```
1718          JMenuItem stopODE=new JMenuItem("Stop");
1719          mEngineManage.add(startODE);
1720          mEngineManage.add(stopODE);
1721          jMenuBar.add(mEngineManage);
1722          JMenu mRun=new JMenu("Run");
1723          JMenuItem runProcess=new JMenuItem("Run ProcessTree");
1724          mRun.add(runProcess);
1725          jMenuBar.add(mRun);
1726          JMenu mHelp=new JMenu("Help");
1727          JMenuItem metamodel=new JMenuItem("FM MetaModel");
1728          metamodel.addActionListener(new ActionListener() {
1729              public void actionPerformed(ActionEvent e) {
1730                  FeatureModelMatamodel fmm=new FeatureModelMatamodel();
1731              }
1732          });
1733          mHelp.add(metamodel);
1734          jMenuBar.add(mHelp);
1735          final JPanel jPanel_Center=new JPanel(new BorderLayout());
1736          jPanel_Center.setBorder(new LineBorder(Color.GREEN));
1737          JTabbedPane jTabbedPane1=new JTabbedPane();
1738          jPanel_Center.add(jTabbedPane1);
1739          final JPanel jPanel_Visual_Customizing=new JPanel(new BorderLayout());
1740          jTabbedPane1.add("Visual Customizing",jPanel_Visual_Customizing);
1741          jPanel_Visual_Customizing.setBorder(new LineBorder(Color.RED));
1742          JPanel jPanel_Visual_Customizing_North=new JPanel(null);
1743          jPanel_Visual_Customizing_North.setBorder(new
1744      TitledBorder(UIManager.getBorder("TitledBorder.border"), "Loading File",
1745      TitledBorder.CENTER, TitledBorder.TOP, null, null));
1746          jPanel_Visual_Customizing_North.setPreferredSize(new Dimension(0,105));
1747  jPanel_Visual_Customizing.add(jPanel_Visual_Customizing_North,BorderLayout.NORTH);
1748          JLabel jLabel_1=new JLabel("Select FM File:");
1749          jLabel_1.setBounds(8,20,100,20);
1750          jPanel_Visual_Customizing_North.add(jLabel_1);
1751          final JTextField jt1=new JTextField();
1752          jt1.setBounds(135,20,290,20);
1753          jPanel_Visual_Customizing_North.add(jt1);
1754          MyButton myButton_Select_FM_File=new MyButton("Browse",430,20,80,20);
1755          jPanel_Visual_Customizing_North.add(myButton_Select_FM_File);
1756          myButton_Select_FM_File.addActionListener(new ActionListener() {
1757              @Override
1758              public void actionPerformed(ActionEvent e) {
1759                  JFileChooser fcDlg = new JFileChooser();
1760                  fcDlg.setDialogTitle("Please choose file:");
1761                  FileNameExtensionFilter filter = new
1762      FileNameExtensionFilter("file(*.scfeaturemodel)", "scfeaturemodel");
1763                  fcDlg.setFileFilter(filter);
1764                  int returnVal = fcDlg.showOpenDialog(null);
1765                  if (returnVal == JFileChooser.APPROVE_OPTION) {
1766                      String filepath = fcDlg.getSelectedFile().getPath();
1767                      url_FM_FilePath=filepath;
```

```
1768                    jt1.setText(url_FM_FilePath);
1769                    jTextArea_Loger_Info.append("Start!\r\n");
1770                    jTextArea_Loger_Info.append("The location of Feature Model
1771    file!"+filepath+"\r\n");
1772                    File f=new File(url_FM_FilePath);
1773                    System.out.println(filepath);
1774                }
1775            }
1776        });
1777        MyButton myButton_Cancel1=new MyButton("Cancel",515,20,80,20);
1778        jPanel_Visual_Customizing_North.add(myButton_Cancel1);
1779        myButton_Cancel1.addActionListener(new CancelActionListener(jt1));
1780        JLabel jLabel_2=new JLabel("Select Save Location:");
1781        jLabel_2.setBounds(8,50,130,20);
1782        jPanel_Visual_Customizing_North.add(jLabel_2);
1783        final JTextField jt2=new JTextField();
1784        jt2.setBounds(135,50,290,20);
1785        url_FM_Save_Location=jt2.getText();
1786        jPanel_Visual_Customizing_North.add(jt2);
1787        MyButton myButton_Select_SaveLocation=new MyButton("Browse",430,50,80,20);
1788        jPanel_Visual_Customizing_North.add(myButton_Select_SaveLocation);
1789        myButton_Select_SaveLocation.addActionListener(new ActionListener() {
1790            @Override
1791            public void actionPerformed(ActionEvent e) {
1792                JFileChooser fcDlg = new JFileChooser();
1793                fcDlg.setDialogTitle("Please select the location where the feature model
1794    picture is saved");
1795                fcDlg.setFileSelectionMode(JFileChooser.DIRECTORIES_ONLY);
1796                int returnVal = fcDlg.showOpenDialog(null);
1797                if (returnVal == JFileChooser.APPROVE_OPTION) {
1798                    String filepath = fcDlg.getSelectedFile().getPath();
1799                    url_FM_Save_Location=filepath;
1800                    jt2.setText(url_FM_Save_Location);
1801                    jTextArea_Loger_Info.append("The location of
1802    diagram!"+filepath+"\r\n");
1803                }
1804            }
1805        });
1806        MyButton myButton_Cancel2=new MyButton("Cancel",515,50,80,20);
1807        jPanel_Visual_Customizing_North.add(myButton_Cancel2);
1808        myButton_Cancel2.addActionListener(new CancelActionListener(jt2));
1809        JLabel jLabel_3=new JLabel("Input Diagram Name:");
1810        jLabel_3.setBounds(8,80,130,20);
1811        jPanel_Visual_Customizing_North.add(jLabel_3);
1812        final JTextField jt3=new JTextField();
1813        jt3.setBounds(135,80,290,20);
1814        FMDiagram_Name=jt3.getText();
1815        jPanel_Visual_Customizing_North.add(jt3);
1816        MyButton myButton_Create_Diagram=new MyButton("Create",430,80,80,20);
1817        jPanel_Visual_Customizing_North.add(myButton_Create_Diagram);
```

```
1818          MyButton myButton_Cancel1=new MyButton("Cancel",515,20,80,20);
1819          jPanel_Visual_Customizing_North.add(myButton_Cancel1);
1820          myButton_Cancel1.addActionListener(new CancelActionListener(jt1));
1821          JLabel jLabel_2=new JLabel("Select Save Location:");
1822          jLabel_2.setBounds(8,50,130,20);
1823          jPanel_Visual_Customizing_North.add(jLabel_2);
1824          final JTextField jt2=new JTextField();
1825          jt2.setBounds(135,50,290,20);
1826          url_FM_Save_Location=jt2.getText();
1827          jPanel_Visual_Customizing_North.add(jt2);
1828          MyButton myButton_Select_SaveLocation=new MyButton("Browse",430,50,80,20);
1829          jPanel_Visual_Customizing_North.add(myButton_Select_SaveLocation);
1830          myButton_Create_Diagram.addActionListener(new ActionListener() {
1831              public void actionPerformed(ActionEvent e) {
1832                  url_FM_Save_Location=jt2.getText();
1833                  FMDiagram_Name=jt3.getText();
1834                  try {
1835                      DrawFMDiagram drawFMDiagram=new
1836                  } catch (DocumentException e1) {
1837                      e1.printStackTrace();
1838                  } catch (IOException e1) {
1839                      e1.printStackTrace();
1840                  }
1841                  JPanel jPanel_FM_VisualTree=new JPanel(new BorderLayout());
1842                  jPanel_FM_VisualTree.setBorder(new
1843          TitledBorder(UIManager.getBorder("TitledBorder.border"), "Visual Tree",
1844          TitledBorder.CENTER, TitledBorder.TOP, null, null));
1845                  jPanel_FM_VisualTree.setPreferredSize(new Dimension(0,415));
1846      jPanel_Visual_Customizing.add(jPanel_FM_VisualTree,BorderLayout.SOUTH);
1847                  try {
1848                      fmTree=new FMTreeJPanel(url_FM_FilePath);
1849                      JPanel fmTreeJPanel=fmTree.jPanel;
1850                      System.out.println("Selected_String"+Selected_String);
1851                      fmTreeJPanel.setBorder(new
1852          TitledBorder(UIManager.getBorder("TitledBorder.border"), "Configurable FM Tree",
1853          TitledBorder.CENTER, TitledBorder.TOP, null, null));
1854                      fmTreeJPanel.setPreferredSize(new Dimension(250,375));
1855                      jPanel_FM_VisualTree.add(fmTreeJPanel, BorderLayout.WEST);
1856                      jPanel_FM_VisualTree.setVisible(true);
1857                      jPanel_Center.repaint();
1858                  } catch (IOException e1) {
1859                      e1.printStackTrace();
1860                  } catch (AWTException e1) {
1861                      e1.printStackTrace();
1862                  } catch (DocumentException e1) {
1863                      e1.printStackTrace();
1864                  }
1865                  JPanel jPanel_Configuration_Info=new JPanel(null);
1866                  jPanel_Configuration_Info.setPreferredSize(new Dimension(250,415));
1867                  JPanel jPanel_Configuration_Info_Table=new JPanel(null);
```

```
1868                    jPanel_Configuration_Info_Table.setBorder(new
1869    TitledBorder(UIManager.getBorder("TitledBorder.border"), "Constraints Table",
1870    TitledBorder.CENTER, TitledBorder.TOP, null, null));
1871                    jPanel_Configuration_Info_Table.setBounds(20,15,210,120);
1872                    jPanel_Configuration_Info.add(jPanel_Configuration_Info_Table);
1873                    try {
1874                        ConstraintTable ct=new ConstraintTable(url_FM_FilePath);
1875                        JScrollPane jScrollPane_Constraint_Table=ct.jtableJScrollPane;
1876                        jScrollPane_Constraint_Table.setBounds(5,20,200,90);
1877                        jPanel_Configuration_Info_Table.add(jScrollPane_Constraint_Table);
1878                    } catch (DocumentException e1) {
1879                        e1.printStackTrace();
1880                    }
1881                    JPanel jPanel_jTextArea_Configuration_Info=new JPanel(null);
1882                    jPanel_jTextArea_Configuration_Info.setBorder(new
1883    TitledBorder(UIManager.getBorder("TitledBorder.border"), "FM Configuration Info",
1884    TitledBorder.CENTER, TitledBorder.TOP, null, null));
1885                    jPanel_jTextArea_Configuration_Info.setBounds(20,150,210,240);
1886                    jPanel_Configuration_Info.add(jPanel_jTextArea_Configuration_Info);
1887                    final DefaultListModel dlm=new DefaultListModel();
1888                    final JList jList = new JList(dlm);
1889                    jList.setBounds(5,20,200,215);
1890                    jList.setBorder(new LineBorder(Color.red));
1891                    jPanel_jTextArea_Configuration_Info.add(jList);
1892                    final String[] jlist_selected_info = new String[1];
1893                    jList.addListSelectionListener(new ListSelectionListener(){
1894                        @Override
1895                        public void valueChanged(ListSelectionEvent e) {
1896                            if(!jList.getValueIsAdjusting()){     //设置只有释放鼠标时才触发
1897                                System.out.println(jList.getSelectedValue());
1898                                jlist_selected_info[0] = (String) jList.getSelectedValue();
1899                            }
