ADF Faces : View data from session EJB (Part 2)

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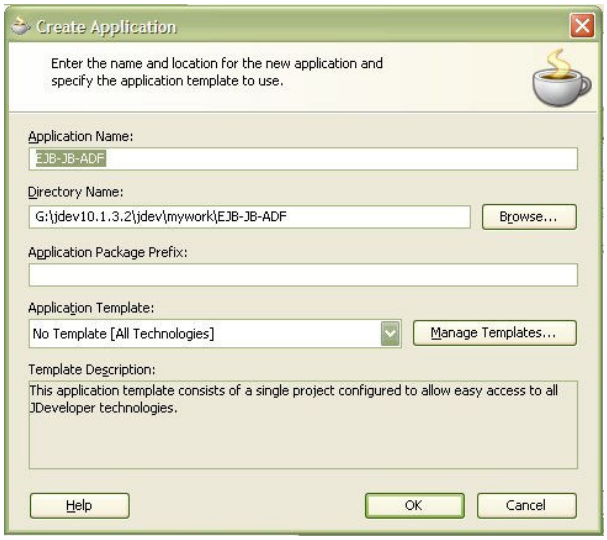
This tutorial will show you how to pass parameter value originated from a session EJB and view them in a JSF page. The tutorial will show how to get data from session EJB using JavaBean. The tutorials will show how to develop User Interface using ADF Faces and Data Control.

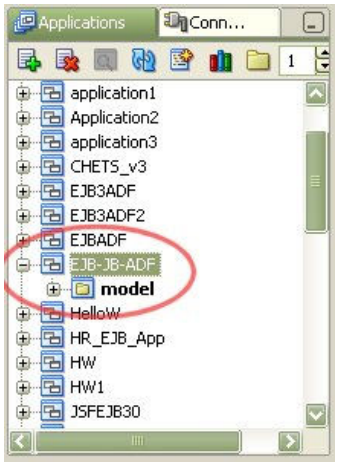
Part 1

Using JavaBean and Data Control

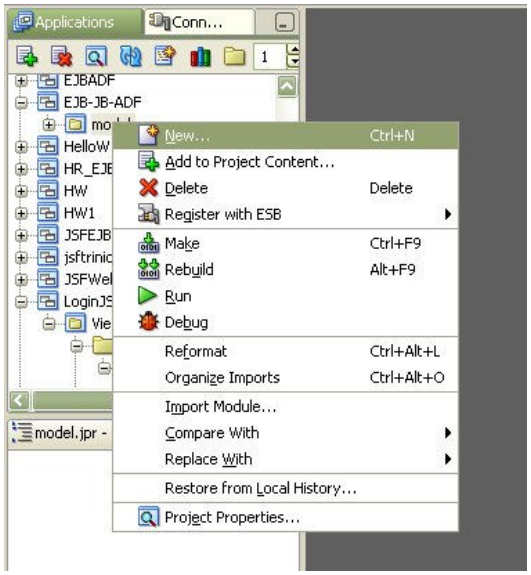
1. Creating new workspace and project folder.
    a. Create a new workspace. Right click at Applications, click New Application… At *Create Application* dialog box, Enter **EJB-JB-ADF** for *Application Name:*, and **No Template [All Technologies]** for *Application Template:*, then click *OK*.



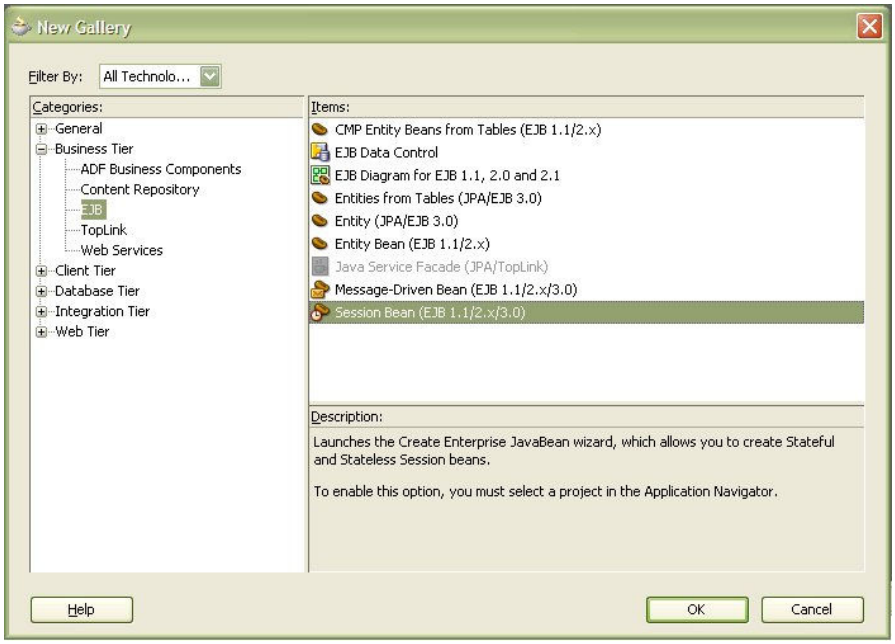
    b. Create a project folder. Enter **model** for *Project Name:*, then click *OK*.



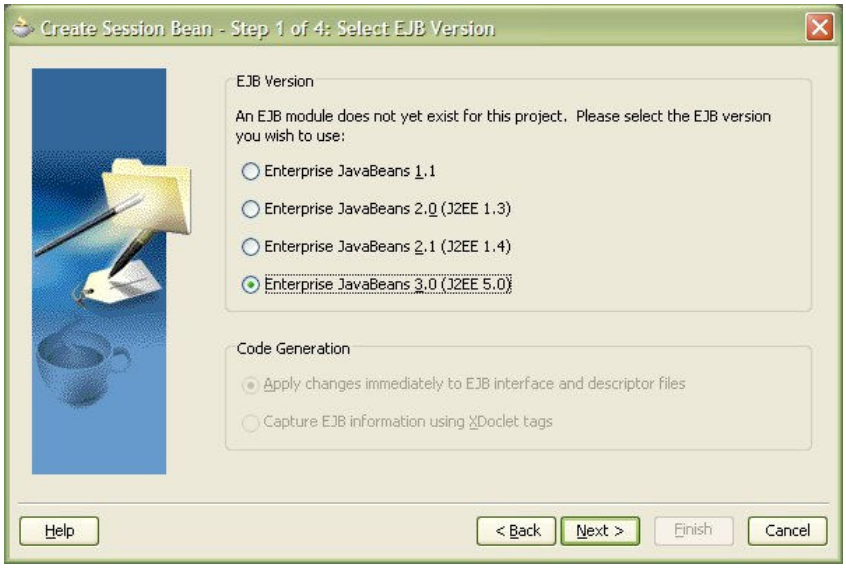
2. Creating a new session EJB
    a. Right click at project folder ***model*** and click *New*...



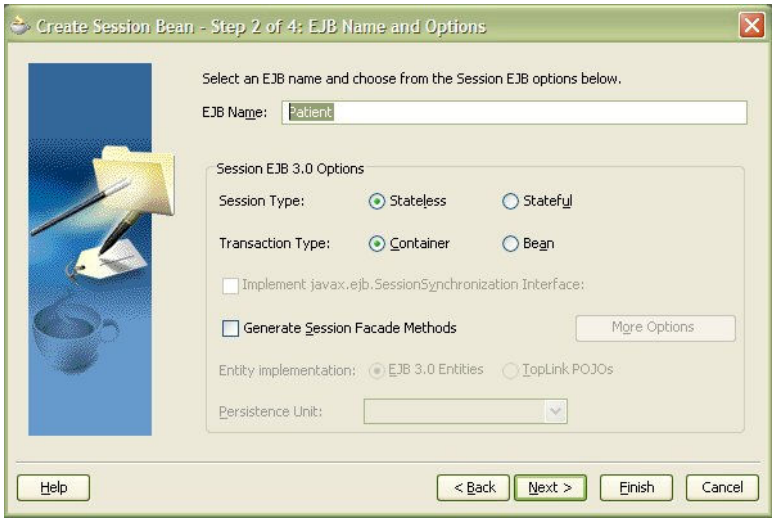
    b. At New Gallery dialog box, inside *Categories:*, under ***Business Tier***, click ***EJB***, at *Items :* click ***Session EJB(EJB1.1/2.x/3.0)***, then click *OK*.



c. At *create session Bean* wizard, click *Next*, at step 1 of 4, select ***Enterprise JavaBean 3.0 (J2EE 5.0)***, then click *Next*.



d. At step 2 of 4, enter **Patient** for *EJB Name:*, then click *Next*.



e. Accept all default value at *step 3 of 4* and *4 of 4*, and click *Finish*.

