

BUTTON DEMO

```
package vivek_1da21cs167;

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

public class ButtonDemo implements ActionListener {
    JLabel jl;

    ButtonDemo() {
        JFrame jf = new JFrame("Button Demo from 1da21cs167");
        jf.setLayout(new GridLayout(2,3));
        jf.setSize(400, 300);
        jf.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

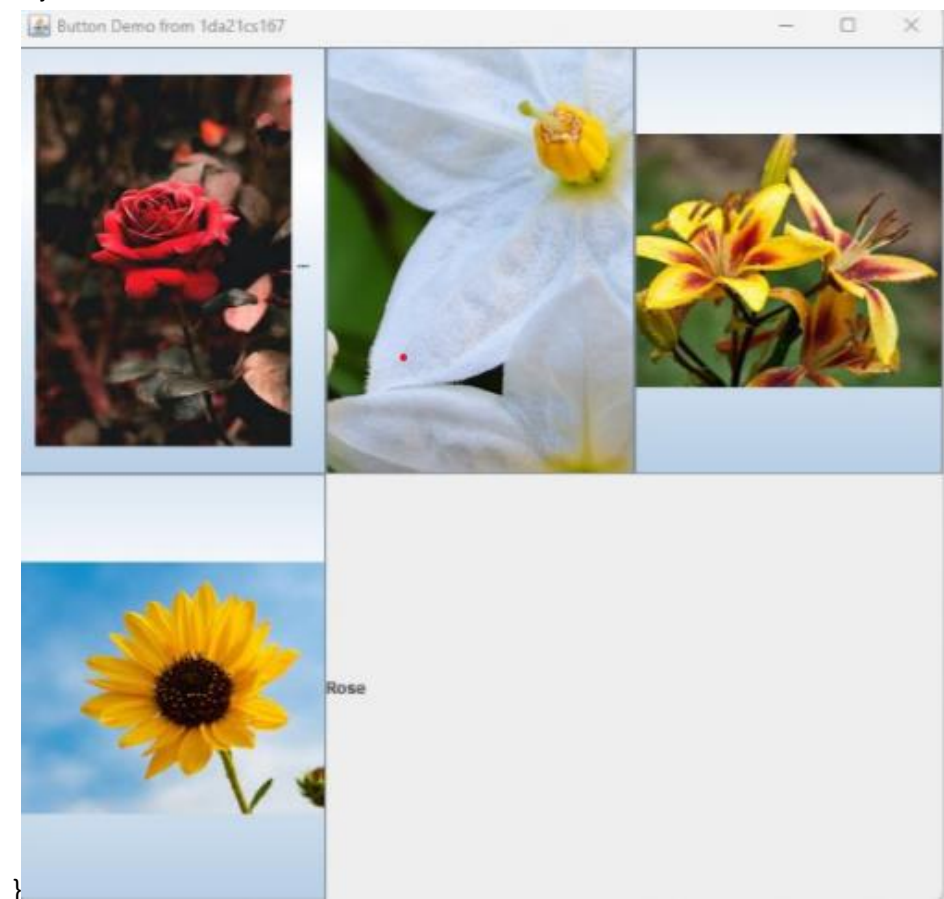
        ImageIcon roseIcon = new ImageIcon("C:\\Users\\Administrator\\Pictures\\rose.jpeg");
        JButton jb1 = new JButton("Rose", roseIcon);
        jb1.setActionCommand("Rose");
        jb1.addActionListener(this);
        jf.add(jb1);

        ImageIcon jasmineIcon = new ImageIcon("C:\\Users\\Administrator\\Downloads\\jasminum-5092158_1280.jpg");
        JButton jb2 = new JButton("Jasmine", jasmineIcon);
        jb2.setActionCommand("Jasmine");
        jb2.addActionListener(this);
        jf.add(jb2);

        ImageIcon lillyIcon = new ImageIcon("C:\\Users\\Administrator\\Pictures\\lilly.jpeg");
        JButton jb3 = new JButton("Lilly", lillyIcon);
        jb3.setActionCommand("Lilly");
        jb3.addActionListener(this);
        jf.add(jb3);

        ImageIcon sunflowerIcon = new ImageIcon("C:\\Users\\Administrator\\Pictures\\sunflower.jpeg");
        JButton jb4 = new JButton("Sunflower", sunflowerIcon);
        jb4.setActionCommand("Sunflower");
        jb4.addActionListener(this);
        jf.add(jb4);
    }
}
```

```
    jl = new JLabel("Choose a flower");  
    jf.add(jl);  
  
    jf.setVisible(true);  
}  
  
public void actionPerformed(ActionEvent e) {  
    String flowerName = e.getActionCommand();  
    jl.setText(flowerName);  
}  
  
public static void main(String[] args) {  
    SwingUtilities.invokeLater(new Runnable() {  
        public void run() {  
            new ButtonDemo();  
        }  
    });  
}
```



