Project 4: The Image Viewer Class

Project Introduction:

Write an application that allows the user to view image files. The application should use either a button or a menu item that displays a file chooser. When the user selects an image file, it should be loaded and displayed. You can use any of your pictures or pick some from the companion CD.

Create a GUI interface called ImageViewer that can:

- Let the user to click on a button to open an image file folder from the computer system.
- Display the selected image file on a frame.
- Let the user to choose another image file to display.
- Exit the program.

Complete the following code or create your own:

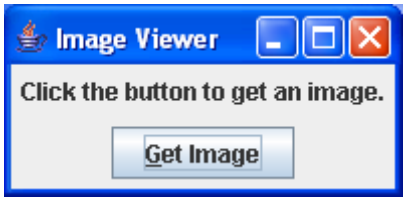
```
/**
   This class demonstrates how to use an ImageIcon and a JLabel to display an
image.
*/

import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
import java.io.File;

public class ImageViewer extends JFrame
{
    private JPanel imagePanel;       // A panel to hold an image label
    private JPanel buttonPanel;      // A panel to hold a button
    private JLabel imageLabel;       // A label to hold an image
    private JButton button;          // A button to get an image
    private JFileChooser fileChooser; // For the open dialog box
    private Container contentPane;    // To reference the content pane


   /**
      Constructor
   */

    public ImageViewer()
    {
        // Set the title.
        setTitle("Image Viewer");
```

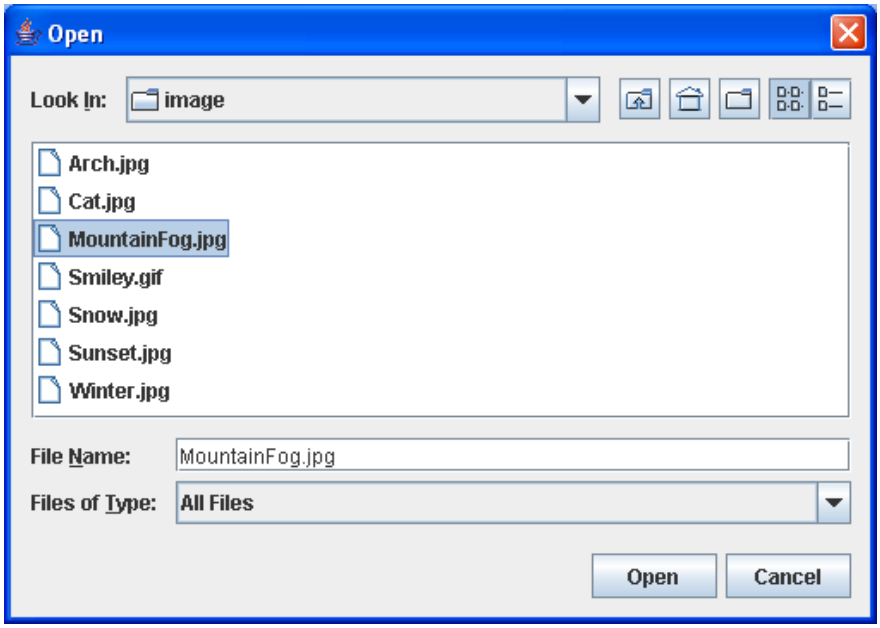
```
        // Specify what happens when the close button is clicked.
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

        // Create a BorderLayout manager for the content pane.
        setLayout(new BorderLayout());

        // Build the panels.
        buildImagePanel();
        buildButtonPanel();

        // Add the panels to the content pane.
        button.addActionListener(new ButtonListener());

        // Create a file chooser.

        // Pack and display the window.
        pack();
        setVisible(true);
    }

    /**
       The buildImagePanel method adds an empty label to a panel.
    */

    private void buildImagePanel()
    {
        // Create a panel.

        // Create a label.

        // Add the label to the panel.

    }

    /**
       The buildButtonPanel method adds a button to a panel.
    */

    private void buildButtonPanel()
    {
        // Create a panel.

        // Create a button.

        // Register an action listener with the button.
```