1900                        }
1901                    });
1902                    jPanel_FM_VisualTree.add(jPanel_Configuration_Info,BorderLayout.EAST);
1903                    JPanel jPanel_JButton=new JPanel(null);
1904                    jPanel_JButton.setBorder(new LineBorder(Color.GREEN));
1905                    jPanel_FM_VisualTree.add(jPanel_JButton,BorderLayout.CENTER);
1906                    MyButton myButton_Add=new MyButton("Add",7,100,80,20);
1907                    JPanel jPanel_jTextArea_Configuration_Info=new JPanel(null);
1908                    jPanel_jTextArea_Configuration_Info.setBorder(new
1909    TitledBorder(UIManager.getBorder("TitledBorder.border"), "FM Configuration Info",
1910    TitledBorder.CENTER, TitledBorder.TOP, null, null));
1911                    jPanel_jTextArea_Configuration_Info.setBounds(20,150,210,240);
1912                    jPanel_Configuration_Info.add(jPanel_jTextArea_Configuration_Info);
1913                    final DefaultListModel dlm=new DefaultListModel();
1914                    final JList jList = new JList(dlm);
1915                    jList.setBounds(5,20,200,215);
1916                    jList.setBorder(new LineBorder(Color.red));
1917                    jPanel_jTextArea_Configuration_Info.add(jList);
```

```
1918                    final String[] jlist_selected_info = new String[1];
1919
1920                    myButton_Add.addActionListener(new ActionListener() {
1921                        @Override
1922                        public void actionPerformed(ActionEvent e) {
1923                            Selected_String=fmTree.selected_String;
1924                            System.out.println("Selected_String"+Selected_String);
1925                            dlm.addElement(Selected_String);
1926                        }
1927                    });
1928                    MyButton myButton_Remove=new MyButton("Remove",7,150,80,20);
1929                    myButton_Remove.addActionListener(new ActionListener() {
1930                        @Override
1931                        public void actionPerformed(ActionEvent e) {
1932                            dlm.removeElement(jlist_selected_info[0]);
1933                        }
1934                    });
1935                    MyButton myButton_Validate=new MyButton("Validate",7,200,80,20);
1936                    jPanel_JButton.add(myButton_Add);
1937                    jPanel_JButton.add(myButton_Remove);
1938                    jPanel_JButton.add(myButton_Validate);
1939
1940        jPanel_Visual_Customizing.add(jPanel_FM_VisualTree,BorderLayout.SOUTH);
1941                    jPanel_Center.repaint();
1942                }
1943            });
1944        MyButton myButton_Cancel3=new MyButton("Cancel",515,80,80,20);
1945        jPanel_Visual_Customizing_North.add(myButton_Cancel3);
1946        JPanel jPanel_South=new JPanel(new BorderLayout());
1947        jPanel_South.setPreferredSize(new Dimension(0,140));
1948        jPanel_South.setBorder(new LineBorder(Color.BLUE));
1949        JTabbedPane jTabbedPane2=new JTabbedPane();
1950        jPanel_South.add(jTabbedPane2,BorderLayout.NORTH);
1951        JPanel jPanel_Loger_Info=new JPanel(new BorderLayout());
1952        jTabbedPane2.add("Logger Info",jPanel_Loger_Info);
1953        jTextArea_Loger_Info=new JTextArea();
1954        jTextArea_Loger_Info.setFont(jTextArea_Font);
1955        JScrollPane jScrollPane1=new JScrollPane(jTextArea_Loger_Info);
1956        jScrollPane1.setPreferredSize(new Dimension(0,110));
1957        jPanel_Loger_Info.add(jScrollPane1,BorderLayout.NORTH);
1958        JPanel jPanel_FM_XMI=new JPanel(new BorderLayout());
1959        jTabbedPane2.add("FM XMI",jPanel_FM_XMI);
1960        jTextArea_FM_XMI=new JTextArea();
1961        jTextArea_FM_XMI.setFont(jTextArea_Font);
1962        JScrollPane jScrollPane2=new JScrollPane(jTextArea_Loger_Info);
1963        jScrollPane2.setPreferredSize(new Dimension(0,110));
1964        jPanel_FM_XMI.add(jScrollPane2,BorderLayout.NORTH);
1965        this.add(jPanel_North,BorderLayout.NORTH);
1966        this.add(jPanel_Center,BorderLayout.CENTER);
1967        this.add(jPanel_South,BorderLayout.SOUTH);
```

```java
1968            this.setVisible(true);
1969            this.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
1970            this.setLocationRelativeTo(null);
1971        }
1972        public static void main(String[] args) {
1973            Main_Test2 m=new Main_Test2();
1974        }
1975    }
1976    public class Main_Test3 extends JFrame{
1977        FMTreeJPanel fmTree;
1978        String Selected_String;
1979        Font jTextArea_Font=new Font("Consolas",Font.PLAIN,12);
1980        String url_FM_FilePath;
1981        String url_FM_Save_Location;
1982        String FMDiagram_Name;
1983        JTextArea jTextArea_Loger_Info;
1984        JTextArea jTextArea_FM_XMI;
1985        String url_FM_FilePath_2_1;
1986        String url_VxBPEL_Save_Location_2_2;
1987        String vxbpel_name;
1988        String vxbpel_file_location;
1989        public Main_Test3(){
1990            this.setTitle("FM2VxBPEL");
1991            this.setSize(630,760);
1992            this.setLayout(new BorderLayout(2, 2));
1993            JPanel jPanel_North=new JPanel(new BorderLayout());
1994            jPanel_North.setPreferredSize(new Dimension(0,25));
1995            jPanel_North.setBorder(new LineBorder(Color.RED));
1996            JMenuBar jMenuBar=new JMenuBar();//添加菜单栏
1997            JMenu mFile=new JMenu("File");
1998            JMenuItem mFile_Close=new JMenuItem("Close");
1999            mFile.add(mFile_Close);
2000            mFile_Close.addActionListener(new ActionListener() {
2001                @Override
2002                public void actionPerformed(ActionEvent e) {
2003                    dispose();
2004                }
2005            });
2006            jMenuBar.add(mFile);
2007            JMenu mEngineManage=new JMenu("Engine");
2008            JMenuItem startODE=new JMenuItem("Start");
2009            JMenuItem stopODE=new JMenuItem("Stop");
2010            mEngineManage.add(startODE);
2011            mEngineManage.add(stopODE);
2012            jMenuBar.add(mEngineManage);
2013            JMenu mRun=new JMenu("Run");
2014            JMenuItem runProcess=new JMenuItem("Run ProcessTree");
2015            mRun.add(runProcess);
2016            jMenuBar.add(mRun);
2017            JMenu mHelp=new JMenu("Help");
```

```
2018            JMenuItem metamodel=new JMenuItem("FM MetaModel");
2019            metamodel.addActionListener(new ActionListener() {
2020                @Override
2021                public void actionPerformed(ActionEvent e) {
2022                    FeatureModelMatamodel fmm=new FeatureModelMatamodel();
2023                }
2024            });
2025            mHelp.add(metamodel);
2026            jMenuBar.add(mHelp);
2027            final JPanel jPanel_Center=new JPanel(new BorderLayout());
2028            jPanel_Center.setBorder(new LineBorder(Color.GREEN));
2029            JTabbedPane jTabbedPane1=new JTabbedPane();
2030            jPanel_Center.add(jTabbedPane1);
2031            final JPanel jPanel_Visual_Customizing=new JPanel(new BorderLayout());
2032            jTabbedPane1.add("Visual Customizing",jPanel_Visual_Customizing);
2033            jPanel_Visual_Customizing.setBorder(new LineBorder(Color.RED));
2034            JPanel jPanel_Visual_Customizing_North=new JPanel(null);
2035            jPanel_Visual_Customizing_North.setBorder(new
2036     TitledBorder(UIManager.getBorder("TitledBorder.border"), "Loading File",
2037     TitledBorder.CENTER, TitledBorder.TOP, null, null));
2038            jPanel_Visual_Customizing_North.setPreferredSize(new Dimension(0,105));
2039            Visual_Customizing.add(jPanel_Visual_Customizing_North,BorderLayout.NORTH);
2040            JLabel jLabel_1=new JLabel("Select FM File:");
2041            jLabel_1.setBounds(8,20,100,20);
2042            jPanel_Visual_Customizing_North.add(jLabel_1);
2043            final JTextField jt1=new JTextField();
2044            jt1.setBounds(135,20,290,20);
2045            jPanel_Visual_Customizing_North.add(jt1);
2046            MyButton myButton_Select_FM_File=new MyButton("Browse",430,20,80,20);
2047            jPanel_Visual_Customizing_North.add(myButton_Select_FM_File);
2048            myButton_Select_FM_File.addActionListener(new ActionListener() {
2049                @Override
2050                public void actionPerformed(ActionEvent e) {
2051                    JFileChooser fcDlg = new JFileChooser();
2052                    fcDlg.setDialogTitle("Please choose file:");
2053                    FileNameExtensionFilter filter = new
2054     FileNameExtensionFilter("file(*.scfeaturemodel)", "scfeaturemodel");
2055                    fcDlg.setFileFilter(filter);
2056                    int returnVal = fcDlg.showOpenDialog(null);
2057                    if (returnVal == JFileChooser.APPROVE_OPTION) {
2058                        String filepath = fcDlg.getSelectedFile().getPath();
2059                        url_FM_FilePath=filepath;
2060                        jt1.setText(url_FM_FilePath);
2061                        jTextArea_Loger_Info.append("Start!\r\n");
2062                        jTextArea_Loger_Info.append("The location of Feature Model
2063     file!"+filepath+"\r\n");
2064                        File f=new File(url_FM_FilePath);
2065                        System.out.println(filepath);
2066                    }
2067                }
```

```
2068            });
2069            MyButton myButton_Cancel1=new MyButton("Cancel",515,20,80,20);
2070            jPanel_Visual_Customizing_North.add(myButton_Cancel1);
2071            myButton_Cancel1.addActionListener(new CancelActionListener(jt1));
2072            JLabel jLabel_2=new JLabel("Select Save Location:");
2073            jLabel_2.setBounds(8,50,130,20);
2074            jPanel_Visual_Customizing_North.add(jLabel_2);
2075            final JTextField jt2=new JTextField();
2076            jt2.setBounds(135,50,290,20);
2077            url_FM_Save_Location=jt2.getText();
2078            jPanel_Visual_Customizing_North.add(jt2);
2079            MyButton myButton_Select_SaveLocation=new MyButton("Browse",430,50,80,20);
2080            jPanel_Visual_Customizing_North.add(myButton_Select_SaveLocation);
2081            myButton_Select_SaveLocation.addActionListener(new ActionListener() {
2082                @Override
2083                public void actionPerformed(ActionEvent e) {
2084                    JFileChooser fcDlg = new JFileChooser();
2085                    fcDlg.setDialogTitle("Please select the location where the feature model
2086 picture is saved");
2087                    fcDlg.setFileSelectionMode(JFileChooser.DIRECTORIES_ONLY);
2088                    int returnVal = fcDlg.showOpenDialog(null);
2089                    if (returnVal == JFileChooser.APPROVE_OPTION) {
2090                        String filepath = fcDlg.getSelectedFile().getPath();
2091                        url_FM_Save_Location=filepath;
2092                        jt2.setText(url_FM_Save_Location);