TABBEDPANE DEMO

```
package vivek_1da21cs167;

import java.awt.*;
import javax.swing.*;

public class JTabbedPaneDemo {
    JTabbedPaneDemo() {
        JFrame jf = new JFrame("JTabbedPane Demo");
        jf.setLayout(new FlowLayout());
        jf.setSize(400, 300);
        jf.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        JTabbedPane jtp = new JTabbedPane();
        jtp.addTab("cities", new CitiesPane());
        jtp.addTab("colors", new ColorsPane());
        jtp.addTab("flavors", new FlavorsPane());
        jf.add(jtp);
        jf.setVisible(true);
    }

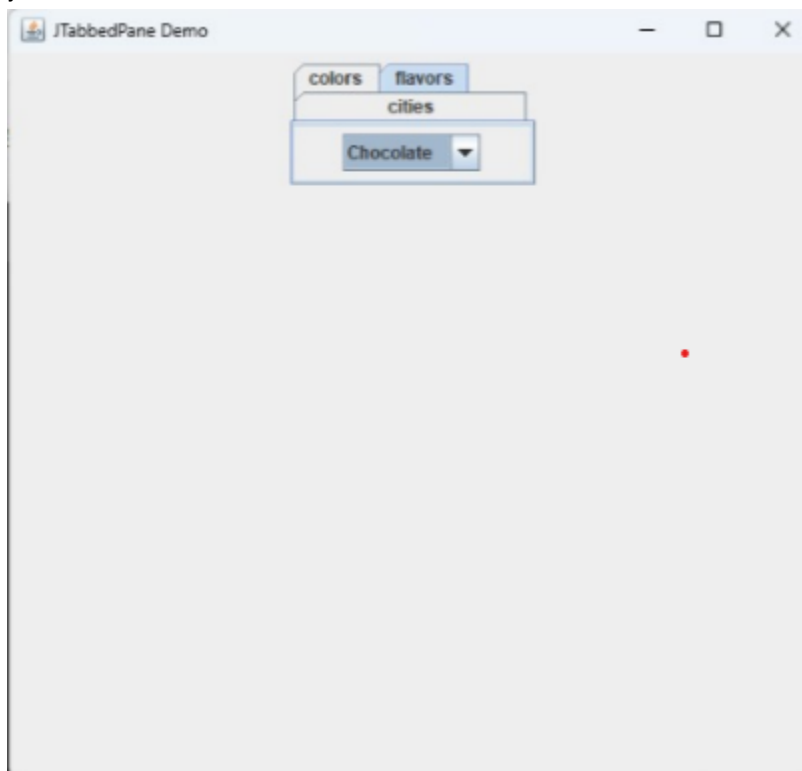
    class CitiesPane extends JPanel {
        CitiesPane() {
            JButton jb1 = new JButton("London");
            add(jb1);
            JButton jb2 = new JButton("Tokyo");
            add(jb2);
        }
    }

    class ColorsPane extends JPanel {
        ColorsPane() {
            JCheckBox cb1 = new JCheckBox("Red");
            add(cb1);
            JCheckBox cb2 = new JCheckBox("Yellow");
            add(cb2);
        }
    }

    class FlavorsPane extends JPanel {
        FlavorsPane() {
```

```
JComboBox<String> jcb = new JComboBox<>(); // Specify the type for JComboBox
jcb.addItem("Vanilla");
jcb.addItem("Chocolate");
jcb.addItem("Strawberry");
add(jcb);
}
}

public static void main(String[] args) {
    SwingUtilities.invokeLater(new Runnable() {
        public void run() {
            new JTabbedPaneDemo();
        }
    });
}
}
```



SCROLL PANE DEMO

```
import java.awt.*;
import javax.swing.*;

public class JScrollPaneDemo {
    JScrollPaneDemo() {
        JFrame frame = new JFrame("Scroll Pane Demo");
        frame.setLayout(new BorderLayout());
        frame.setSize(400, 300);
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

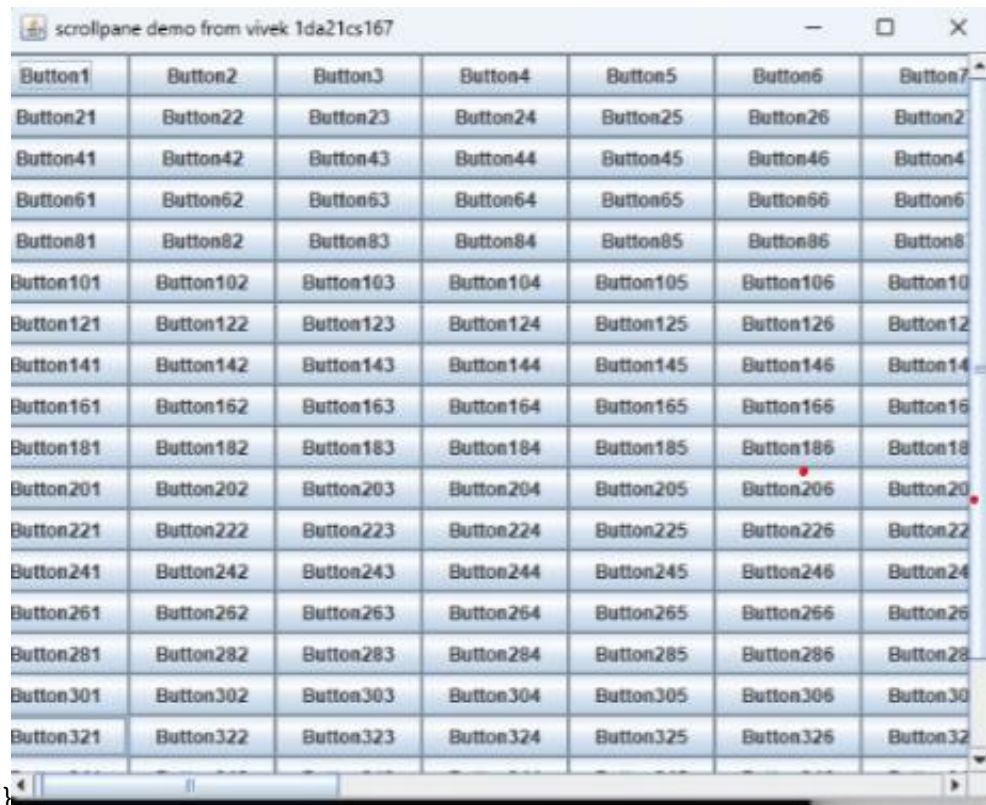
        JPanel panel = new JPanel();
        panel.setLayout(new GridLayout(20, 20));
        int buttonCount = 1;
        for (int i = 0; i < 20; i++) {
            for (int j = 0; j < 20; j++) {
                panel.add(new JButton("Button" + buttonCount));
                buttonCount++;
            }
        }

        JScrollPane scrollPane = new JScrollPane(panel);
        frame.add(scrollPane, BorderLayout.CENTER);

        frame.setVisible(true);

        // Print statement for demonstration
        System.out.println("ScrollPaneDemo initialized successfully.");
    }

    public static void main(String[] args) {
        SwingUtilities.invokeLater(new Runnable() {
            public void run() {
                new JScrollPaneDemo();
            }
        });
    }
}
```