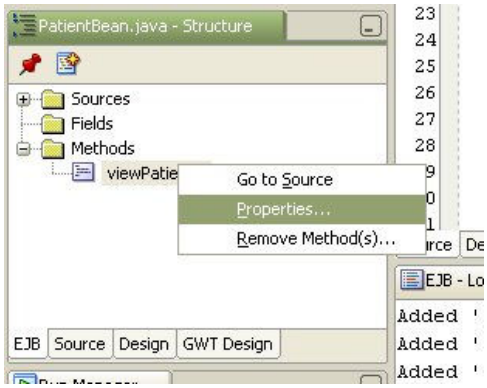
f. Now, source editor for ***PatientBean.java*** is seen. Add source code below, below constructor ***PatientBean() { }*** after the curly bracket (}).

```
public ArrayList viewPatient(){
    ArrayList patientList= new ArrayList(10);
    String[] patient1;
    patient1 = new String[]{"Ahmad Zam zam","0122345678","700628045678","Selangor"};
    String[] patient2;
    patient2 = new String[] {"Arin Sujak","0177745678","890628045671","Perlis"};
    String[] patient3;
    patient3 = new String[]{"Baharin Ujang","0195675678","880628045672","Pahang"};
    String[] patient4;
    patient4 = new String[]{"Zulhairi Hasan","0136345671","560628045674","Trengganu"};
    String[] patient5;
    patient5 = new String[] {"Hasan Kamal","0159345673","450628045633","Johor"};
    String[] patient6={"Mohamad Kamal","0188345632","670628045687","Sarawak"};

    patientList.add(patient1);
    patientList.add(patient2);
    patientList.add(patient3);
    patientList.add(patient4);
    patientList.add(patient5);
    patientList.add(patient6);

    return patientList;
}
```

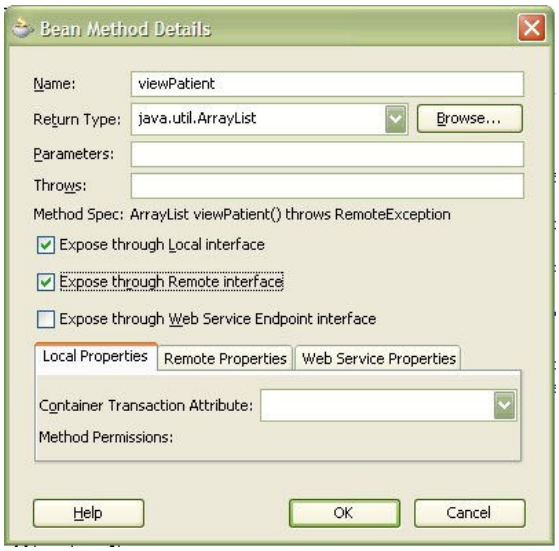
```
PatientBean.java | PatientBean.java
 7  @Stateless(name="Patient")
 8  public class PatientBean implements Patient, PatientLocal {
 9      public PatientBean() {
10      }
11
12      public ArrayList viewPatient(){
13          ArrayList patientList= new ArrayList(10);
14          String[] patient1;
15          patient1 = new String[]{"Ahmad Zam zam","0122345678","700628045678","Selangor"};
16          String[] patient2;
17          patient2 = new String[] {"Arin Sujak","0177745678","890628045671","Perlis"};
18          String[] patient3;
19          patient3 = new String[]{"Baharin Ujang","0195675678","880628045672","Pahang"};
20          String[] patient4;
21          patient4 = new String[]{"Zulhairi Hasan","0136345671","560628045674","Trengganu"};
22          String[] patient5;
23          patient5 = new String[] {"Hasan Kamal","0159345673","450628045633","Johor"};
24          String[] patient6={"Mohamad Kamal","0188345632","670628045687","Sarawak"};
25
26          patientList.add(patient1);
27          patientList.add(patient2);
28          patientList.add(patient3);
29          patientList.add(patient4);
30          patientList.add(patient5);
31          patientList.add(patient6);
32
33          return patientList;
34      }
35  }
36
```

g. Expand project folder ***model***, until you see ***PatientBean.java*** and click to mark it. Under structure below it, you will see ***viewPatient()*** under folder *method*.

h. Right click at viewPatient(), and click Properties…

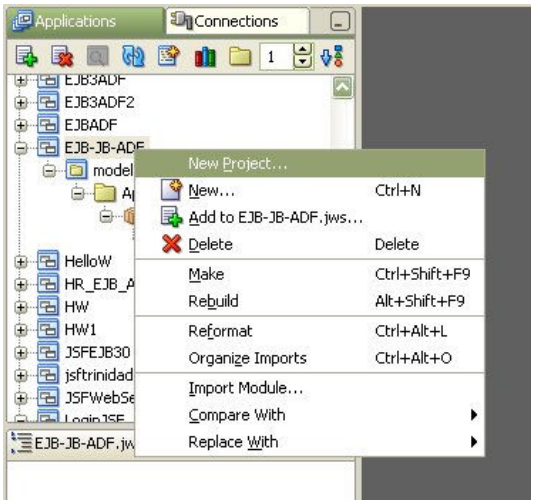


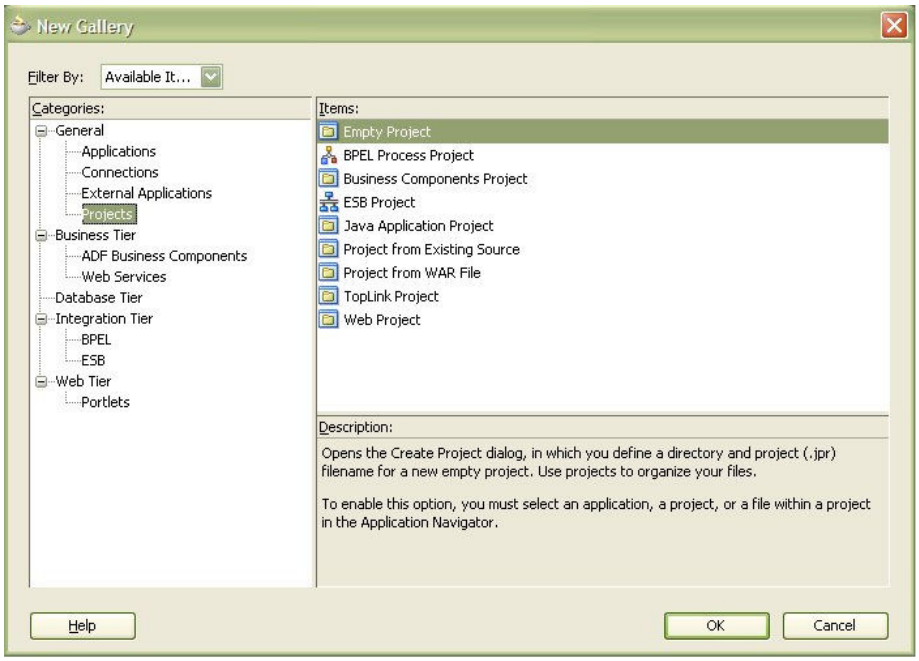
i. At *Bean Method details* dialog box, check both ***Expose through Local Interface*** and ***Expose through Remote Interface***, and click *OK*.