2093                        jTextArea_Loger_Info.append("The location of
2094 diagram!"+filepath+"\r\n");
2095                    }
2096                }
2097            });
2098            MyButton myButton_Cancel2=new MyButton("Cancel",515,50,80,20);
2099            jPanel_Visual_Customizing_North.add(myButton_Cancel2);
2100            myButton_Cancel2.addActionListener(new CancelActionListener(jt2));
2101            JLabel jLabel_3=new JLabel("Input Diagram Name:");
2102            jLabel_3.setBounds(8,80,130,20);
2103            jPanel_Visual_Customizing_North.add(jLabel_3);
2104            final JTextField jt3=new JTextField();
2105            jt3.setBounds(135,80,290,20);
2106            jPanel_Visual_Customizing_North.add(jt3);
2107            MyButton myButton_Create_Diagram=new MyButton("Create",430,80,80,20);
2108            jPanel_Visual_Customizing_North.add(myButton_Create_Diagram);
2109            myButton_Create_Diagram.addActionListener(new ActionListener() {
2110                public void actionPerformed(ActionEvent e) {
2111                    try {
2112                        Read_FM_XMI rfx=new Read_FM_XMI(url_FM_FilePath);
2113                        jTextArea_FM_XMI.append(rfx.result);
2114                    } catch (IOException e1) {
2115                        e1.printStackTrace();
2116                    }
2117                    url_FM_Save_Location=jt2.getText();
```

```
2118                    FMDiagram_Name=jt3.getText();
2119                    try {
2120                        DrawFMDiagram drawFMDiagram=new
2121        DrawFMDiagram(url_FM_FilePath,url_FM_Save_Location,FMDiagram_Name);
2122                    } catch (DocumentException e1) {
2123                        e1.printStackTrace();
2124                    } catch (IOException e1) {
2125                        e1.printStackTrace();
2126                    }
2127                    JPanel jPanel_FM_VisualTree=new JPanel(new BorderLayout());
2128                    jPanel_FM_VisualTree.setBorder(new
2129        TitledBorder(UIManager.getBorder("TitledBorder.border"), "Visual Tree",
2130        TitledBorder.CENTER, TitledBorder.TOP, null, null));
2131                    jPanel_FM_VisualTree.setPreferredSize(new Dimension(0,415));
2132        jPanel_Visual_Customizing.add(jPanel_FM_VisualTree,BorderLayout.SOUTH);
2133                    try {
2134                        fmTree=new FMTreeJPanel(url_FM_FilePath);
2135                        JPanel fmTreeJPanel=fmTree.jPanel;
2136                        System.out.println("Selected_String"+Selected_String);
2137                        fmTreeJPanel.setBorder(new
2138        TitledBorder(UIManager.getBorder("TitledBorder.border"), "Configurable FM Tree",
2139        TitledBorder.CENTER, TitledBorder.TOP, null, null));
2140                        fmTreeJPanel.setPreferredSize(new Dimension(250,375));
2141                        jPanel_FM_VisualTree.add(fmTreeJPanel, BorderLayout.WEST);
2142                        jPanel_FM_VisualTree.setVisible(true);
2143                        jPanel_Center.repaint();
2144                    } catch (IOException e1) {
2145                        e1.printStackTrace();
2146                    } catch (AWTException e1) {
2147                        e1.printStackTrace();
2148                    } catch (DocumentException e1) {
2149                        e1.printStackTrace();
2150                    }
2151                    JPanel jPanel_Configuration_Info=new JPanel(null);
2152                    jPanel_Configuration_Info.setBorder(new
2153        TitledBorder(UIManager.getBorder("TitledBorder.border"), "Configuration",
2154        TitledBorder.CENTER, TitledBorder.TOP, null, null));
2155                    jPanel_Configuration_Info.setPreferredSize(new Dimension(250,415));
2156                    JPanel jPanel_Configuration_Info_Table=new JPanel(null);
2157                    jPanel_Configuration_Info_Table.setBorder(new
2158        TitledBorder(UIManager.getBorder("TitledBorder.border"), "Constraints Table",
2159        TitledBorder.LEFT, TitledBorder.TOP, null, null));
2160                    jPanel_Configuration_Info_Table.setBounds(20,25,210,120);
2161                    jPanel_Configuration_Info.add(jPanel_Configuration_Info_Table);
2162                    try {
2163                        ConstraintTable ct=new ConstraintTable(url_FM_FilePath);
2164                        JScrollPane jScrollPane_Constraint_Table=ct.jtableJScrollPane;
2165                        jScrollPane_Constraint_Table.setBounds(5,20,200,90);
2166                        jPanel_Configuration_Info_Table.add(jScrollPane_Constraint_Table);
2167                    } catch (DocumentException e1) {
```

```
2168                          e1.printStackTrace();
2169                      }
2170                  JPanel jPanel_jList_Configuration_Info=new JPanel(null);
2171                  jPanel_jList_Configuration_Info.setBorder(new
2172  TitledBorder(UIManager.getBorder("TitledBorder.border"), "FM Configuration Info",
2173  TitledBorder.LEFT, TitledBorder.TOP, null, null));
2174                  jPanel_jList_Configuration_Info.setBounds(20,155,210,230);
2175                  jPanel_Configuration_Info.add(jPanel_jList_Configuration_Info);
2176                  final DefaultListModel dlm=new DefaultListModel();
2177                  final JList jList = new JList(dlm);
2178                  jList.setBounds(5,20,200,205);
2179                  jList.setBorder(new LineBorder(Color.red));
2180                  jPanel_jList_Configuration_Info.add(jList);
2181                  final String[] jlist_selected_info = new String[1];
2182                  jList.addListSelectionListener(new ListSelectionListener(){
2183                      @Override
2184                      public void valueChanged(ListSelectionEvent e) {
2185                          if(!jList.getValueIsAdjusting()){
2186                              System.out.println(jList.getSelectedValue());
2187                              jlist_selected_info[0] = (String) jList.getSelectedValue();
2188                          }
2189                      }
2190                  });
2191                  jPanel_FM_VisualTree.add(jPanel_Configuration_Info,BorderLayout.EAST);
2192                  JPanel jPanel_JButton=new JPanel(null);
2193                  jPanel_JButton.setBorder(new LineBorder(Color.GREEN));
2194                  jPanel_FM_VisualTree.add(jPanel_JButton,BorderLayout.CENTER);
2195                  MyButton myButton_Add=new MyButton("Add",7,100,80,20);
2196                  myButton_Add.addActionListener(new ActionListener() {
2197                      @Override
2198                      public void actionPerformed(ActionEvent e) {
2199                          Selected_String=fmTree.selected_String;
2200                          System.out.println("Selected_String"+Selected_String);
2201                          dlm.addElement(Selected_String);
2202                      }
2203                  });
2204                  MyButton myButton_Remove=new MyButton("Remove",7,150,80,20);
2205                  myButton_Remove.addActionListener(new ActionListener() {
2206                      @Override
2207                      public void actionPerformed(ActionEvent e) {
2208                          dlm.removeElement(jlist_selected_info[0]);
2209                      }
2210                  });
2211                  MyButton myButton_Validate=new MyButton("Validate",7,200,80,20);
2212                  MyButton myButton_UCCF=new MyButton("UCCF",7,250,80,20);
2213                  jPanel_JButton.add(myButton_Add);
2214                  jPanel_JButton.add(myButton_Remove);
2215                  jPanel_JButton.add(myButton_Validate);
2216                  jPanel_JButton.add(myButton_UCCF);
2217                  jPanel_Visual_Customizing.add(
```

```
2218                    jPanel_FM_VisualTree,BorderLayout.SOUTH);
2219                    jPanel_Center.repaint();
2220                }
2221            });
2222        MyButton myButton_Cancel3=new MyButton("Cancel",515,80,80,20);
2223        jPanel_Visual_Customizing_North.add(myButton_Cancel3);
2224        myButton_Cancel3.addActionListener(new CancelActionListener(jt3));
2225        final JPanel jPanel_Model_Transformation=new JPanel(new BorderLayout());
2226        jTabbedPane1.add("Model Transformation",jPanel_Model_Transformation);
2227        jPanel_Model_Transformation.setBorder(new LineBorder(Color.BLUE));
2228        JPanel jPanel_Model_Transformation_North=new JPanel(null);
2229        jPanel_Model_Transformation_North.setBorder(new
2230 TitledBorder(UIManager.getBorder("TitledBorder.border"), "Loading File",
2231 TitledBorder.CENTER, TitledBorder.TOP, null, null));
2232        jPanel_Model_Transformation_North.setPreferredSize(new Dimension(0,140));
2233        jPanel_Model_Transformation.add(
2234        jPanel_Model_Transformation_North,BorderLayout.NORTH);
2235        JLabel jLabel_2_1=new JLabel("Select FM File:");
2236        jLabel_2_1.setBounds(8,20,100,20);
2237        jPanel_Model_Transformation_North.add(jLabel_2_1);
2238        final JTextField jt_2_1=new JTextField();
2239        jt_2_1.setBounds(135,20,290,20);
2240        jPanel_Model_Transformation_North.add(jt_2_1);
2241        MyButton myButton_Select_FM_File_2_1=new MyButton("Browse",430,20,80,20);
2242        jPanel_Model_Transformation_North.add(myButton_Select_FM_File_2_1);
2243        myButton_Select_FM_File_2_1.addActionListener(new ActionListener() {
2244            public void actionPerformed(ActionEvent e) {
2245                JFileChooser fcDlg = new JFileChooser();
2246                fcDlg.setDialogTitle("Please choose file:");
2247                FileNameExtensionFilter filter = new
2248 FileNameExtensionFilter("file(*.scfeaturemodel)", "scfeaturemodel");
2249                fcDlg.setFileFilter(filter);
2250                int returnVal = fcDlg.showOpenDialog(null);
2251                if (returnVal == JFileChooser.APPROVE_OPTION) {
2252                    String filepath = fcDlg.getSelectedFile().getPath();
2253                    url_FM_FilePath_2_1=filepath;
2254                    jt_2_1.setText(url_FM_FilePath_2_1);
2255                    jTextArea_Loger_Info.append("The location of Feature Model
2256 file!"+filepath+"\r\n");
2257                    File f=new File(url_FM_FilePath_2_1);
2258                    System.out.println(filepath);
2259                }
2260            }
2261        });
2262        MyButton myButton_Cancel_2_1=new MyButton("Cancel",515,20,80,20);
2263        jPanel_Model_Transformation_North.add(myButton_Cancel_2_1);
2264        myButton_Cancel_2_1.addActionListener(new CancelActionListener(jt_2_1));
2265        JLabel jLabel_2_2=new JLabel("Select Save Location:");
2266        jLabel_2_2.setBounds(8,50,130,20);
2267        jPanel_Model_Transformation_North.add(jLabel_2_2);
```

```
2268          final JTextField jt_2_2=new JTextField();
2269          jt_2_2.setBounds(135,50,290,20);
2270          jPanel_Model_Transformation_North.add(jt_2_2);
2271          MyButton myButton_Select_SaveLocation_2_2=new
