MDTU JAVA Workshop
Worksheet 02

Introduction to Java GUI Programming

The objective of this practical is to develop Java GUI applications Using Java **Swing package**. You are given set of activities and the sample outputs to your reference.

Java Swing is a part of Java Foundation Classes (JFC) that is *used to create window-based applications*. It is built on the top of AWT (Abstract Windowing Toolkit) API and entirely written in Java.

Unlike AWT, Java Swing provides platform-independent and lightweight components.

The **javax.swing package** provides classes for Java swing API such as JButton, JTextField, JTextArea, JRadioButton, JCheckbox, JMenu, JColorChooser etc.

Activity 1

Convert the console-based file handling application in **Practical 01** to a Java based GUI application. It should resemble a simple Notepad with application with features such as Open, Save, Save As, Find.

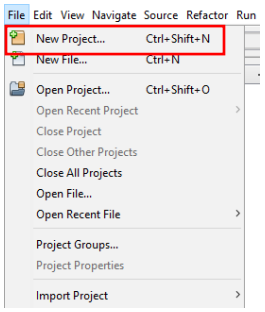
1. Open NetBeans IDE

Start Menu -> NetBeans

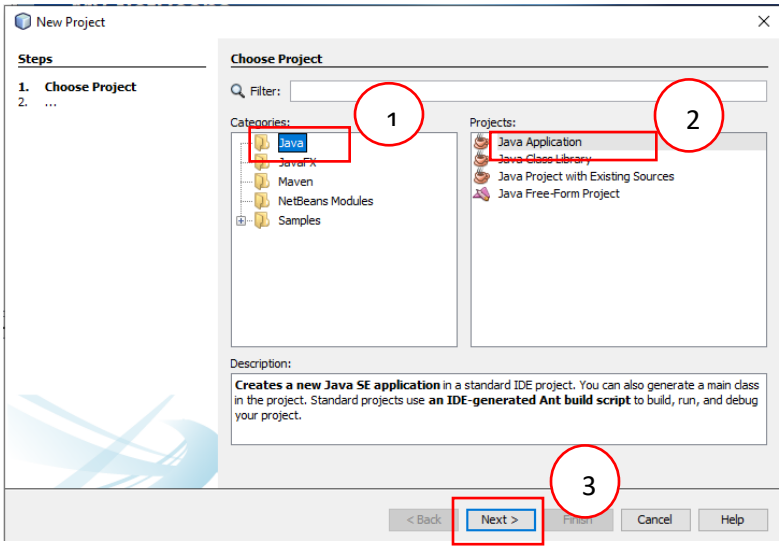
(IF there is a desktop shortcut you can use that)