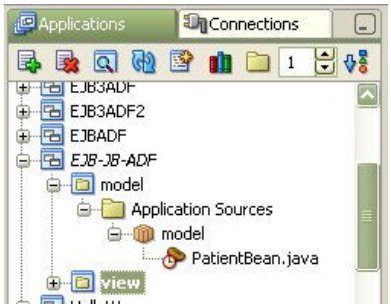
j. Save all and compile (Make) file ***PatientBean.java***

3. Creating new project folder for view layer
   a. Right click at ***EJB-JB-ADF*** workspace, click *New Project…* At *New Gallery* dialog box, at column *Categories:*, under ***General,*** select ***Projects***, then click ***Empty Project*** at column *Items:* then click *OK*.

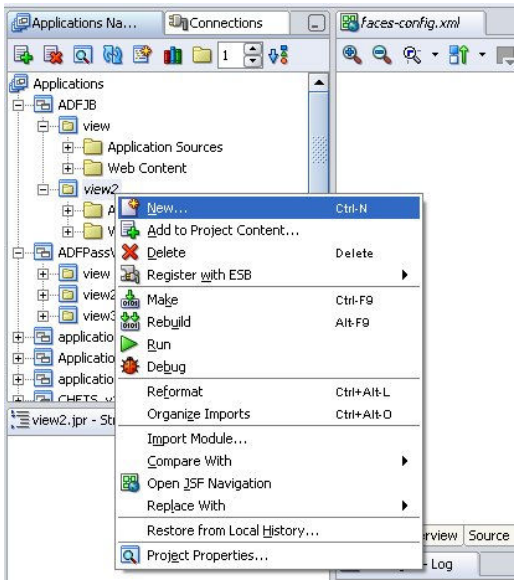




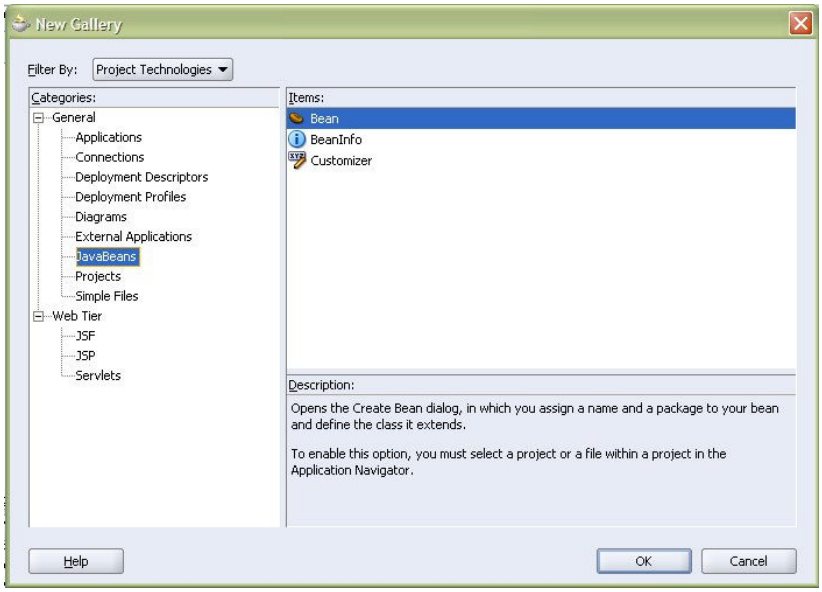
b. At *Create Project* dialog box, enter **view** for *Project Name:* and click *OK*. New ***view*** project folder is created.



4. Creating new Managed Bean
    a. Right click at ***view*** project and click *New*...



    b. At *New Gallery* dialog box, at *Categories:*, expand ***General***, find and click ***JavaBeans***. Inside *Items*, click ***Bean*** and then click *OK*.



c. At *Create Bean* dialog box, enter **PatientJB** for *Name:,* **view** for *Package:*, and choose **java.lang.Object** for Extends:, then click *OK*. Source editor for ***PatientJB.java*** is now opened.

d. Add the following lines inside the ***PatientJB*** class, immediately below ***PatienJBt*** constructor (`public PatientJB() { }`).

```
 private String name;
 private String telno;
 private String icno;
 private String state;

public PatientJB(String name, String telno, String icno, String state) {

     this.name=name;
     this.telno=telno;
     this.icno=icno;
     this.state=state;
 }

 public String getName(){
     return name;
 }

 public String getTelno(){
     return telno;
 }

 public String getIcno(){
     return icno;
```

```
}

public String getState(){
    return state;
}
```

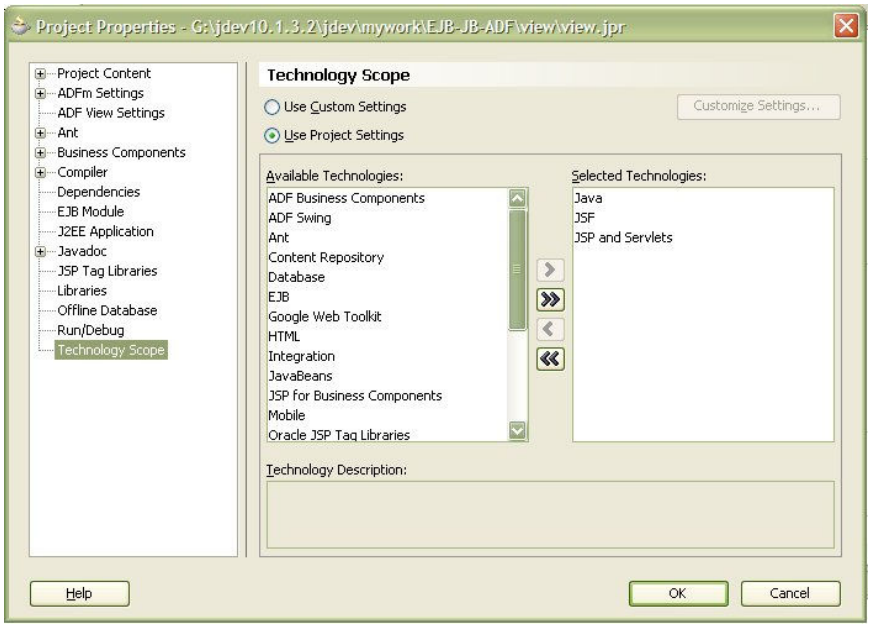
faces-config.xml | borang.jsp | Borang.java | PatientJB.java

```
1  package view;
2
3  public class PatientJB {
4      public PatientJB() {
5      }
6
7      private String name;
8          private String telno;
9          private String icno;
10         private String state;
11
12         public PatientJB(String name, String telno, String icno, String state) {
13
14             this.name=name;
15             this.telno=telno;
16             this.icno=icno;
17             this.state=state;
18         }
19
20         public String getName(){
21             return name;
22         }
23
24         public String getTelno(){
25             return telno;
26         }
27
28         public String getIcno(){
29             return icno;
30         }
31
32         public String getState(){
33             return state;
34         }
35 }
```

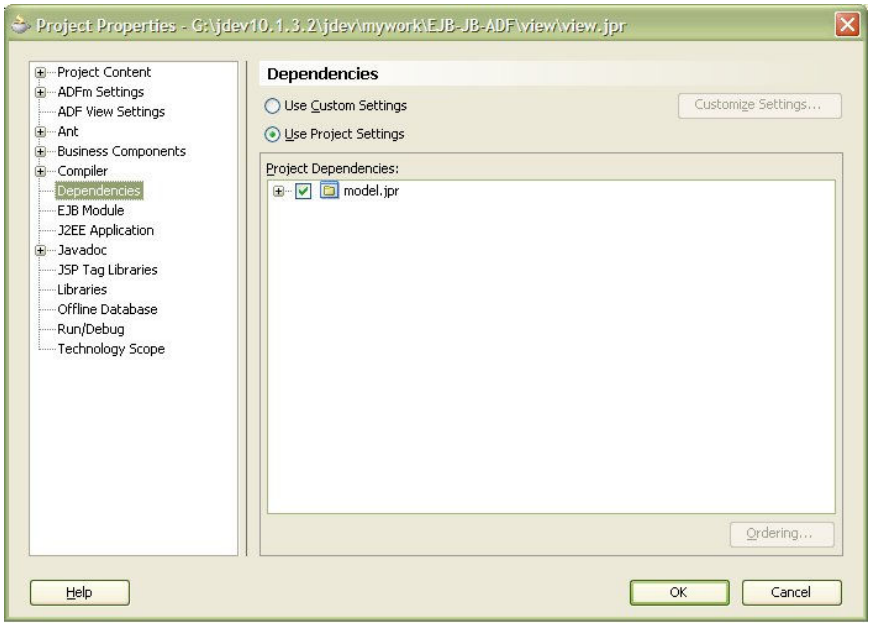
Source | Design | GWT Design | History

e. Save all and compile(Make).