COMBOBOX DEMO

```
package vivek_1da21cs167;
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;

public class JComboBoxDemo {
    String timepieces[] = {"Hourglass", "Analog", "Digital", "Stopwatch"};
    JComboBoxDemo() {
        JFrame jf = new JFrame("JcomboBox Demo from 1da21cs167");
        jf.setLayout(new FlowLayout());
        jf.setSize(400, 300);
        jf.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        JComboBox<String> jcb = new JComboBox<String>(timepieces);
```

DEPT OF CSE

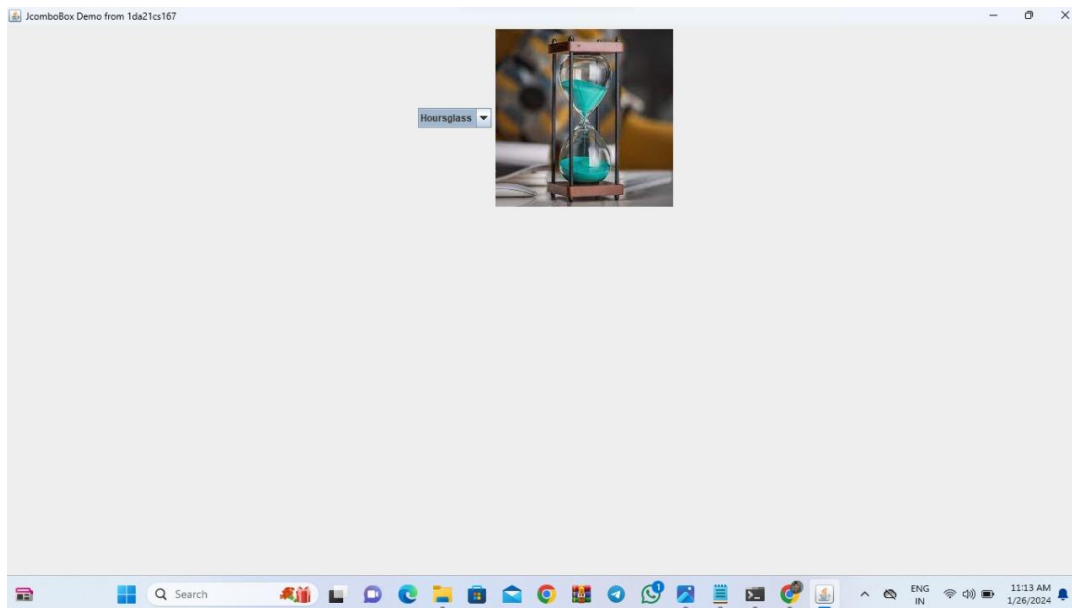
```
jf.add(jcb);
JLabel jl = new JLabel(new ImageIcon("C:/Users/Administrator/Pictures/Hourglass.jpeg"));

jf.add(jl);
jcb.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent ae) {
        String s=(String) jcb.getSelectedItem();
        jl.setIcon(new ImageIcon(s+".jpeg"));
    }
});
jf.setVisible(true);

}

public static void main(String[] args) {
    SwingUtilities.invokeLater(new Runnable() {
        public void run() {
            new JComboBoxDemo();
        }
    });
}

}
```



List demo

```
package vivek_1da21cs167;

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

public class JListDemo {
    String cities[] = {"New york", "chicago", "houston", "denver", "los angeles", "seattle", "london",
        "paris", "new delhi", "hong kong", "tokyo", "sydney"};

    JListDemo() {
        JFrame jf = new JFrame("JList Demo from 1da21cs167");
        jf.setLayout(new FlowLayout());
        jf.setSize(400, 300);
        jf.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

        JList<String> jl = new JList<String>(cities);
        jl.setSelectionMode(ListSelectionModel.SINGLE_SELECTION);
        JScrollPane js = new JScrollPane(jl);
        js.setPreferredSize(new Dimension(120, 90));

        JLabel label = new JLabel("Choose a city");
        jl.addListSelectionListener(new ListSelectionListener() {
            public void valueChanged(ListSelectionEvent le) {
                int idx = jl.getSelectedIndex();

                if (idx != -1) {
                    label.setText("Current selection: " + cities[idx]); // Corrected the variable name here
                } else {
                    label.setText("Choose a city");
                }
            }
        });

        jf.add(js);
        jf.add(label);
        jf.setVisible(true);
    }
}
```



```
}  
  
public static void main(String[] args) {  
    SwingUtilities.invokeLater(new Runnable() {  
        public void run() {  
            new JListDemo();  
        }  
    });  
}
```

