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## Lab 4 – Customizing a WebFaced Application

## Overall Lab Guide

This lab is an extension of the WebFacing Conversion and Testing Lab which demonstrates how to use the IBM Webfacing tool to generate the base application. This lab shows customization techniques that can be used to enhance the base application. It assumed the student already has or is familiar with how to use the IBM WebFacing tool to create this base application.

*Note: The pictures in these labs show a similar application being built. Some of the names and icons may be different from the environment you are working with.*

### **The Steps in this Lab**

1. Using the Style Properties
2. Using a user defined Sign-on
3. Hyperlinks and Hiding Fields
4. Adding Tool Tips
5. Using JavaScript to add a Clock

# 1. Using the Style properties

Using the Style Wizard to change the IBM WebFaced application user interface. During this exercise you will change the User Interface of your application by using the **Style properties** that are part of the IBM WebFacing Tool environment. The style changes will be applied on a project level, so all pages in a project will contain the changes you apply to a style. In this lab we want you to change the text color and font for all highlighted fields. Also you will learn how to apply changes to command key definitions that don't follow the Common User Access (CUA) rules.

**The following tasks will be covered in this lab:**

- Starting the properties dialog
- Creating a new style
- Working with Style settings in the change style wizard
- Specifying the new style to be used for this project
- Refreshing the project with the new style

## **What You Should be Able to Do**

As a result of this exercise you will be able to change a style to tailor the web interface to your needs:

- Create a new style using the IBM WebFacing Style properties
- Use the field level property pages to change the looks of your web pages
- Change the project to use a different style

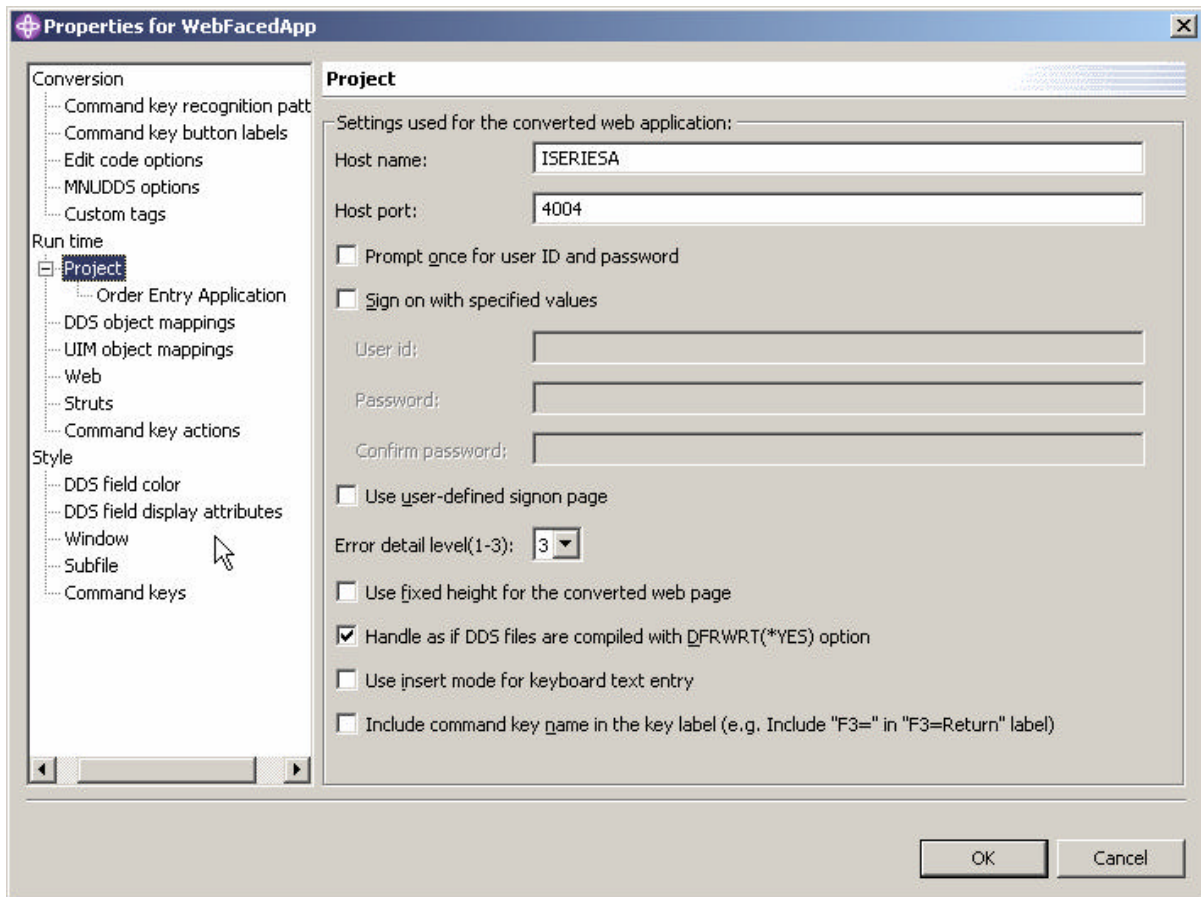
## **Using the IBM WebFacing Style properties**

During this exercise you will use the IBM WebFacing Style properties to tailor your web user interface. Highlighted fields in the 5250 panels will get changed to show the fact they are highlighted a little bit more in the web user interface. You will change the IBM WebFacing conversion results of highlighted fields so the conversion will generate code to apply a yellow text color and a bigger font for these parts.

## 1. Invoking the WebFacing Style properties dialog

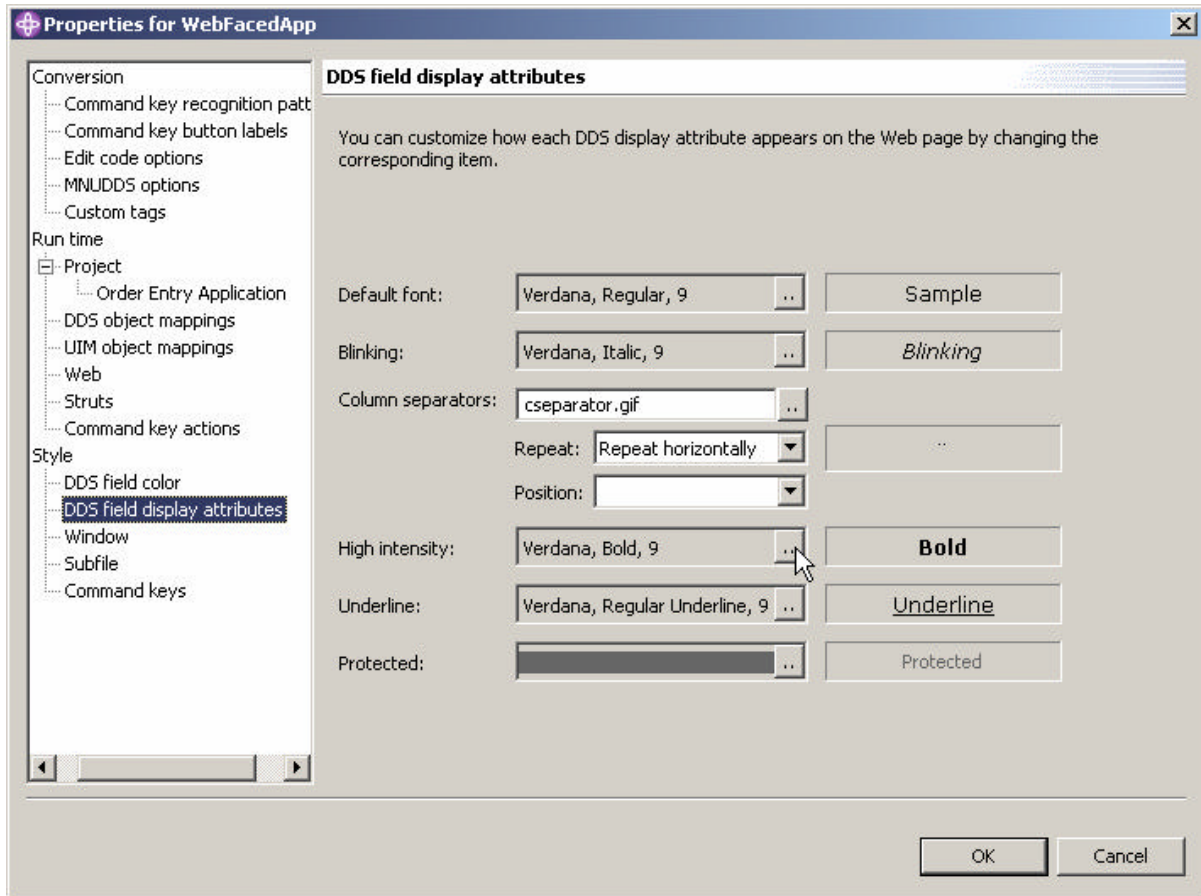
- Start the WDSc workbench and open the **WebFacing perspective**, if it is not up and opened already
- In the WebFacing perspective, locate the WebFacing project you are working with in this Lab.
- Right mouse click on the WebFacing project node **WebFacedApp**
- Select **Properties** from the pop up menu

The WebFacing project **properties** dialog will show



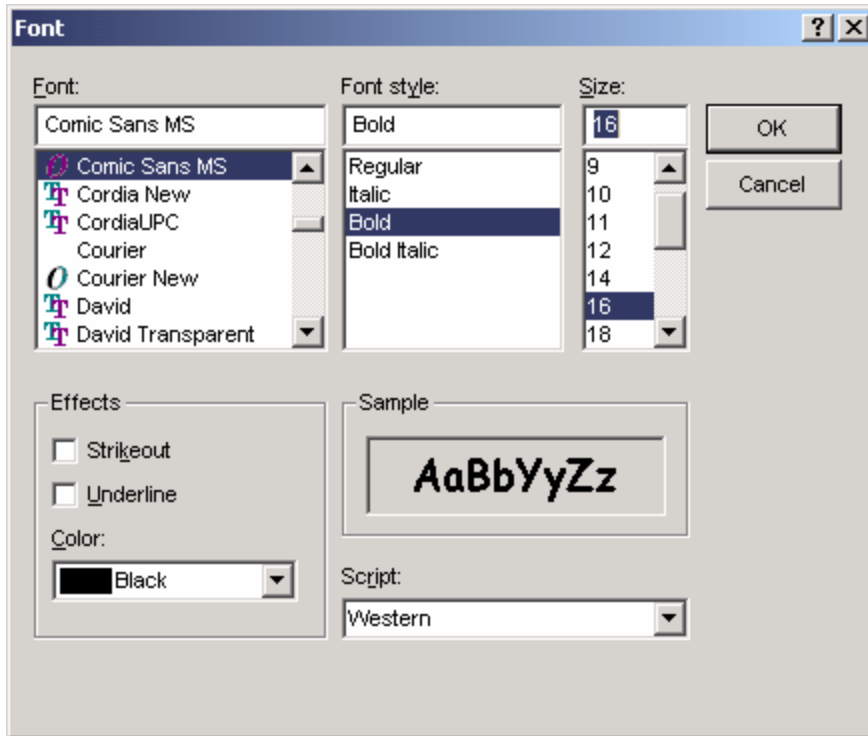
- Select the **Style--DDS field display attributes** node in the list on the left side, the arrow in the figure above indicates where to find the node.

The **DDS field display attributes** page will appear on the right side of the dialog



- Click the .. push button in the **High intensity** combo box.

The **Font** dialog appears



- Select **Font: Comic Sans MS**
- Select **Font style: Bold**
- Select **Size: 16**
- Click the **OK** push button on this dialog

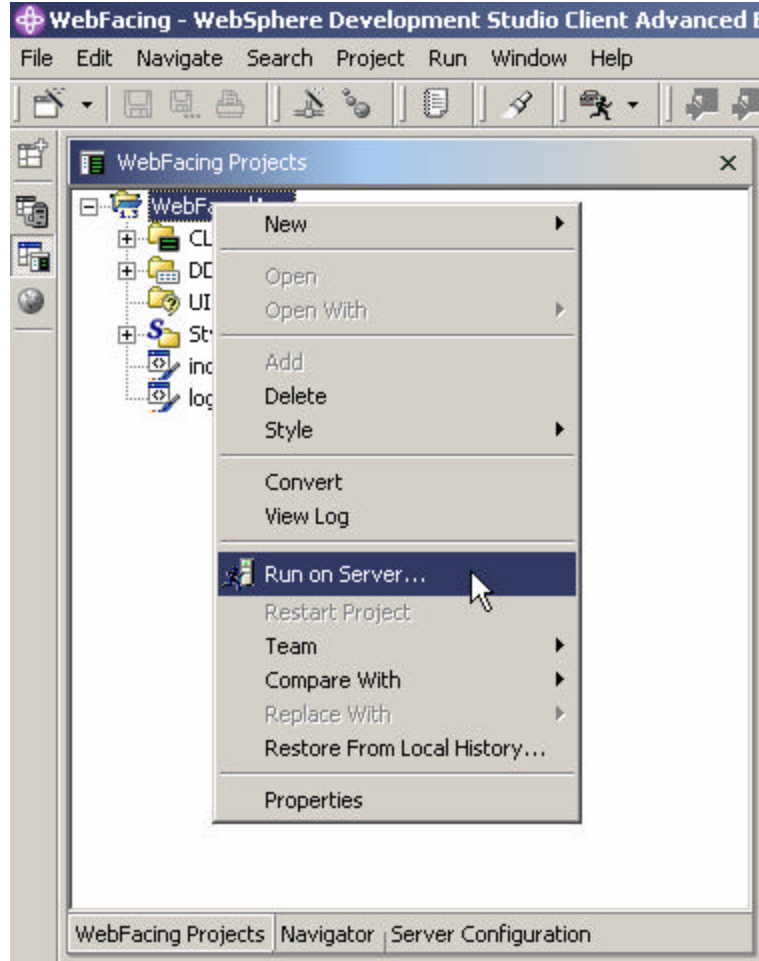
This will change font size, and font appearance for parts with the high intensity attribute active.

- Click the **OK** push button on the properties dialog

Now you are back in the workbench

\_\_ 2. **Using the WebSphere Application Server Express V5.0 test environment to show the changes**

- Right mouse click on the **WebFacedApp** project icon

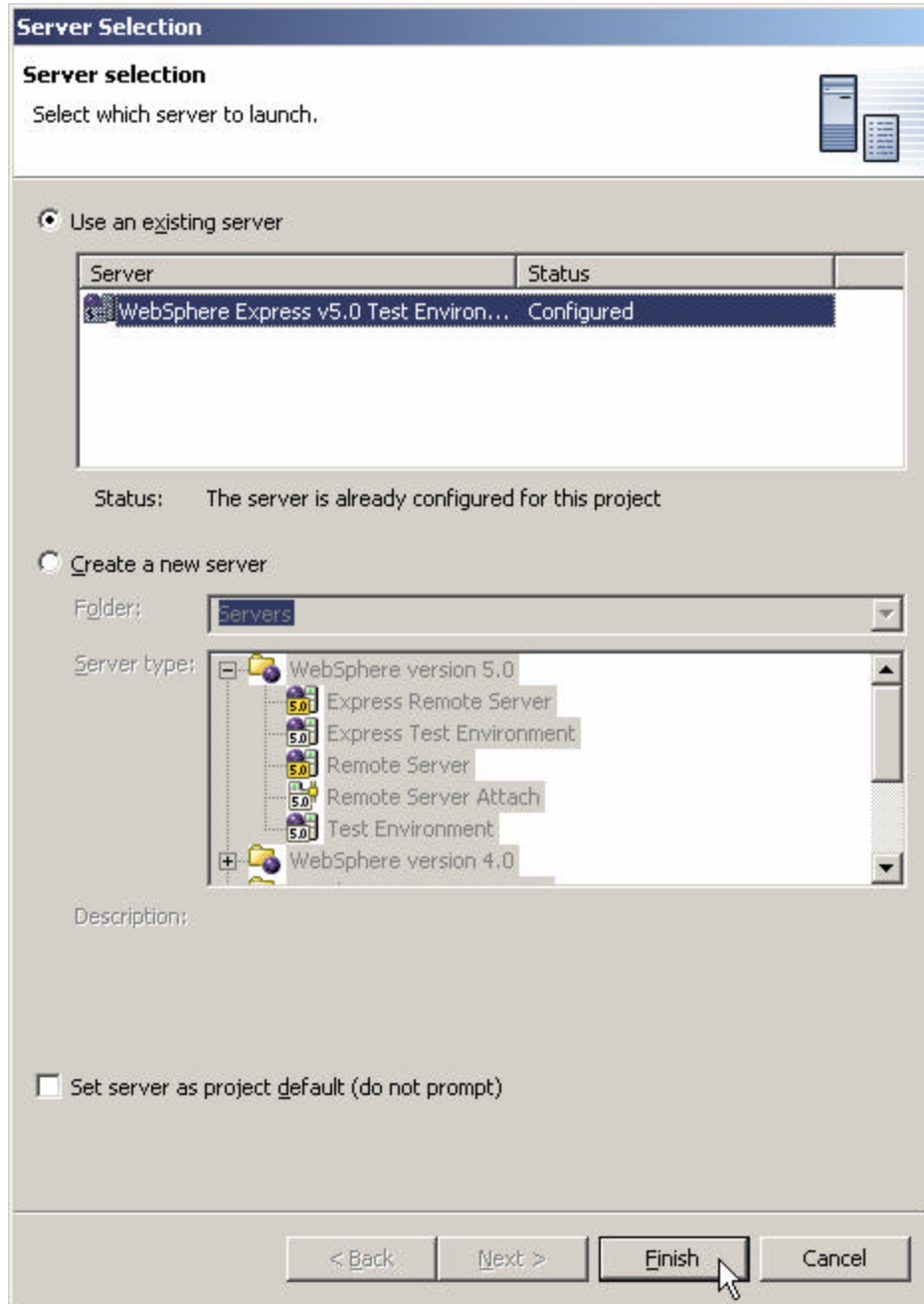


- Select **Run on server** from the pop up menu

A Server Selection pop up window will ask for you to use existing server or create a new server.