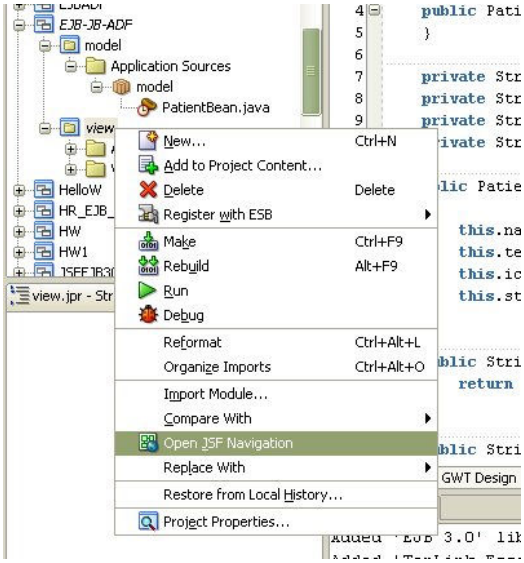
5. Creating page navigation using face-config.xml.
   a. Right click at ***view*** project and click *Project Properties*…. In *Project Properties* dialog box, at left column; click ***Technology Scope.*** Find and click ***JSF*** at *Available Technologies* and move to right column (*Selected Technologies*)-***Java, JSP and Servlets*** will be moved as well.



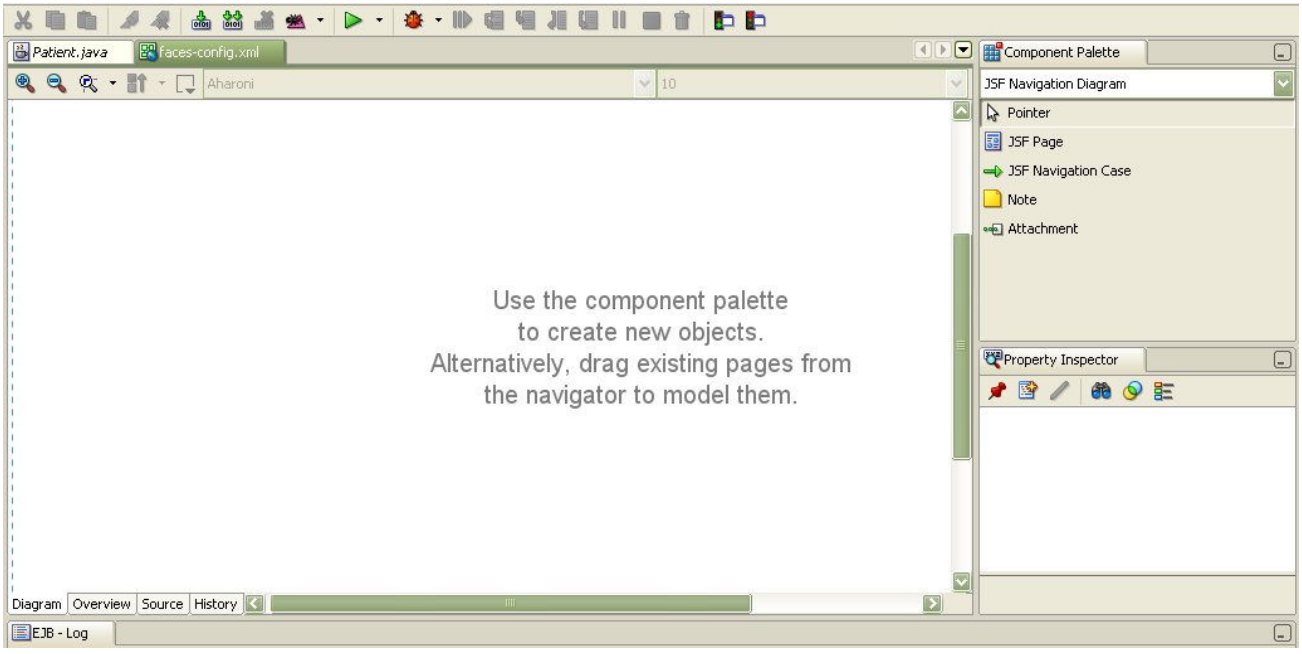
b. At the same dialog box, click at ***Dependencies*** (at left column) and check ***model.jpr*** (at right column), then click *OK*.



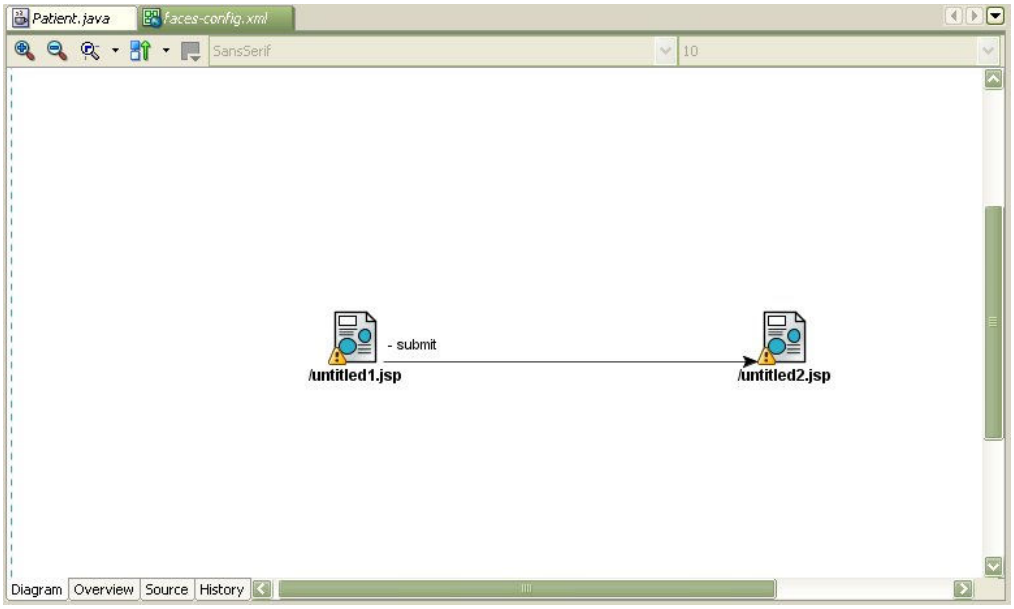
c. Right click at ***view*** project, and click *Open JSF navigation*.



d. File ***faces-config.xml*** is opened in Diagram view.



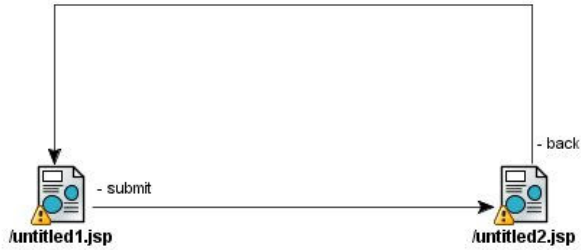
d. Create new page navigation. Click, drag & drop ***JSF Page*** from *Component Palette*, onto the diagram view of ***faces-config.xml***, and then drop another ***JSF page*** beside it. Click ***JSF Navigation Case*** from *Component Palette*, then click at ***/untitled1.jsp*** and then click at /***untitled2.jsp***. An arrow is created and pointing to ***/untitled2.jsp***. Change – **success** to – **submit**.