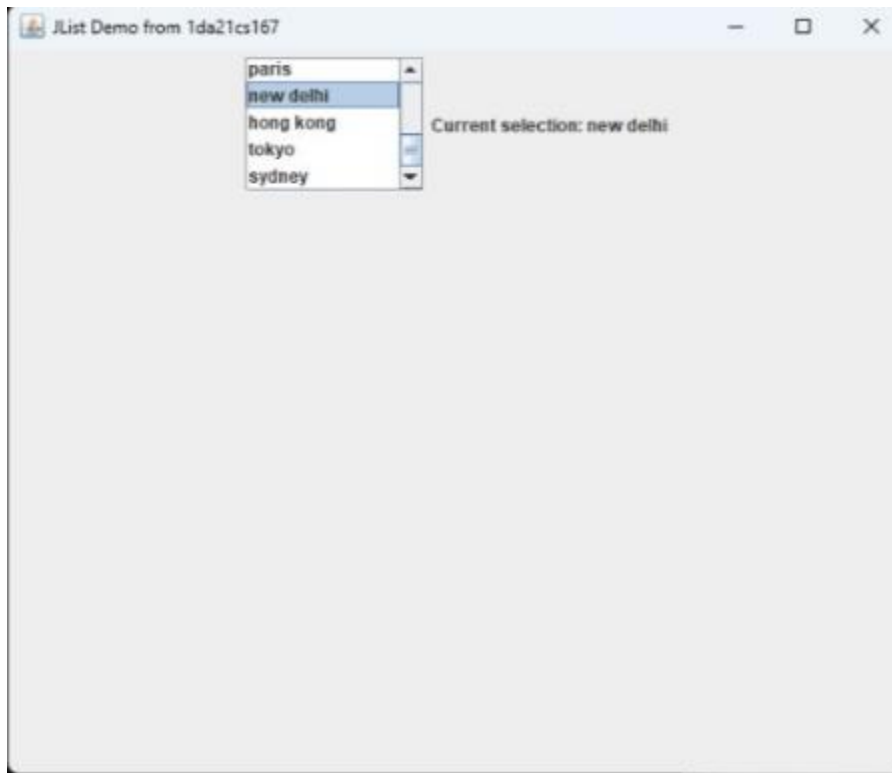


TABLE DEMO

```
package vivek_1da21cs167;

import javax.swing.*;
import java.awt.*;

public class JTableDemo {
    JFrame frame;
    JTable table;

    Object[][] data = {
        {"John Doe", "3428", "656"},
        {"Jane Smith", "9035", "25"},
        {"Bob Johnson", "4289", "245"},
        {"Alice Williams", "3189", "764"},
        {"Charlie Brown", "4576", "465"}
    };

    private String[] columnHeads = {"Name", "Extension", "ID#"};

    public JTableDemo() {
        frame = new JFrame("JTable Demo from 1da21cs167");
        frame.setLayout(new BorderLayout());
        frame.setSize(400, 300);
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

        table = new JTable(data, columnHeads);
        JScrollPane jsp = new JScrollPane(table);

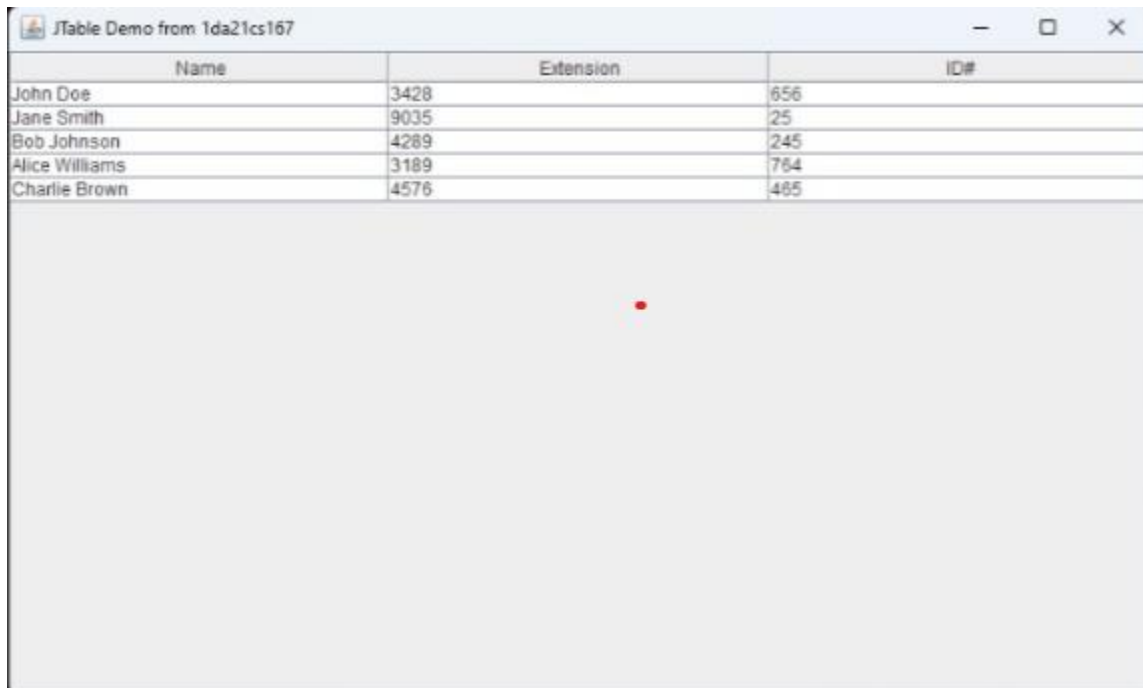
        frame.add(jsp);

        frame.setVisible(true);
    }

    public static void main(String[] args) {
        SwingUtilities.invokeLater(new Runnable() {
            public void run() {
                new JTableDemo();
            }
        });
    }
}
```

DEPT OF CSE

```
    });  
  }  
}
```



Name	Extension	ID#
John Doe	3428	656
Jane Smith	9035	25
Bob Johnson	4289	245
Alice Williams	3189	764
Charlie Brown	4576	485

