1, 36)); // NOI18N
        jLabel6.setForeground(new java.awt.Color(51, 0, 51));
        jLabel6.setText("Pharmastash");
        getContentPane().add(jLabel6, new
org.netbeans.lib.awtextra.AbsoluteConstraints(650, 20, 330, 50));
        getContentPane().add(jLabel5, new
org.netbeans.lib.awtextra.AbsoluteConstraints(0, 120, 400, 450));

        lblTime.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
        getContentPane().add(lblTime, new
org.netbeans.lib.awtextra.AbsoluteConstraints(1130, 50, 140, 20));

        lblDate.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
        getContentPane().add(lblDate, new
org.netbeans.lib.awtextra.AbsoluteConstraints(1130, 10, 140, 20));

        jLabel3.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/MedicineInfo/background.png"))); //
NOI18N
```

```
        getContentPane().add(jLabel3, new
org.netbeans.lib.awtextra.AbsoluteConstraints(0, 0, 1360, 650));


        jMenuBar1.setFont(new java.awt.Font("Arial", 1, 15)); // NOI18N


        jMenu1.setText("File");



jmuOpen.setAccelerator(javax.swing.KeyStroke.getKeyStroke(java.awt.event.KeyEvent.
VK_O, java.awt.event.InputEvent.CTRL_MASK));
        jmuOpen.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/MedicineInfo/icons8_folder_30px.png"
))); // NOI18N
        jmuOpen.setText("Open");
        jmuOpen.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jmuOpenActionPerformed(evt);
            }
        });
        jMenu1.add(jmuOpen);



JmuSave.setAccelerator(javax.swing.KeyStroke.getKeyStroke(java.awt.event.KeyEvent
.VK_S, java.awt.event.InputEvent.CTRL_MASK));
```

```
        JmuSave.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/MedicineInfo/icons8_save_30px.png")
)); // NOI18N
        JmuSave.setText("Save");
        JmuSave.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                JmuSaveActionPerformed(evt);
            }
        });
        jMenu1.add(JmuSave);



jmuImport.setAccelerator(javax.swing.KeyStroke.getKeyStroke(java.awt.event.KeyEven
t.VK_I, java.awt.event.InputEvent.CTRL_MASK));
        jmuImport.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/MedicineInfo/icons8_import_30px.png
"))); // NOI18N
        jmuImport.setText("Import");
        jmuImport.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jmuImportActionPerformed(evt);
            }
        });
        jMenu1.add(jmuImport);
```

```
jumExit.setAccelerator(javax.swing.KeyStroke.getKeyStroke(java.awt.event.KeyEvent.VK_E, java.awt.event.InputEvent.ALT_MASK | java.awt.event.InputEvent.CTRL_MASK));
        jumExit.setIcon(new javax.swing.ImageIcon(getClass().getResource("/MedicineInfo/icons8_exit_24px.png"))); // NOI18N
        jumExit.setText("Exit");
        jumExit.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jumExitActionPerformed(evt);
            }
        });
        jMenu1.add(jumExit);

        jMenuBar1.add(jMenu1);

        jMenu2.setText("Help");

jMenuItem1.setAccelerator(javax.swing.KeyStroke.getKeyStroke(java.awt.event.KeyEvent.VK_H, java.awt.event.InputEvent.CTRL_MASK));
        jMenuItem1.setIcon(new javax.swing.ImageIcon(getClass().getResource("/MedicineInfo/icons8_faq_26px.png"))); // NOI18N
```

```
        jMenuItem1.setText("Help");
        jMenuItem1.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jMenuItem1ActionPerformed(evt);
            }
        });
        jMenu2.add(jMenuItem1);

        jMenuBar1.add(jMenu2);

        jMenu3.setText("About");

jMenuItem2.setAccelerator(javax.swing.KeyStroke.getKeyStroke(java.awt.event.KeyEvent.VK_A, java.awt.event.InputEvent.CTRL_MASK));
        jMenuItem2.setIcon(new javax.swing.ImageIcon(getClass().getResource("/MedicineInfo/icons8_about_24px.png"))); // NOI18N
        jMenuItem2.setText("About ");
        jMenuItem2.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jMenuItem2ActionPerformed(evt);
            }
        });
```