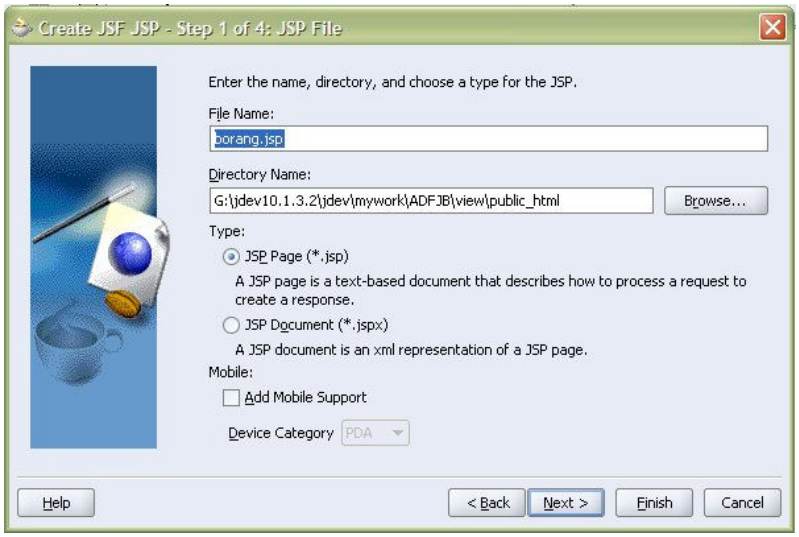
e. Create another JSF Navigation from ***/untitled2.jsp*** to ***/untitled1.jsp***. Rename – **success** to – **back**.

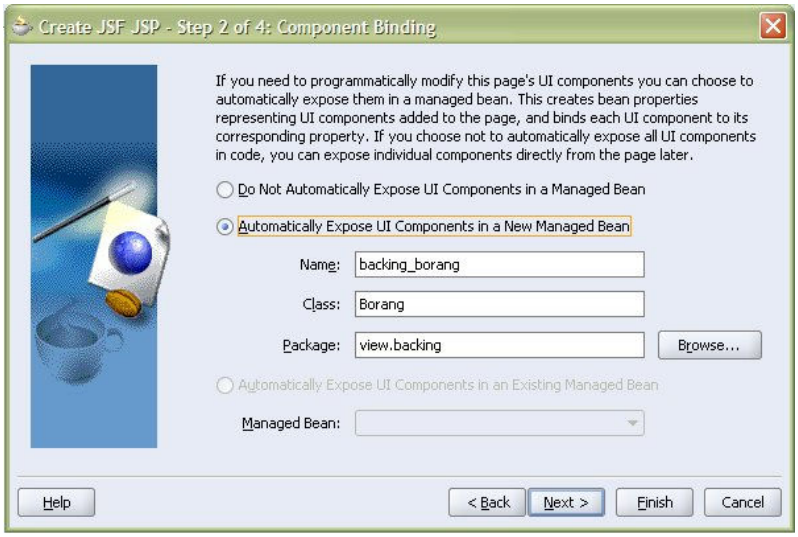
f. Click Save All

6. Creating JSF form and backing beans.
   a. Go back to ***faces-config.xml*** Diagram view.

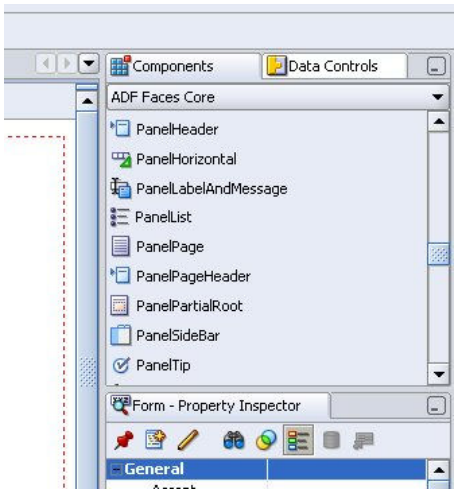


b. Double click icon ***/untitled1.jsp***. At *Create JSF JSP* wizard click *Next*. At Step 1 of 4, enter **borang.jsp** for *File name:*. Click *Next*. Choose ***Automatically Expose UI Components in a New managed Beans***. Click *Finish*.

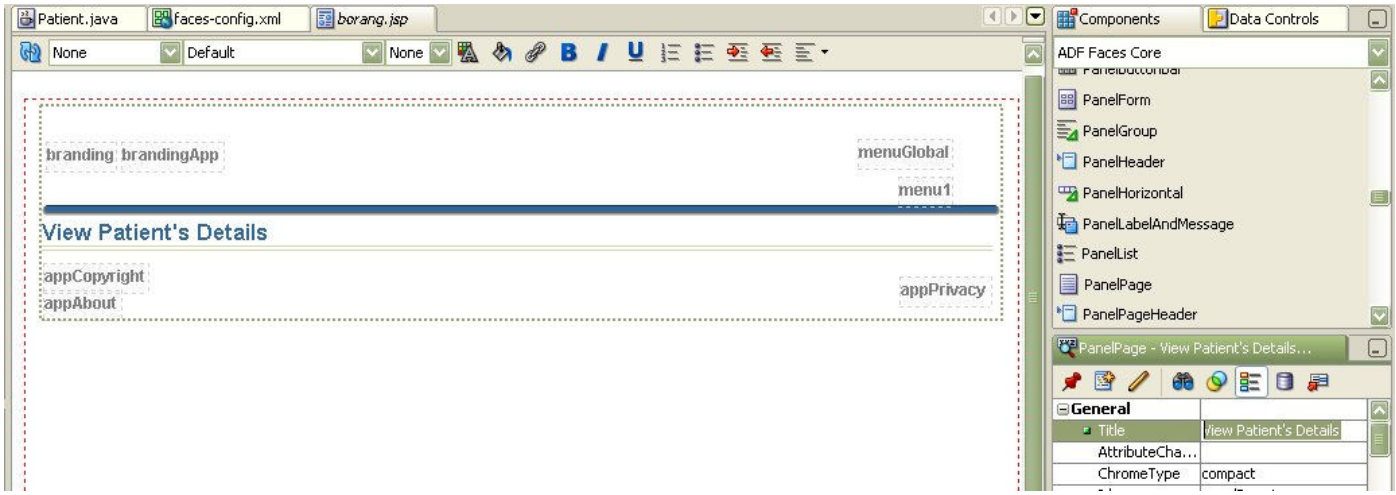




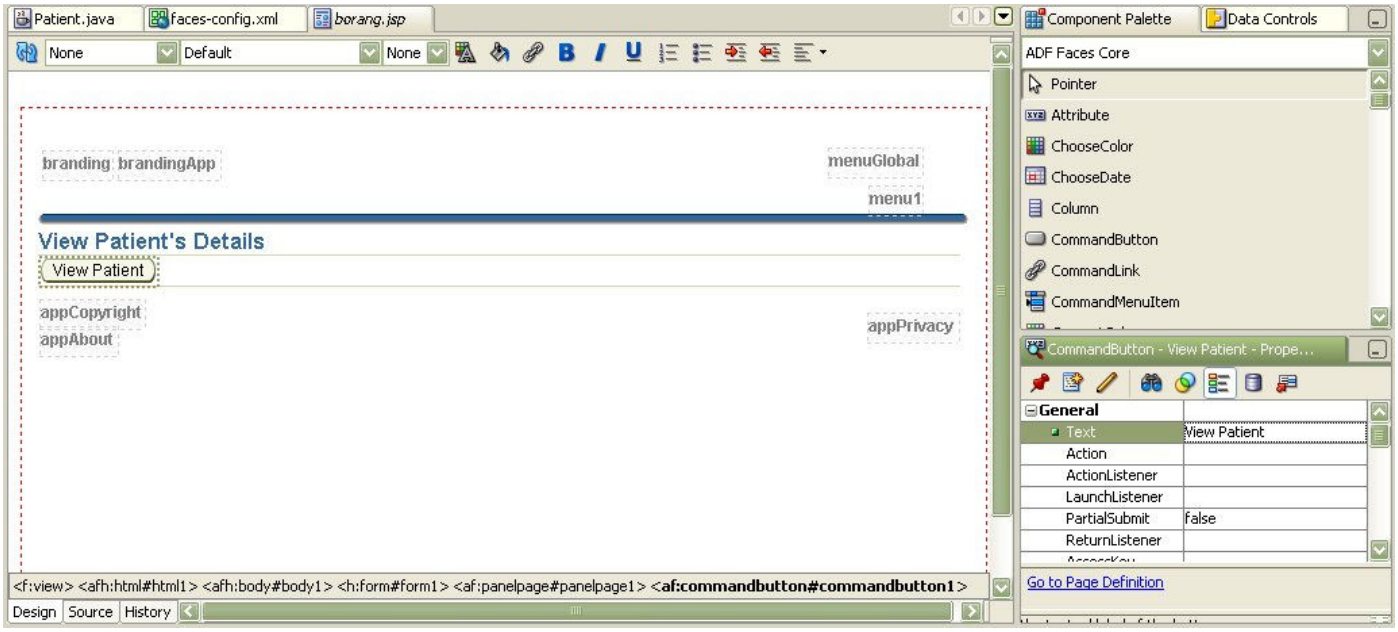
c. At the ***borang.jsp*** design area, click, drag and drop ***PanelPage*** from *Components Palette*, to ***borang.jsp*** design area.



d. Using *Property Inspector*, change Title to **View Patient's Details**. Now the title of the page has changed.



e. Click, drag & drop ***CommandButton*** from *Component Palatte* to the ***panelPage***, and change the *Text* value in *Property Inspector* from ***CommandButton 1*** to **View Patient** and press Enter.