TREE DEMO

```
package vivek_1da21cs167;  
  
import javax.swing.*.*;  
import javax.swing.tree.DefaultMutableTreeNode;  
import javax.swing.tree.TreeSelectionModel;  
import javax.swing.event.TreeSelectionEvent;  
import javax.swing.event.TreeSelectionListener;  
import java.awt.*.*;  
  
public class JTreeDemo {  
    private JFrame frame;  
    private JTree tree;  
    private JTextArea textArea;
```

```

public JTreeDemo() {
    frame = new JFrame("JTree Demo from 1DA21CS167");
    frame.setLayout(new BorderLayout());
    frame.setSize(400, 300);
    frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

    // Create the root node and child nodes for the JTree
    DefaultMutableTreeNode root = new DefaultMutableTreeNode("Root");
    DefaultMutableTreeNode fruits = new DefaultMutableTreeNode("Fruits");
    fruits.add(new DefaultMutableTreeNode("Apple"));
    fruits.add(new DefaultMutableTreeNode("Banana"));
    fruits.add(new DefaultMutableTreeNode("Orange"));

    DefaultMutableTreeNode vegetables = new DefaultMutableTreeNode("Vegetables");
    vegetables.add(new DefaultMutableTreeNode("Carrot"));
    vegetables.add(new DefaultMutableTreeNode("Broccoli"));
    vegetables.add(new DefaultMutableTreeNode("Tomato"));

    root.add(fruits);
    root.add(vegetables);

    // Create the JTree with the root node
    tree = new JTree(root);
    tree.getSelectionModel().setSelectionMode(TreeSelectionModel.SINGLE_TREE_SELECTION);

    // Add a TreeSelectionListener to handle tree selection events
    tree.addTreeSelectionListener(new TreeSelectionListener() {
        public void valueChanged(TreeSelectionEvent e) {
            DefaultMutableTreeNode selectedNode = (DefaultMutableTreeNode)
tree.getLastSelectedPathComponent();

            if (selectedNode != null) {
                String selectedValue = selectedNode.getUserObject().toString();
                textArea.setText("Selected: " + selectedValue);
            }
        }
    });

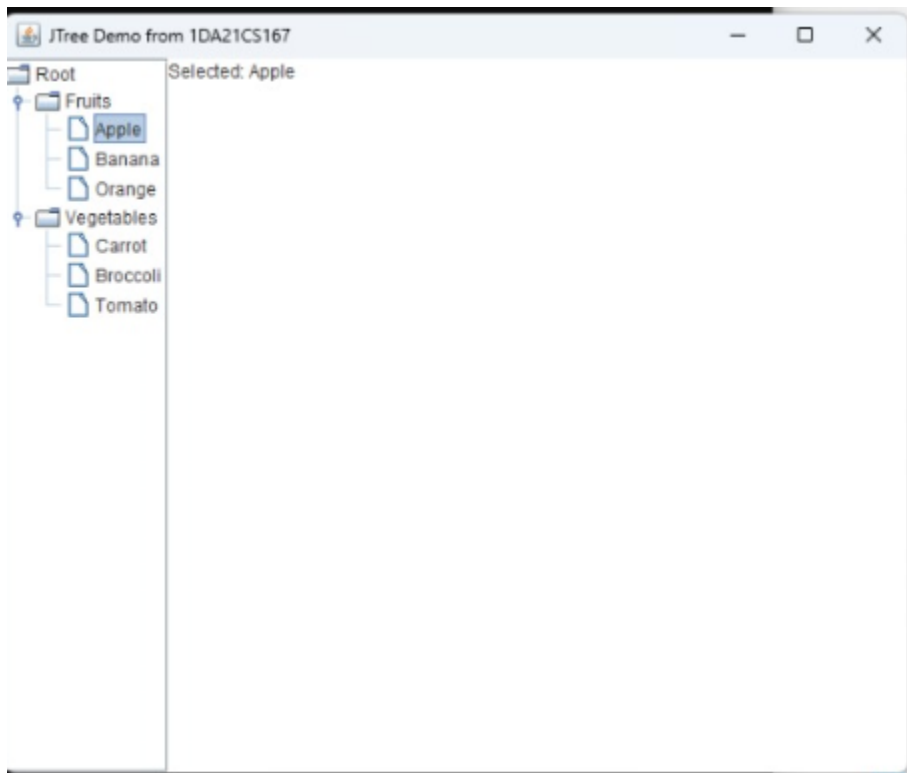
    JScrollPane treeScrollPane = new JScrollPane(tree);
    textArea = new JTextArea();
    textArea.setEditable(false);

```

```
frame.add(treeScrollPane, BorderLayout.WEST);
frame.add(textArea, BorderLayout.CENTER);

frame.setVisible(true);
}

public static void main(String[] args) {
    SwingUtilities.invokeLater(new Runnable() {
        public void run() {
            new JTreeDemo();
        }
    });
}
```