2272    MyButton("Browse",430,50,80,20);
2273          jPanel_Model_Transformation_North.add(myButton_Select_SaveLocation_2_2);
2274          myButton_Select_SaveLocation_2_2.addActionListener(new ActionListener() {
2275               @Override
2276               public void actionPerformed(ActionEvent e) {
2277                    JFileChooser fcDlg = new JFileChooser();
2278                    fcDlg.setDialogTitle("Please select the location where the feature model
2279    picture is saved");
2280                    fcDlg.setFileSelectionMode(JFileChooser.DIRECTORIES_ONLY);
2281                    int returnVal = fcDlg.showOpenDialog(null);
2282                    if (returnVal == JFileChooser.APPROVE_OPTION) {
2283                         String filepath = fcDlg.getSelectedFile().getPath();
2284                         url_VxBPEL_Save_Location_2_2=filepath;
2285                         jt_2_2.setText(url_VxBPEL_Save_Location_2_2);
2286                         jTextArea_Loger_Info.append("The location of
2287    VxBPEL!"+filepath+"\r\n");
2288                    }
2289               }
2290          });
2291               JPanel jPanel_jList_Configuration_Info=new JPanel(null);
2292               jPanel_jList_Configuration_Info.setBorder(new
2293    TitledBorder(UIManager.getBorder("TitledBorder.border"), "FM Configuration Info",
2294    TitledBorder.LEFT, TitledBorder.TOP, null, null));
2295               jPanel_jList_Configuration_Info.setBounds(20,155,210,230);
2296               jPanel_Configuration_Info.add(jPanel_jList_Configuration_Info);
2297               final DefaultListModel dlm=new DefaultListModel();
2298               final JList jList = new JList(dlm);
2299               jList.setBounds(5,20,200,205);
2300               jList.setBorder(new LineBorder(Color.red));
2301               jPanel_jList_Configuration_Info.add(jList);
2302               final String[] jlist_selected_info = new String[1];
2303               jList.addListSelectionListener(new ListSelectionListener(){
2304                    @Override
2305                    public void valueChanged(ListSelectionEvent e) {
2306                         if(!jList.getValueIsAdjusting()){
2307                              System.out.println(jList.getSelectedValue());
2308                              jlist_selected_info[0] = (String) jList.getSelectedValue();
2309                         }
2310                    }
2311               });
2312          MyButton myButton_Cancel_2_2=new MyButton("Cancel",515,50,80,20);
2313          jPanel_Model_Transformation_North.add(myButton_Cancel_2_2);
2314          myButton_Cancel_2_2.addActionListener(new CancelActionListener(jt_2_2));
2315          JLabel jLabel_2_3=new JLabel("Input VxBPEL Name:");
2316          jLabel_2_3.setBounds(8,80,130,20);
2317          jPanel_Model_Transformation_North.add(jLabel_2_3);
```

```
2318            final JTextField jt_2_3=new JTextField();
2319            jt_2_3.setBounds(135,80,290,20);
2320            jPanel_Model_Transformation_North.add(jt_2_3);
2321            MyButton myButton_Model_Convert=new MyButton("Convert",430,80,80,20);
2322            jPanel_Model_Transformation_North.add(myButton_Model_Convert);
2323            myButton_Model_Convert.addActionListener(new ActionListener() {
2324                @Override
2325                public void actionPerformed(ActionEvent e) {
2326                    vxbpel_name=jt_2_3.getText();
2327                    try {
2328                        ModelTran_Test2 mt=new
2329        ModelTran_Test2(url_FM_FilePath_2_1,url_VxBPEL_Save_Location_2_2,vxbpel_name);
2330                    } catch (DocumentException e1) {
2331                        e1.printStackTrace();
2332                    } catch (IOException e1) {
2333                        e1.printStackTrace();
2334                    }
2335                }
2336            });
2337            MyButton myButton_Cancel_2_3=new MyButton("Cancel",515,80,80,20);
2338            jPanel_Model_Transformation_North.add(myButton_Cancel_2_3);
2339            myButton_Cancel_2_3.addActionListener(new CancelActionListener(jt_2_3));
2340            JLabel jLabel_2_4=new JLabel("Parse Variability Info:");
2341            jLabel_2_4.setBounds(8,110,130,20);
2342            jPanel_Model_Transformation_North.add(jLabel_2_4);
2343            final JTextField jt_2_4=new JTextField();
2344            jt_2_4.setBounds(135,110,290,20);
2345            jPanel_Model_Transformation_North.add(jt_2_4);
2346            MyButton myButton_Browse_2_4=new MyButton("Browse",430,110,80,20);
2347            jPanel_Model_Transformation_North.add(myButton_Browse_2_4);
2348            myButton_Browse_2_4.addActionListener(new ActionListener() {
2349                @Override
2350                public void actionPerformed(ActionEvent e) {
2351                    JFileChooser fcDlg = new JFileChooser();
2352                    fcDlg.setDialogTitle("Please choose file:");
2353                    FileNameExtensionFilter filter =
2354                    new FileNameExtensionFilter("file(*.bpel)", "bpel");
2355                    fcDlg.setFileFilter(filter);
2356                    int returnVal = fcDlg.showOpenDialog(null);
2357                    if (returnVal == JFileChooser.APPROVE_OPTION) {
2358                        String filepath = fcDlg.getSelectedFile().getPath();
2359                        vxbpel_file_location=filepath;
2360                        jt_2_4.setText(vxbpel_file_location);
2361                        jTextArea_Loger_Info.append("Start!\r\n");
2362                        jTextArea_Loger_Info.append("The location of vxbpel
2363        file!"+filepath+"\r\n");
2364                        System.out.println(filepath);
2365                    }
2366                }
2367            });
```

```
2368        MyButton myButton_Parse_2_4=new MyButton("Parse",515,110,80,20);
2369        jPanel_Model_Transformation_North.add(myButton_Parse_2_4);
2370        myButton_Parse_2_4.addActionListener(new ActionListener() {
2371            @Override
2372            public void actionPerformed(ActionEvent e) {
2373                JPanel jPanel_VxBPEL=new JPanel(new BorderLayout());
2374                jPanel_VxBPEL.setBorder(new
2375    TitledBorder(UIManager.getBorder("TitledBorder.border"), "VxBPEL",
2376    TitledBorder.CENTER, TitledBorder.TOP, null, null));
2377                jPanel_VxBPEL.setPreferredSize(new Dimension(0,380));
2378    jPanel_Model_Transformation.add(jPanel_VxBPEL,BorderLayout.SOUTH);
2379                try {
2380                    ProcessTree pt=new ProcessTree(vxbpel_file_location);
2381                    JPanel jPanel_vxbpel_Tree=pt.jPanel;
2382                    jPanel_vxbpel_Tree.setBorder(new
2383    TitledBorder(UIManager.getBorder("TitledBorder.border"), "Process Tree",
2384    TitledBorder.CENTER, TitledBorder.TOP, null, null));
2385                    jPanel_vxbpel_Tree.setPreferredSize(new Dimension(250,325));
2386                    jPanel_VxBPEL.add(jPanel_vxbpel_Tree,BorderLayout.WEST);
2387                } catch (DocumentException e1) {
2388                    e1.printStackTrace();
2389                }
2390                jPanel_Center.repaint();
2391            }
2392        });
2393        JPanel jPanel_South=new JPanel(new BorderLayout());
2394        jPanel_South.setPreferredSize(new Dimension(0,140));
2395        jPanel_South.setBorder(new LineBorder(Color.BLUE));
2396        JTabbedPane jTabbedPane2=new JTabbedPane();
2397        jPanel_South.add(jTabbedPane2,BorderLayout.NORTH);
2398        JPanel jPanel_Loger_Info=new JPanel(new BorderLayout());
2399        jTabbedPane2.add("Logger Info",jPanel_Loger_Info);
2400        jTextArea_Loger_Info=new JTextArea();
2401        jTextArea_Loger_Info.setFont(jTextArea_Font);
2402        JScrollPane jScrollPane1=new JScrollPane(jTextArea_Loger_Info);
2403        jScrollPane1.setPreferredSize(new Dimension(0,110));
2404        jPanel_Loger_Info.add(jScrollPane1,BorderLayout.NORTH);
2405        JPanel jPanel_FM_XMI=new JPanel(new BorderLayout());
2406        jTabbedPane2.add("FM XMI",jPanel_FM_XMI);
2407        jTextArea_FM_XMI=new JTextArea();
2408        jTextArea_FM_XMI.setFont(jTextArea_Font);
2409        JScrollPane jScrollPane2=new JScrollPane(jTextArea_FM_XMI);
2410        jScrollPane2.setPreferredSize(new Dimension(0,110));
2411        jPanel_FM_XMI.add(jScrollPane2,BorderLayout.NORTH);
2412        this.add(jPanel_North,BorderLayout.NORTH);
2413        this.add(jPanel_Center,BorderLayout.CENTER);
2414        this.add(jPanel_South,BorderLayout.SOUTH);
2415        this.setVisible(true);
2416        this.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
2417        this.setLocationRelativeTo(null);
```

```
2418            }
2419        public static void main(String[] args) {
2420            Main_Test3 m=new Main_Test3();
2421        }
2422    }
2423    public class Main_Test4 extends JFrame{
2424            jMenuBar.add(mFile);
2425            JMenu mEngineManage=new JMenu("Engine");
2426            JMenuItem startODE=new JMenuItem("Start");
2427            JMenuItem stopODE=new JMenuItem("Stop");
2428            mEngineManage.add(startODE);
2429            mEngineManage.add(stopODE);
2430            jMenuBar.add(mEngineManage);
2431            JMenu mRun=new JMenu("Run");
2432            JMenuItem runProcess=new JMenuItem("Run ProcessTree");
2433            mRun.add(runProcess);
2434            jMenuBar.add(mRun);
2435            JMenu mHelp=new JMenu("Help");
2436            JMenuItem metamodel=new JMenuItem("FM MetaModel");
2437        FMTreeJPanel fmTree;
2438        String Selected_String;
2439        Font jTextArea_Font=new Font("Consolas",Font.PLAIN,12);
2440        String url_FM_FilePath;
2441        String url_FM_Save_Location;
2442        ArrayList<String> arrayList=new ArrayList<String>();
2443        String FMDiagram_Name;
2444        JTextArea jTextArea_Loger_Info;
2445        JTextArea jTextArea_FM_XMI;
2446        String url_FM_FilePath_2_1;
2447        String url_VxBPEL_Save_Location_2_2;
2448        String vxbpel_name;
2449        String vxbpel_file_location;
2450        ArrayList<ArrayList> arrayLists_VP;
2451        String UCCF_Save_Location;
2452        String UCCF_File_Name;
2453        public Main_Test4(){
2454            this.setTitle("FM2VxBPEL");
2455            this.setSize(630,760);
2456            this.setLayout(new BorderLayout(2, 2));
2457            JPanel jPanel_North=new JPanel(new BorderLayout());
2458            jPanel_North.setPreferredSize(new Dimension(0,25));
2459            jPanel_North.setBorder(new LineBorder(Color.RED));
2460            JMenuBar jMenuBar=new JMenuBar();//添加菜单栏
2461            jPanel_North.add(jMenuBar,BorderLayout.NORTH);
2462            JMenu mFile=new JMenu("File");
2463            JMenuItem mFile_Close=new JMenuItem("Close");
2464            mFile.add(mFile_Close);
2465            mFile_Close.addActionListener(new ActionListener() {
2466                @Override
2467                public void actionPerformed(ActionEvent e) {
```

```
2468              dispose();
2469          }
2470      });
2471      jMenuBar.add(mFile);