**Select WebSphere Application Server Express v5.0 Test Environment (Status: Configured)** under Use an existing server.

**You may also select Set Server as project default (do not prompt) radio button** as we will be using the same test environment throughout this lab.



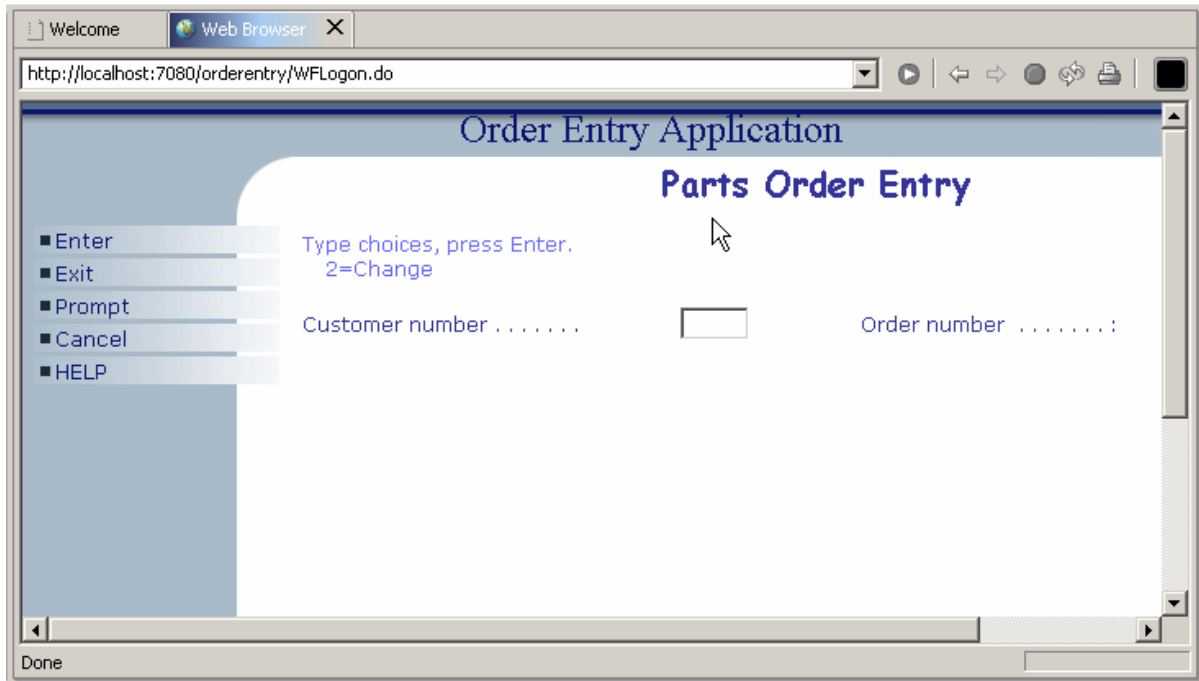
Click **Finish**.



## IBM WebFacing Tool – Customizing a WebFaced Application

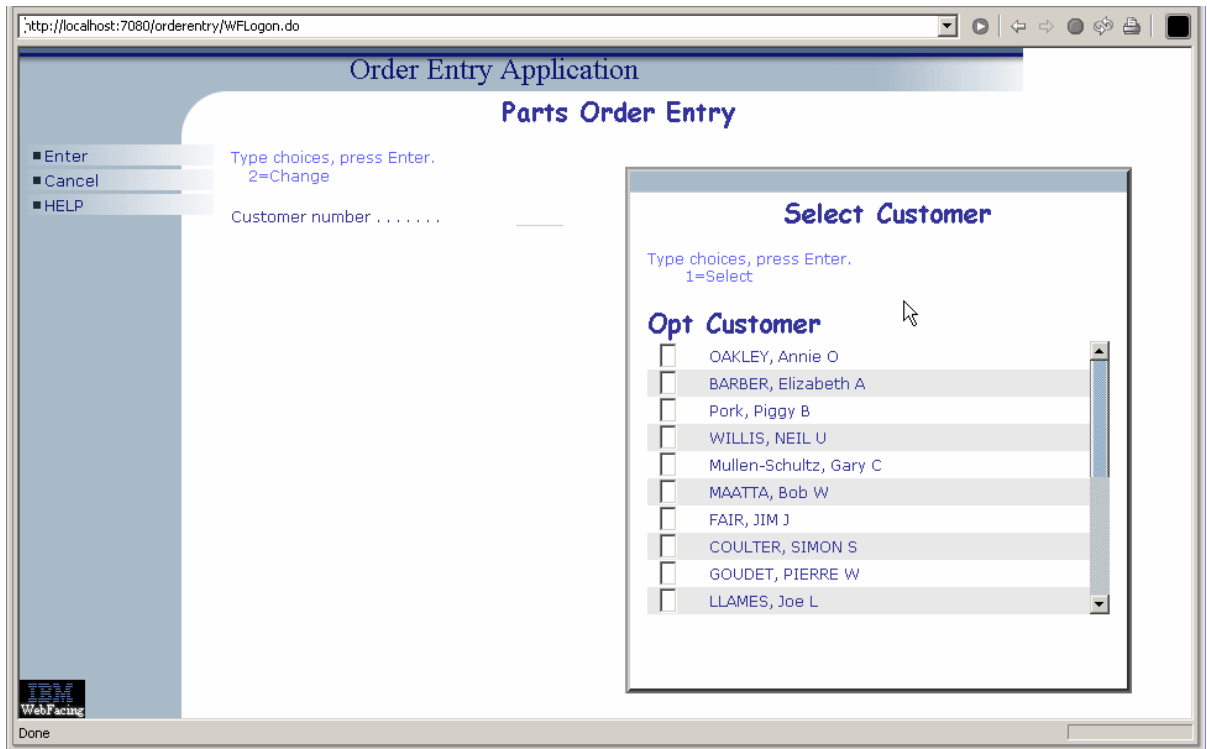
You will see publishing window pop-up as it has to publish the modified web application to WebSphere Application Server Environment.

You will see the first screen of your application.



- Notice the different font and font size in some of the text, these are the **highlighted** areas of your 5250 screen.

- Prompt for the customer, notice the font changes in the sub-file window also as follows:



Return to Index page by completing the order entry and exiting the application.

## **2. Using the User Defined Signon**

**Using the User Defined Signon to create a new sign on page.**

During this exercise you will change the runtime behavior of your application. Instead of using the integrated signon, the one you used when you selected the members to convert your DDS source, you will now modify the default signon.

**The following tasks will be covered in this lab:**

- Select the properties for User Defined Signon
- Modifying the default logon page

### **What You Should be Able to Do**

As a result of this exercise you will be able to secure your application by forcing authentication before the application gets invoked.

- Understand the how to modify the logon page
- Change the project properties to enable User Defined Signon

## 1. Using the project properties dialog

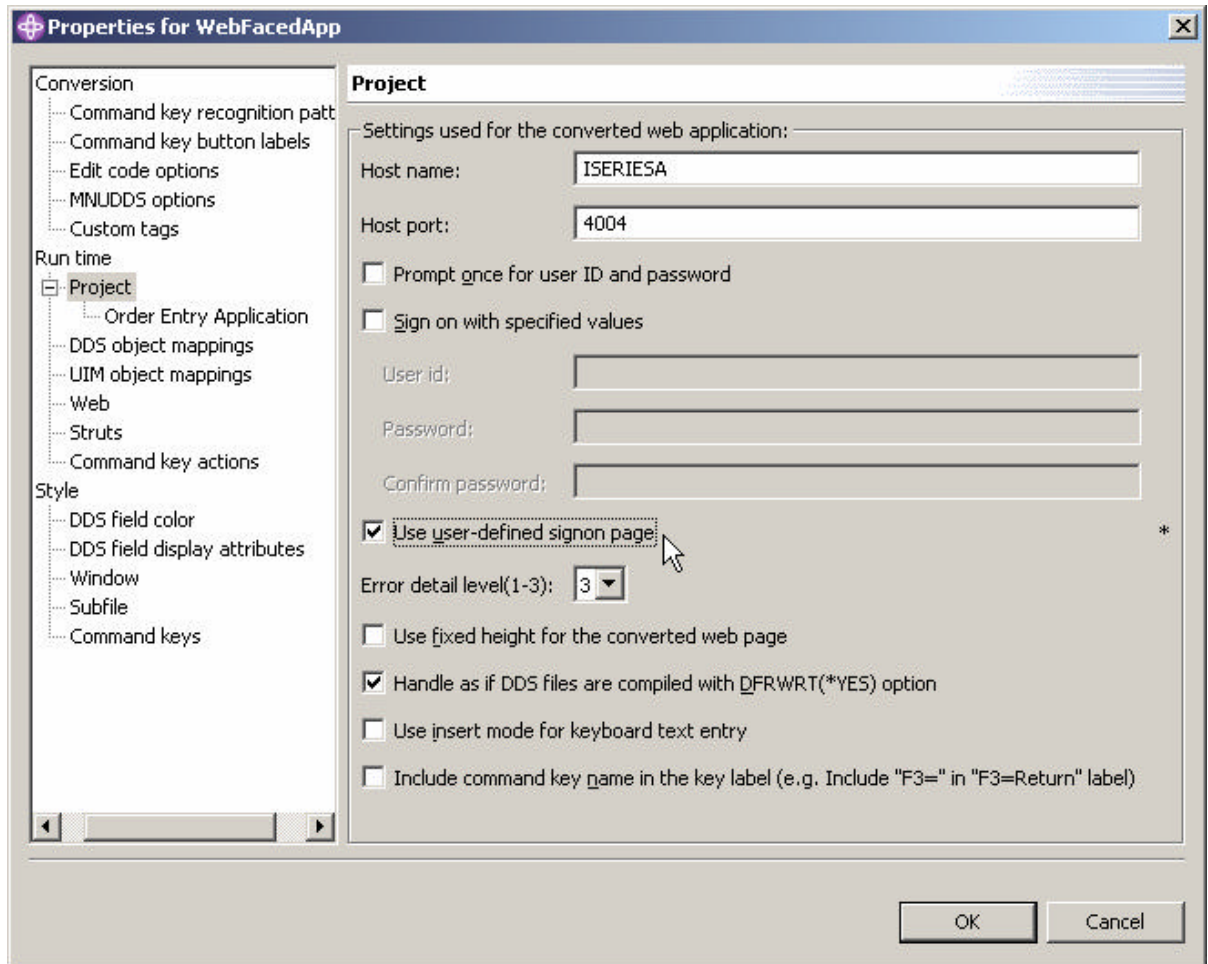
During this exercise you will use the **Runtime**, **Project** properties page to select **Use user-defined signon page**

Start the workbench and open the WebFacing perspective, if it is not up and running already.

In the WebFacing Perspective in the project view,

- Right mouse click on the **WebFacedApp** project icon
- Select **Properties** from the pull down menu

The **Properties for WebFacedApp** dialog will appear



- Under **Runtime** ... Click on **Project**

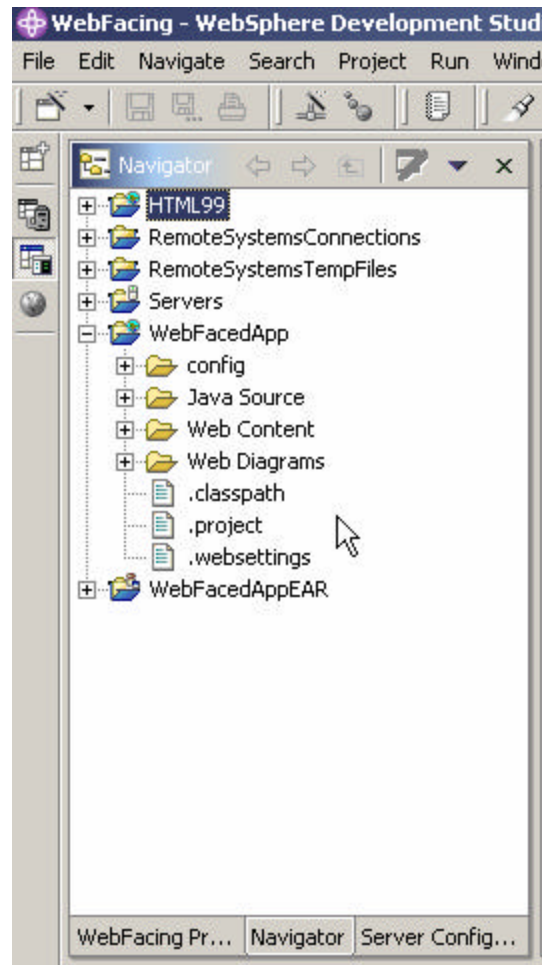
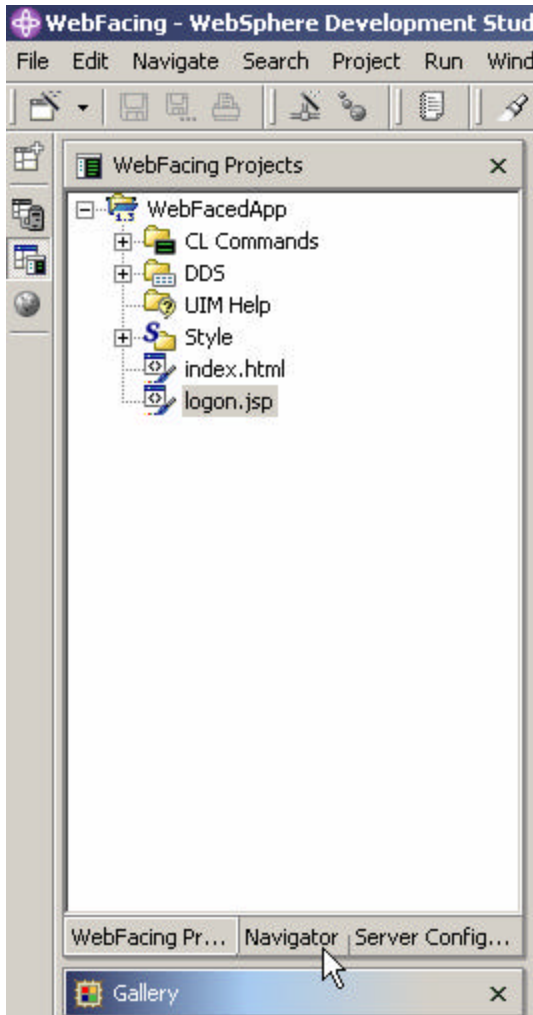
- Check the **Use user-defined signon page** check box, in the middle of the dialog
- Click the **OK** push button, at the bottom of this dialog

You are back in the workbench

You have changed the logon behavior for this link (application).