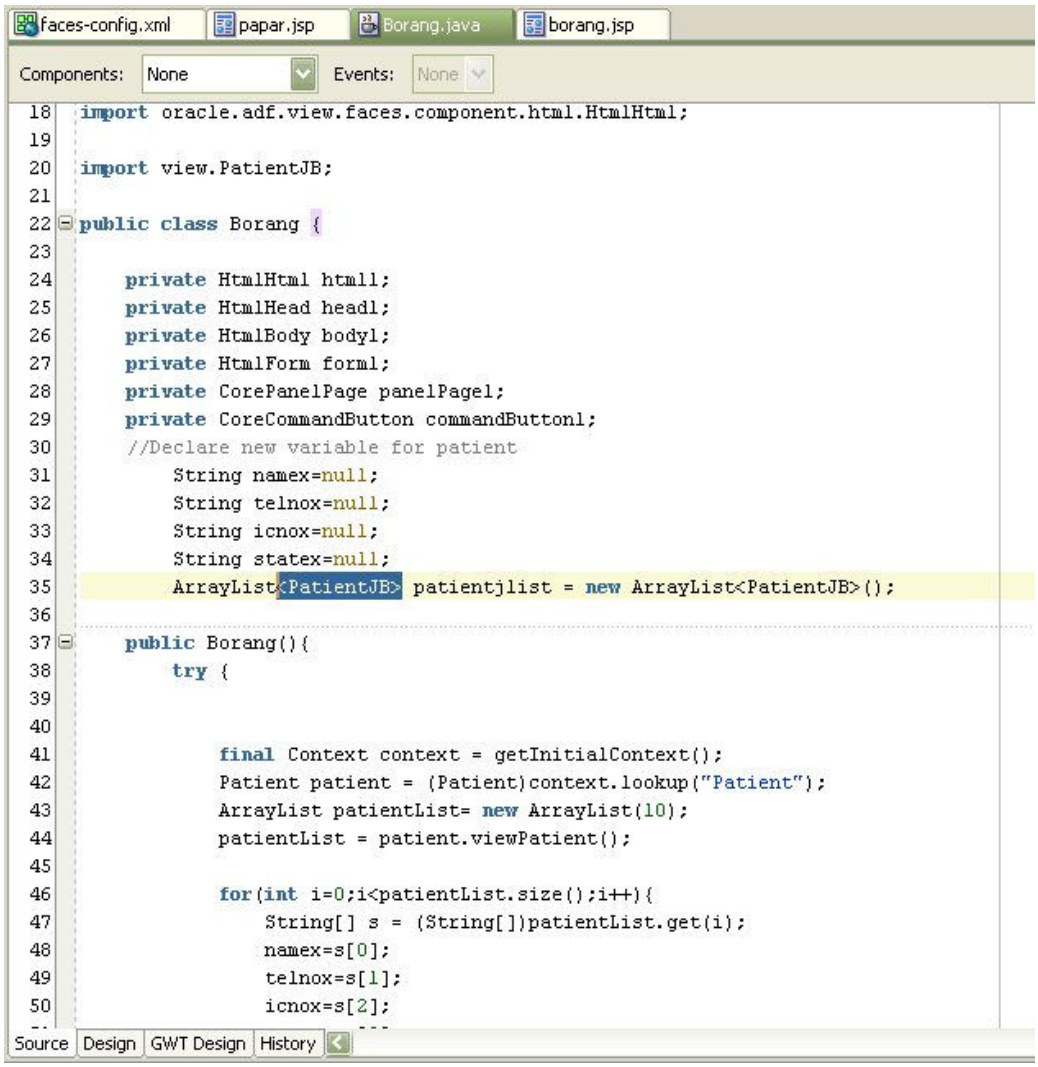


7. Editing backing bean (***Borang.java***).
    a. Double click button ***View Patient***, *Bind Action Property* dialog box will appear, accept all the default value and click *OK*.

    b. You will see backing bean ***Borang.java*** is opened in the editor. Add the following lines to ***Borang.java***, after the variable declaration (after this line `private CoreCommandButton commandButton1;`).

```
    //Declare new variable for patient
    String namex=null;
    String telnox=null;
    String icnox=null;
    String statex=null;
    ArrayList <PatientJB> patientjlist = new ArrayList <PatientJB>();

//Declare new constructor to connect to EJB using initialcontext and get values for patient
    public Borang(){
    try {


        final Context context = getInitialContext();
        Patient patient = (Patient)context.lookup("Patient");
        ArrayList patientList= new ArrayList(10);
        patientList = patient.viewPatient();

        for(int i=0;i<patientList.size();i++){
            String[] s = (String[])patientList.get(i);
            namex=s[0];
            telnox=s[1];
            icnox=s[2];
            statex=s[3];
```

```
                patientjlist.add(new PatientJB(namex,telnox,icnox,statex));
            }

        } catch (Exception ex) {
            ex.printStackTrace();
        }

        }
    //Method for initial context
         private static Context getInitialContext() throws NamingException {
             // Get InitialContext for Embedded OC4J
             // The embedded server must be running for lookups to succeed.
             return new InitialContext();
         }


       //method to return value to JSF page
         public ArrayList <PatientJB> getPatientjlist(){

             return patientjlist;

         }
```

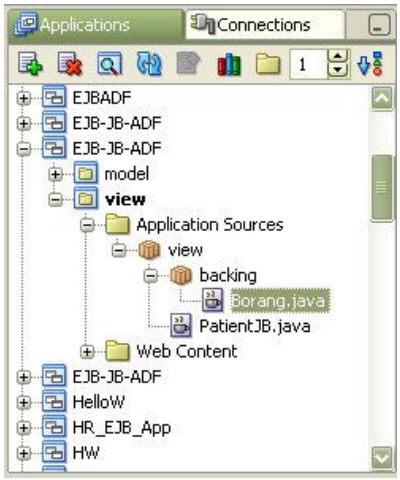


c. Press ALT+ENTER few times if necessary to insert line import below, or you can manually add the line below to file ***Borang.java***.

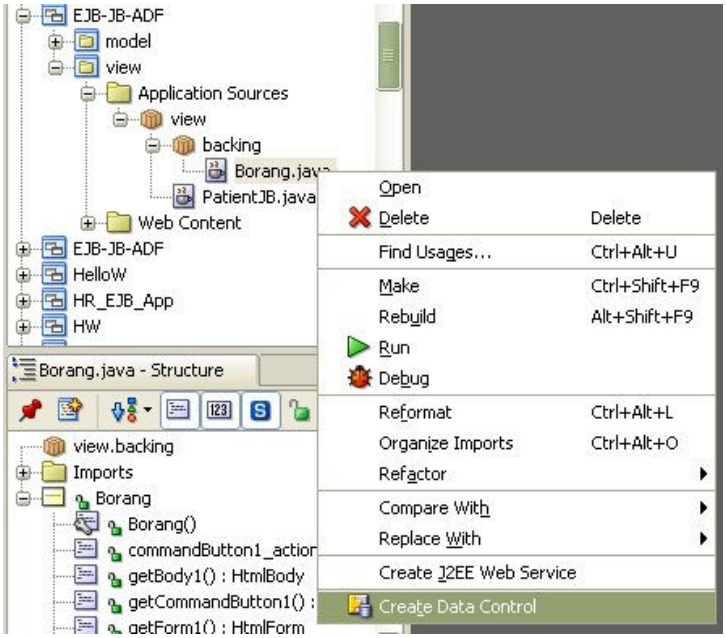
```
import view.PatientJB;
import java.util.ArrayList;

import javax.faces.component.html.HtmlForm;

import javax.naming.Context;

import javax.naming.InitialContext;
import javax.naming.NamingException;

import model.Patient;
```

d. Find method `public String commandButton1_action()`, in file ***Borang.java***, and change the line `return null;` to `return "submit";`
e. Save All and compile (Make).