2472      JMenu mEngineManage=new JMenu("Engine");
2473      JMenuItem startODE=new JMenuItem("Start");
2474      JMenuItem stopODE=new JMenuItem("Stop");
2475      mEngineManage.add(startODE);
2476      mEngineManage.add(stopODE);
2477      jMenuBar.add(mEngineManage);
2478      JMenu mRun=new JMenu("Run");
2479      JMenuItem runProcess=new JMenuItem("Run ProcessTree");
2480      mRun.add(runProcess);
2481      jMenuBar.add(mRun);
2482      JMenu mHelp=new JMenu("Help");
2483      JMenuItem metamodel=new JMenuItem("FM MetaModel");
2484      metamodel.addActionListener(new ActionListener() {
2485          @Override
2486          public void actionPerformed(ActionEvent e) {
2487              FeatureModelMatamodel fmm=new FeatureModelMatamodel();
2488          }
2489      });
2490      MyButton myButton_Cancel1=new MyButton("Cancel",515,20,80,20);
2491      jPanel_Visual_Customizing_North.add(myButton_Cancel1);
2492      myButton_Cancel1.addActionListener(new CancelActionListener(jt1));
2493      JLabel jLabel_2=new JLabel("Select Save Location:");
2494      jLabel_2.setBounds(8,50,130,20);
2495      jPanel_Visual_Customizing_North.add(jLabel_2);
2496      final JTextField jt2=new JTextField();
2497      jt2.setBounds(135,50,290,20);
2498      url_FM_Save_Location=jt2.getText();
2499      jPanel_Visual_Customizing_North.add(jt2);
2500      MyButton myButton_Select_SaveLocation=new MyButton("Browse",430,50,80,20);
2501      jPanel_Visual_Customizing_North.add(myButton_Select_SaveLocation);
2502      mHelp.add(metamodel);
2503      jMenuBar.add(mHelp);
2504      final JPanel jPanel_Center=new JPanel(new BorderLayout());
2505      jPanel_Center.setBorder(new LineBorder(Color.GREEN));
2506      JTabbedPane jTabbedPane1=new JTabbedPane();
2507      jPanel_Center.add(jTabbedPane1);
2508      final JPanel jPanel_Visual_Customizing=new JPanel(new BorderLayout());
2509      jTabbedPane1.add("Visual Customizing",jPanel_Visual_Customizing);
2510      jPanel_Visual_Customizing.setBorder(new LineBorder(Color.RED));
2511      JPanel jPanel_Visual_Customizing_North=new JPanel(null);
2512      jPanel_Visual_Customizing_North.setBorder(new
2513  TitledBorder(UIManager.getBorder("TitledBorder.border"), "Loading File",
2514  TitledBorder.CENTER, TitledBorder.TOP, null, null));
2515      jPanel_Visual_Customizing_North.setPreferredSize(new Dimension(0,105));
2516  jPanel_Visual_Customizing.add(jPanel_Visual_Customizing_North,BorderLayout.NORTH);
2517      JLabel jLabel_1=new JLabel("Select FM File:");
```

```
2518          jLabel_1.setBounds(8,20,100,20);
2519          jPanel_Visual_Customizing_North.add(jLabel_1);
2520          final JTextField jt1=new JTextField();
2521          jt1.setBounds(135,20,290,20);
2522          jPanel_Visual_Customizing_North.add(jt1);
2523          MyButton myButton_Select_FM_File=new MyButton("Browse",430,20,80,20);
2524          jPanel_Visual_Customizing_North.add(myButton_Select_FM_File);
2525          myButton_Select_FM_File.addActionListener(new ActionListener() {
2526              @Override
2527              public void actionPerformed(ActionEvent e) {
2528                  JFileChooser fcDlg = new JFileChooser();
2529                  fcDlg.setDialogTitle("Please choose file:");
2530                  FileNameExtensionFilter filter = new
2531     FileNameExtensionFilter("file(*.scfeaturemodel)", "scfeaturemodel");
2532                  fcDlg.setFileFilter(filter);
2533                  int returnVal = fcDlg.showOpenDialog(null);
2534                  if (returnVal == JFileChooser.APPROVE_OPTION) {
2535                      String filepath = fcDlg.getSelectedFile().getPath();
2536                      url_FM_FilePath=filepath;
2537                      jt1.setText(url_FM_FilePath);
2538                      jTextArea_Loger_Info.append("Start!\r\n");
2539                      jTextArea_Loger_Info.append("The location of Feature Model
2540     file!"+filepath+"\r\n");
2541                      File f=new File(url_FM_FilePath);
2542                      System.out.println(filepath);
2543                  }
2544              }
2545          });
2546          MyButton myButton_Cancel1=new MyButton("Cancel",515,20,80,20);
2547          jPanel_Visual_Customizing_North.add(myButton_Cancel1);
2548          myButton_Cancel1.addActionListener(new CancelActionListener(jt1));
2549          JLabel jLabel_2=new JLabel("Select Save Location:");
2550          jLabel_2.setBounds(8,50,130,20);
2551          jPanel_Visual_Customizing_North.add(jLabel_2);
2552          final JTextField jt2=new JTextField();
2553          jt2.setBounds(135,50,290,20);
2554          url_FM_Save_Location=jt2.getText();
2555          jPanel_Visual_Customizing_North.add(jt2);
2556          MyButton myButton_Select_SaveLocation=new MyButton("Browse",430,50,80,20);
2557          jPanel_Visual_Customizing_North.add(myButton_Select_SaveLocation);
2558          myButton_Select_SaveLocation.addActionListener(new ActionListener() {
2559              @Override
2560              public void actionPerformed(ActionEvent e) {
2561                  JFileChooser fcDlg = new JFileChooser();
2562                  fcDlg.setDialogTitle("Please select the location where the feature model
2563     picture is saved");
2564                  fcDlg.setFileSelectionMode(JFileChooser.DIRECTORIES_ONLY);
2565                  int returnVal = fcDlg.showOpenDialog(null);
2566                  if (returnVal == JFileChooser.APPROVE_OPTION) {
2567                      String filepath = fcDlg.getSelectedFile().getPath();
```

```
2568                         url_FM_Save_Location=filepath;
2569                         jt2.setText(url_FM_Save_Location);
2570                         jTextArea_Loger_Info.append("The location of
2571     diagram!"+filepath+"\r\n");
2572                     }
2573                 }
2574         });
2575         MyButton myButton_Cancel3=new MyButton("Cancel",515,80,80,20);
2576         jPanel_Visual_Customizing_North.add(myButton_Cancel3);
2577         myButton_Cancel3.addActionListener(new CancelActionListener(jt3));
2578         final JPanel jPanel_Model_Transformation=new JPanel(new BorderLayout());
2579         jTabbedPane1.add("Model Transformation",jPanel_Model_Transformation);
2580         jPanel_Model_Transformation.setBorder(new LineBorder(Color.BLUE));
2581         JPanel jPanel_Model_Transformation_North=new JPanel(null);
2582         jPanel_Model_Transformation_North.setBorder(new
2583     TitledBorder(UIManager.getBorder("TitledBorder.border"), "Loading File",
2584     TitledBorder.CENTER, TitledBorder.TOP, null, null));
2585         jPanel_Model_Transformation_North.setPreferredSize(new Dimension(0,140));
2586         jPanel_Model_Transformation.add(
2587         jPanel_Model_Transformation_North,BorderLayout.NORTH);
2588         JLabel jLabel_2_1=new JLabel("Select FM File:");
2589         jLabel_2_1.setBounds(8,20,100,20);
2590         jPanel_Model_Transformation_North.add(jLabel_2_1);
2591         final JTextField jt_2_1=new JTextField();
2592         jt_2_1.setBounds(135,20,290,20);
2593         jPanel_Model_Transformation_North.add(jt_2_1);
2594         MyButton myButton_Select_FM_File_2_1=new MyButton("Browse",430,20,80,20);
2595         jPanel_Model_Transformation_North.add(myButton_Select_FM_File_2_1);
2596         MyButton myButton_Cancel2=new MyButton("Cancel",515,50,80,20);
2597         jPanel_Visual_Customizing_North.add(myButton_Cancel2);
2598         myButton_Cancel2.addActionListener(new CancelActionListener(jt2));
2599         JLabel jLabel_3=new JLabel("Input Diagram Name:");
2600         jLabel_3.setBounds(8,80,130,20);
2601         jPanel_Visual_Customizing_North.add(jLabel_3);
2602         final JTextField jt3=new JTextField();
2603         jt3.setBounds(135,80,290,20);
2604         jPanel_Visual_Customizing_North.add(jt3);
2605         MyButton myButton_Create_Diagram=new MyButton("Create",430,80,80,20);
2606         jPanel_Visual_Customizing_North.add(myButton_Create_Diagram);
2607         myButton_Create_Diagram.addActionListener(new ActionListener() {
2608             @Override
2609             public void actionPerformed(ActionEvent e) {
2610                 try {
2611                     Read_FM_XMI rfx=new Read_FM_XMI(url_FM_FilePath);
2612                     jTextArea_FM_XMI.append(rfx.result);
2613                 } catch (IOException e1) {
2614                     e1.printStackTrace();
2615                 }
2616                 url_FM_Save_Location=jt2.getText();
2617                 FMDiagram_Name=jt3.getText();
```

```
2618                    try {
2619                        DrawFMDiagram drawFMDiagram=new
2620    DrawFMDiagram(url_FM_FilePath,url_FM_Save_Location,FMDiagram_Name);
2621                    } catch (DocumentException e1) {
2622                        e1.printStackTrace();
2623                    } catch (IOException e1) {
2624                        e1.printStackTrace();
2625                    }
2626                    JPanel jPanel_FM_VisualTree=new JPanel(new BorderLayout());
2627                    jPanel_FM_VisualTree.setBorder(new
2628    TitledBorder(UIManager.getBorder("TitledBorder.border"), "Visual Tree",
2629    TitledBorder.CENTER, TitledBorder.TOP, null, null));
2630                    jPanel_FM_VisualTree.setPreferredSize(new Dimension(0,415));
2631    jPanel_Visual_Customizing.add(jPanel_FM_VisualTree,BorderLayout.SOUTH);
2632                    try {
2633                        fmTree=new FMTreeJPanel(url_FM_FilePath);
2634                        JPanel fmTreeJPanel=fmTree.jPanel;
2635                        System.out.println("Selected_String"+Selected_String);
2636                        fmTreeJPanel.setBorder(new
2637    TitledBorder(UIManager.getBorder("TitledBorder.border"), "Configurable FM Tree",
2638    TitledBorder.CENTER, TitledBorder.TOP, null, null));
2639                        fmTreeJPanel.setPreferredSize(new Dimension(250,375));
2640                        jPanel_FM_VisualTree.add(fmTreeJPanel, BorderLayout.WEST);
2641                        jPanel_FM_VisualTree.setVisible(true);
2642                        jPanel_Center.repaint();
2643                    } catch (IOException e1) {
2644                        e1.printStackTrace();
2645                    } catch (AWTException e1) {
2646                        e1.printStackTrace();
2647                    } catch (DocumentException e1) {
2648                        e1.printStackTrace();
2649                    }
2650                    JPanel jPanel_Configuration_Info=new JPanel(null);
2651                    jPanel_Configuration_Info.setBorder(new
2652    TitledBorder(UIManager.getBorder("TitledBorder.border"), "Configuration",
2653    TitledBorder.CENTER, TitledBorder.TOP, null, null));
2654                    jPanel_Configuration_Info.setPreferredSize(new Dimension(250,415));
2655                    //创建一个 JPanel 保存特征模型约束表
2656                    JPanel jPanel_Configuration_Info_Table=new JPanel(null);
2657                    jPanel_Configuration_Info_Table.setBorder(new
2658    TitledBorder(UIManager.getBorder("TitledBorder.border"), "Constraints Table",