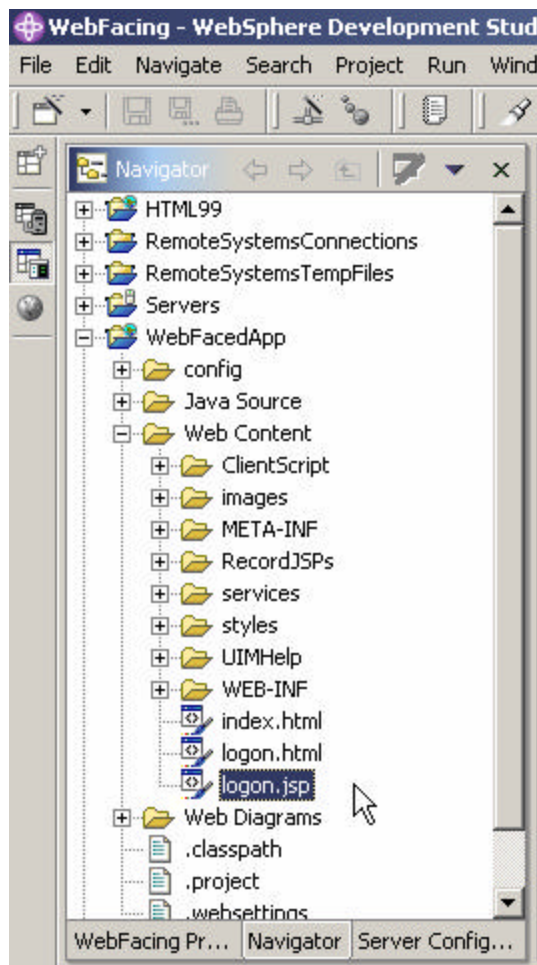
## \_\_ 2. Modifying logon.jsp

- Make sure you are in the WebFacing Perspective
- Select the Navigator tab at the bottom of the WebFacing Perspective window

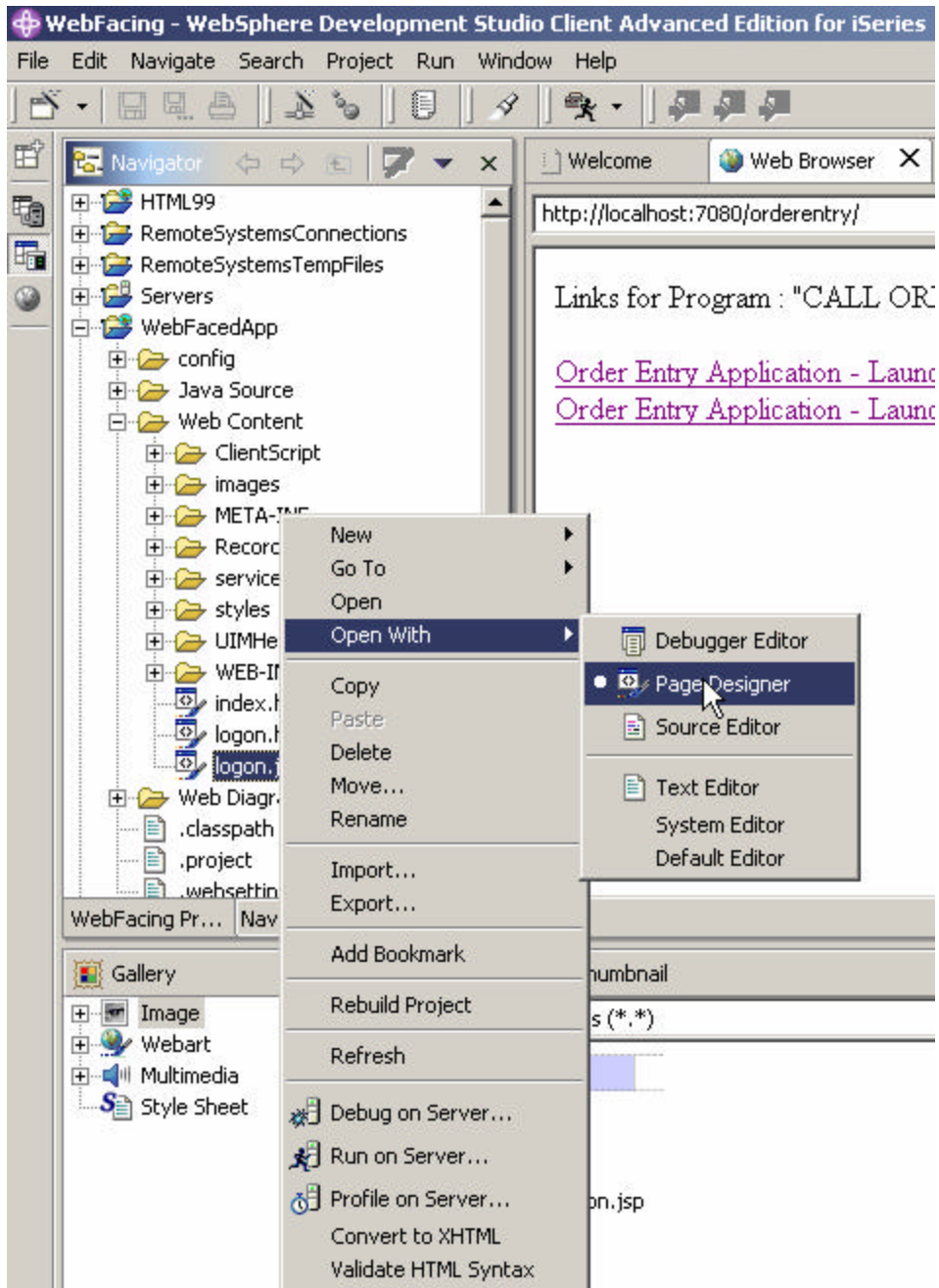


## IBM WebFacing Tool – Customizing a WebFaced Application

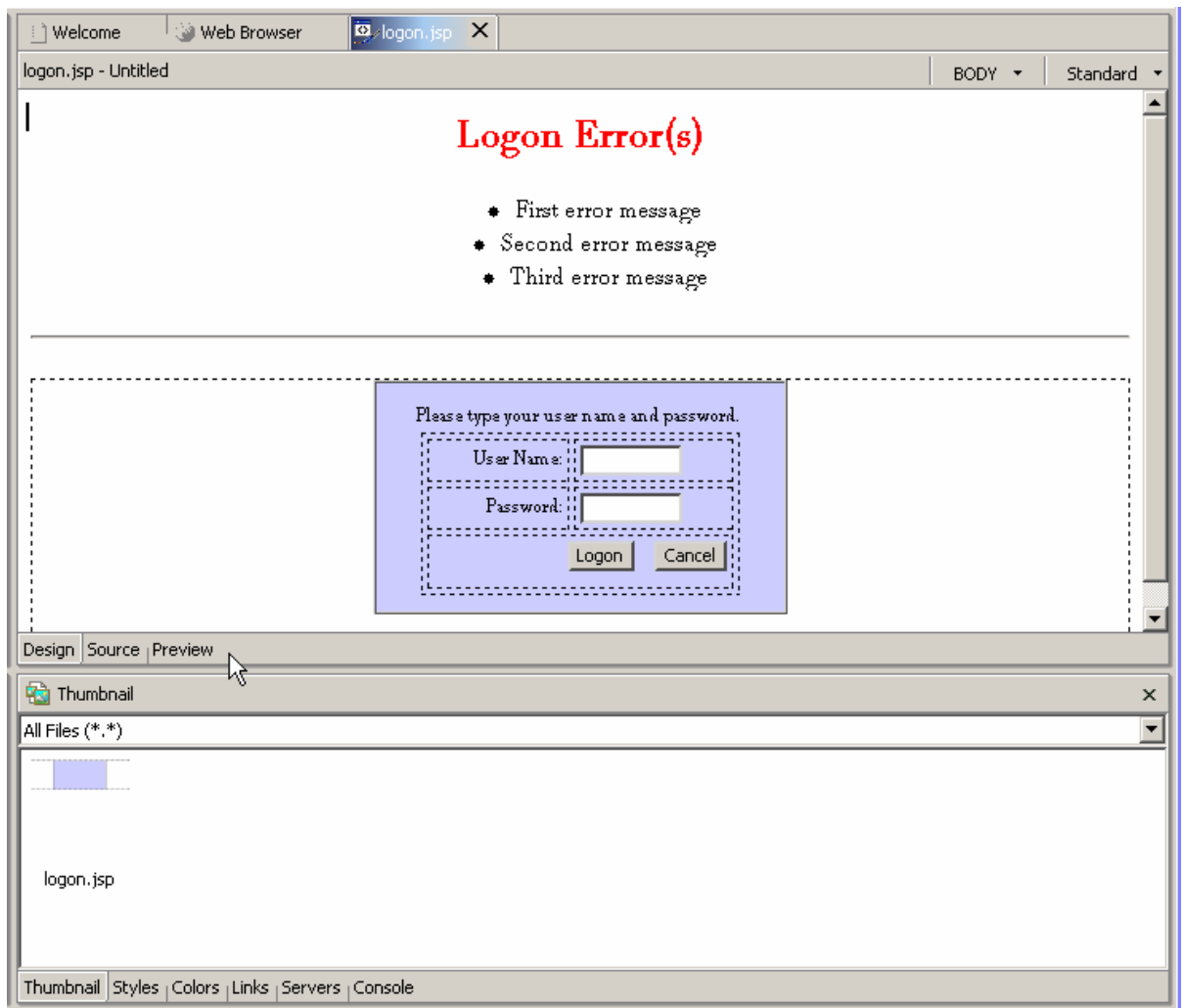
- Once in the Navigator expand your WebFacing project WebFacedApp and then the Web Content Folder. In the Web Content Folder you will find the logon.jsp



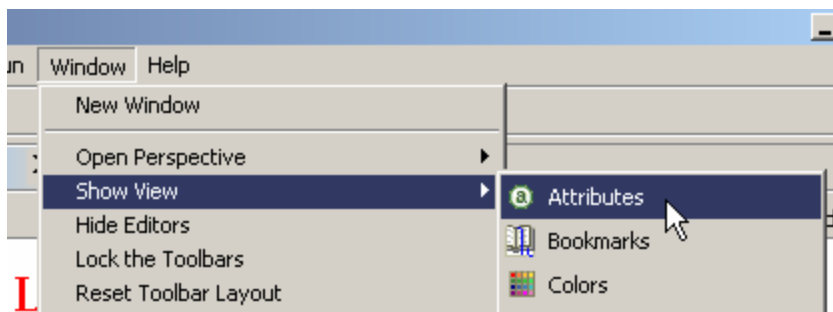
- Select logon.jsp, right click on it **select open with Page Designer** as showb below



- Note that there is a Design, Source, and Preview view of the jsp. Feel free to browse the other views.

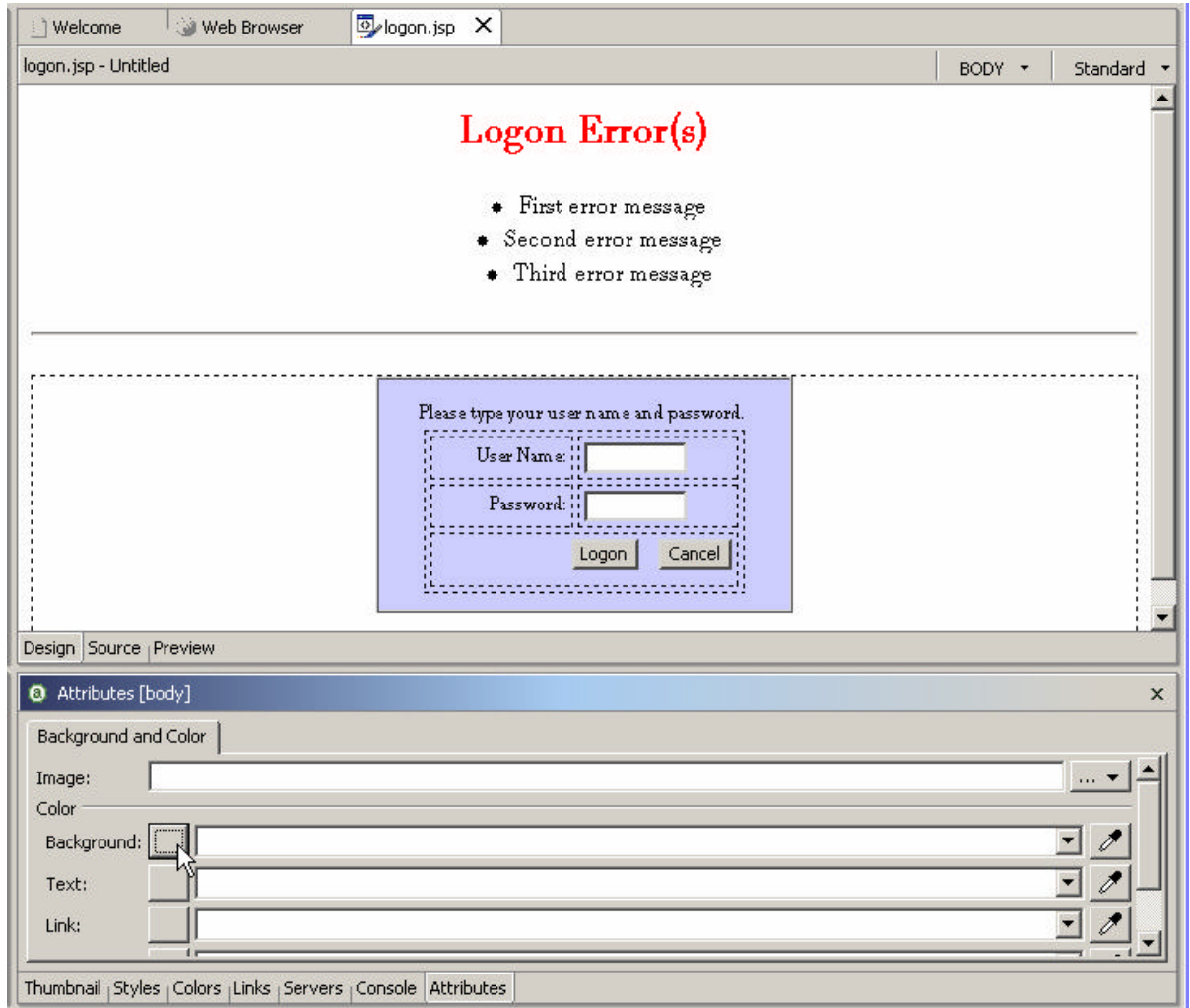


If you do not see Attribute view in the lower part of above screen, you can open the attribute view by selecting Window → Show View → Attributes



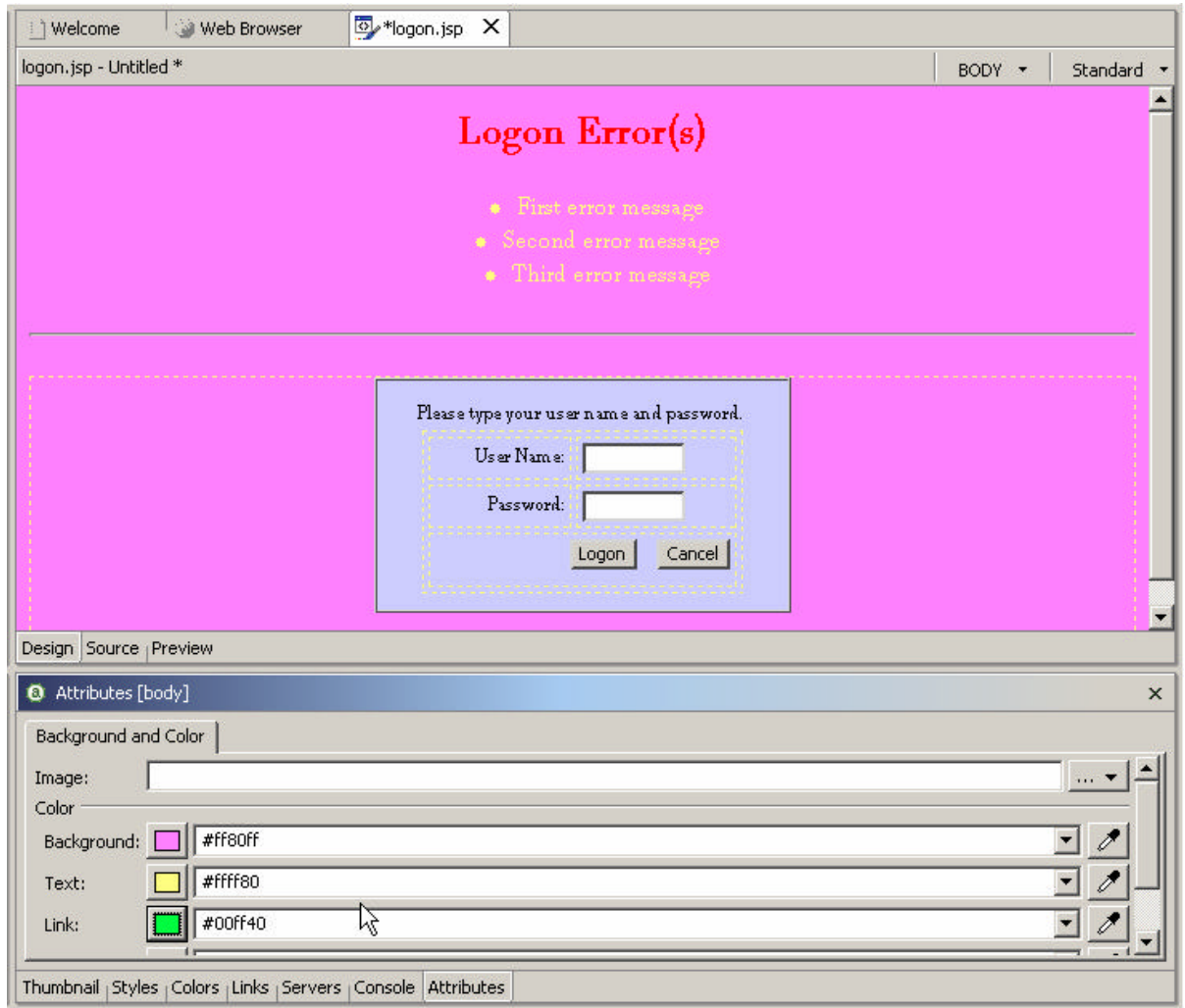


Using the Attributes [body] window change the colors of the logon.jsp



Click on the box next to Background and select any color you like so we can identify that the modified jsp is being used.

