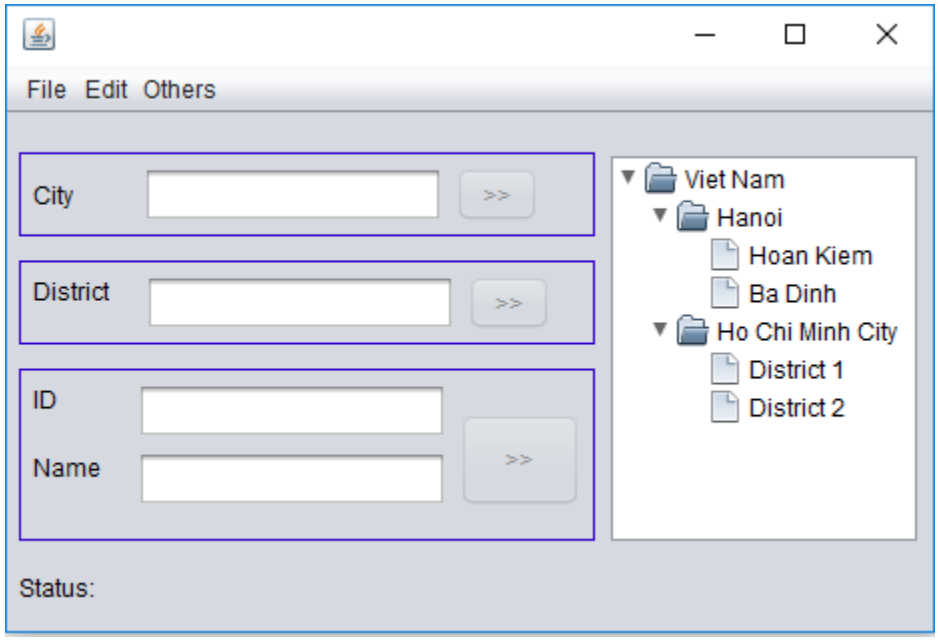
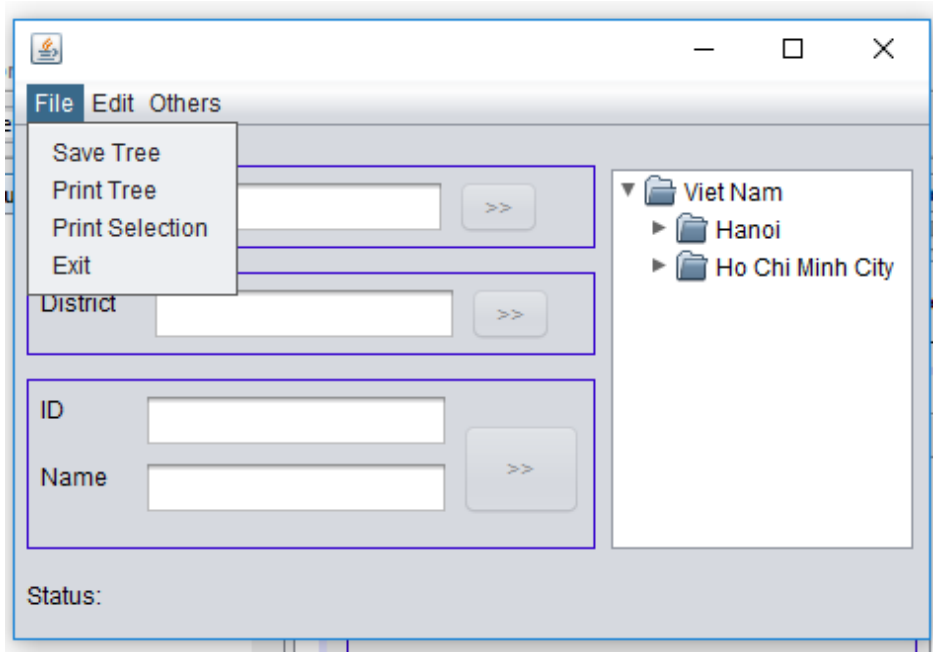
Class Task