2. Create New Java Project

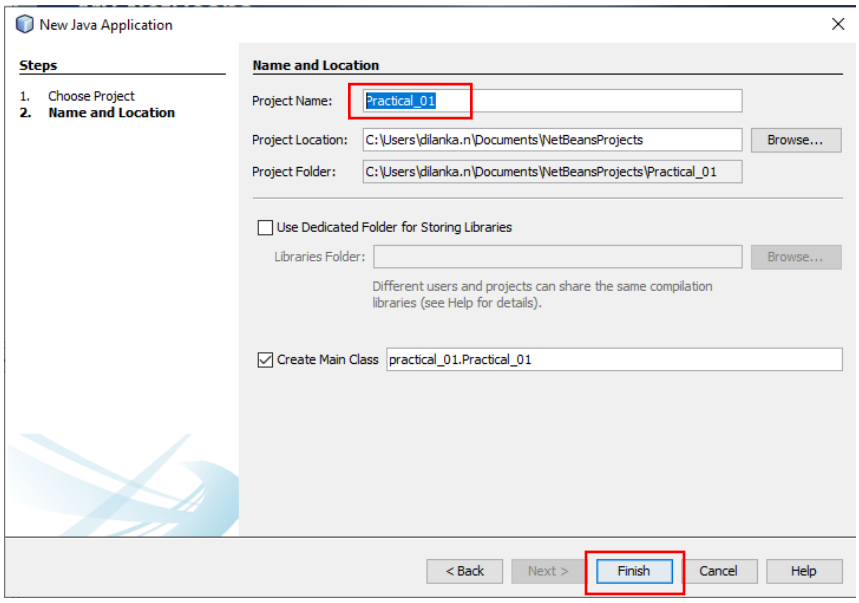
File –> New Project



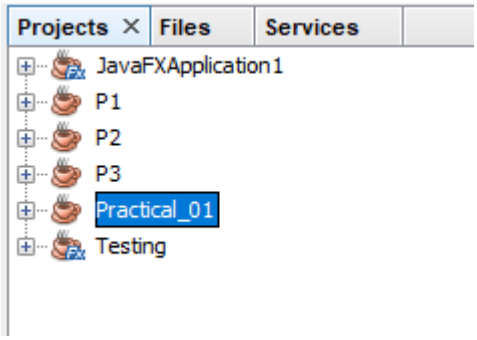
After you will have a interface to select project type as below.



- Select **Java** in Categories Column,
- Select **Java Application** in Project Column,
- Click **Next**



- Then Give an appropriate name for you project, **EX: Practical_02**
- Click **Finish.**

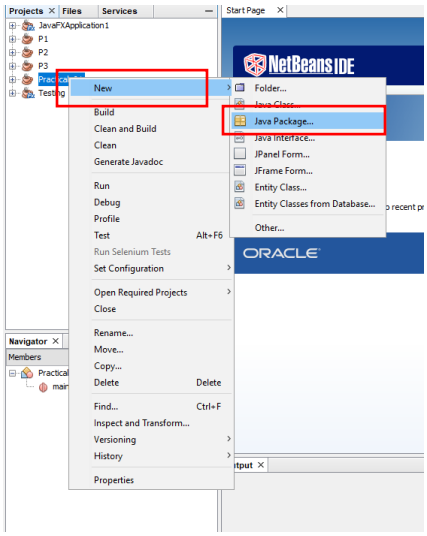


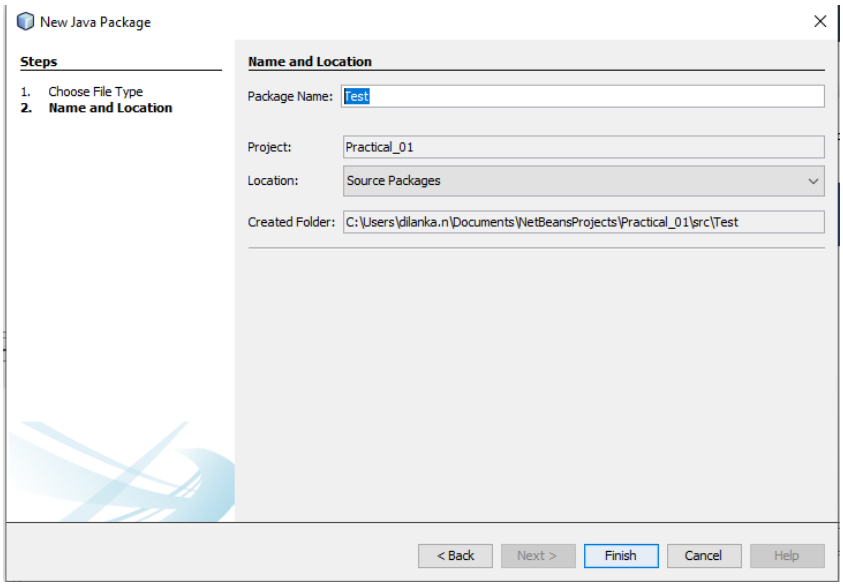
- Now you can see the project which you created under the **Project Explorer**