```
        jMenu3.add(jMenuItem2);


        jMenuBar1.add(jMenu3);


        setJMenuBar(jMenuBar1);


        pack();
    }// </editor-fold>


    private void jmuImportActionPerformed(java.awt.event.ActionEvent evt) {
       try {
            File selectedFile;
            selectedFile = new
File("C:\\Users\\User\\Documents\\NetBeansProjects\\MedicineInfo\\src\\MedicineInfo\\D
ata\\data.csv");
            if(selectedFile.exists()) {
                if(selectedFile.length()==0) {
                    JOptionPane.showMessageDialog(rootPane,"There is No Previously
Saved Data" ,"Error!!",JOptionPane.ERROR_MESSAGE);
                }
                else{
                    BufferedReader br = new BufferedReader(new FileReader(selectedFile));
                    Object[] lines = br.lines().toArray();
```

```
int rowCount = tableInfo.getRowCount();
int nextRow = 0;
boolean emptyRowFlag = false;
String p;

for (int i = 0; i < lines.length; i++) {
    String[] row = lines[i].toString().split(",");
    do {
        p = (String) tableInfo.getValueAt(nextRow, 0);

        if (p != null && p.length() != 0) {
            nextRow++;
        }

        else {
            emptyRowFlag = true;
        }
    }
    while (nextRow < rowCount && !emptyRowFlag);

    if (emptyRowFlag) {
        int colCount = tableInfo.getColumnCount();
```

```
                    if (nextRow < rowCount) {


                        for (int j = 0; j < colCount; j++) {
                            tableInfo.setValueAt(row[j], nextRow, j);
                        }
                    }
                }
                else {
                    JOptionPane.showMessageDialog(rootPane, "No Empty Row Found!!", "Error!!", JOptionPane.ERROR_MESSAGE);
                }
            }
        }
        else{
            selectedFile.createNewFile();
            JOptionPane.showMessageDialog(rootPane,"There is No Previously Saved Data" ,"Error!!",JOptionPane.ERROR_MESSAGE);
            return;
        }
    }


    catch (Exception ex) {
```

```
            Logger.getLogger(MedicineInfo.class.getName()).log(Level.SEVERE, null, ex);
        }









    }
   private void save() {
            File file = new
File("C:\\Users\\User\\Documents\\NetBeansProjects\\MedicineInfo\\src\\MedicineInfo\\Data\\data.csv");//Loading of file


        try (FileWriter wr = new FileWriter(file)) {
            for (MedicineInfo s : Item) {
            String val[] = {s.getSerialNumber(), s.getname(), s.getManufacture(),
s.getmedicinetype(),s.getcatagory(), Integer.toString(s.getprice()), s.getDiscount()};


            if (file.isFile()) {
                file.createNewFile();
            }
                for (int i = 0; i <= val.length; i++) {
                    wr.append(val[i]);
```

```
                if (i == val.length - 1) {
                    break;
                }
                wr.append(",");//
            }
            wr.append("\n");
        }
        wr.flush();
        wr.close();
    }
    catch (IOException ex) {
        Logger.getLogger(MedicineInfo.class.getName()).log(Level.SEVERE, null, ex);
  }
 }

public void readCSV() {
try {
    BufferedReader bffr = new BufferedReader(new FileReader("Demo.csv"));
    } catch (FileNotFoundException ex) {
         JOptionPane.showMessageDialog(this, "File not Found");
    }catch(IOException ex){
       JOptionPane.showMessageDialog(this, "IOException occured.");
    }
```

```
 }
   private void JmuSaveActionPerformed(java.awt.event.ActionEvent evt) {
       // TODO add your handling code here:
         if(Item.size()>=1) {
           save();
           JOptionPane.showMessageDialog(this, "Data is sucessfully Saved ",
"Sucessfull!!", JOptionPane.INFORMATION_MESSAGE);
       }
       else {
           JOptionPane.showMessageDialog(rootPane, "No Any Data Inserted in Table!!",
"Error!!", JOptionPane.ERROR_MESSAGE);
       }
   }

   private void jmuOpenActionPerformed(java.awt.event.ActionEvent evt) {
       // TODO add your handling code here:
         try {
           File file = new
File("C:\\Users\\User\\Documents\\NetBeansProjects\\MedicineInfo\\src\\MedicineInfo\\D
ata\\data.csv"); //sets file location

           if(file.exists()) {
               if(Desktop.isDesktopSupported()) {
                   Desktop.getDesktop().open(file); //Opens the previously saved file
```