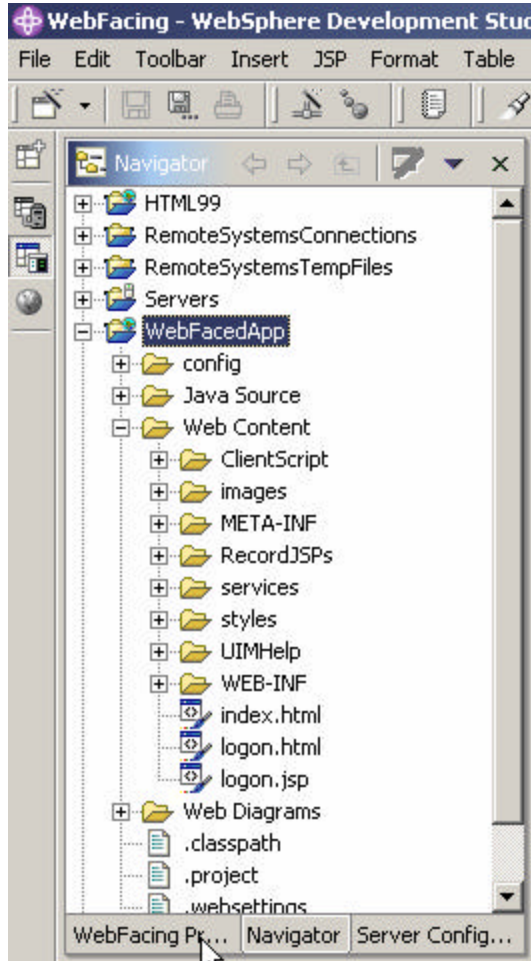
Here is the sample modified JSP page:



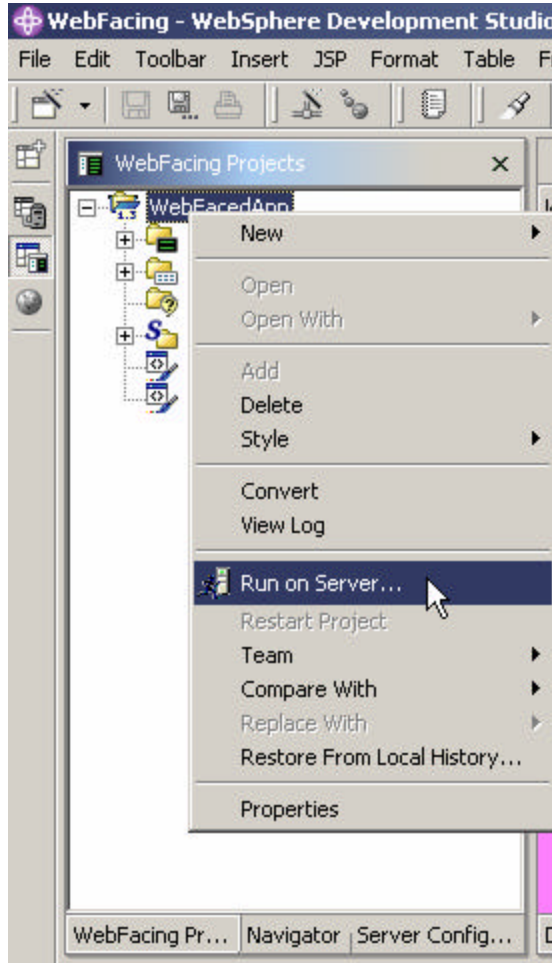
- Save your work **by clicking on File -> Save All** from menu bar.

4. Using the WebSphere Application Server Express V5.0 test environment to show the changes

- Go back to WebFacing Projects view by clicking on WebFacing Projects tab



- Right mouse click on the **WebFacedApp** project icon

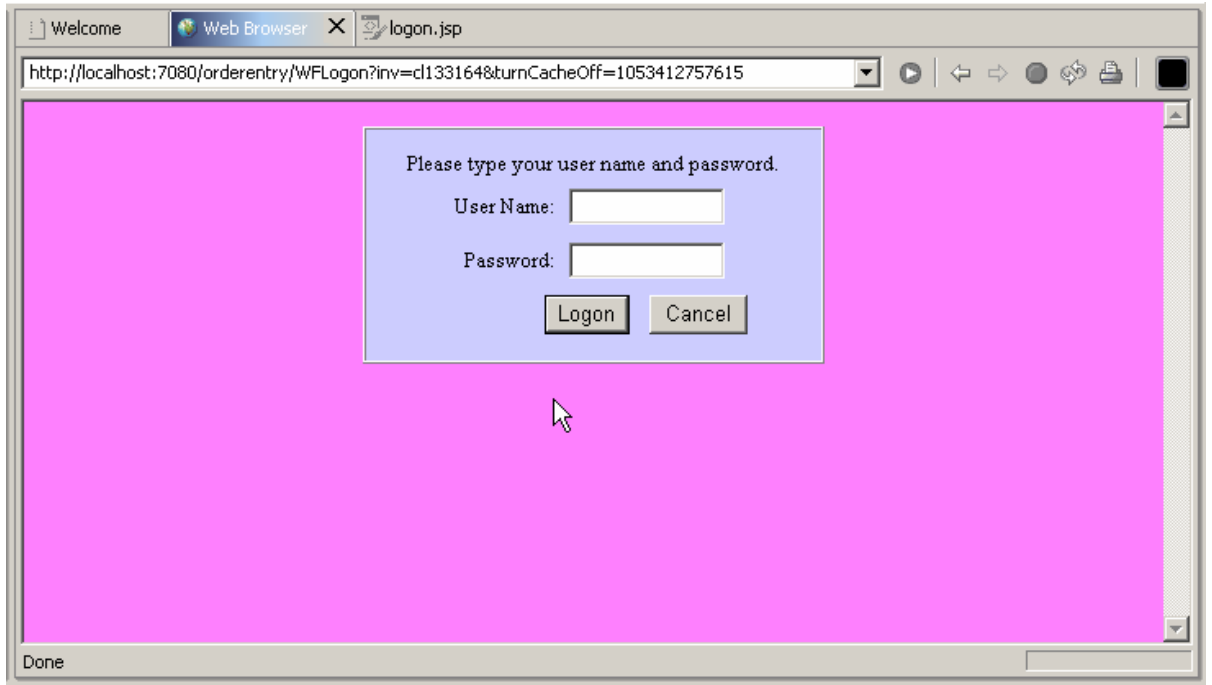


- Select **Run on server** from the pop up menu

In the Server Selection pop-up window **select WebSphere Express V5.0 Test Environment under User Existing Server Click Finish**

## IBM WebFacing Tool – Customizing a WebFaced Application

- In your browser pane click on the top **Order Entry Application** link and you will see a user defined signon page displayed with modified background color.



Return to Index page by completing the order entry and exiting the application.

## 3. Hyperlinks and Hiding Fields

### Using WebSettings to change the user interface of the WebFaced application

During this exercise you will change the User Interface of your application by using **CODE designer**. **CODE designer** is the GUI based screen design tool for 5250 panels. For WebFacing we have added a new function to **CODE designer**, this new function is called **WebSettings**. It allows to change certain aspects of the user interface related to the WebFacing conversion process. **CODE designer** will store this WebSetting information as comment lines in the DDS source. These specific DDS source comment lines will be picked up at WebFacing conversion and applied to the WebFaced user interface.

You will not be able to use SDA for your DDS source after you used WebSettings.

#### The following tasks will be covered in this lab:

- Specifying the DDS source member to work with
- Starting CODE Designer
- Working with WebSettings in CODE Designer
- Reconverting the application

As a result of this exercise, you will be able to enhance your WebFaced user interface for the browser environment.

#### What You Should be Able to Do

As a result of this exercise you will be able to change the DDS source and add WebFacing specific Websettings to it.

- Use CODE designer to access DDS source
- Use WebSettings to add web user interface changes
- Reconvert the changed DDS

## **Using CODE designer to access DDS display file source**

During this exercise you will use **Code designer** to add some **WebSettings** to the DDS source. We want you to improve the web **user interface** for the customer list window.

In this window, currently users have to enter a **1** in the options field to select a specific customer from the subfile. We want you to change this because it is not the way you typically select things in a web interface. On a web page, a link would be more natural, to cause a selection of a record to happen.

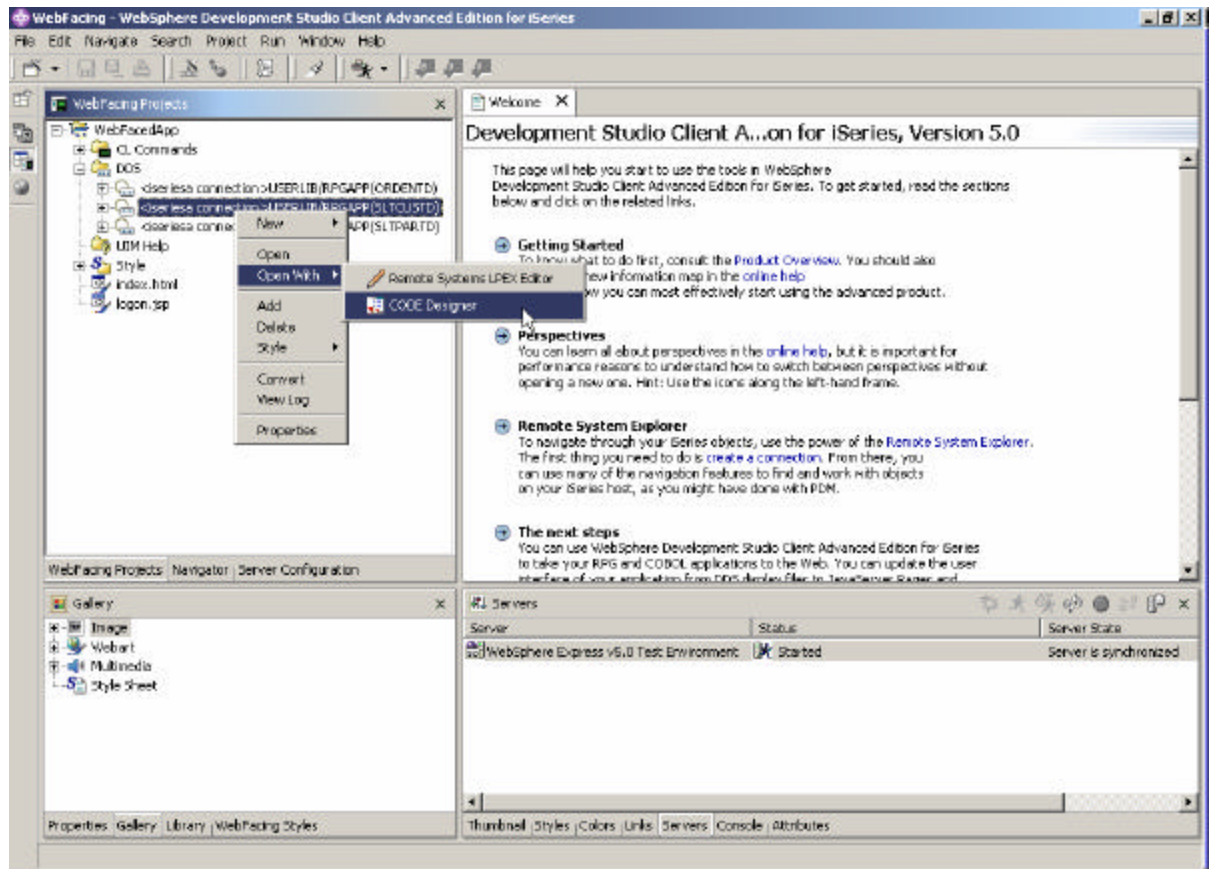
You will change the second column **customer name** in the subfile, from a simple text field to a link. The WebFacing conversion will add logic to the user interface, to accomplish the following:

- When the end user is clicking on this link,
- Under the covers the options field will be filled with a **1** and
- An **Enter** key press will be invoked.

The changed user interface still returns to the application the same information as before the WebSetting was applied, but the user interface appears more web like to the end user. The application itself doesn't have to be changed.

\_\_\_ 1. Start the WDSc workbench, if it is not up and running

- In the workbench, select the **WebFacing** perspective
- Make sure you are on the **project** page and not the **navigator** notebook page
- Expand **your project WebFacedApp** in the tree view by clicking on the **+**



\_\_\_ 2. Modifying DDS Member Through CODE Designer

- Expand the **DDS** folder
- Right mouse click on the **SLTCUSTD** member

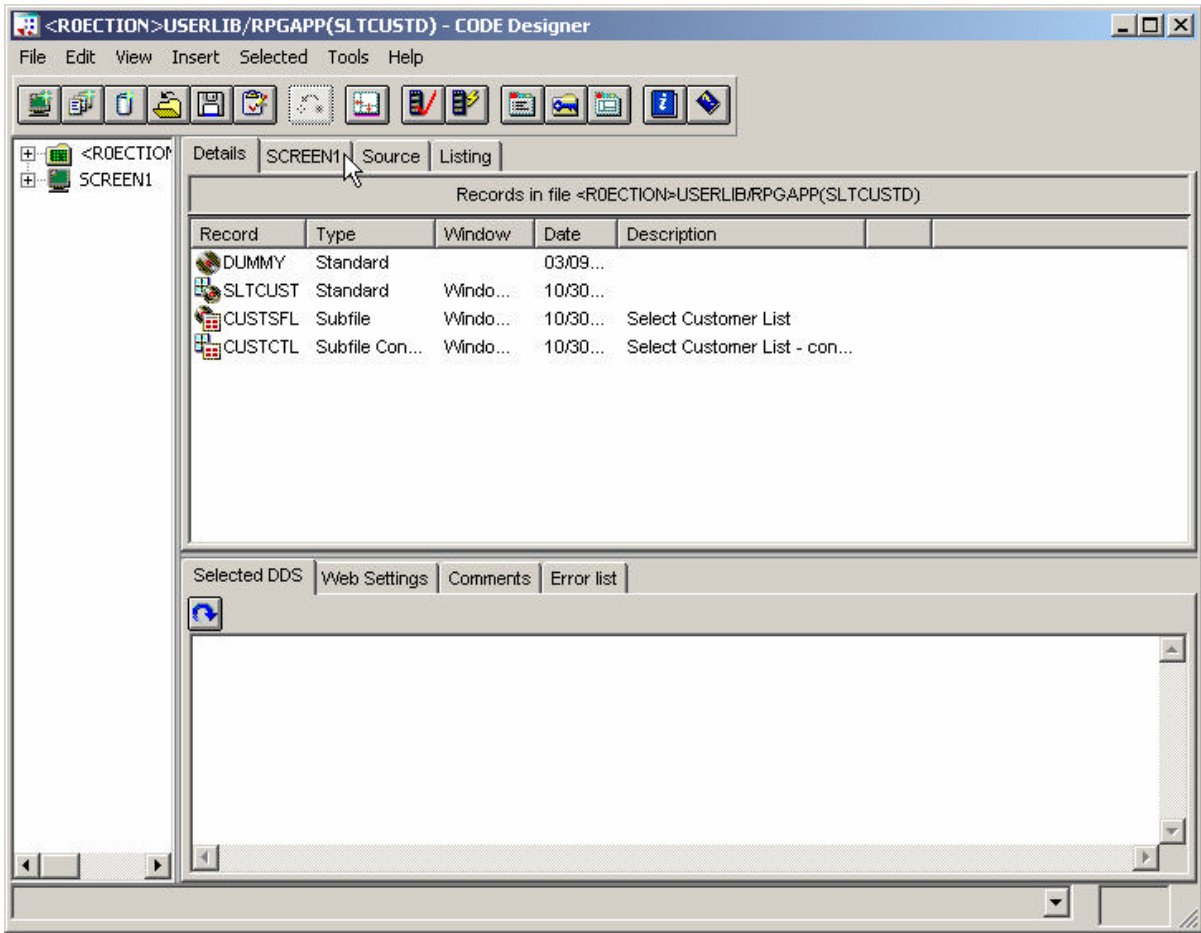
Start the Code designer by:

- Selecting **Open With -->CODE Designer** from the pop up menu

CODE designer is loading the member. This will take a moment.