2659    TitledBorder.LEFT, TitledBorder.TOP, null, null));
2660                    jPanel_Configuration_Info_Table.setBounds(20,25,210,120);
2661                    jPanel_Configuration_Info.add(jPanel_Configuration_Info_Table);
2662                    try {
2663                        ConstraintTable ct=new ConstraintTable(url_FM_FilePath);
2664                        JScrollPane jScrollPane_Constraint_Table=ct.jtableJScrollPane;
2665                        jScrollPane_Constraint_Table.setBounds(5,20,200,90);
2666                        jPanel_Configuration_Info_Table.add(jScrollPane_Constraint_Table);
2667                    } catch (DocumentException e1) {
```

```
2668                          e1.printStackTrace();
2669                      }
2670                  JPanel jPanel_jList_Configuration_Info=new JPanel(null);
2671                  jPanel_jList_Configuration_Info.setBorder(new
2672      TitledBorder(UIManager.getBorder("TitledBorder.border"), "FM Configuration Info",
2673      TitledBorder.LEFT, TitledBorder.TOP, null, null));
2674                  jPanel_jList_Configuration_Info.setBounds(20,155,210,230);
2675                  jPanel_Configuration_Info.add(jPanel_jList_Configuration_Info);
2676                  final DefaultListModel dlm=new DefaultListModel();
2677                  final JList jList = new JList(dlm);
2678                  jList.setBounds(5,20,200,205);
2679                  jList.setBorder(new LineBorder(Color.red));
2680                  jPanel_jList_Configuration_Info.add(jList);
2681                  final String[] jlist_selected_info = new String[1];
2682                  jList.addListSelectionListener(new ListSelectionListener(){
2683                      @Override
2684                      public void valueChanged(ListSelectionEvent e) {
2685                          if(!jList.getValueIsAdjusting()){
2686                              System.out.println(jList.getSelectedValue());
2687                              jlist_selected_info[0] = (String) jList.getSelectedValue();
2688                          }
2689                      }
2690                  });
2691                  jPanel_FM_VisualTree.add(jPanel_Configuration_Info,BorderLayout.EAST);
2692                  JPanel jPanel_JButton=new JPanel(null);
2693                  jPanel_JButton.setBorder(new LineBorder(Color.GREEN));
2694                  jPanel_FM_VisualTree.add(jPanel_JButton,BorderLayout.CENTER);
2695                  MyButton myButton_Add=new MyButton("Add",7,100,80,20);
2696                  myButton_Add.addActionListener(new ActionListener() {
2697                      @Override
2698                      public void actionPerformed(ActionEvent e) {
2699                          Selected_String=fmTree.selected_String;
2700                          System.out.println("Selected_String"+Selected_String);
2701                          dlm.addElement(Selected_String);
2702                          arrayList.add(Selected_String);
2703                      }
2704                  });
2705                  MyButton myButton_Remove=new MyButton("Remove",7,150,80,20);
2706                  myButton_Remove.addActionListener(new ActionListener() {
2707                      @Override
2708                      public void actionPerformed(ActionEvent e) {
2709                          dlm.removeElement(jlist_selected_info[0]);
2710                          arrayList.remove(jlist_selected_info[0]);
2711                      }
2712                  });
2713                  MyButton myButton_Validate=new MyButton("Validate",7,200,80,20);
2714                  MyButton myButton_UCCF=new MyButton("UCCF",7,250,80,20);
2715                  jPanel_JButton.add(myButton_Add);
2716                  jPanel_JButton.add(myButton_Remove);
2717                  jPanel_JButton.add(myButton_Validate);
```

```
2718                    jPanel_JButton.add(myButton_UCCF);
2719                    jPanel_Visual_Customizing.add(
2720                    jPanel_FM_VisualTree,BorderLayout.SOUTH);
2721                    jPanel_Center.repaint();
2722                 }
2723              });
2724              MyButton myButton_Cancel3=new MyButton("Cancel",515,80,80,20);
2725              jPanel_Visual_Customizing_North.add(myButton_Cancel3);
2726              myButton_Cancel3.addActionListener(new CancelActionListener(jt3));
2727              final JPanel jPanel_Model_Transformation=new JPanel(new BorderLayout());
2728              jTabbedPane1.add("Model Transformation",jPanel_Model_Transformation);
2729              jPanel_Model_Transformation.setBorder(new LineBorder(Color.BLUE));
2730              JPanel jPanel_Model_Transformation_North=new JPanel(null);
2731              jPanel_Model_Transformation_North.setBorder(new
2732     TitledBorder(UIManager.getBorder("TitledBorder.border"), "Loading File",
2733     TitledBorder.CENTER, TitledBorder.TOP, null, null));
2734              jLabel_2_3.setBounds(8,80,130,20);
2735              jPanel_Model_Transformation_North.add(jLabel_2_3);
2736              final JTextField jt_2_3=new JTextField();
2737              jt_2_3.setBounds(135,80,290,20);
2738              jPanel_Model_Transformation_North.add(jt_2_3);
2739              jPanel_Model_Transformation_North.setPreferredSize(new Dimension(0,140));
2740              jPanel_Model_Transformation.add(
2741              jPanel_Model_Transformation_North,BorderLayout.NORTH);
2742              JLabel jLabel_2_1=new JLabel("Select FM File:");
2743              jLabel_2_1.setBounds(8,20,100,20);
2744              jPanel_Model_Transformation_North.add(jLabel_2_1);
2745              final JTextField jt_2_1=new JTextField();
2746              jt_2_1.setBounds(135,20,290,20);
2747              jPanel_Model_Transformation_North.add(jt_2_1);
2748              MyButton myButton_Select_FM_File_2_1=new MyButton("Browse",430,20,80,20);
2749              jPanel_Model_Transformation_North.add(myButton_Select_FM_File_2_1);
2750              myButton_Select_FM_File_2_1.addActionListener(new ActionListener() {
2751                  public void actionPerformed(ActionEvent e) {
2752                      JFileChooser fcDlg = new JFileChooser();
2753                      fcDlg.setDialogTitle("Please choose file:");
2754                      FileNameExtensionFilter filter = new
2755     FileNameExtensionFilter("file(*.scfeaturemodel)", "scfeaturemodel");
2756                      fcDlg.setFileFilter(filter);
2757                      int returnVal = fcDlg.showOpenDialog(null);
2758                      if (returnVal == JFileChooser.APPROVE_OPTION) {
2759                          String filepath = fcDlg.getSelectedFile().getPath();
2760                          url_FM_FilePath_2_1=filepath;
2761                          jt_2_1.setText(url_FM_FilePath_2_1);
2762                          jTextArea_Loger_Info.append("The location of Feature Model
2763     file!"+filepath+"\r\n");
2764                          File f=new File(url_FM_FilePath_2_1);
2765                          System.out.println(filepath);
2766                      }
2767                  }
```

```
2768            });
2769            MyButton myButton_Cancel_2_1=new MyButton("Cancel",515,20,80,20);
2770            jPanel_Model_Transformation_North.add(myButton_Cancel_2_1);
2771            myButton_Cancel_2_1.addActionListener(new CancelActionListener(jt_2_1));
2772            JLabel jLabel_2_2=new JLabel("Select Save Location:");
2773            jLabel_2_2.setBounds(8,50,130,20);
2774            jPanel_Model_Transformation_North.add(jLabel_2_2);
2775            final JTextField jt_2_2=new JTextField();
2776            jt_2_2.setBounds(135,50,290,20);
2777            jPanel_Model_Transformation_North.add(jt_2_2);
2778            MyButton myButton_Select_SaveLocation_2_2=new
2779       MyButton("Browse",430,50,80,20);
2780            jPanel_Model_Transformation_North.add(myButton_Select_SaveLocation_2_2);
2781            myButton_Select_SaveLocation_2_2.addActionListener(new ActionListener() {
2782                @Override
2783                public void actionPerformed(ActionEvent e) {
2784                    JFileChooser fcDlg = new JFileChooser();
2785                    fcDlg.setDialogTitle("Please select the location where the feature model
2786       picture is saved");
2787                    fcDlg.setFileSelectionMode(JFileChooser.DIRECTORIES_ONLY);
2788                    int returnVal = fcDlg.showOpenDialog(null);
2789                    if (returnVal == JFileChooser.APPROVE_OPTION) {
2790                        String filepath = fcDlg.getSelectedFile().getPath();
2791                        url_VxBPEL_Save_Location_2_2=filepath;
2792                        jt_2_2.setText(url_VxBPEL_Save_Location_2_2);
2793                        jTextArea_Loger_Info.append("The location of
2794       VxBPEL!"+filepath+"\r\n");
2795                    }
2796                }
2797            });
2798            MyButton myButton_Cancel_2_2=new MyButton("Cancel",515,50,80,20);
2799            jPanel_Model_Transformation_North.add(myButton_Cancel_2_2);
2800            myButton_Cancel_2_2.addActionListener(new CancelActionListener(jt_2_2));
2801            JLabel jLabel_2_3=new JLabel("Input VxBPEL Name:");
2802            jLabel_2_3.setBounds(8,80,130,20);
2803            jPanel_Model_Transformation_North.add(jLabel_2_3);
2804            final JTextField jt_2_3=new JTextField();
2805            jt_2_3.setBounds(135,80,290,20);
2806            jPanel_Model_Transformation_North.add(jt_2_3);
2807            MyButton myButton_Model_Convert=new MyButton("Convert",430,80,80,20);
2808            jPanel_Model_Transformation_North.add(myButton_Model_Convert);
2809            myButton_Model_Convert.addActionListener(new ActionListener() {
2810                @Override
2811                public void actionPerformed(ActionEvent e) {
2812                    vxbpel_name=jt_2_3.getText();
2813                    try {
2814                        ModelTran_Test2 mt=new
2815       ModelTran_Test2(url_FM_FilePath_2_1,url_VxBPEL_Save_Location_2_2,vxbpel_name);
2816                    } catch (DocumentException e1) {
2817                        e1.printStackTrace();
```

```
2818                    } catch (IOException e1) {
2819                        e1.printStackTrace();
2820                    }
2821                }
2822            });
2823            MyButton myButton_Cancel_2_3=new MyButton("Cancel",515,80,80,20);
2824            jPanel_Model_Transformation_North.add(myButton_Cancel_2_3);
2825            myButton_Cancel_2_3.addActionListener(new CancelActionListener(jt_2_3));
2826            JLabel jLabel_2_4=new JLabel("Parse Variability Info:");
2827            jLabel_2_4.setBounds(8,110,130,20);
2828            jPanel_Model_Transformation_North.add(jLabel_2_4);
2829            final JTextField jt_2_4=new JTextField();
2830            jt_2_4.setBounds(135,110,290,20);
2831            jPanel_Model_Transformation_North.add(jt_2_4);
2832            MyButton myButton_Browse_2_4=new MyButton("Browse",430,110,80,20);
2833            jPanel_Model_Transformation_North.add(myButton_Browse_2_4);