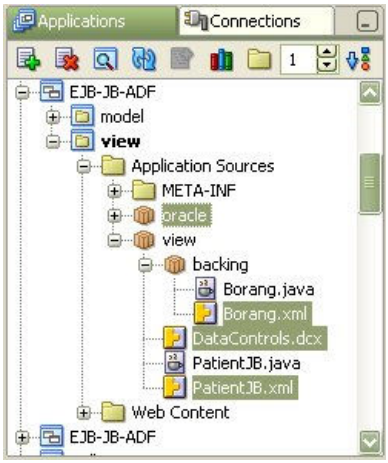
8. Creating Data Control
   a. At project folder ***view***, find and click ***Borang.java***, to mark it.



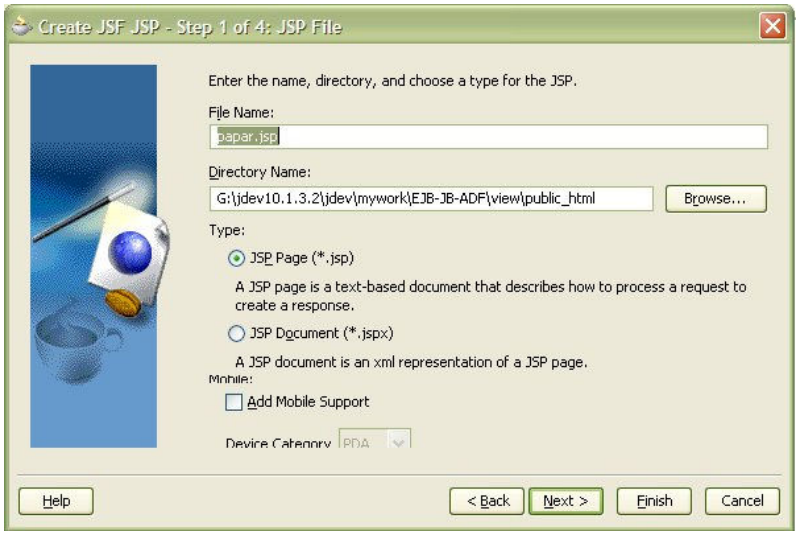
b. Right click ***Borang.java*** and click *Create Data Control*.

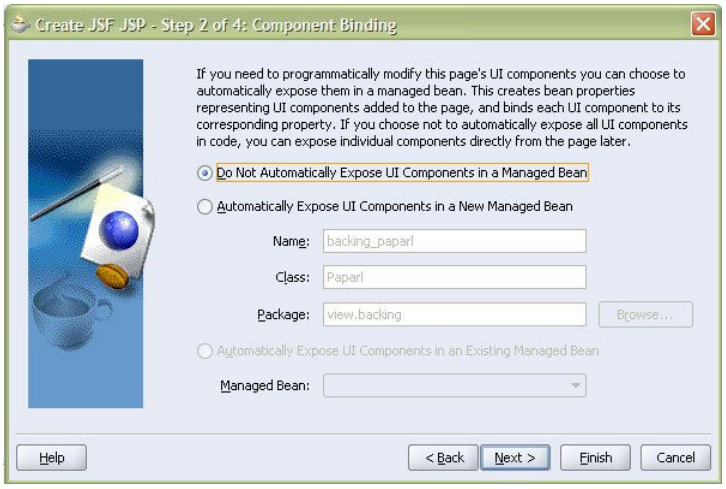


c. Few files created



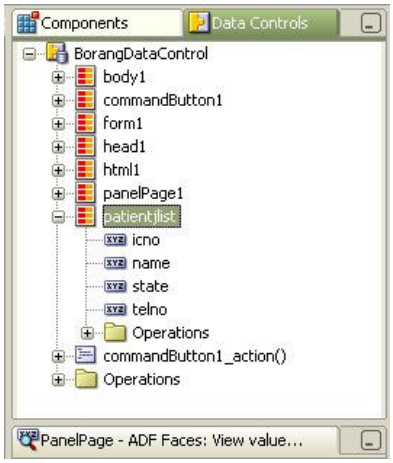
9. Creating JSF page to view data.
    a. Go back to diagram view of ***faces-config.xml***. Double click icon ***/untitled2.jsp***
    b. On *Create JSF JSP wizard* click *Next*, at Step 1 of 4, change file name to **papar.jsp** and click *Next*. Choose ***Do Not Automatically Expose UI……***then click *Finish*.



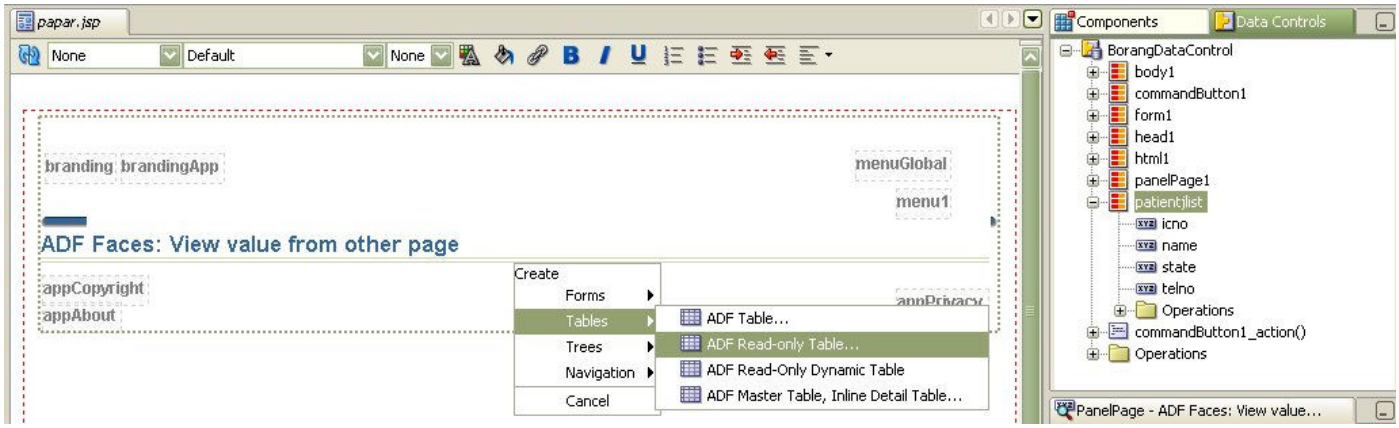


c. At Design view for file ***papar.jsp***, click, drag & drop ***PanelPage*** from *Components Palette* tab to design area, and change the title to **ADF Faces: View value from other page.**

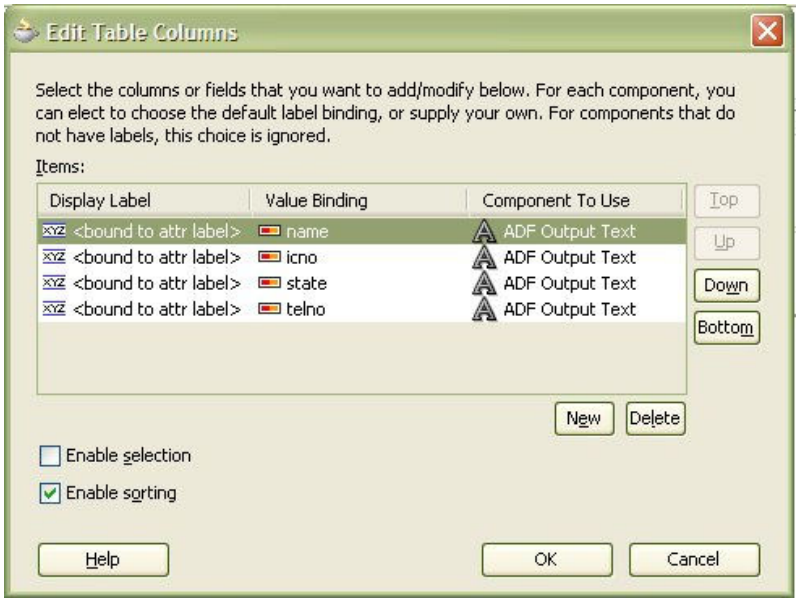
d. Click *Data Controls* tab at right side. Expand ***BorangDataControl*** and find ***patientjlist***. Expand ***patientjlist*** and make sure you see ***icon, name, state*** and ***telno***.