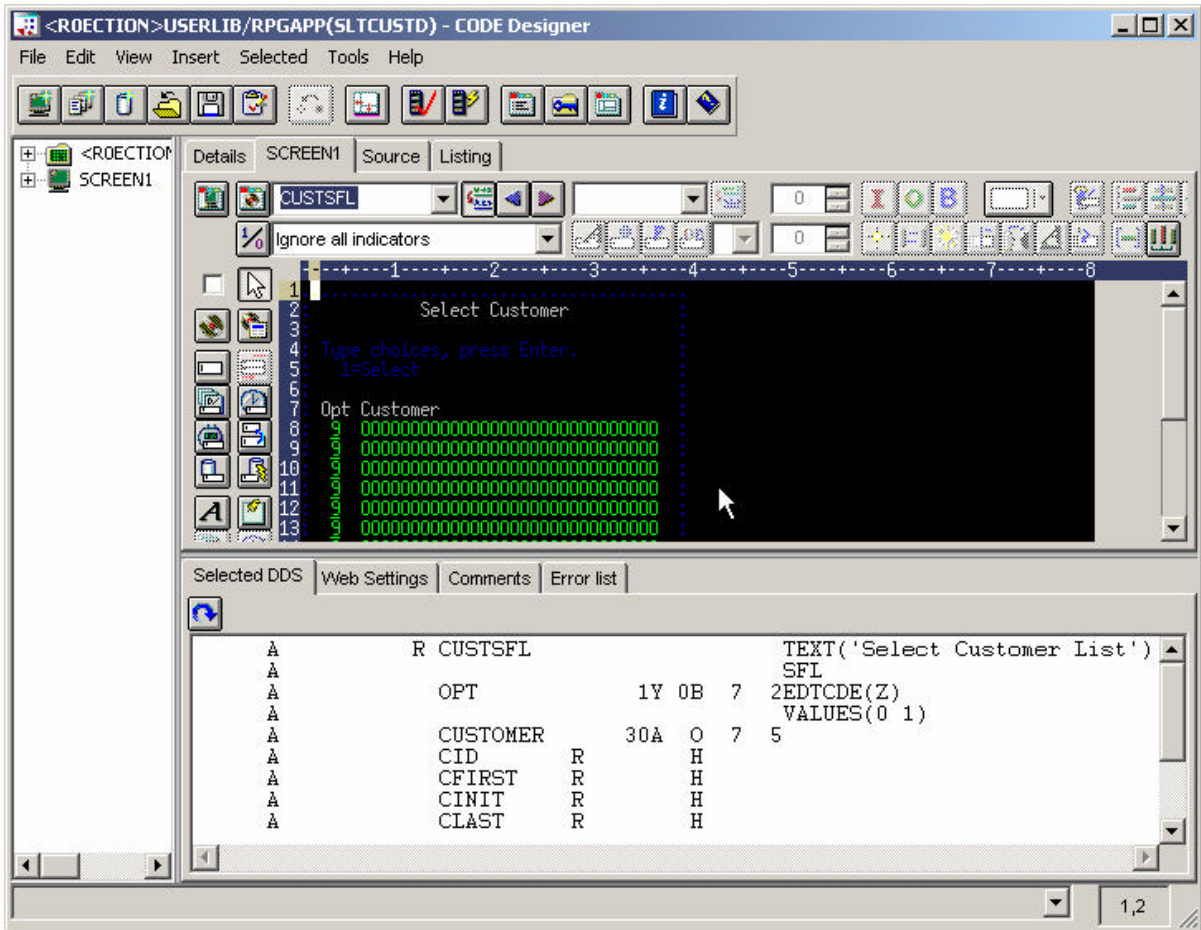


Eventually you will see the **DDS member** loaded in CODE designer as shown below:



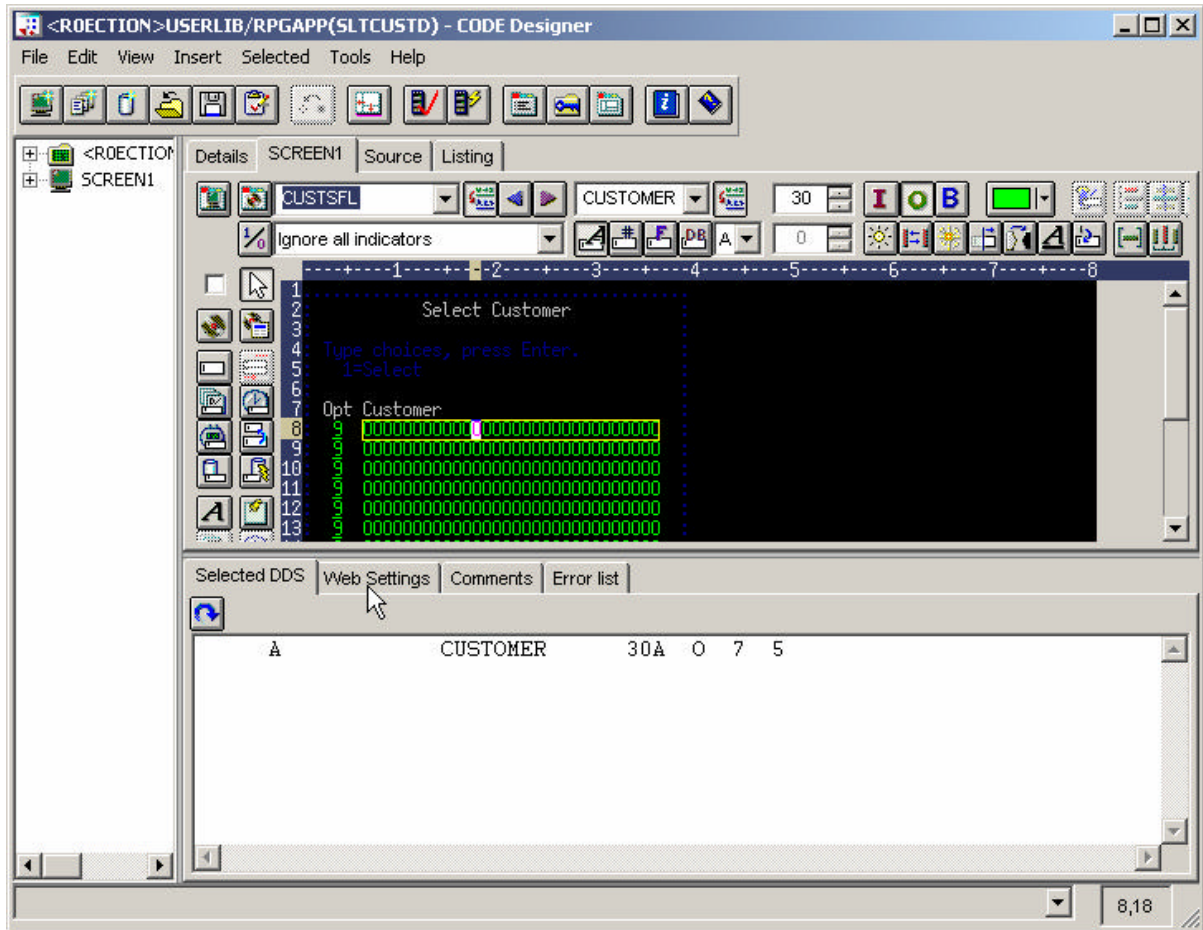
Select the **SCREEN1** tab on the notebook, cursor in the figure above, points at the tab.

You should see a dialog similar to the figure below



You will work with the green screen image in CODE designer, do you recognize the screen? It is the customer selection list, we want you to change it, so it appears more “webbish” to the end user.

Click on the first **row** second **column** in the subfile (**the customer name field**) see the figure below.

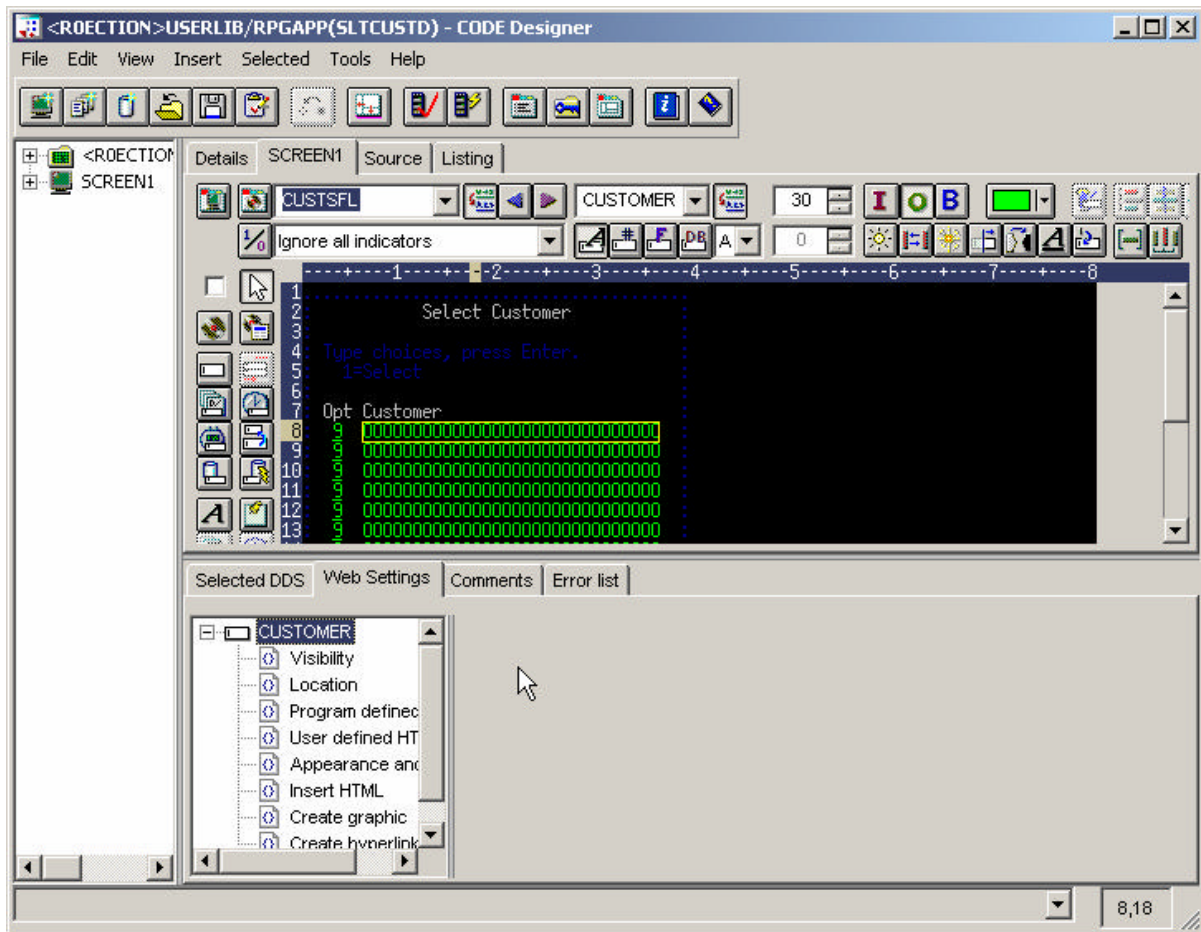


## Applying WebSettings

You will notice that the notebook tabs of the notebook at the **bottom** of the designer dialog are context sensitive and changed as soon as you selected the customer field

- Select the **WebSettings tab** in this notebook

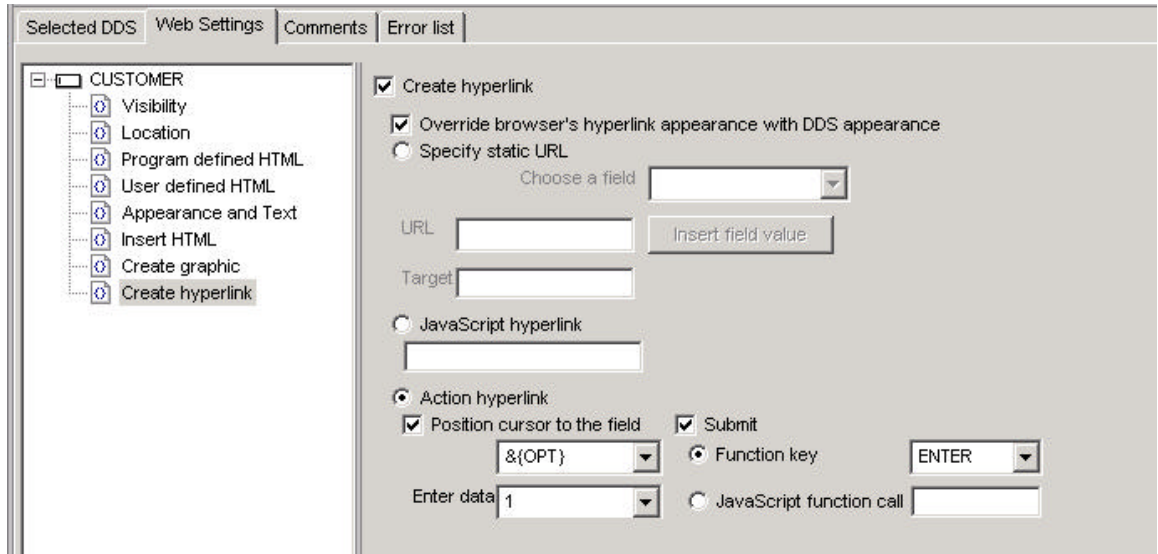
The CODE designer window appearance will be similar to the figure below



On the Websettings page on the bottom of the CODE designer window

- Locate the list that shows the different Websettings available for the customer field
- Scroll down to the **bottom** of the list
- Select **Create hyper link**
- Check the **Create hyper link check box** in the dialog on the right side of the list
- Select the Set **Action hyperlink** radio button
- Select the **Position cursor to the field** check box
- Select **&(OPT)** in the field pulldown and enter **1** in the Enter data field.
- Select the **Submit** checkbox
- Select the **Function key** radio button

- Select **ENTER** from the Function Key pulldown



Just to recap, you have specified the following:

During WebFacing conversion:

1. the **customer name** fields in the subfile will be generated so they appear as links in the browser window

At runtime:

2. When the **link** is clicked a **1** will be placed in the **option** field
3. Also a **submit** request will be initiated to generate the equivalent of an **ENTER** key press.

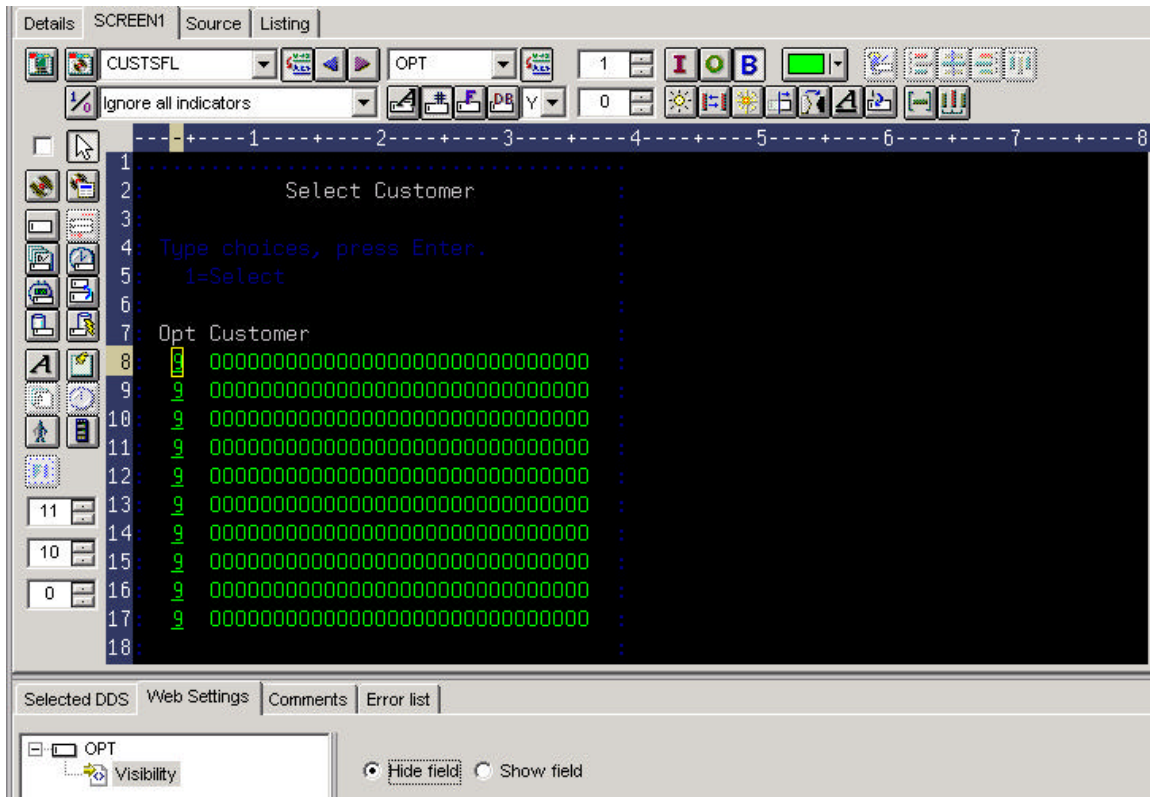
Now that you have created the link for the **customer** field you have to get rid of the **Option** field so it is not visible any more.

### \_\_ 3. Hiding the Option column

On the design page, you now need to select the Option field to indicate that you want to work with it.