RADIO BUTTON DEMO

```
package vivek_1da21cs167;

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

public class RadioButtonDemo implements ActionListener {
    JLabel label;

    RadioButtonDemo() {
        JFrame frame = new JFrame("Radio Button Demo from 1da21cs167");
        frame.setLayout(new FlowLayout());
        frame.setSize(300, 200);
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

        JRadioButton rb1 = new JRadioButton("Option 1");
        JRadioButton rb2 = new JRadioButton("Option 2");
        JRadioButton rb3 = new JRadioButton("Option 3");

        ButtonGroup group = new ButtonGroup();
        group.add(rb1);
        group.add(rb2);
        group.add(rb3);

        JButton submitButton = new JButton("Submit");

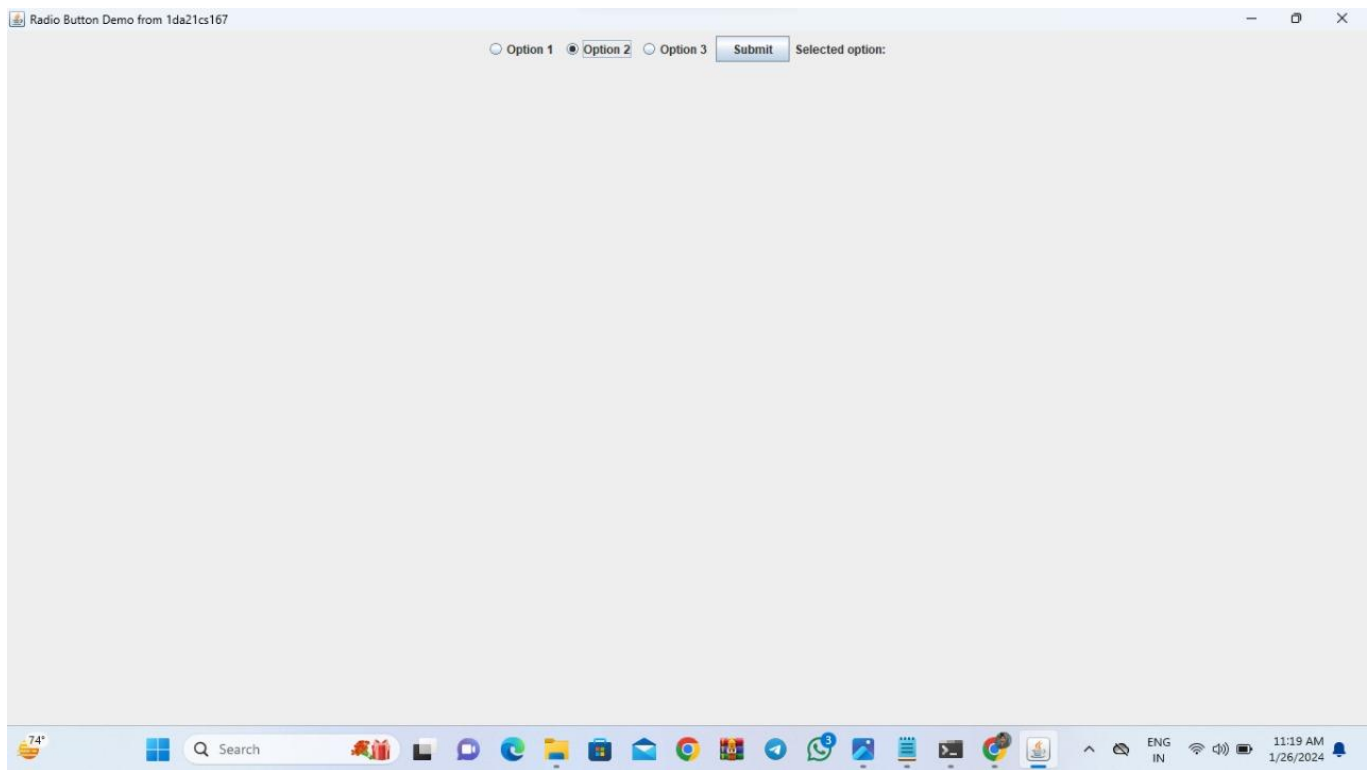
        label = new JLabel("Selected option: ");

        frame.add(rb1);
        frame.add(rb2);
        frame.add(rb3);
        frame.add(submitButton);
        frame.add(label);

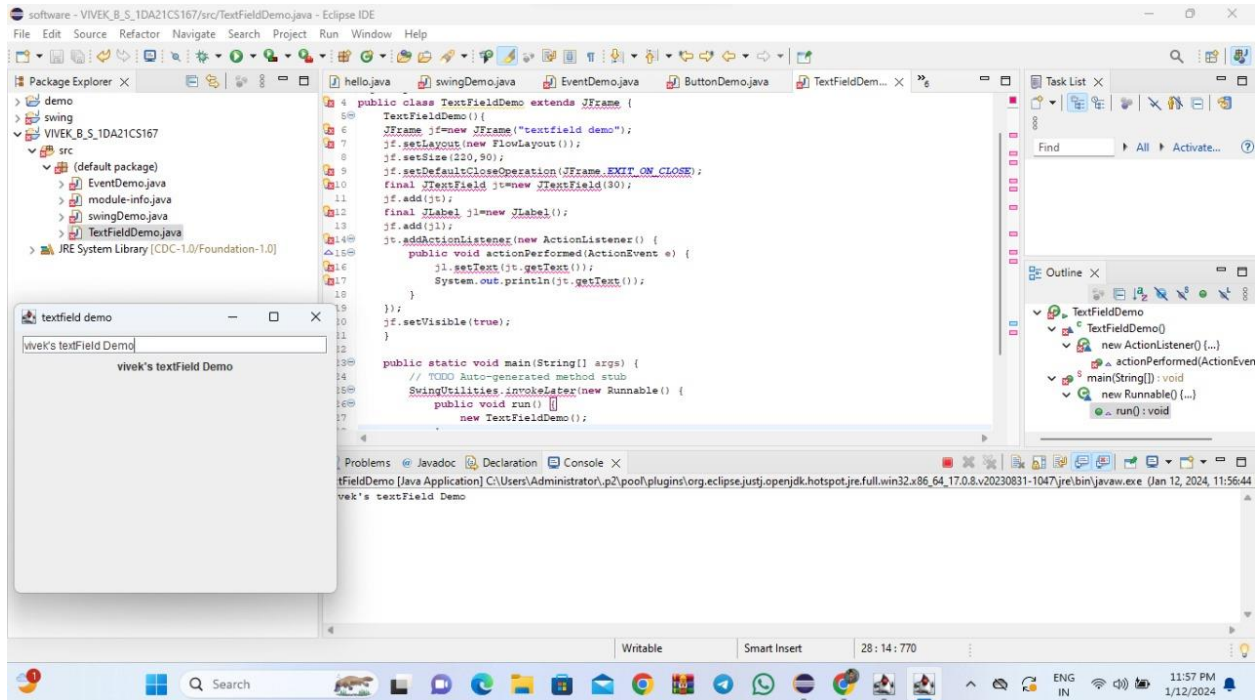
        submitButton.addActionListener(this);

        frame.setVisible(true);
    }
}
```

