

```

//Written By: Evan Williams
//For CSE-271 Lab 8
//Due 3/27/22
import java.awt.BorderLayout;
import java.awt.ComponentOrientation;
import java.awt.Container;
import java.awt.FlowLayout;
import java.awt.GridLayout;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import java.io.File;
import java.io.FileNotFoundException;
import java.io.FileWriter;
import java.io.IOException;
import java.io.PrintWriter;
import java.util.ArrayList;
import java.util.Scanner;
import javax.swing.JButton;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JMenu;
import javax.swing.JMenuBar;
import javax.swing.JMenuItem;
import javax.swing.JPanel;
import javax.swing.JScrollPane;
import javax.swing.JTextArea;
import javax.swing.JTextField;
import javax.swing.border.Border;
import javax.swing.border.TitledBorder;

/**
 * The AddressBook class is a class that build a GUI to be displayed, unlike the
 * last one it does not need functionality
 * it just needs to look like what is required in the example images
 * @author Evan Williams
 */
public class AddressBook extends JFrame {

    private final int FRAME_WIDTH = 630;
    private final int FRAME_HEIGHT = 520;
    private JPanel buttonPanel;
    private JPanel textPanel;
    private JPanel output;
    private JButton addContact;
    private JButton saveToFile;
    private JTextField name;
    private JTextField address;
    private JTextField phone;
    private JTextField email;
    private JTextArea area;
    private JLabel nameLabel;
    private JLabel addressLabel;
    private JLabel phoneLabel;
    private JLabel emailLabel;
    private Border buttonBorder;

    private ArrayList<String> contacts = new ArrayList<String>();

```

```

/**
 * Constructor for the AddressBook class
 */
public AddressBook() {
    constructDisplay();
}

/**
 * This methods purpose is to write to the file we read from to append the
list
 * of contacts with any new ones that were added with the program/GUI
 */
/*
public void writeContactsToFile() {
    FileWriter fw = null;
    PrintWriter pw = null;
    try {
        fw = new FileWriter("contacts.txt");
        pw = new PrintWriter(fw, true);

        for (String s : contacts) {
            pw.println(s);
        }
    } catch (IOException e1) {
        e1.printStackTrace();
    } finally {
        try {
            fw.close();
            pw.close();
        } catch (Exception e) {
            e.printStackTrace();
        }
    }
}

*/

/**
 * This methods purpose is to read from the text file contacts.txt it then
takes
 * the contents of the file and puts them into an arraylist of
 * addresses/contacts then also appends the JTextField to display its
contents
 * on the GUI
 */
/*
public void readContactsFromFile() {
    Scanner in = null;
    try {
        in = new Scanner(new File("contacts.txt"));
        while (in.hasNextLine()) {
            String input = in.nextLine();
            area.append(input + "\n");
            contacts.add(input);
        }
    } catch (IOException e) {
        e.printStackTrace();
    } finally {
        try {

```

```

        in.close();
    } catch (Exception e) {
        e.printStackTrace();
    }
}

*/
/**
 * This methods purpose is to create the display that is being put into the
GUI
 * takes no inputs and when it is finished executing it should have a
 * constructed GUI in a window with functioning features that includes
 * textFields, functioning buttons, and a textArea that displays text
 */

public void constructDisplay() {
    Container container = getContentPane();
    buttonPanel = new JPanel();
    buttonPanel.setBorder(new TitledBorder(null, "Add New Contact or Save
to File", TitledBorder.LEADING, TitledBorder.TOP, null, null));
    buttonPanel.setSize(100,50);
    textPanel = new JPanel(new GridLayout(4,2));
    textPanel.setBorder(new TitledBorder(null, "Enter New Contact
Information", TitledBorder.LEADING, TitledBorder.TOP, null, null));

    addressLabel = new JLabel("Address: ");
    address = new JTextField(55);
    phoneLabel = new JLabel("    Phone: ");
    phone = new JTextField(55);
    emailLabel = new JLabel("    Email: ");
    email = new JTextField(55);
    area = new JTextArea(16, 50);
    JScrollPane pane = new JScrollPane(area);
    area.setEditable(false);

    addContact = new JButton("Add Contact");
    addContact.addActionListener(new ActionListener() {
        /**
 * recognized that the button is clicked and then takes the text
from text
 * fields and constructs a String that is then appended into the
JTextArea
 *
 * @param e
 */
        @Override
        public void actionPerformed(ActionEvent e) {
            String out = (name.getText() + ", " + address.getText() +
", " + phone.getText() + ", "
                + email.getText());
            contacts.add(out);
            area.append(out + "\n");
        }
    });
    saveToFile = new JButton("Saves to File");
    saveToFile.addActionListener(new ActionListener() {
        /**

```

```

        * recognized that the button is clicked and then writes what is
in the
        * JTextArea into the contacts.txt file
        *
        * @param e
        */
        @Override
        public void actionPerformed(ActionEvent e) {
            //writeContactsToFile();
        }
    });
    output = new JPanel();
    output.setBorder(new TitledBorder(null, "Saved Contacts",
TitledBorder.LEADING, TitledBorder.TOP, null, null));
    // readContactsFromFile();
    buttonPanel.add(addContact);
    buttonPanel.add(saveToFile);
    output.add(pane);
    getContentPane().setLayout(new BorderLayout(0, 0));
    nameLabel = new JLabel("Name:");
    textPanel.add(nameLabel);
    name = new JTextField();
    textPanel.add(name);
    name.setColumns(10);
    addressLabel = new JLabel("Address:");
    textPanel.add(addressLabel);
    address = new JTextField();
    textPanel.add(address);
    address.setColumns(10);
    phoneLabel = new JLabel("Phone:");
    textPanel.add(phoneLabel);
    phone = new JTextField();
    textPanel.add(phone);
    phone.setColumns(10);
    emailLabel = new JLabel("Email:");
    textPanel.add(emailLabel);
    email = new JTextField();
    textPanel.add(email);
    email.setColumns(10);

    container.add(textPanel, BorderLayout.NORTH);
    container.add(buttonPanel, BorderLayout.CENTER);
    container.add(output, BorderLayout.SOUTH);

    setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
    setTitle("Address Book");
    setSize(FRAME_WIDTH, FRAME_HEIGHT);
}
}

```