2834            myButton_Browse_2_4.addActionListener(new ActionListener() {
2835                @Override
2836                public void actionPerformed(ActionEvent e) {
2837                    JFileChooser fcDlg = new JFileChooser();
2838                    fcDlg.setDialogTitle("Please choose file:");
2839                    FileNameExtensionFilter filter =
2840                    new FileNameExtensionFilter("file(*.bpel)", "bpel");
2841                    fcDlg.setFileFilter(filter);
2842                    int returnVal = fcDlg.showOpenDialog(null);
2843                    if (returnVal == JFileChooser.APPROVE_OPTION) {
2844                        String filepath = fcDlg.getSelectedFile().getPath();
2845                        vxbpel_file_location=filepath;
2846                        jt_2_4.setText(vxbpel_file_location);
2847                        jTextArea_Loger_Info.append("Start!\r\n");
2848                        jTextArea_Loger_Info.append("The location of vxbpel
2849 file!"+filepath+"\r\n");
2850                        System.out.println(filepath);
2851                    }
2852                }
2853            });
2854            MyButton myButton_Parse_2_4=new MyButton("Parse",515,110,80,20);
2855            jPanel_Model_Transformation_North.add(myButton_Parse_2_4);
2856            myButton_Parse_2_4.addActionListener(new ActionListener() {
2857                @Override
2858                public void actionPerformed(ActionEvent e) {
2859                    JPanel jPanel_VxBPEL=new JPanel(new BorderLayout());
2860                    jPanel_VxBPEL.setBorder(new
2861 TitledBorder(UIManager.getBorder("TitledBorder.border"), "VxBPEL",
2862 TitledBorder.CENTER, TitledBorder.TOP, null, null));
2863                    jPanel_VxBPEL.setPreferredSize(new Dimension(0,380));
2864                    jPanel_Model_Transformation.add(jPanel_VxBPEL,BorderLayout.SOUTH);
2865                    try {
2866                        ProcessTree pt=new ProcessTree(vxbpel_file_location);
2867                        JPanel jPanel_vxbpel_Tree=pt.jPanel;
```

```
2868                    jPanel_vxbpel_Tree.setBorder(new
2869      TitledBorder(UIManager.getBorder("TitledBorder.border"), "Process Tree",
2870      TitledBorder.CENTER, TitledBorder.TOP, null, null));
2871                    jPanel_vxbpel_Tree.setPreferredSize(new Dimension(250,325));
2872                    jPanel_VxBPEL.add(jPanel_vxbpel_Tree,BorderLayout.WEST);
2873                } catch (DocumentException e1) {
2874                    e1.printStackTrace();
2875                }
2876            jPanel_FM_XMI.add(jScrollPane2,BorderLayout.NORTH);
2877            this.add(jPanel_North,BorderLayout.NORTH);
2878            this.add(jPanel_Center,BorderLayout.CENTER);
2879            this.add(jPanel_South,BorderLayout.SOUTH);
2880            JPanel jPanel_vxbpel_configuration_info=new JPanel(null);
2881            jPanel_vxbpel_configuration_info.setBorder(new
2882      TitledBorder(UIManager.getBorder("TitledBorder.border"), "VxBPEL Configuration Info",
2883      TitledBorder.CENTER, TitledBorder.TOP, null, null));
2884            jPanel_vxbpel_configuration_info.setPreferredSize(new
2885      Dimension(250,325));
2886  jPanel_VxBPEL.add(jPanel_vxbpel_configuration_info,BorderLayout.EAST);
2887            JPanel jPanel_fm_conf_info=new JPanel(null);
2888            jPanel_fm_conf_info.setBounds(10,20,230,140);
2889            jPanel_fm_conf_info.setBorder(new
2890      TitledBorder(UIManager.getBorder("TitledBorder.border"), "FM Configuration Info",
2891      TitledBorder.LEFT, TitledBorder.TOP, null, null));
2892            JTextArea jTextArea_fm_conf_info=new JTextArea();
2893            JScrollPane jScrollPane_fm_conf_info=new
2894      JScrollPane(jTextArea_fm_conf_info);
2895            jScrollPane_fm_conf_info.setBounds(5,20,220,110);
2896            jTabbedPane2.add("Logger Info",jPanel_Loger_Info);
2897            jTextArea_Loger_Info=new JTextArea();
2898            jTextArea_Loger_Info.setFont(jTextArea_Font);
2899            JScrollPane jScrollPane1=new JScrollPane(jTextArea_Loger_Info);
2900            jScrollPane1.setPreferredSize(new Dimension(0,110));
2901            jPanel_Loger_Info.add(jScrollPane1,BorderLayout.NORTH);
2902            JPanel jPanel_FM_XMI=new JPanel(new BorderLayout());
2903            jTabbedPane2.add("FM XMI",jPanel_FM_XMI);
2904            jTextArea_FM_XMI=new JTextArea();
2905            jTextArea_FM_XMI.setFont(jTextArea_Font);
2906            JScrollPane jScrollPane2=new JScrollPane(jTextArea_FM_XMI);
2907            jScrollPane2.setPreferredSize(new Dimension(0,110));
2908            jPanel_FM_XMI.add(jScrollPane2,BorderLayout.NORTH);
2909            this.add(jPanel_North,BorderLayout.NORTH);
2910            this.add(jPanel_Center,BorderLayout.CENTER);
2911            this.add(jPanel_South,BorderLayout.SOUTH);
2912            jPanel_fm_conf_info.add(jScrollPane_fm_conf_info);
2913            jPanel_vxbpel_configuration_info.add(jPanel_fm_conf_info);
2914            if(arrayList.size()>0){
2915                for(int i=0;i<arrayList.size();i++){
2916                    jTextArea_fm_conf_info.append(arrayList.get(i)+"\r\n");
2917                }
```

```
2918                    }
2919                    JPanel jPanel_Match_vp_variant=new JPanel(null);
2920                    jPanel_Match_vp_variant.setBounds(10,170,230,180);
2921                    final JTextArea jTextArea_user_conf=new JTextArea();
2922                    JScrollPane jScrollPane_user_conf=new JScrollPane(jTextArea_user_conf);
2923                    jPanel_Match_vp_variant.add(jScrollPane_user_conf);
2924                    jPanel_vxbpel_configuration_info.add(jPanel_Match_vp_variant);
2925                    JPanel jPanel_JButton2=new JPanel(null);
2926                    jPanel_JButton2.setBorder(new LineBorder(Color.GREEN));
2927                    jPanel_VxBPEL.add(jPanel_JButton2,BorderLayout.CENTER);
2928                    MyButton myButton_Match_VP=new MyButton("Configure",7,120,80,20);
2929                    myButton_Match_VP.setFont(new Font("Dialog",Font.PLAIN,9));
2930                    myButton_Match_VP.addActionListener(new ActionListener() {
2931                        @Override
2932                        public void actionPerformed(ActionEvent e) {
2933                            arrayLists_VP=new ArrayList<ArrayList>();
2934                            for(int i=0;i<arrayList.size();i++){
2935                                try {
2936                                    FindVP findVP=new
2937        FindVP(vxbpel_file_location,arrayList.get(i));
2938    jTextArea_user_conf.append("VariationPoint->"+findVP.flag1+"\r\n");
2939        jTextArea_user_conf.append("Variant->"+findVP.flag2+"\r\n");
2940        ArrayList<String> a=new ArrayList<String>();
2941                                    a.add(findVP.flag1);
2942                                    a.add(findVP.flag2);
2943                                    arrayLists_VP.add(a);
2944                                } catch (DocumentException e1) {
2945                                    e1.printStackTrace();
2946                                }
2947                            }
2948                        }
2949                    });
2950                    MyButton myButton_UCCF=new MyButton("UCCF",7,170,80,20);
2951                    jPanel_JButton2.add(myButton_Match_VP);
2952                    jPanel_JButton2.add(myButton_UCCF);
2953                    jPanel_Center.repaint();//很重要
2954                }
2955            });
2956        final JPanel jPanel_UCCF=new JPanel(new BorderLayout());//可视化定制
2957        jTabbedPane1.add("Create UCCF",jPanel_UCCF);
2958        jPanel_UCCF.setBorder(new LineBorder(Color.RED));
2959        JPanel jPanel_UCCF_North=new JPanel(null);
2960        jPanel_UCCF_North.setBorder(new
2961    TitledBorder(UIManager.getBorder("TitledBorder.border"), "Create UCCF",
2962    TitledBorder.CENTER, TitledBorder.TOP, null, null));
2963        jPanel_UCCF_North.setPreferredSize(new Dimension(0,75));
2964        jPanel_UCCF.add(jPanel_UCCF_North,BorderLayout.NORTH);
2965        JLabel jLabel_3_1=new JLabel("Select Save Location:");
2966        jLabel_3_1.setBounds(8,20,140,20);
2967        jPanel_UCCF_North.add(jLabel_3_1);
```

```
2968            final JTextField jt_3_1=new JTextField();
2969            jt_3_1.setBounds(135,20,290,20);
2970            jPanel_UCCF_North.add(jt_3_1);
2971            MyButton myButton_Select_3_1=new MyButton("Browse",430,20,80,20);
2972            jPanel_UCCF_North.add(myButton_Select_3_1);
2973            myButton_Select_3_1.addActionListener(new ActionListener() {
2974                @Override
2975                public void actionPerformed(ActionEvent e) {
2976                    JFileChooser fcDlg = new JFileChooser();
2977                    fcDlg.setDialogTitle("Please select the location where the UCCF is saved");
2978                    fcDlg.setFileSelectionMode(JFileChooser.DIRECTORIES_ONLY);
2979                    int returnVal = fcDlg.showOpenDialog(null);
2980                    if (returnVal == JFileChooser.APPROVE_OPTION) {
2981                        String filepath = fcDlg.getSelectedFile().getPath();
2982                        UCCF_Save_Location=filepath;
2983                        jt_3_1.setText(UCCF_Save_Location);
2984                        jTextArea_Loger_Info.append("The save location of
2985    UCCF!"+filepath+"\r\n");
2986                    }
2987                }
2988            });
2989            MyButton myButton_Cancel_3_1=new MyButton("Cancel",515,20,80,20);
2990            jPanel_UCCF_North.add(myButton_Cancel_3_1);
2991            myButton_Cancel_3_1.addActionListener(new CancelActionListener(jt_3_1));
2992            JLabel jLabel_3_2=new JLabel("Input UCCF File Name:");
2993            jLabel_3_2.setBounds(8,50,140,20);
2994            jPanel_UCCF_North.add(jLabel_3_2);
2995            final JTextField jt_3_2=new JTextField();
2996            jt_3_2.setBounds(135,50,290,20);
2997            jPanel_UCCF_North.add(jt_3_2);
2998            MyButton myButton_create_UCCF=new MyButton("UCCF",430,50,80,20);
2999            jPanel_UCCF_North.add(myButton_create_UCCF);
3000            myButton_create_UCCF.addActionListener(new ActionListener() {
3001                public void actionPerformed(ActionEvent e) {
3002                    JPanel jPanel_UCCF_South=new JPanel(null);
3003                    jPanel_UCCF_South.setPreferredSize(new Dimension(0,440));
3004                    jPanel_UCCF_South.setBorder(new
3005    TitledBorder(UIManager.getBorder("TitledBorder.border"), "UCCF Info",
3006    TitledBorder.CENTER, TitledBorder.TOP, null, null));
3007                    JTextArea jTextArea_UCCF_Info=new JTextArea();
3008                    jTextArea_UCCF_Info.setFont(jTextArea_Font);
3009                    JScrollPane jScrollPane_UCCF_Info=new
3010    JScrollPane(jTextArea_UCCF_Info);
3011                    jScrollPane_UCCF_Info.setBounds(5,20,595,410);
3012                    jPanel_UCCF_South.add(jScrollPane_UCCF_Info);