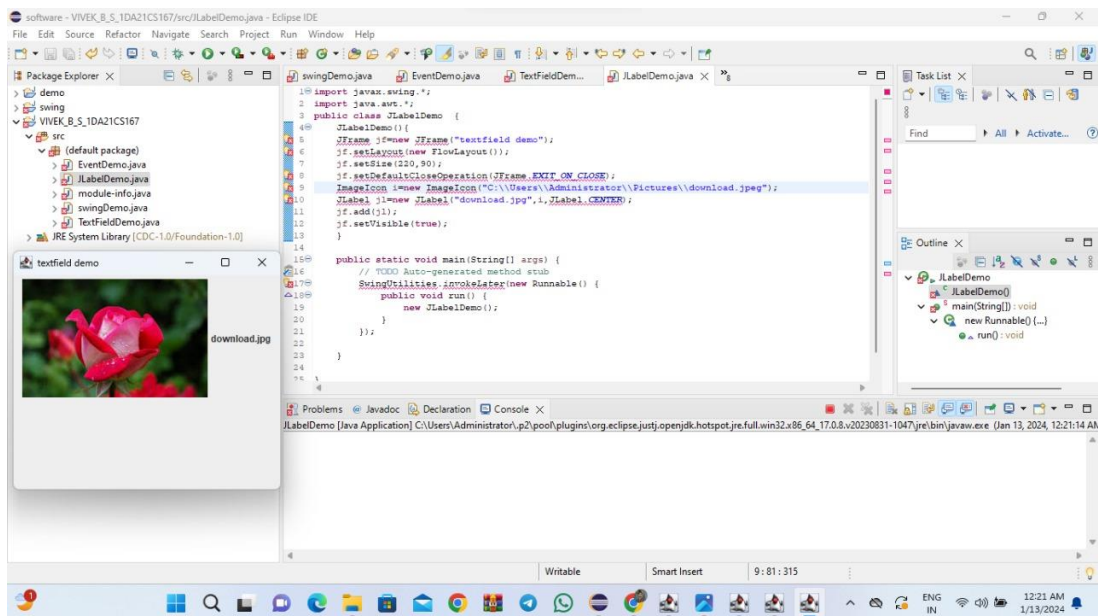
```
public void actionPerformed(ActionEvent e) {  
    label.setText("Selected option: ");  
  
    if (e.getActionCommand().equals("Submit")) {  
        label.setText(label.getText() +  
            ((JRadioButton) ((ButtonGroup) e.getSource()).getSelection()).getText());  
    }  
}  
  
public static void main(String[] args) {  
    SwingUtilities.invokeLater(new Runnable() {  
        public void run() {  
            new RadioButtonDemo();  
        }  
    });  
}
```



