

# Experiment 7

1.  
→ JTree is used to display the tree structured data or hierarchical data.
2.  
→ `JTree.getPathForLocation(int x, int y)`  
Returns the path for the node at the specified location.
3.  
→
  - i) `javax.swing.tree.DefaultMutableTreeNode`
  - ii) `javax.swing.tree.DefaultTreeCellEditor`
  - iii) `javax.swing.tree.DefaultTreeModel`
  - iv) `javax.swing.tree.DefaultTreeSelectionModel`
  - v) `javax.swing.tree.TreePath`
  - vi) `javax.swing.AbstractLayoutCache`
  - vii) `javax.swing.ExpandVetoException`

Teacher's Signature: \_\_\_\_\_

```

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

public class TreeDemo extends JFrame{
    int vsb=ScrollPaneConstants.VERTICAL_SCROLLBAR_ALWAYS,
    hsb=ScrollPaneConstants.HORIZONTAL_SCROLLBAR_ALWAYS;
    Color teal= new Color(0,128,128);
    JTree jt;
    JScrollPane jsp;

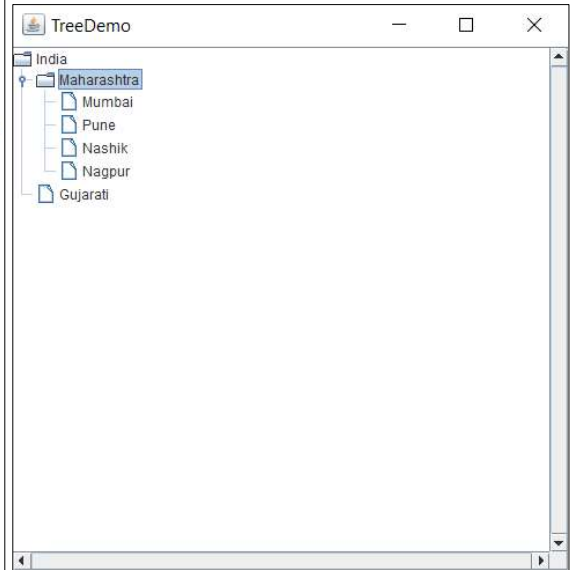
    TreeDemo(){
        String states[]={"Maharashtra"};
        String cities[][]={{ "Mumbai", "Pune", "Nashik", "Nagpur" }};
        Container co=getContentPane();
        setLayout(new GridLayout(1,1));
        DefaultMutableTreeNode root=new DefaultMutableTreeNode("India");
        for (int i=0;i<states.length;i++){
            DefaultMutableTreeNode dmt=new DefaultMutableTreeNode(states[i]);
            root.add(dmt);
            for(int j=0; j<cities[i].length;j++){
                dmt.add(new DefaultMutableTreeNode(cities[i][j]));
            }
        }
        root.add(new DefaultMutableTreeNode("Gujarati"));
        jt=new JTree(root);
        jsp=new JScrollPane(jt,vsb,hsb);

        co.add(jsp);
        co.setBackground(teal);

        setVisible(true);
        setSize(500,500);
        setTitle("TreeDemo");
        this.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
    }

    public static void main(String[] args){
        TreeDemo td=new TreeDemo();
    }
}

```



```

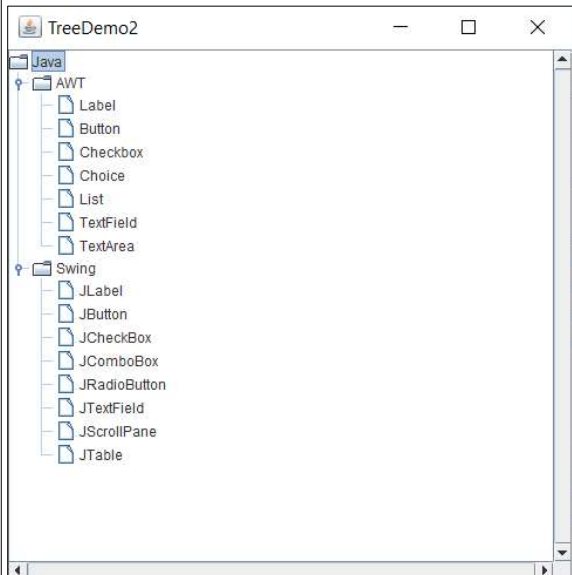
import javax.swing.*;
import java.awt.*;
import java.util.*;
import javax.swing.tree.*;
import java.util.*;

public class TreeDemo2 extends JFrame{
    int vsb=ScrollPaneConstants.VERTICAL_SCROLLBAR_ALWAYS,
    hsb=ScrollPaneConstants.HORIZONTAL_SCROLLBAR_ALWAYS;
    Color teal= new Color(0,128,128);
    JTree jt;
    JScrollPane jsp;

    TreeDemo2(){
        String[] javaClasses={"AWT", "Swing"};
        String[][] data=
        {{ "Label", "Button", "Checkbox", "Choice", "List", "TextField", "TextArea",
        { "JLabel", "JButton", "JCheckBox", "JComboBox", "JRadioButton", "JTextField",
        "JScrollPane", "JTable" }};
        Container co=getContentPane();
        setLayout(new GridLayout(1,1));
        DefaultMutableTreeNode root=new DefaultMutableTreeNode("Java");
        for (int i=0;i<javaClasses.length;i++){
            DefaultMutableTreeNode dmt=new DefaultMutableTreeNode(javaClasses[i]);
            root.add(dmt);
            for(int j=0; j<data[i].length;j++){
                dmt.add(new DefaultMutableTreeNode(data[i][j]));
            }
        }
        jt=new JTree(root);
        jsp=new JScrollPane(jt,vsb,hsb);
        co.add(jsp);
        co.setBackground(teal);
        setVisible(true);
        setSize(500,500);
        setTitle("TreeDemo2");
        this.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
    }

    public static void main(String[] args){
        TreeDemo2 td=new TreeDemo2();
    }
}

```



```

import javax.swing.*;
import java.awt.*;
import java.util.*;
import javax.swing.tree.*;
import java.util.*;
import java.io.*;
public class TreeDemo3 extends JFrame{
    int vsb=ScrollPaneConstants.VERTICAL_SCROLLBAR_ALWAYS,
    hsb=ScrollPaneConstants.HORIZONTAL_SCROLLBAR_ALWAYS;
    Color teal= new Color(0,128,128);
    JTree jt;
    JScrollPane jsp;
    TreeDemo3(){
        File directoryPath = new File("C:/");
        String rootFolders[] = directoryPath.list();
        Vector<String[]> vfolders=new Vector<String[]>();
        for(String data:rootFolders){
            File dataPath=new File("C:/"+data+"/");
            vfolders.add(dataPath.list());
        }
        Container co=getContentPane();
        setLayout(new GridLayout(1,1));
        DefaultMutableTreeNode root=new DefaultMutableTreeNode("root");
        for (int i=0;i<rootFolders.length;i++){
            DefaultMutableTreeNode dmt=new DefaultMutableTreeNode(rootFolders[i]);
            root.add(dmt);
            for(int j=0; j<vfolders.size();j++){
                dmt.add(new DefaultMutableTreeNode(vfolders.get(j)));
            }
        }
        jt=new JTree(root);
        jsp=new JScrollPane(jt,vsb,hsb);
        co.add(jsp);
        co.setBackground(teal);
        setVisible(true);
        setSize(500,500);
        setTitle("TreeDemo3");
        this.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
    }
    public static void main(String[] args){
        TreeDemo3 td=new TreeDemo3();
    }
}

```