3013                    jPanel_UCCF.add(jPanel_UCCF_South,BorderLayout.SOUTH);
3014                    UCCF_File_Name=jt_3_2.getText();
3015                    String
3016    all_uccf_location=UCCF_Save_Location+"\\"+UCCF_File_Name+".uccf";
3017                    UccfInof u=new UccfInof(arrayLists_VP);
```

```
3018                    try {
3019                        CreateUCCF c=new CreateUCCF(all_uccf_location,u.s_info);
3020                    } catch (IOException e1) {
3021                        e1.printStackTrace();
3022                    }
3023                    File f=new File(all_uccf_location);
3024                    try {
3025                        Read_UCCF ru=new Read_UCCF(f,arrayLists_VP.size()+2);
3026                        jTextArea_UCCF_Info.append(ru.result);
3027                    } catch (IOException e1) {
3028                        e1.printStackTrace();
3029                    }
3030                    jPanel_Center.repaint();
3031                }
3032            });
3033            MyButton myButton_Cancel_3_2=new MyButton("Cancel",515,50,80,20);
3034            jPanel_UCCF_North.add(myButton_Cancel_3_2);
3035            myButton_Cancel_3_2.addActionListener(new CancelActionListener(jt_3_2));
3036            JPanel jPanel_South=new JPanel(new BorderLayout());
3037            jPanel_South.setPreferredSize(new Dimension(0,140));
3038            jPanel_South.setBorder(new LineBorder(Color.BLUE));
3039            JTabbedPane jTabbedPane2=new JTabbedPane();
3040            jPanel_South.add(jTabbedPane2,BorderLayout.NORTH);
3041            JPanel jPanel_Loger_Info=new JPanel(new BorderLayout());
3042            jTabbedPane2.add("Logger Info",jPanel_Loger_Info);
3043            jTextArea_Loger_Info=new JTextArea();
3044            jTextArea_Loger_Info.setFont(jTextArea_Font);
3045            JScrollPane jScrollPane1=new JScrollPane(jTextArea_Loger_Info);
3046        }
3047        public static void main(String[] args) {
3048            Main_Test4 m=new Main_Test4();
3049        }
3050        public FindVP(String url, String s) throws DocumentException {
3051            Document document=parse(url);
3052            Element root = document.getRootElement();
3053            Element x=root.element("sequence");
3054            Element f=x.getParent();
3055            System.out.println("root nameff"+f.getName());
3056            find(s,x);
3057            System.out.println("flag"+flag1+flag2);
3058        }
3059        public void find(String s,Element node){
3060            if(flag1==null && flag2==null && node.getName().equals("invoke")){
3061                    List<Attribute> l1=node.attributes();
3062                    for(Attribute a:l1){
3063                        if(a.getValue().equals(s)){
3064    flag1=node.getParent().getParent().getParent().getParent().attribute("name").getText();
3065                            flag2=node.getParent().getParent().attribute("name").getText();
3066                        }
3067                    }
```

```
3068            } else if (flag1==null && flag2==null && !node.getName().equals("invoke")) {
3069                List<Element> l2=node.elements();
3070                for(Element e:l2){
3071                    find(s,e);
3072                }
3073            }
3074        }
3075        public static void main(String[] args) throws DocumentException {
3076            FindVP f=new FindVP("F:\\GraduateTools\\Test6.bpel","Skylight");
3077        }
3078    }
3079    package cn.edu.ustb..servlet;
3080    import java.io.IOException;
3081    import java.util.ArrayList;
3082    import java.util.List;
3083    import javax.servlet.RequestDispatcher;
3084    import javax.servlet.ServletConfig;
3085    import javax.servlet.ServletException;
3086    import javax.servlet.http.HttpServlet;
3087    import javax.servlet.http.HttpServletRequest;
3088    import javax.servlet.http.HttpServletResponse;
3089    import javax.servlet.http.HttpSession;
3090    import cn.edu.ustb.mt4ws.javabean.Function;
3091    import cn.edu.ustb.mt4ws.javabean.MetamorphicRelation;
3092    import cn.edu.ustb.mt4ws.javabean.OpAndRelation;
3093    import cn.edu.ustb.mt4ws.javabean.Operator;
3094    import cn.edu.ustb.mt4ws.javabean.Relation;
3095    import cn.edu.ustb.mt4ws.javabean.RelationOfInput;
3096    import cn.edu.ustb.mt4ws.javabean.RelationOfOutput;
3097    public class AddToMrs extends HttpServlet {
3098        public void init(ServletConfig config) throws ServletException {
3099            super.init(config);
3100        }
3101        public void doPost(HttpServletRequest request, HttpServletResponse response)
3102                throws ServletException, IOException {
3103            if (textbox_R_F_1.isEmpty() || textbox_R_S_1.isEmpty()) {
3104                System.out.println("resOp_R_1 or textbox_R_S_1 is empty");
3105            } else if (textbox_RF_F_1.isEmpty() || textbox_RF_S_1.isEmpty()) {
3106                System.out.println("resOp_RF_1 or textbox_RF_S_1 is empty");
3107            } else {
3108                System.out.println("第一条的 InputMr 和 OutputMr 不为空!!!");
3109                RelationOfInput relationOfInput = new RelationOfInput();
3110                List<OpAndRelation> listOpAndRelation_R = new ArrayList<OpAndRelation>();
3111                RelationOfOutput relationOfOutput = new RelationOfOutput();
3112                List<OpAndRelation> listOpAndRelation_RF = new
3113    ArrayList<OpAndRelation>();
3114                MetamorphicRelation metamorphicRelation = new MetamorphicRelation();
3115                List<MetamorphicRelation> mrList = null;
3116                if ((List<MetamorphicRelation>) session.getAttribute("MR_List") == null) {
3117                    System.out.println("加入的 mr 为第一条!!!");
```

```
3118                    mrList = new ArrayList<MetamorphicRelation>();
3119            } else {
3120                    mrList = (List<MetamorphicRelation>) session
3121                            .getAttribute("MR_List");
3122                    System.out.println("这是第" + (mrList.size()+1) + "个 mr!!!");
3123            }
3124            if (numOfRMr == 1) {
3125                    System.out.println("InputMr 只有一条");
3126            } else {
3127                        Operator relation_Op_R = new Operator(relationOp_R);
3128                        Operator resOp_R = new Operator(request
3129                                .getParameter("resOp_R_" + String.valueOf(i)));
3130                        Relation relation_R = new Relation(function_R_F,
3131                                function_R_S, op_R, relation_Op_R);
3132                        System.out.println("the "
3133                                + i
3134                                + " mr Of Input: "
3135                                + " "
3136                                + request.getParameter("resOp_R_"
3137                                        + String.valueOf(i))
3138                                + " "
3139                                + relationOp_R
3140                                + " "
3141                                + request.getParameter("textbox_R_F_"
3142                                        + String.valueOf(i))
3143                                + " "
3144                                + request.getParameter("select_relation_R_"
3145                                        + String.valueOf(i))
3146                                + " "
3147                                + request.getParameter("textbox_R_S_"
3148                                        + String.valueOf(i)));
3149                    OpAndRelation opAndRelation = new OpAndRelation(resOp_R,
3150                            relation_R);

3152                    listOpAndRelation_R.add(opAndRelation);
3153                }
3154            }
3155        relationOfOutput.setListOpAndRe(listOpAndRelation_RF);
3156        metamorphicRelation.setRelationOfInput(relationOfInput);
3157        metamorphicRelation.setRelaitonOfOutput(relationOfOutput);
3158        relationOfInput.setListOpAndRe(listOpAndRelation_R);
3159        relationOfOutput.setRelation(relation_RF_1);
3160        if (numOfRFMr == 1) {
3161                System.out.println("OutputMr 只有一条");
3162        } else {
3163            for (int i = 2; i <= numOfRFMr; i++) {
3164                Function function_RF_F = new Function(request
3165                        .getParameter("textbox_RF_F_" + String.valueOf(i)));
3166                Function function_RF_S = new Function(request
3167                        .getParameter("textbox_RF_S_" + String.valueOf(i)));
```

```
3168                    Operator op_RF = new Operator(request
3169                            .getParameter("select_relation_RF_"
3170                                    + String.valueOf(i)));
3171                    String relationOp_RF = request.getParameter("relationOp_RF_"
3172                            + String.valueOf(i));
3173                    if (relationOp_RF == null) {
3174                        relationOp_RF = "POS";
3175                    }
3176                    Operator relation_Op_RF = new Operator(relationOp_RF);
3177                }
3178            }
3179        relationOfOutput.setListOpAndRe(listOpAndRelation_RF);
3180        metamorphicRelation.setRelationOfInput(relationOfInput);
3181        metamorphicRelation.setRelaitonOfOutput(relationOfOutput);
3182        mrList.add(metamorphicRelation);
3183        session.setAttribute("MR_List", mrList);
3184        String operationName = (String) session.getAttribute("operationName");
3185        if (operationName.equals("transfer")) {
3186            RequestDispatcher dispatcher = request
3187                    .getRequestDispatcher("2.1.input_MR.jsp");
3188            dispatcher.forward(request, response);
3189        } else if (operationName.equals("rmbToGbbob")) {
3190            RequestDispatcher dispatcher = request
3191                    .getRequestDispatcher("2.1.input_MR_rmbToGbbob.jsp");
3192            dispatcher.forward(request, response);
3193        } else if (operationName.equals("queryQuakes")
3194                || operationName.equals("matchQuakes")) {
3195            RequestDispatcher dispatcher = request
3196                    .getRequestDispatcher("2.1.input_MR_Quake.jsp");
3197            dispatcher.forward(request, response);
3198        } else if
3199 (operationName.equals("process")||operationName.equals("add")||operationName.endsWith("
3200 sub")) {
3201            RequestDispatcher dispatcher = request
3202                    .getRequestDispatcher("2.1.input_MR.jsp");
3203            dispatcher.forward(request, response);
3204        } else if (operationName.equals("checkQuantity")) {
3205            RequestDispatcher dispatcher = request
3206                    .getRequestDispatcher("2.1.input_MR.jsp");
3207            dispatcher.forward(request, response);
3208        } else {
3209            System.out.println("跳转错误！！！ ");
3210        }
3211        }
3212    }
3213    public void doGet(HttpServletRequest request, HttpServletResponse response)
3214            throws ServletException, IOException {
3215        doPost(request, response);
3216    }
3217 }
```