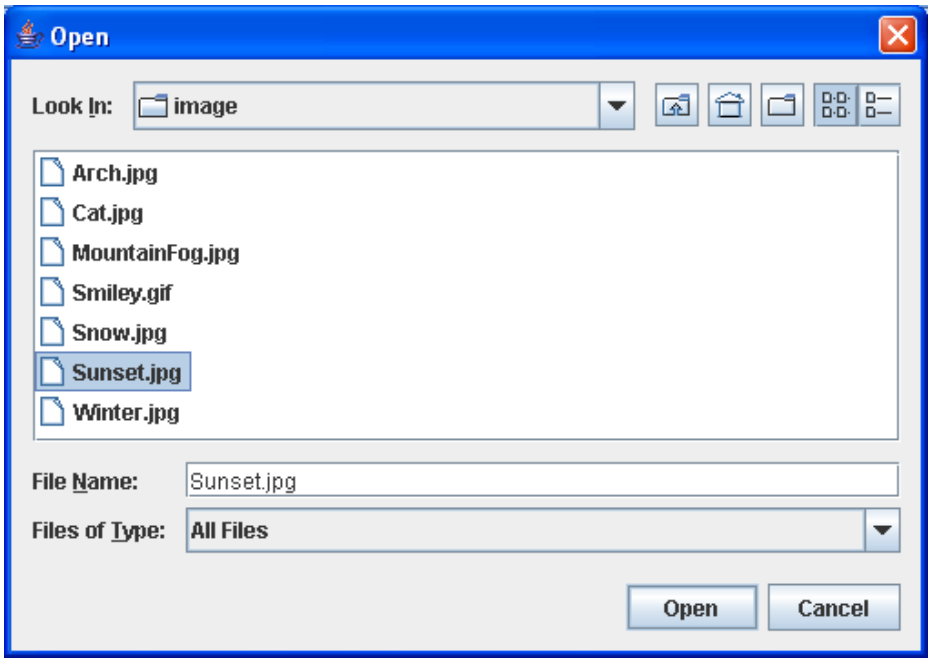
```
        // Add the button to the panel.

    }

    /**
       Private inner class that handles the event when the user clicks the button.
    */

    private class ButtonListener implements ActionListener
    {
        public void actionPerformed(ActionEvent e)
        {
            // To reference the selected image file
            // To read the image from the file
            // To hold the name and path of the file
            // Indicates status of the open dialog box

            // Display an open dialog box.
            fileChooserStatus =
fileChooser.showOpenDialog(ImageViewer.this);

            if (fileChooserStatus == JFileChooser.APPROVE_OPTION)
            {
                // Get a reference to the selected file.

                // Get the path of the selected file.

                // Read the image from the file.

                // Store the image in the label.

                // If the label displays text, remove it.

                // Pack the frame again to accomodate the new size of the label.

            }
        }
    }

    /**
      The main method creates an instance of the ImageViewer
      class, causing it to display its window.
    */

    public static void main(String[] args)
    {
```

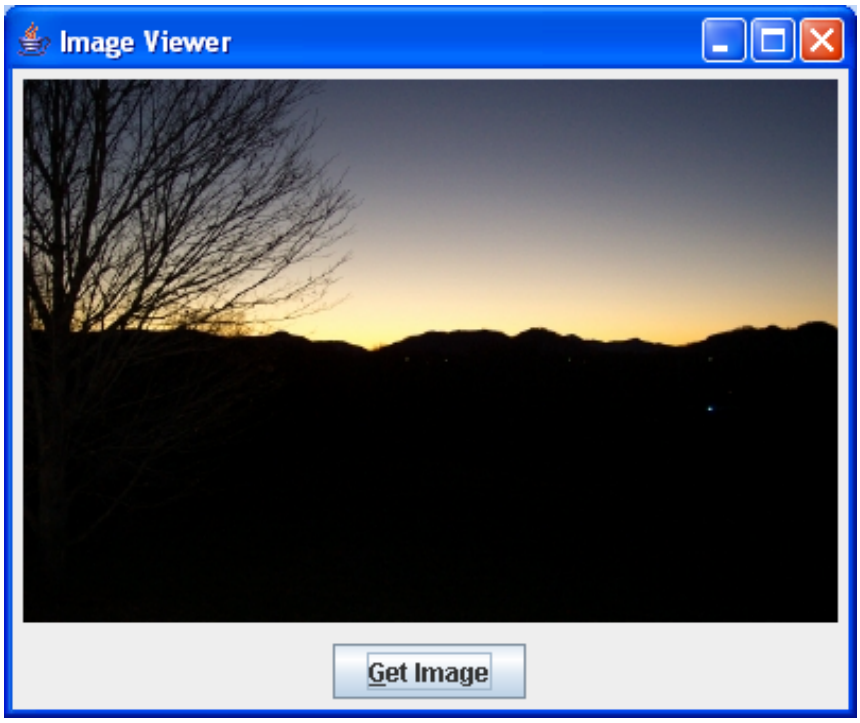
```
        ImageViewer iv = new ImageViewer();
    }
}
```

Here is a sample output:









Submit your project on a floppy disk or CD, or print out the source code with screen shots.

Assigned and Due Date:
Assigned: Unit 10
Due: Unit 11