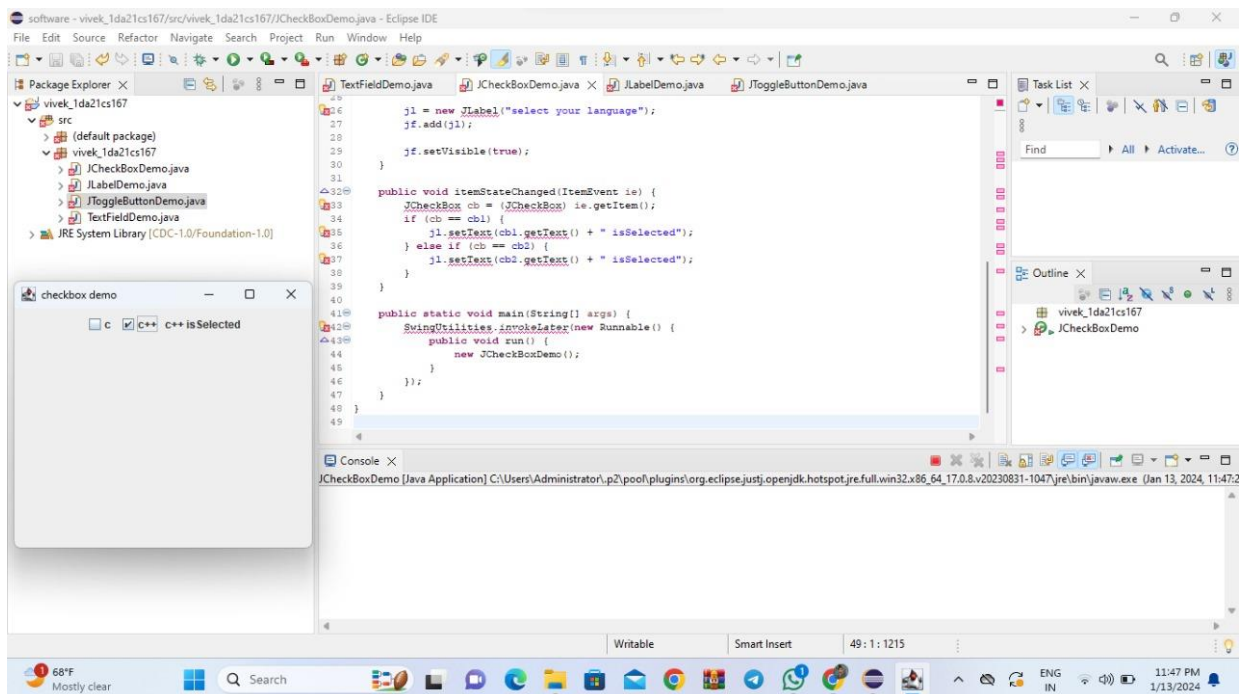
TEXTFIELD DEMO



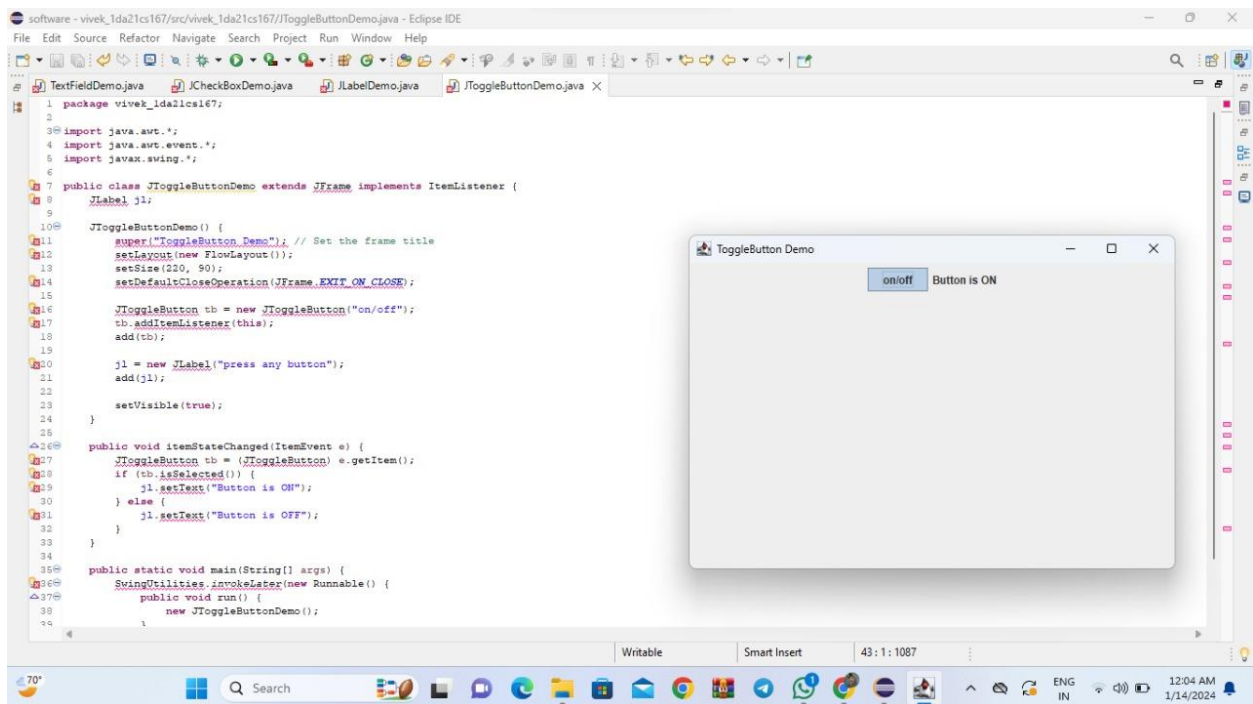
LABEL DEMO



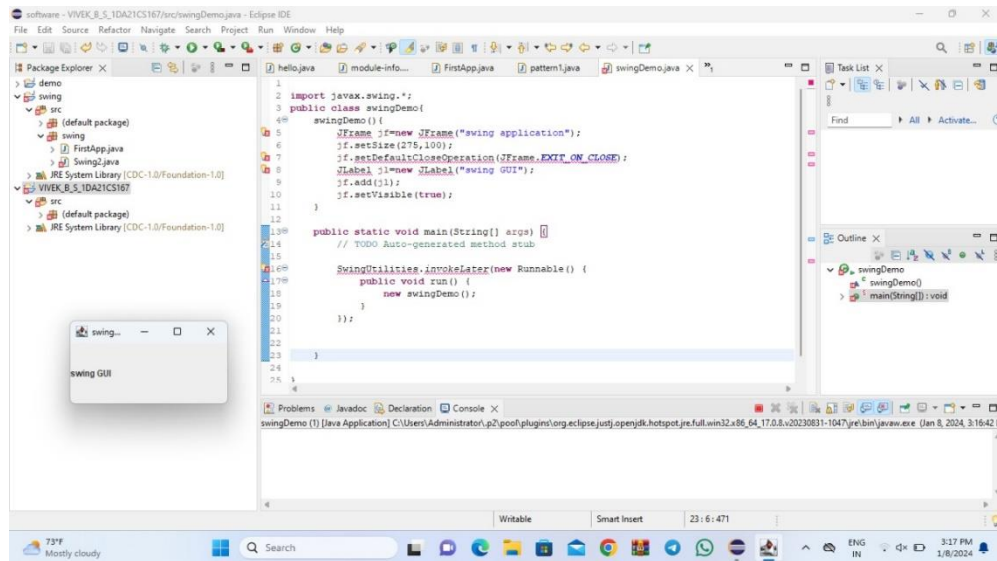
CHECKBOX DEMO



TOGGLEBUTTON DEMO



SWING DEMO



EVENT DEMO