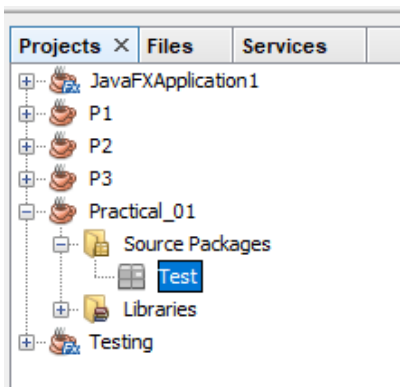
3. Create Java Packages and Classes

To create packages right click on your project in project Explorer, Then Select,

New –> New Packages

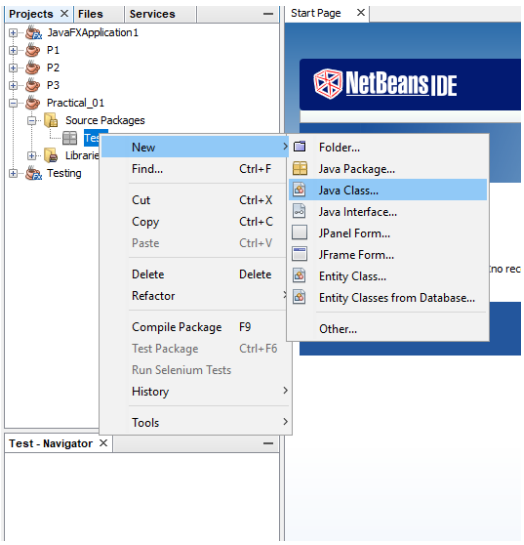




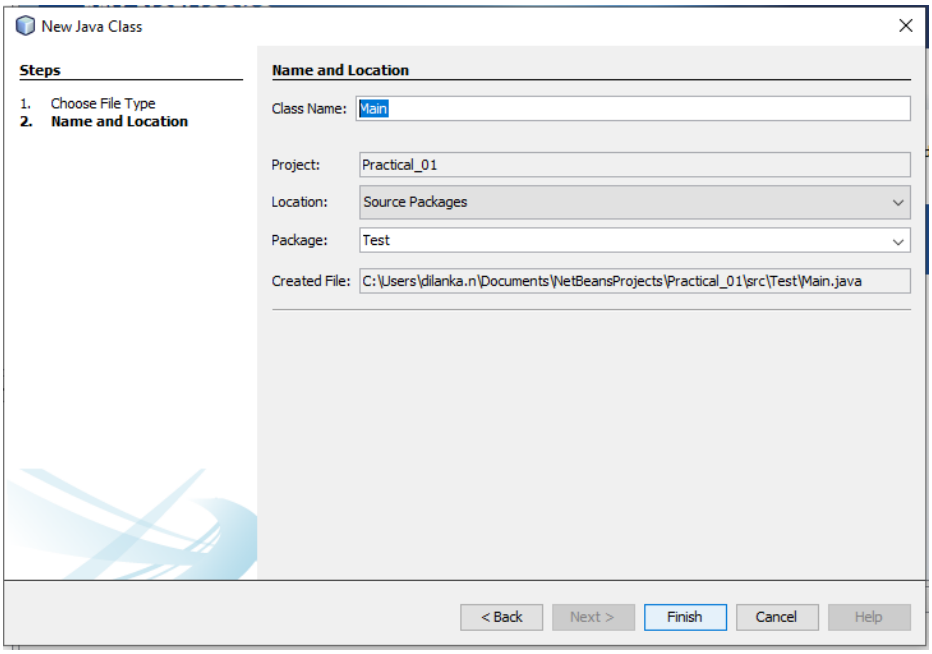


To create packages right click on your project in project Explorer, Then Select,

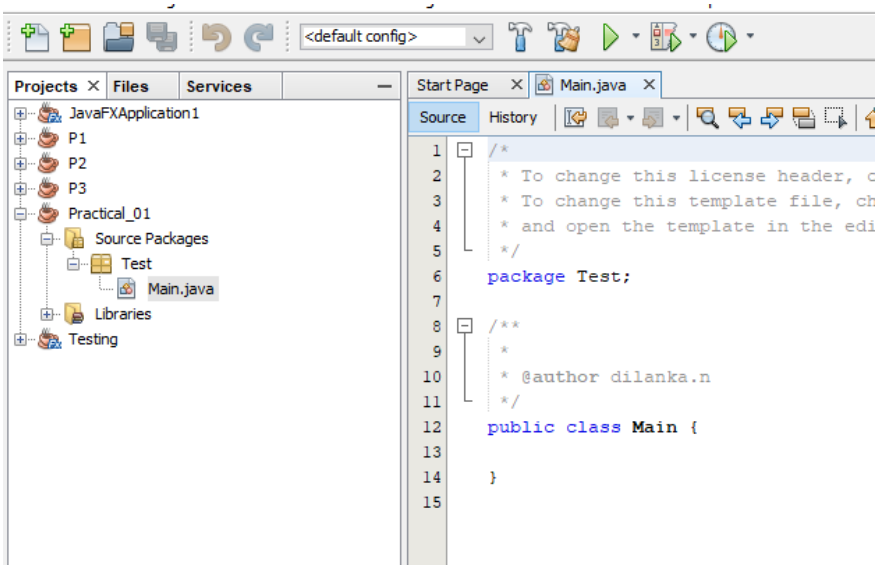
Right Click on the package, **New -> Java class**