- Click on the **option field(column)** on the **first record** in the subfile to select it

Then on the WebSettings notebook page



- Click on the **Visibility** choice in the list box
- Click on the **Hide field** radio button

Now this column in the subfile will be hidden.

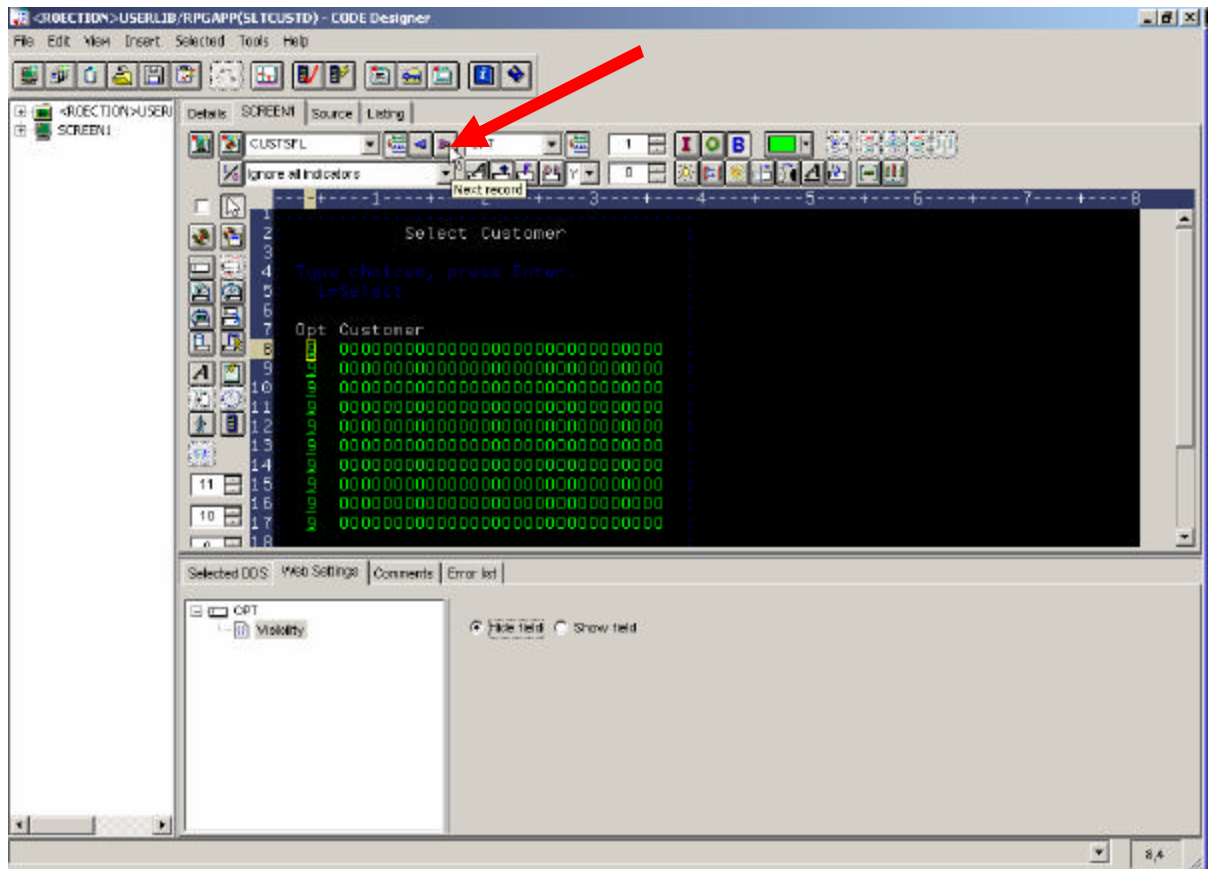


#### 4. Hiding the Option heading

Now you need to hide the heading for the option field as well. In order to do this you will have to put focus to a different record format in the design screen. CODE designer shows all record formats belonging to a screen, this is called a group of record formats. You can see all record formats but you can only work with one record format at a time, the one that has focus.

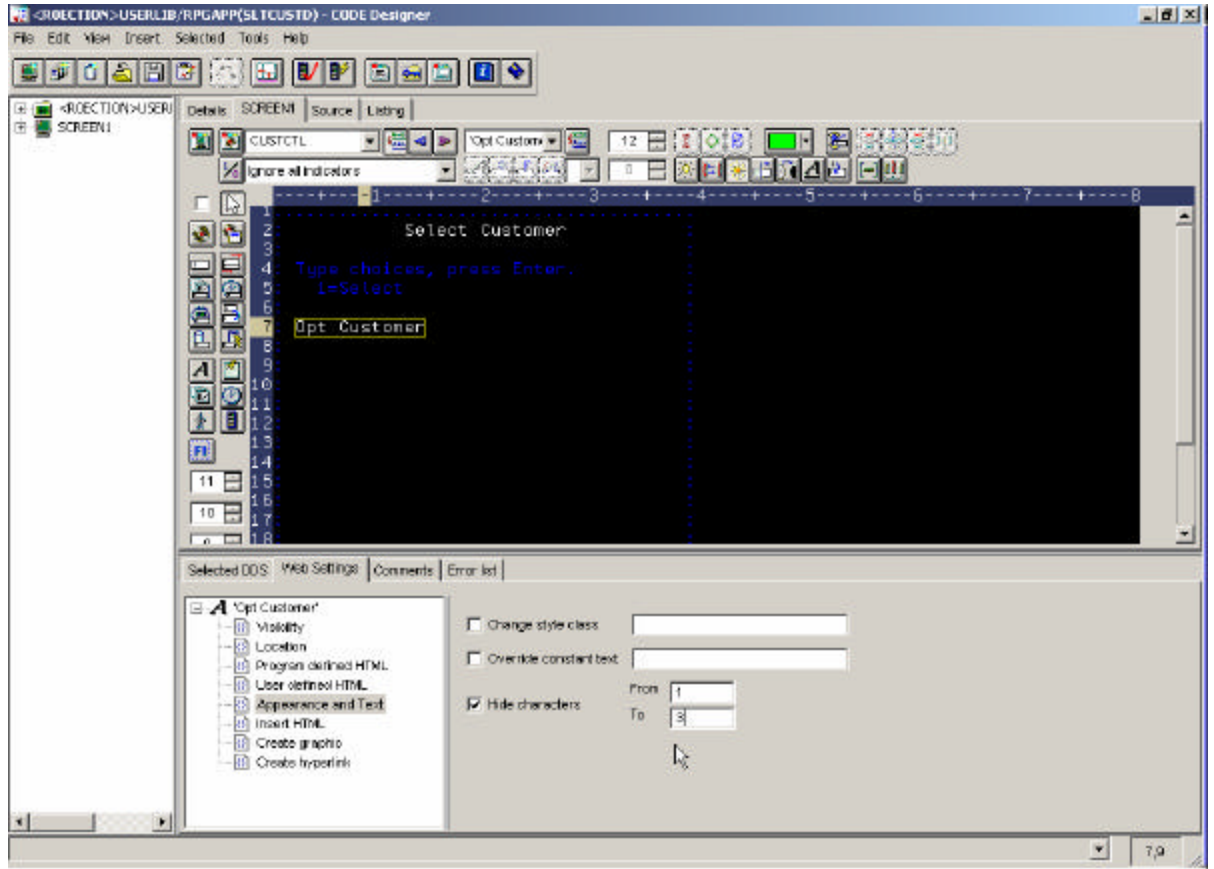
To shift focus to next record format:

- Click on the **arrow** on top of the design page, as shown in the **picture below**.



You will notice that the **top portion** of the design window is **now highlighted**, the bottom one only has half intensity. The highlighted portion is the one you can work with.

- Select the **OPT Customer** constant on the design page



- Select **Appearance and Text** from the list box on the WebSettings page
- Select the **Hide characters** check box
- Specify **1** in the **From** entry field
- Specify **3** in the **To** entry field

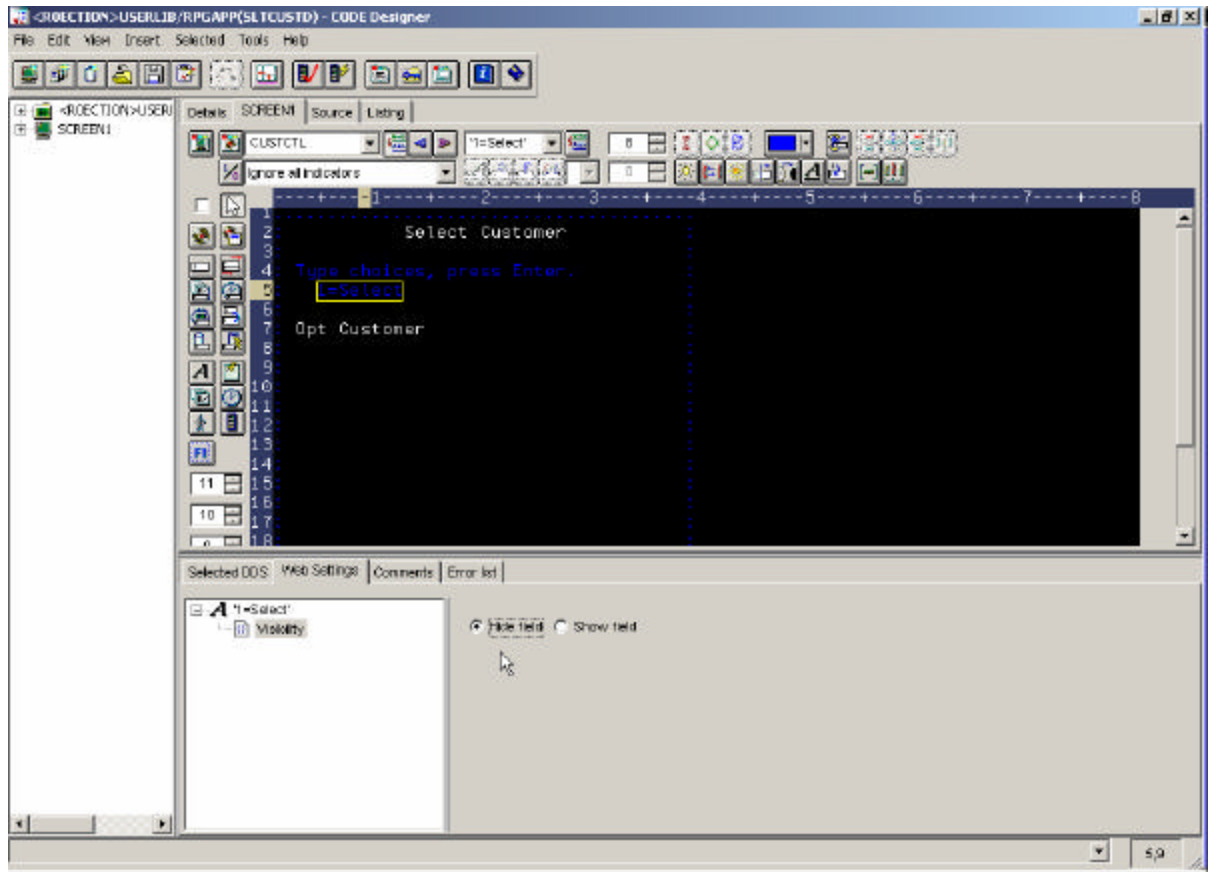
Now you need to hide the **instructions** on the panel that guide the user to put a **1** into the option field to select a specific customer.



\_\_ 5. **Hiding the *Select* instruction**

- Select the constant **1=Select** in the 5250 design panel

On the WebSettings page



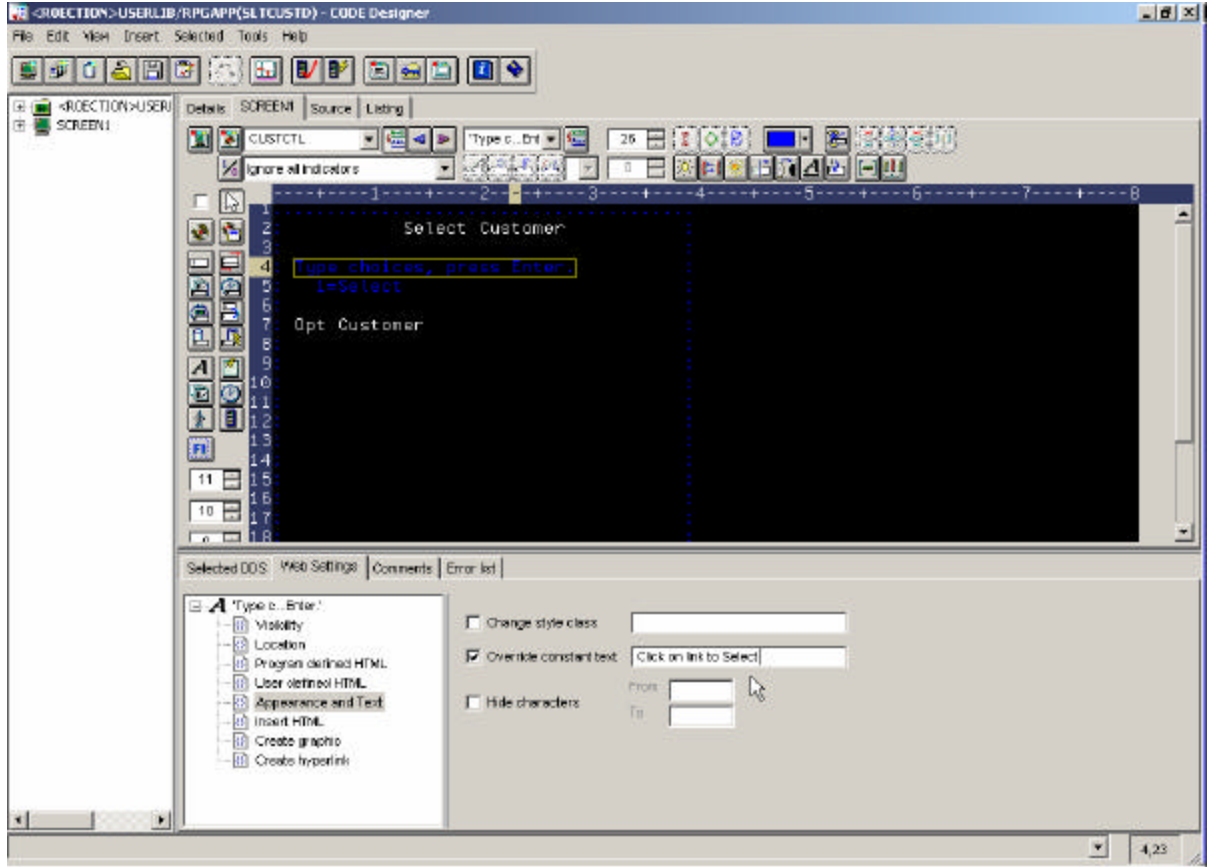
- Select **Visibility** from the list box
- Select the radio button **Hide field**

You also want to change the instruction text: *Type choices press Enter*

\_\_ 6. **Change instruction (Type choice press Enter)**

- Select the constant (*Type choices press Enter*) on the design page

Then on the Web Setting Notebook page



- Select *Appearance and Text* from the list box on the WebSettings page
- Select the check box *Override constant text* and key into the entry field to the right of the check box this new text: *Click on link to select*

Now all WebSettings are in place and you can go ahead and save the DDS source and reconvert this DDS member.

**\_\_ 7. Closing CODE designer and re-convert DDS member**

- Click on the **X** button (top right corner) of the CODE Designer dialog
- Specify **Yes** to save, when asked to do so.

You are done with CODE designer

- Go back to the **WDS** workbench and the **WebFacing** perspective.
- Select your **project WebFacedApp** in the **WebFacing** view
- Expand the **project +** if you can't see the DDS folder as part of the project
- Select the member **SLTCUSTD** you just changed
- Right mouse click on the **SLTCUSTD DDS member**
- Select **Convert** from the popup menu

Only this member will be converted

A conversion report will show up after the conversion is finished

Now **test** the new modified application with hyperlinks.