```
            }
            else {
                JOptionPane.showMessageDialog(rootPane,"Not Supported in Desktop"
,"Error!!",JOptionPane.ERROR_MESSAGE);
            }
        }
        else {
            JOptionPane.showMessageDialog(rootPane,"File Doesn't Exists."
,"Error!!",JOptionPane.ERROR_MESSAGE);
        }
    }
    catch (HeadlessException | IOException ex) {
        Logger.getLogger(MedicineInfo.class.getName()).log(Level.SEVERE, null, ex);
    }
}



private void jumExitActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    int result = JOptionPane.showConfirmDialog(rootPane,"Do You Want To
Close?","Warning!!",JOptionPane.YES_NO_OPTION); //Asks user to exit the program
    if(result == 0) {
        System.exit(0);
```

```
        }
        else {
            return;
        }
    }

    private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
            int result = JOptionPane.showConfirmDialog(rootPane,"Do You Want To
Close?","Warning!!",JOptionPane.YES_NO_OPTION); //Asks user to exit the program
        if(result == 0) {
            System.exit(0);
        }
        else {
            return;
        }
    }

    private void txtSearchbyfeeActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
    }
```

```
    private void btnSearchbyManufatureActionPerformed(java.awt.event.ActionEvent evt)
{
        // TODO add your handling code here:
        try {


            mergeSort(Item); //calls mergeSort() andd pass the array list as parameter
            int price = Integer.parseInt(txtSearchbyfee.getText().trim()); //converts string to
integer type
            int i = binarySearch(Item,0,Item.size()-1,price);


            if (i == -1) {
                JOptionPane.showMessageDialog(rootPane,"There is No Data with that
Price." ,"No Any Data!!",JOptionPane.INFORMATION_MESSAGE);
            }


            else { //displaying searched details
                JOptionPane.showMessageDialog(rootPane,"\n"+" SerialNumber:
"+Item.get(i).getSerialNumber()+"\n medicine Name: "+Item.get(i).getname()+"\n price:
"+Item.get(i).getprice(),"Medicine
Information",JOptionPane.INFORMATION_MESSAGE);
            }
        }
        catch(NumberFormatException nfe) { //exception handling
            if (txtSearchbyfee.getText().isEmpty()) {
```

```
            JOptionPane.showMessageDialog(rootPane,"No Any Value is Inserted."
,"Empty Text Fields!!",JOptionPane.ERROR_MESSAGE);
        }           else {
            JOptionPane.showMessageDialog(rootPane,"Please Enter Correct Data
Type" ,"Error Data Type!!",JOptionPane.ERROR_MESSAGE);
        }
    }
  }

  private void btnsearchbymedicineTypeActionPerformed(java.awt.event.ActionEvent
evt) {
    // TODO add your handling code here:
    String medicinetype = "";
    String cKey = (String)cmbMedicineType.getSelectedItem(); //selecting key value
from comboBox

    for(MedicineInfo c:Item) {
        if(c.getmedicinetype().equals(cKey)) {
            medicinetype +=  " Model Number:"+c.getSerialNumber()+"\n
Name:"+c.getname()+"\n Price:"+c.getprice()+"\n Catagory:"+c.getManufacture()+"\n\n";
//printing searched values
        }
    }
```

```
        if(!medicinetype.equals("")) {
            JOptionPane.showMessageDialog(rootPane," The Item is:"+"\n" +
medicinetype);
        }
        else {
            JOptionPane.showMessageDialog(rootPane,"No Values in this Category" ,"No
Such Data",JOptionPane.ERROR_MESSAGE);
        }

    }

    private void btnExitActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
            int result = JOptionPane.showConfirmDialog(rootPane,"Do You Want To
Close?","Warning!!",JOptionPane.YES_NO_OPTION); //Asks user to exit the program
        if(result == 0) {
            System.exit(0);
        }
        else {
        }
    }

    private void btnAddActionPerformed(java.awt.event.ActionEvent evt) {
```

```
        // TODO add your handling code here:
try{
        String  serialnumber = txtSerialno.getText().trim();
        String name = txtName.getText().trim();
        String manufacture = txtManufacture.getText().trim();
        String medicinetype = (String)cmbType.getSelectedItem();
        String catagoryTypes;
        if (rbtnLocal.isSelected() == true){
            catagoryTypes = "Local";
        }
        else{
            catagoryTypes = "Imporated";
        }
        String catagory = catagoryTypes;
        int price =Integer.parseInt(txtprice.getText().trim());
        String discount = (String)cmbDiscount.getSelectedItem();
        DefaultTableModel dmf = (DefaultTableModel)tableInfo.getModel();

        for (MedicineInfo n :Item){
            if (serialnumber.equals(n.getSerialNumber())){
                JOptionPane.showMessageDialog(this,"SerialNumber
Same","Error",JOptionPane.ERROR_MESSAGE);
                return;
```