Give a suitable class name.

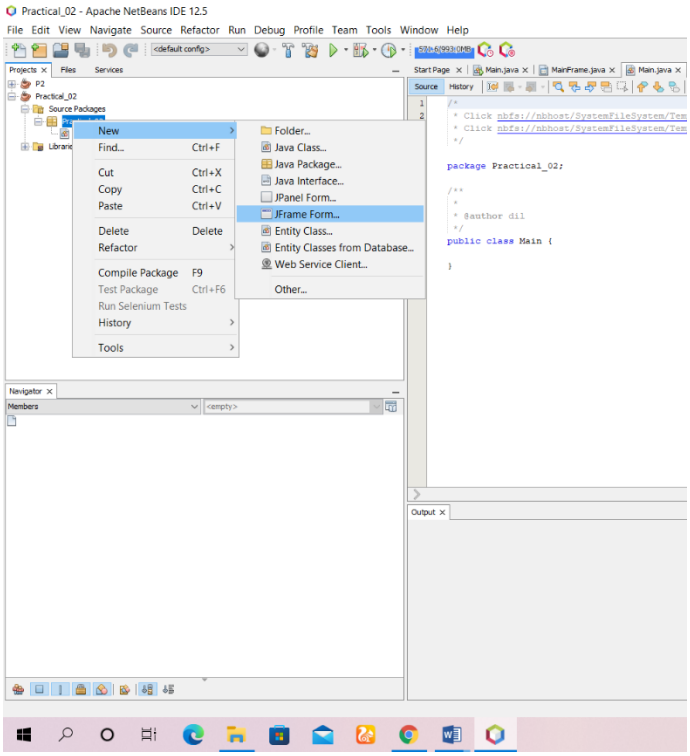


Now you should be able to see below environment

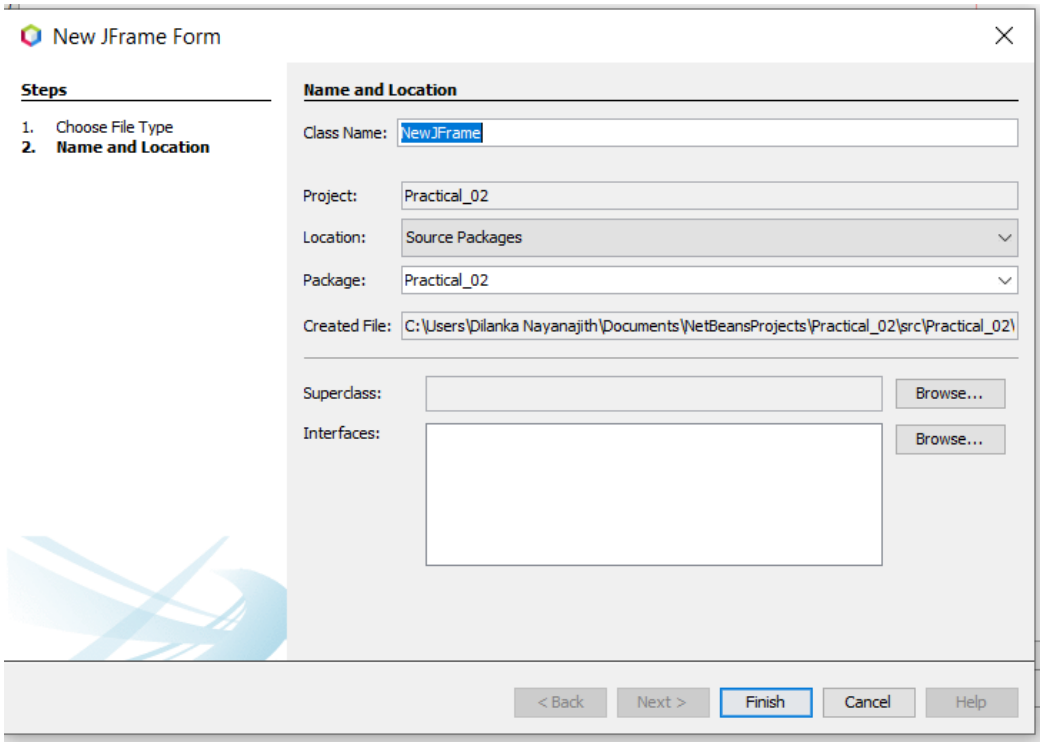