**\_\_ 8. Using the Websphere Application Server Express V5.0 test environment to show the changes**

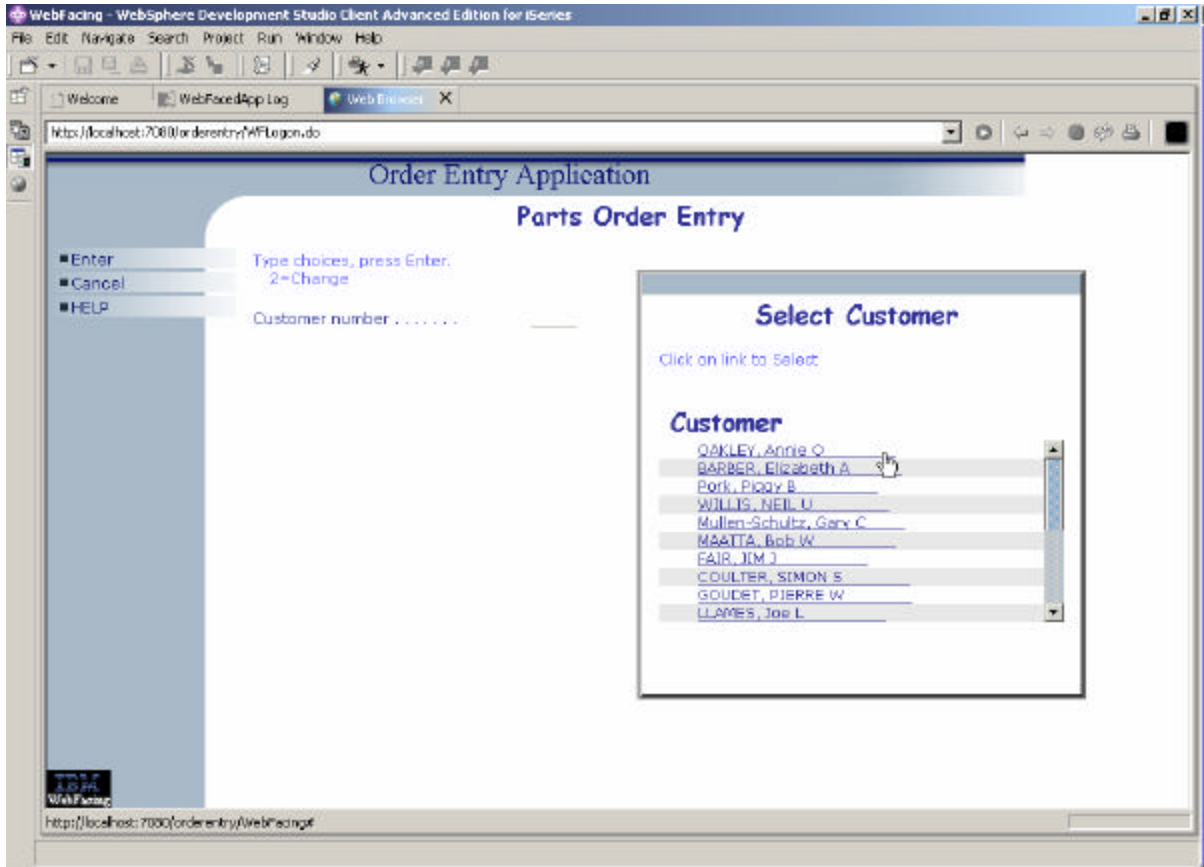
Right mouse click on the **WebFacedApp project** icon

Select **Run on server** from the pop up menu

In the Server Selection pop-up window **select WebSphere Express V5.0 Test Environment under User Existing Server Click Finish**

In your browser pane click on the top **Order Entry Application** link and sign in with your iSeries user name and password when prompted.

On Parts order entry screen prompt for the customer number, which should show the hyperlinks for selecting customer in the customer sub-file window.



Return to Index page by completing the order entry and exiting the application.

## 4. Adding ToolTips

HTML provides a title attribute which may be rendered by browsers to display the title as a "tool tip" (a short message that appears when the pointing device pauses over an object such as a field). This enhancement is easily added to a WebFacing Application.

### The following tasks will be covered in this lab:

- Specifying the DDS source member to work with
- Starting CODE Designer
- Working with WebSettings in CODE Designer
- Reconverting the application

As a result of this exercise, you will be able to enhance your WebFaced user interface for the browser environment.

### What You Should be Able to Do

As a result of this exercise you will be able to change the DDS source and add a "Tool Tip" to an Entry Field.

- Use CODE designer to access DDS source
- Use WebSettings to add web user interface changes
- Reconvert the changed DDS

### Using CODE designer to access DDS display file source

During this exercise you will use **Code designer** to add some **WebSettings** to the DDS source. We want you to improve the web **user interface** for the customer list window.

In this window, currently users have to enter a valid customer ID. Users may not know that pressing F4 brings up a list of valid customers.

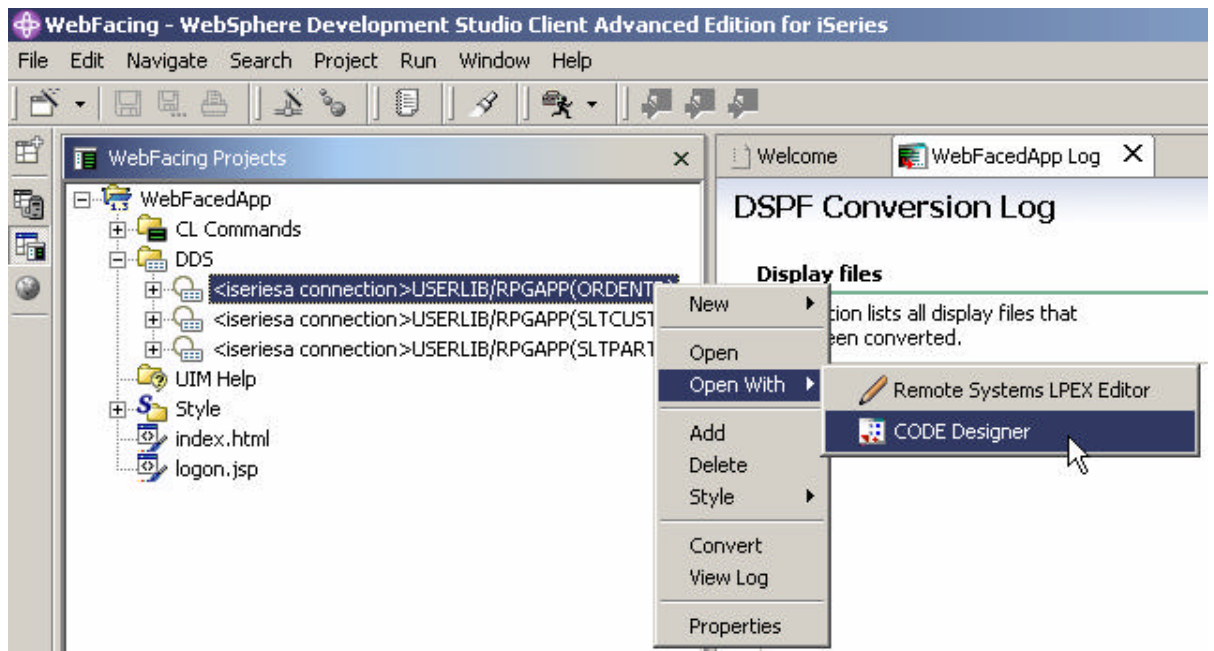
- You will enhance this application by adding a "Tool Tip" when the mouse cursor is hovered over the customer entry field.

\_\_ 1. Use **page designer components** to create a more attractive browser interface **Start the WDSc workbench**, if it is not up and running

- In the workbench, select the **WebFacing** perspective
- Make sure you are on the **WebFacing project** view and not the **navigator** view
- Expand **your project** in the tree view by clicking on the **+**

\_\_ 2. **Modifying DDS Member Through CODE Designer**

- Expand the **DDS folder**



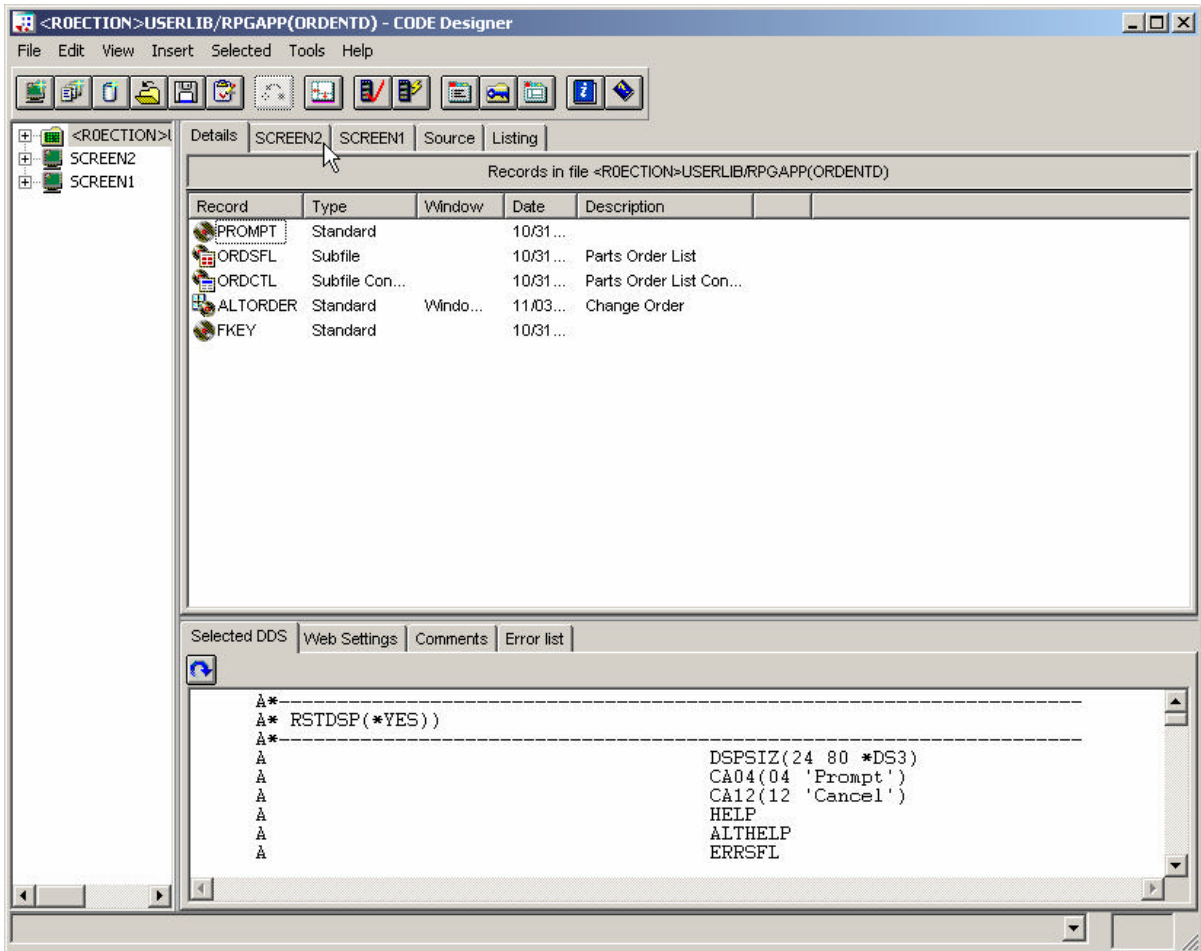
- Right mouse click on the **ORDENTD** member

Start the Code designer by:

- Selecting **Open With -->CODE Designer** from the pop up menu

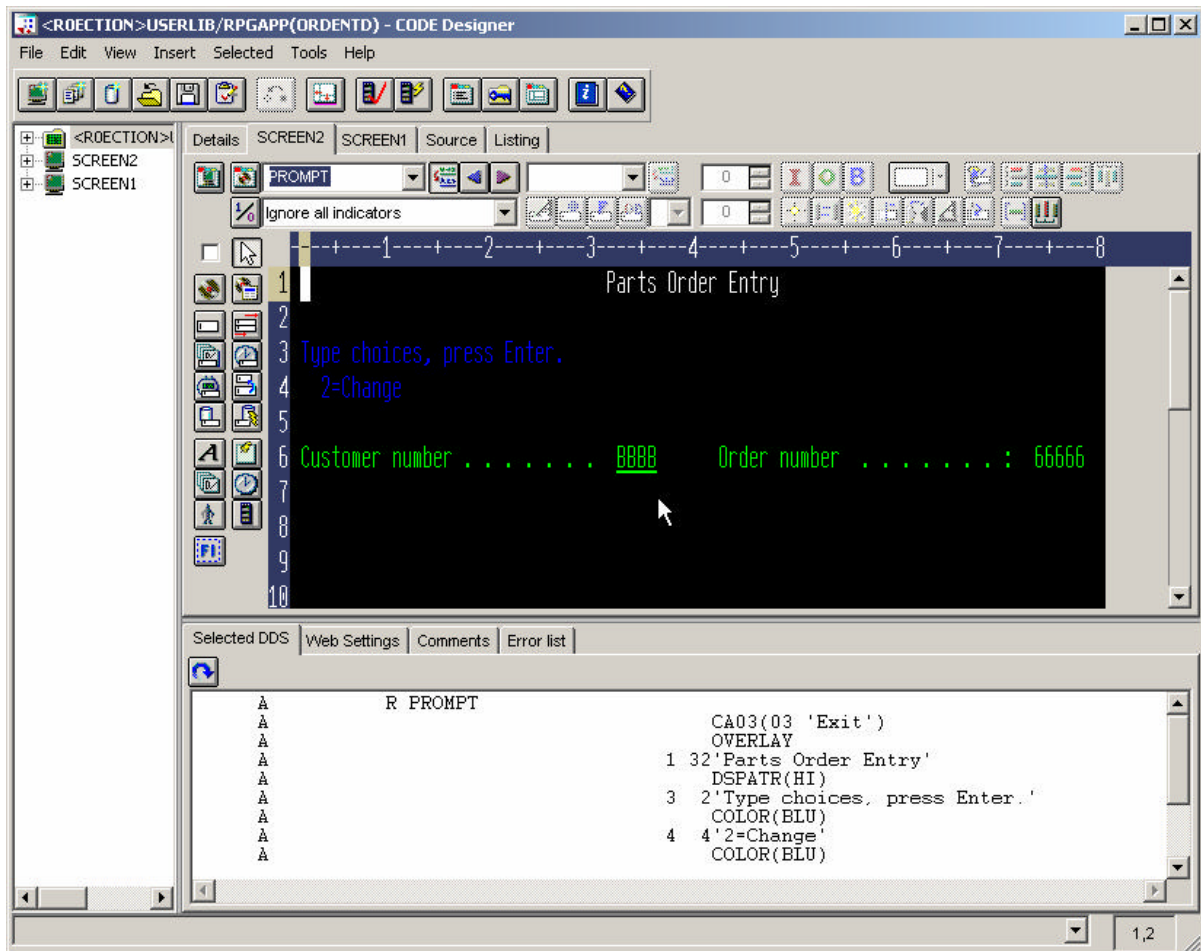
CODE designer is loading the member. This will take a moment.

Eventually you will see the **DDS member** loaded in CODE designer as shown below:



Select the **SCREEN2** tab on the notebook.

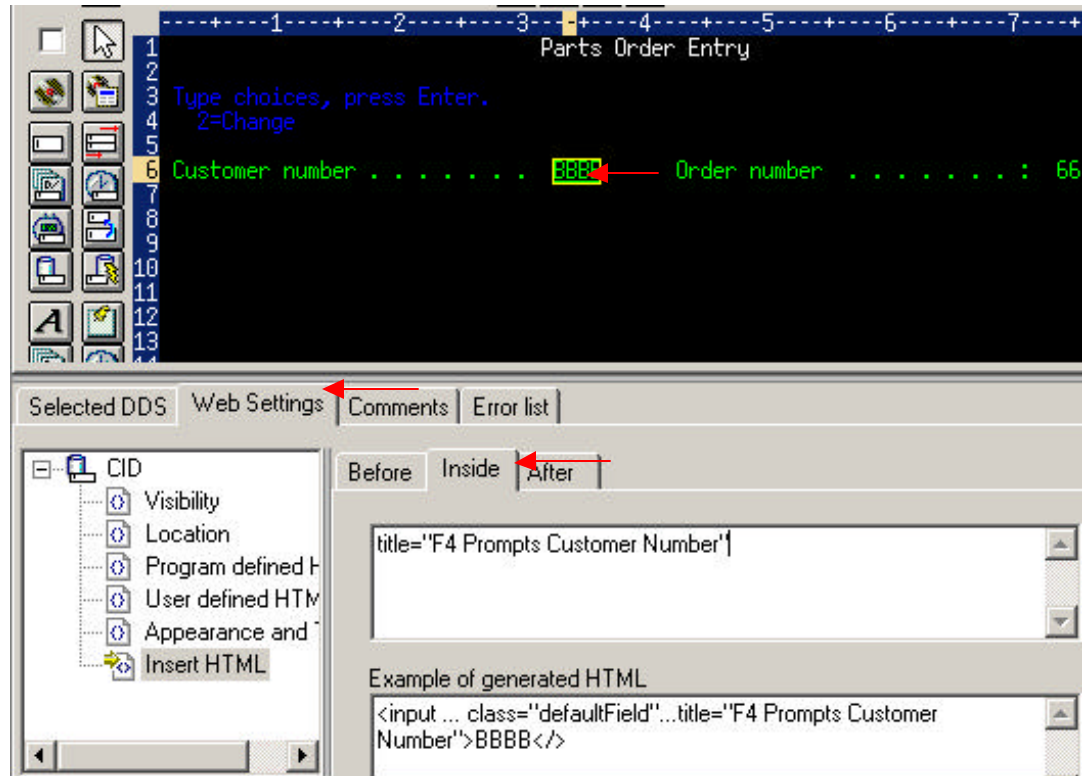
You should see a dialog similar to the figure below



### \_\_ 3. Modifying DDS Member Through CODE Designer

- Right Click on the Customer Number Entry Field
- **Select the WebSettings Tab**
- **Select Insert HTML**
- **Select the Inside Tab**
- Within the Inside tab type  
**title="F4 Prompts for Customer Number"**





- Save the changes by clicking on File -> Save from menu bar.
- Close Code Designer

\_\_\_ 4. If the **WebFACING perspective**, Select the project you have been working on in the previous exercise **WebFACINGApp**

- Expand this project by **clicking** on the **+** sign beside its icon in the tree view
- You should see an icon named **DDS** in the expanded tree

If you **don't** see a **DDS** folder:

You might be in the **Navigator** view,

- Check the **pane title bar**,

If it shows **Navigator**,

- Locate the **WebFACING projects** Tab at the **bottom** of the list pane
- Click on it.