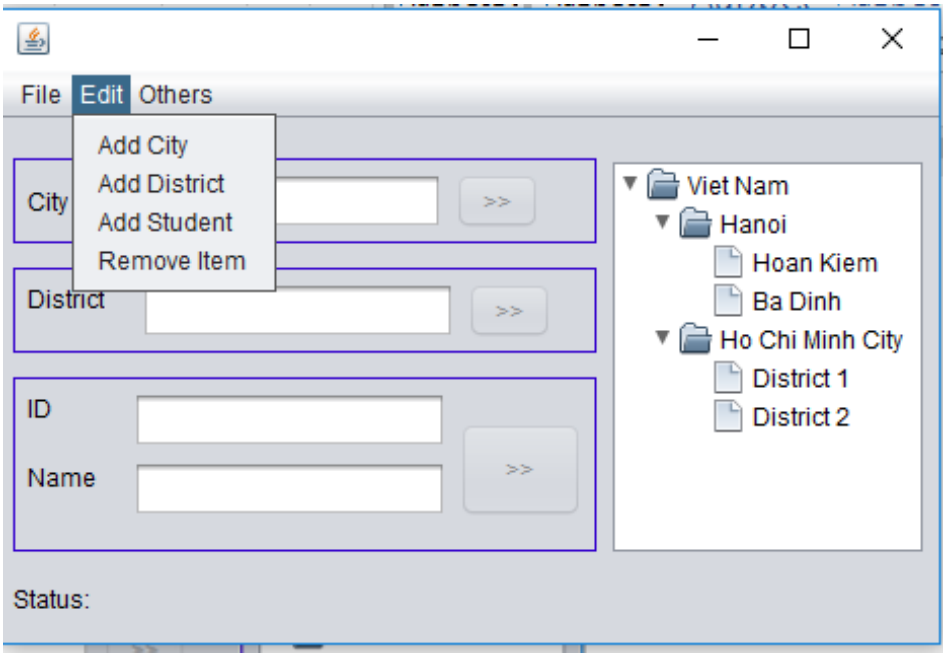
JTree

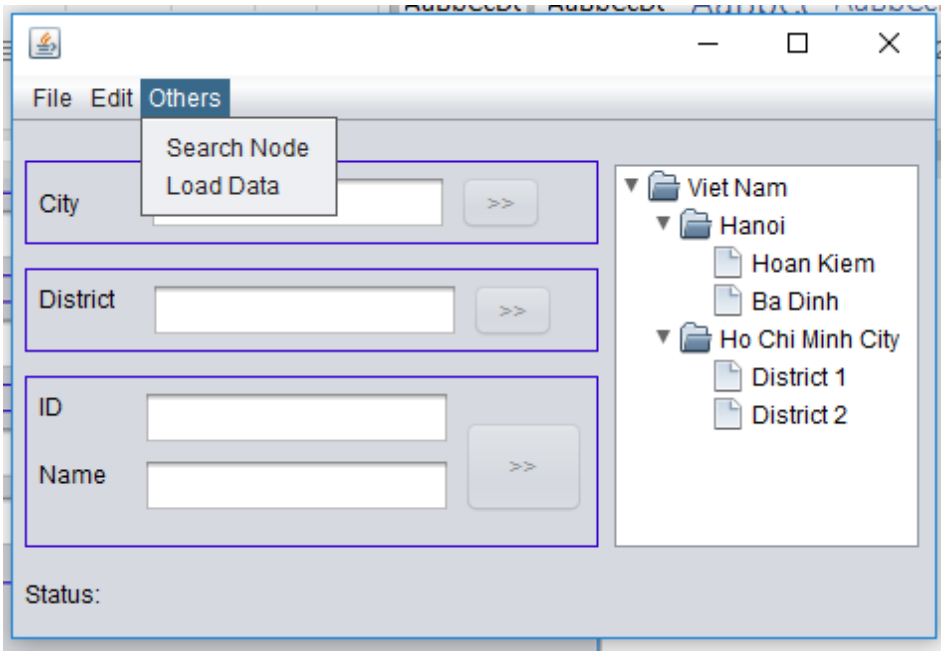
Task:

Design and implement the following JTree interface






File
Edit
Others
Add City
Add District
Add Student
Remove Item
City
>>
District
>>
ID
Name
>>
Status:
Viet Nam
Hanoi
Hoan Kiem
Ba Dinh
Ho Chi Minh City
District 1
District 2


File
Edit
Others
Search Node
Load Data
City
>>
District
>>
ID
Name
>>
Status:
Viet Nam
Hanoi
Hoan Kiem
Ba Dinh
Ho Chi Minh City
District 1
District 2

Code snippets for “Print Tree”:

```
private void printToConsole() throws IOException{
    DefaultMutableTreeNode root = (DefaultMutableTreeNode) treeStudents.getModel().getRoot();

    if (root.getChildCount()==0) return;



      System.out.println(root);

      int childCount = root.getChildCount();
      for (int i=0; i<childCount; i++){
        System.out.println("\t"+ root.getChildAt(i));

        int leafCount = root.getChildAt(i).getChildCount();
        if (leafCount == 0){}
        else{
          for (int j =0; j<leafCount; j++){
            System.out.println("\t\t" + root.getChildAt(i).getChildAt(j));

            int dataCount = root.getChildAt(i).getChildAt(j).getChildCount();
            if (dataCount == 0){}
            else{
              for (int k =0; k<dataCount; k++){
              System.out.println("\t\t\t" + root.getChildAt(i).getChildAt(j).getChildAt(k));
        }
      }
        }
      }
`
```

Code snippet for "Add City" operation:

```
private void AddCityActionPerformed(java.awt.event.ActionEvent evt) {
    DefaultTreeModel model = (DefaultTreeModel) treeStudents.getModel();
    DefaultMutableTreeNode root = (DefaultMutableTreeNode) model.getRoot();
    String city = txtCity.getText().trim();

    if (!city.equals("")){
      root.add(new DefaultMutableTreeNode(city));
      model.reload();
      lblStatus.setText("New City added to tree");
      txtCity.setText("");
      AddCity.setEnabled(false);
    }else{
      JOptionPane.showMessageDialog(this, "City field is empty", "Error!", JOptionPane.ERROR_MESSAGE);
      lblStatus.setText("Please enter a City");
      txtCity.setText("");
      AddCity.setEnabled(false);
    }
}
```

Some important classes and methods:

- DefaultTreeModel
  - model.insertNodeInto(newDistrict, selectedNode,selectedNode.getChildCount())

- DefaultMutableTreeNode
  - JTree.getModel().getRoot()
  - JTree.getLastSelectedPathComponent()
  - selectedNode.getChildCount()
  - selectedNode.getChildAt(int index)