4.Create Java JFrame Form

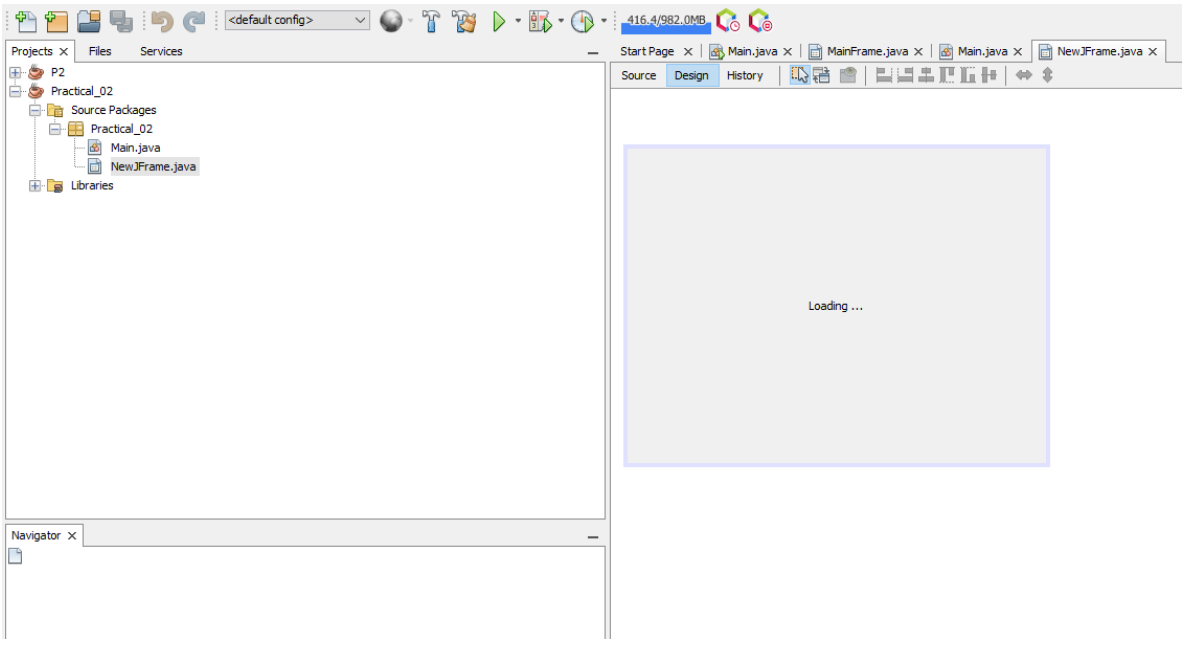
Right click o the package and go to new-> Frame Form