```
            }
        }


        if
(!serialnumber.isEmpty()&&!name.isEmpty()&&!manufacture.isEmpty()&&!medicinetype.
isEmpty()&&!catagory.isEmpty()&&!discount.isEmpty()&& price > 0  ){
            String []Values =
{serialnumber,name,manufacture,medicinetype,catagory,Integer.toString(price),discount
};
            dmf.addRow(Values);
            MedicineInfo td = new
MedicineInfo(serialnumber,name,medicinetype,catagory,price,discount,manufacture);
            Item.add(td);
        }


        else{
            JOptionPane.showMessageDialog(this, "The number is invalid");


        }
}
catch(NumberFormatException nfe ){
   JOptionPane.showMessageDialog(rootPane, "Invalid Input or Missing TextField",
"Error!!", JOptionPane.ERROR_MESSAGE);
}
```

```
 catch (NullPointerException npe) {
        JOptionPane.showMessageDialog(rootPane, "No Data, Check Your Input",
"Error!!", JOptionPane.ERROR_MESSAGE);
 }
   }

   private void cmbTypeActionPerformed(java.awt.event.ActionEvent evt) {
       // TODO add your handling code here:
   }

   private void txtManufactureActionPerformed(java.awt.event.ActionEvent evt) {
       // TODO add your handling code here:
   }

   private void btnClearActionPerformed(java.awt.event.ActionEvent evt) {
       // TODO add your handling code here:
       int result = JOptionPane.showConfirmDialog(rootPane,"Do You Want To Clear All
The Text Fields?","Warning!!",JOptionPane.YES_NO_OPTION);
       if (result == 0){
           txtSerialno.setText("");
           txtName.setText("");
           txtManufacture.setText("");
           txtprice.setText("");
```

```
        }
        else {
            return;
        }


    }

    private void jMenuItem1ActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
            try {
            Runtime.getRuntime().exec("rundll32 url.dll,FileProtocolHandler " +
"C:\\Users\\User\\Documents\\NetBeansProjects\\MedicineInfo\\src\\MedicineInfo\\manu
al.pdf");
        }
        catch (Exception e) {
            JOptionPane.showMessageDialog(rootPane, "Sorry, There is no FAQs", "
Error.", JOptionPane.ERROR_MESSAGE);
        }
    }

    private void jMenuItem2ActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
```

```
        jDialog1.show();
    jDialog1.setLocationRelativeTo(null);
}

 private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    return;
}
public void mergeSort(ArrayList<MedicineInfo> price){
     if (price.size()<= 1){
         return ;
     }
 int FstLength = price.size()/2;
 int secLength = price.size()- FstLength;
 ArrayList<MedicineInfo> first = new ArrayList();
 ArrayList<MedicineInfo> secound = new ArrayList();
 for (int i = 0; i <FstLength;i++){
    first.add(price.get(i));
}
 for (int i = 0 ; i< secLength; i++){
    secound.add(price.get(FstLength + i));

}
```

```
    mergeSort(first);
    mergeSort(secound);
    merge(first,secound, price);
}
   public static int binarySearch(ArrayList<MedicineInfo> priceSearch, int low, int high,
int key) {
        int mid = (low + high)/2;
        if (low <= high){

            if ( priceSearch.get(mid).getprice() == key ){
                return mid;
            }

            else if ( priceSearch.get(mid).getprice() > key ){
                return binarySearch(priceSearch, low, mid-1, key);
            }

            else{
                return binarySearch(priceSearch, mid+1, high, key);
            }
        }

        else {
```

```
            return -1;
        }
    }
    public static void merge(ArrayList<MedicineInfo>first,ArrayList<MedicineInfo>second,
ArrayList<MedicineInfo>price){
            int iFirst = 0;
        int iSecond = 0;
        int j = 0;

        while (iFirst < first.size() && iSecond < second.size()) {
            if (first.get(iFirst).getprice() < second.get(iSecond).getprice()) {
                price.set(j, first.get(iFirst));
                iFirst++;
            }
            else {
                price.set(j, second.get(iSecond));
                iSecond++;
            }
            j++;
        }

        while (iFirst < first.size()) {
            price.set(j, first.get(iFirst));
```

```
            iFirst++;
            j++;
        }

        while (iSecond < second.size()) {
            price.set(j, second.get(iSecond));
            iSecond++;
            j++;
        }
    }