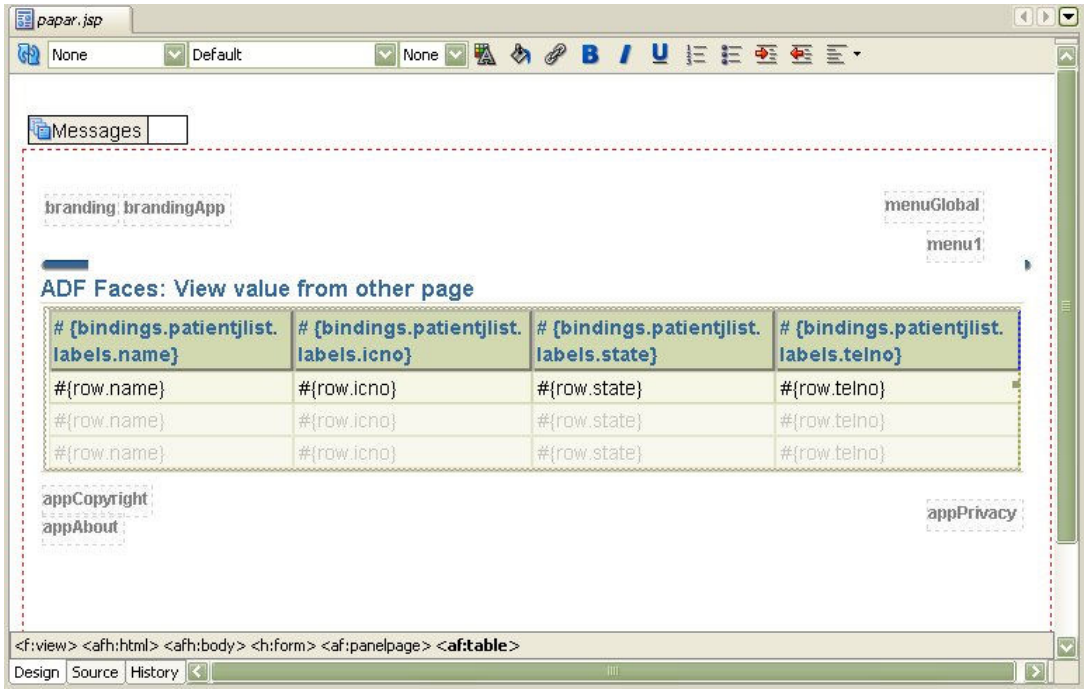
e. Click, drag and drop ***patientjlist*** onto ***panelPage***, select *Tables* and click *ADF Read-only Table…*



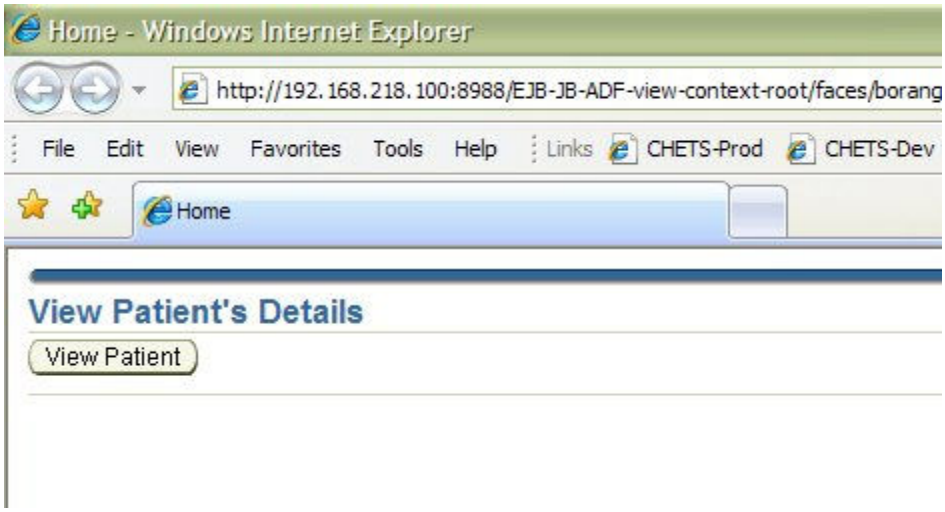
f. You will see Edit Table Column. Click Value Binding name, and click button Top tp move it to the top, and check Enable Sorting, then click OK.



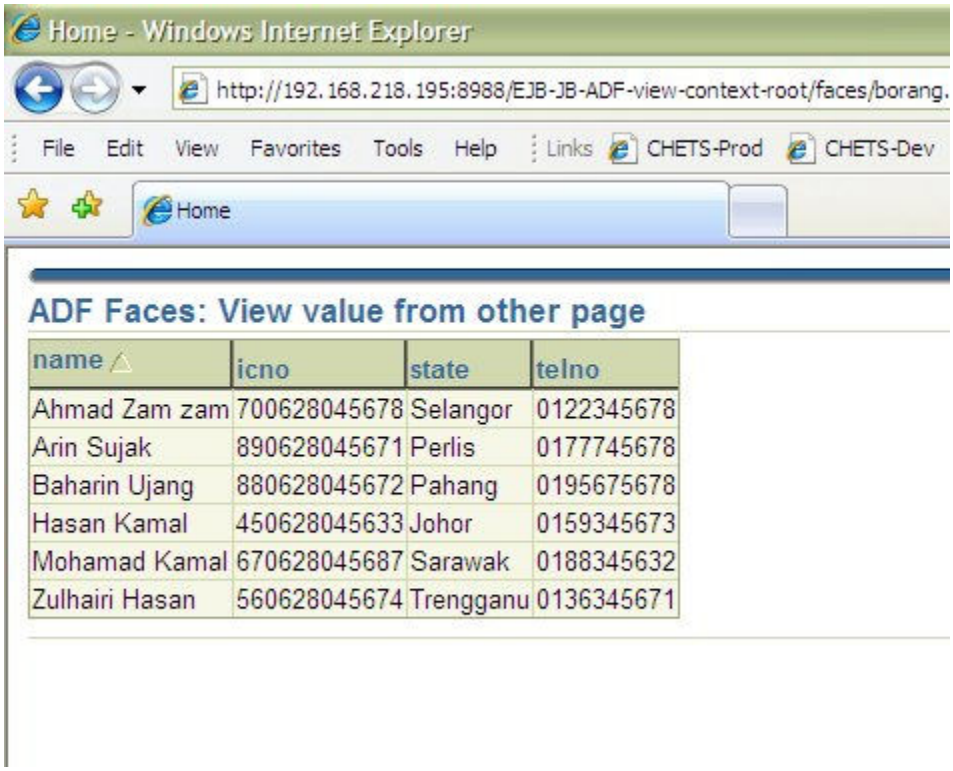
g. You have just created papar.jsp using Data Control.



h. Click Save All and compile(Make).
i. Run file ***borang.jsp***



j. Click button View Patient. You will see the result below.



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Arin Sujak	890628045671	Perlis	0177745678
Baharin Ujang	880628045672	Pahang	0195675678
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