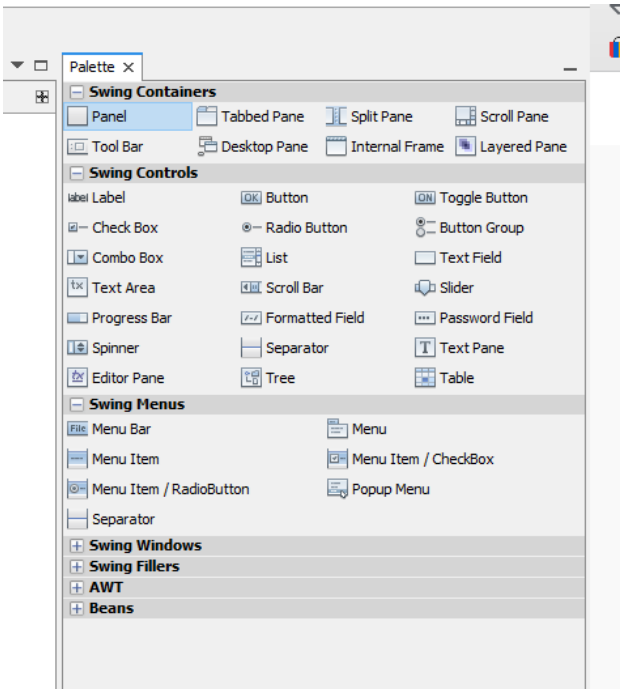
Give a suitable name for the main frame and click on finish.



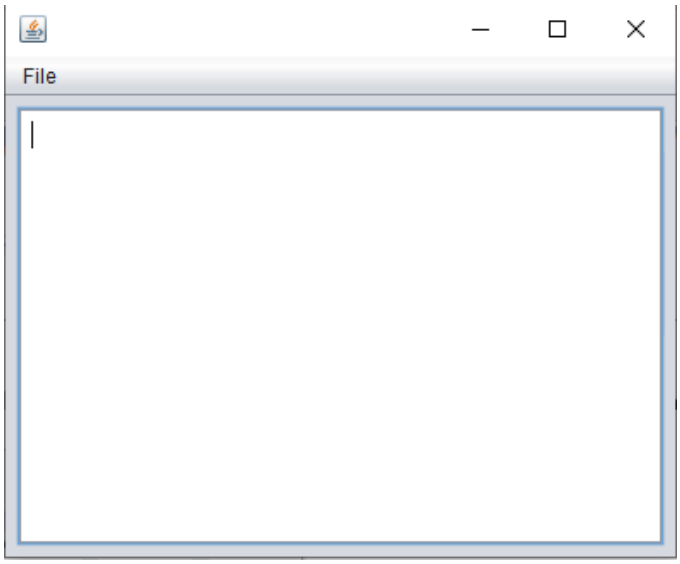
You should be able to see the below environment with the fram loaded.



You should be able to see the SWING components Palette available in the right pane.



Now design the below GUI accordingly.

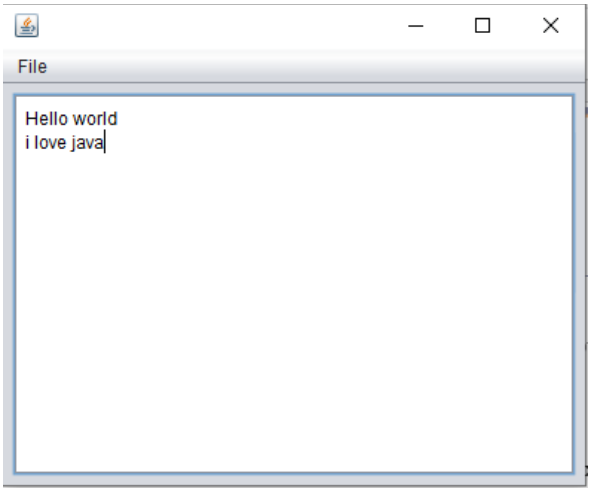


When you click on the file in the Menu bar, it should display a menu with 3 options as new, open and save.

Activity 2

When user clicks New from the menu, the mouse cursor should be focus on to the text area so that user can type the content.