    /**
     * @param args the command line arguments
     */
    public static void main(String args[]) {
        /* Set the Nimbus look and feel */
        //<editor-fold defaultstate="collapsed" desc=" Look and feel setting code (optional)
">
        /* If Nimbus (introduced in Java SE 6) is not available, stay with the default look
and feel.
         * For details see
http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.html
         */
```

```
        try {
            for (javax.swing.UIManager.LookAndFeelInfo info :
javax.swing.UIManager.getInstalledLookAndFeels()) {
                if ("Nimbus".equals(info.getName())) {
                    javax.swing.UIManager.setLookAndFeel(info.getClassName());
                    break;
                }
            }
        } catch (ClassNotFoundException ex) {

java.util.logging.Logger.getLogger(fontpage.class.getName()).log(java.util.logging.Level.
SEVERE, null, ex);
        } catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(fontpage.class.getName()).log(java.util.logging.Level.
SEVERE, null, ex);
        } catch (IllegalAccessException ex) {

java.util.logging.Logger.getLogger(fontpage.class.getName()).log(java.util.logging.Level.
SEVERE, null, ex);
        } catch (javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(fontpage.class.getName()).log(java.util.logging.Level.
SEVERE, null, ex);
        }
```

```
        //</editor-fold>

        /* Create and display the form */
        java.awt.EventQueue.invokeLater(() -> {
            new fontpage().setVisible(true);
        });
    }

    // Variables declaration - do not modify
    private javax.swing.JMenuItem JmuSave;
    private javax.swing.JButton btnAdd;
    private javax.swing.ButtonGroup btnCatogries;
    private javax.swing.JButton btnClear;
    private javax.swing.JButton btnExit;
    private javax.swing.JButton btnSearchbyManufature;
    private javax.swing.JButton btnsearchbymedicineType;
    private javax.swing.JComboBox<String> cmbDiscount;
    private javax.swing.JComboBox<String> cmbMedicineType;
    private javax.swing.JComboBox<String> cmbType;
    private javax.swing.JButton jButton1;
    private javax.swing.JButton jButton3;
    private javax.swing.JDialog jDialog1;
    private javax.swing.JLabel jLabel1;
```

```
    private javax.swing.JLabel jLabel10;
    private javax.swing.JLabel jLabel11;
    private javax.swing.JLabel jLabel12;
    private javax.swing.JLabel jLabel13;
    private javax.swing.JLabel jLabel14;
    private javax.swing.JLabel jLabel2;
    private javax.swing.JLabel jLabel3;
    private javax.swing.JLabel jLabel4;
    private javax.swing.JLabel jLabel5;
    private javax.swing.JLabel jLabel6;
    private javax.swing.JLabel jLabel7;
    private javax.swing.JLabel jLabel8;
    private javax.swing.JLabel jLabel9;
    private javax.swing.JMenu jMenu1;
    private javax.swing.JMenu jMenu2;
    private javax.swing.JMenu jMenu3;
    private javax.swing.JMenuBar jMenuBar1;
    private javax.swing.JMenuItem jMenuItem1;
    private javax.swing.JMenuItem jMenuItem2;
    private javax.swing.JPanel jPanel1;
    private javax.swing.JPanel jPanel2;
    private javax.swing.JPanel jPanel3;
    private javax.swing.JPanel jPanel4;
```

```
    private javax.swing.JPanel jPanel5;
    private javax.swing.JPanel jPanel6;
    private javax.swing.JScrollPane jScrollPane2;
    private javax.swing.JTabbedPane jTabbedPane1;
    private javax.swing.JTabbedPane jTabbedPane2;
    private javax.swing.JTextField jTextField1;
    private javax.swing.JMenuItem jmuImport;
    private javax.swing.JMenuItem jmuOpen;
    private javax.swing.JMenuItem jumExit;
    private javax.swing.JLabel lblAddress;
    private javax.swing.JLabel lblCode;
    private javax.swing.JLabel lblDate;
    private javax.swing.JLabel lblDiscount;
    private javax.swing.JLabel lblFee;
    private javax.swing.JLabel lblName;
    private javax.swing.JLabel lblRanking;
    private javax.swing.JLabel lblTime;
    private javax.swing.JLabel lblType;
    private javax.swing.JRadioButton rbtImport;
    private javax.swing.JRadioButton rbtnLocal;
    private javax.swing.JTable tableInfo;
    private javax.swing.JTextField txtManufacture;
    private javax.swing.JTextField txtName;
```

```
    private javax.swing.JTextField txtSearchbyfee;
    private javax.swing.JTextField txtSerialno;
    private javax.swing.JTextField txtprice;
    // End of variables declaration
}
```