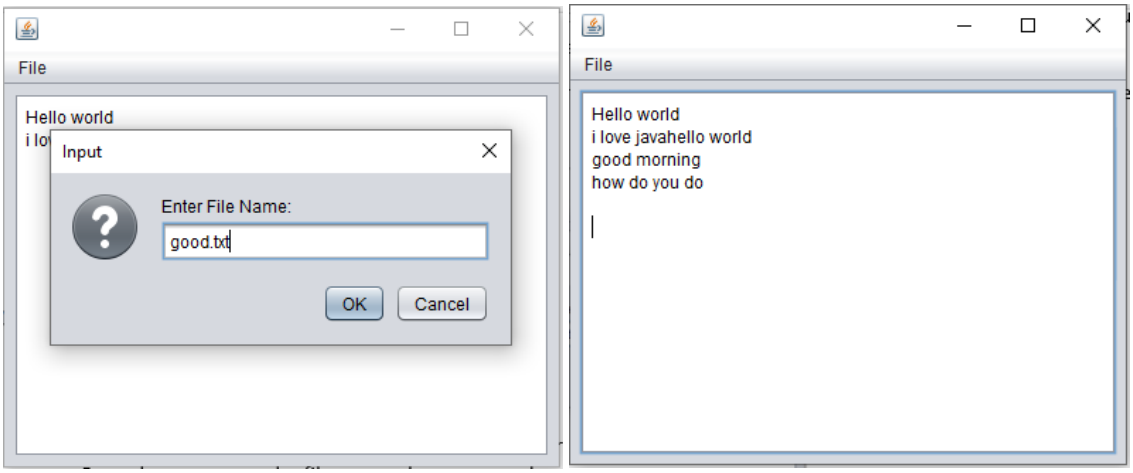
Sample output:-



Activity 3

When user clicks Open from the menu, a dialog box should be appeared to enter the file name which user wish to open. Once the user enters the file name, the program should read that file content and write to the text area.

Sample output:-

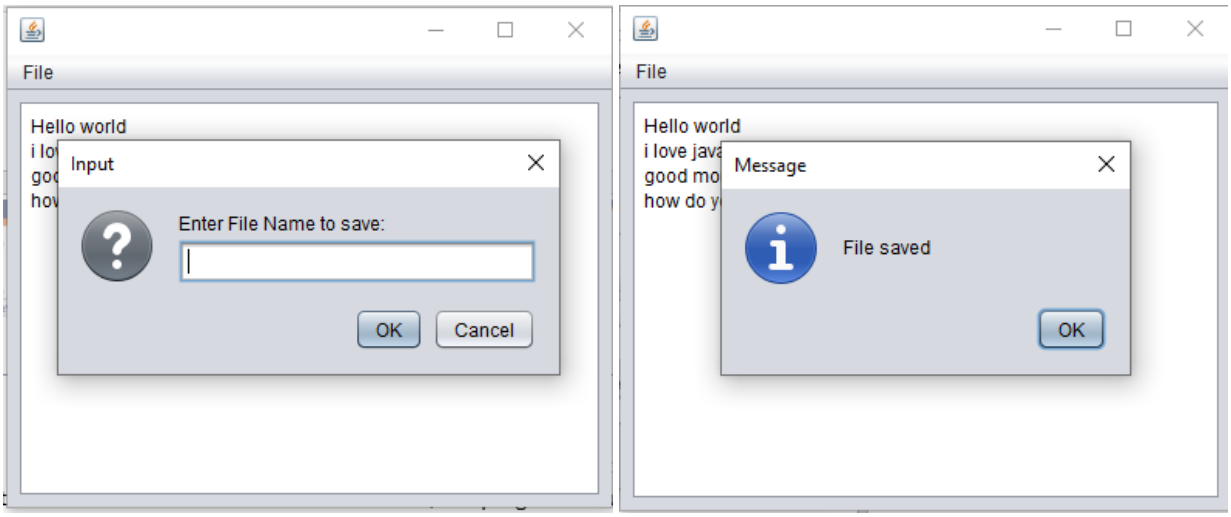


MDTU JAVA Workshop
Worksheet 02

Activity 4

When user clicks Save from the menu, a dialog box should be appeared to enter the file name which user wish to save. Once the user enters the file name, the program should read the content int the text area and write the content in to the file. After writing, a message box should be appeared as “file saved’.

Sample output:-



Activity 5

You can modify the above solution with more functions like save as, print with more UI features like clearing the text area after saving.