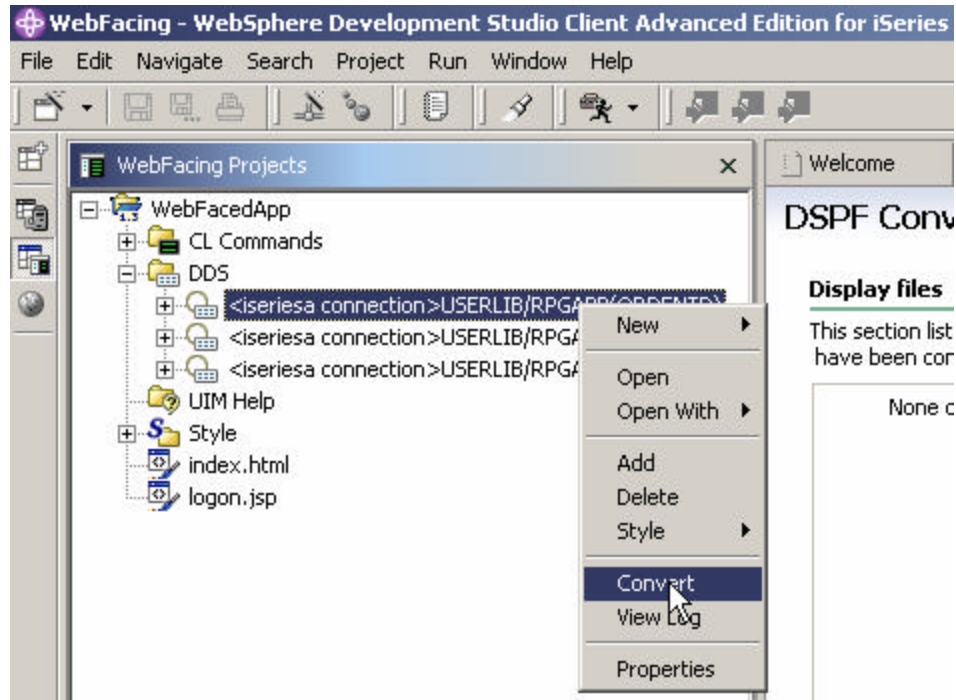
Now the **WebFACING projects** view should be active and you should be **able** to locate the **DDS** folder.

\_\_\_ 5. Expand the DDS folder by **clicking** on the **+** sign, beside it

You should see all **3 members** that you selected in the previous exercise.

Since you only made changes to one member it is only necessary to convert that one member.

Right mouse **click** on the **ORDENTD** member in the DDS folder



Select **Convert** from the pop up menu

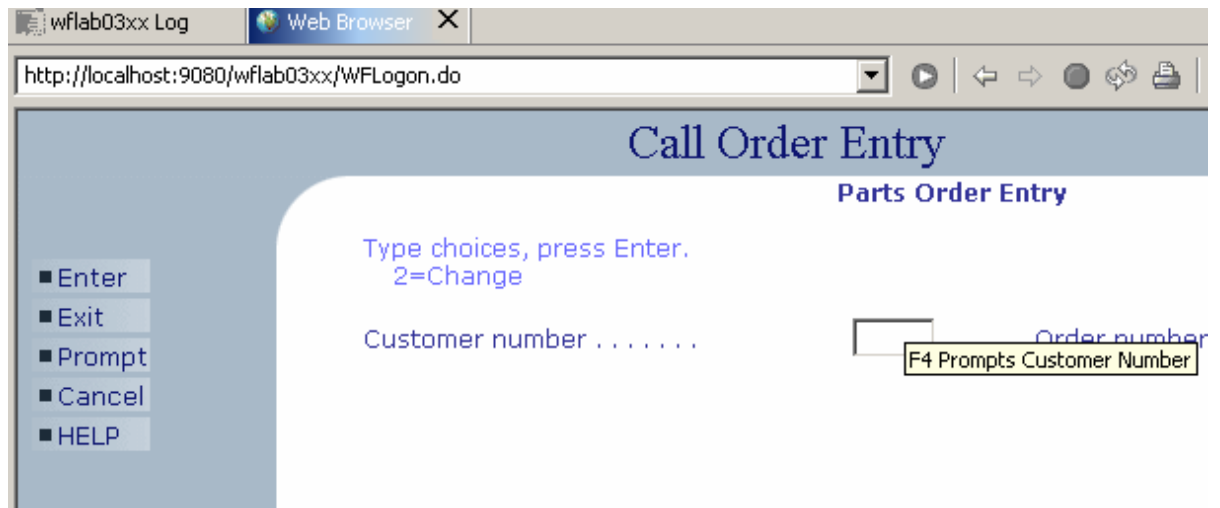
The conversion process starts.

(You **may** be prompted for a signon and password. Look for the screen and use your team id and password, if you don't see a prompt, it is OK, just continue.)

*Wait until the conversion finishes*

\_\_\_ 6. **Using the Websphere Application Server Express V5.0 test environment to show the changes**

- Right mouse click on the **WebFacedApp project** icon
- Select **Run on server** from the pop up menu
- In the Server Selection pop-up window **select WebSphere Express V5.0 Test Environment under User Existing Server Click Finish**
- In your browser pane click on the top **Order Entry Application** link and sign in with your iSeries user name and password when prompted.
- Position the Mouse Cursor over the Customer Number field. Notice how the “Tool Tip” is displayed.



Custom html can be added in a similar way to any field.

Return to Index page by completing the order entry and exiting the application.

## 5. Using Javascript to add a Clock

### Changing the Pagebuilder.jsp page using page designer

During this exercise you will use the Web tools in the WDSc workbench to add a a clock to the status bar of the browser window of the IBM Webfaced application.

All javascript in the Client Script\user folder is executed at page load time. This makes it very easy to add Javascript to an IBM Webfacing application. For this example we will add a Clock.js to the \ClientScript\user folder of the project. Clock.js will display the current date and time in the status bar of the browser

### The following tasks will be covered in this lab:

- Switching to the navigator view
- Locating the the ClientScript folder in the WebFacing project
- Adding Javascript to the application
- Testing the changed page

As a result of this exercise, you will enhance the IBM Webfaced Applicaiton

### What You Should be Able to Do

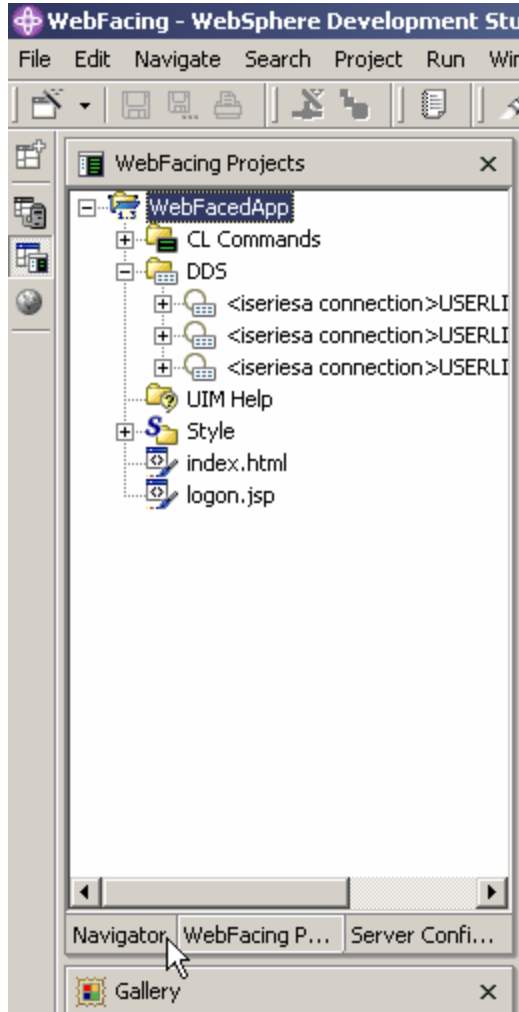
You will be able to locate the ClientScritp folder in your WebFacing project.

- Use the navigator view to identify objects created by the WebFacing tool
- Use a Wizard to insert new Javascript file
- Use **page designer components** to create a more attractive browser interface

## \_\_ 1. Switching to the navigator view

- Go to the WebFacing perspective

Switch to the Navigator view by selecting the Navigator tab

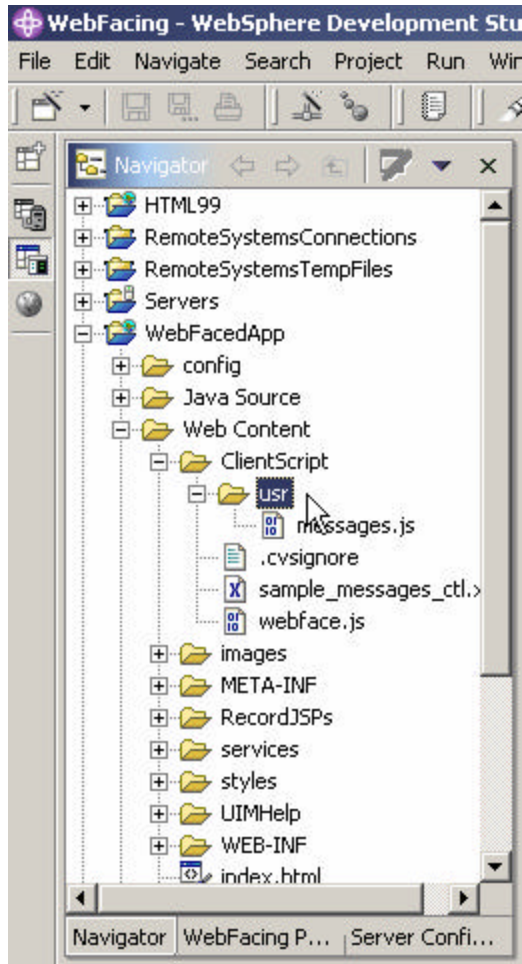


## \_\_ 2. Navigator view

You now have a view that shows you all the files in your WebFacing project. You will use this view to locate the ClientScript .

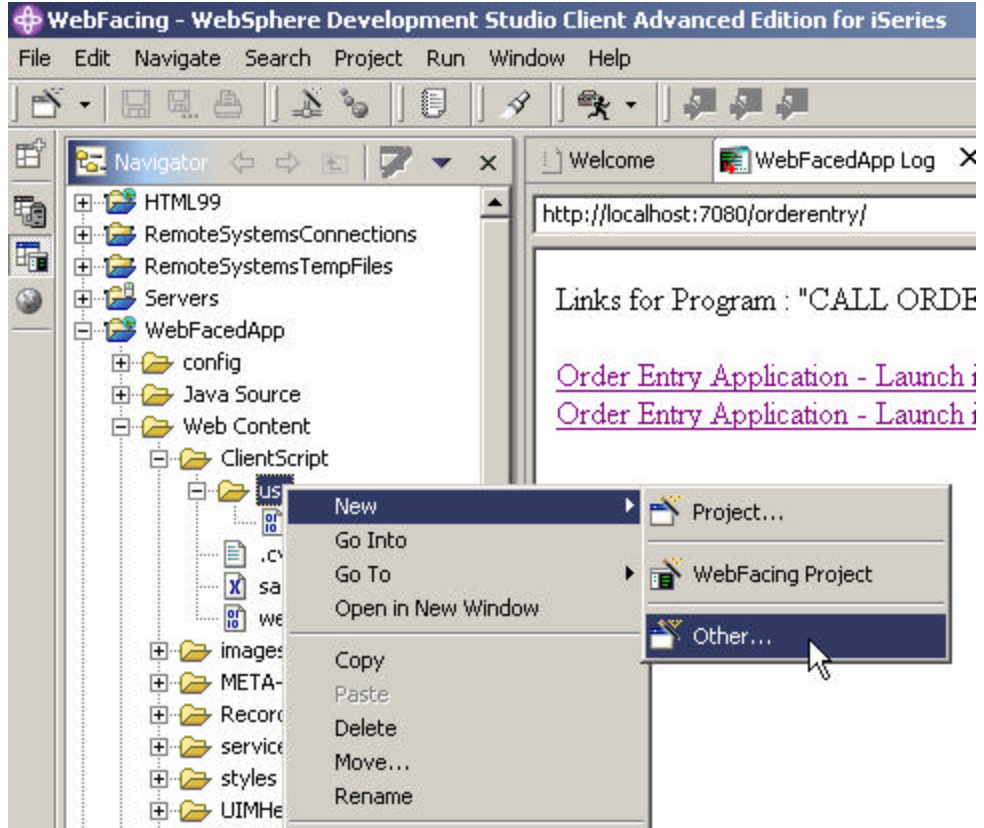
Expand the **WebFacedApp** project

- Expand **Web Content** folder
- Expand the **ClientScript** folder
- Expand the **user** folder

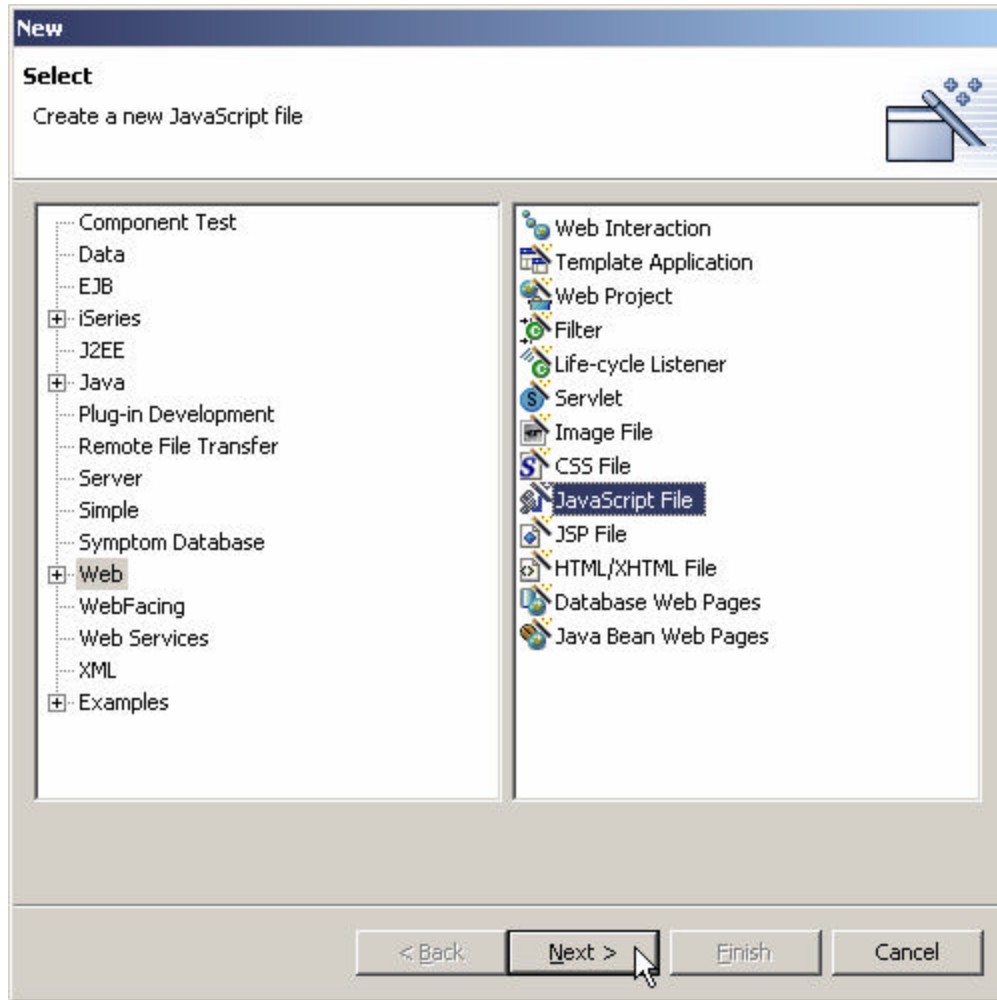


\_\_ 3. **Add Javascript file to user directory**

- Right click on the WebContent/ClientScript/user directory.
- From the Popup menu select New → Other

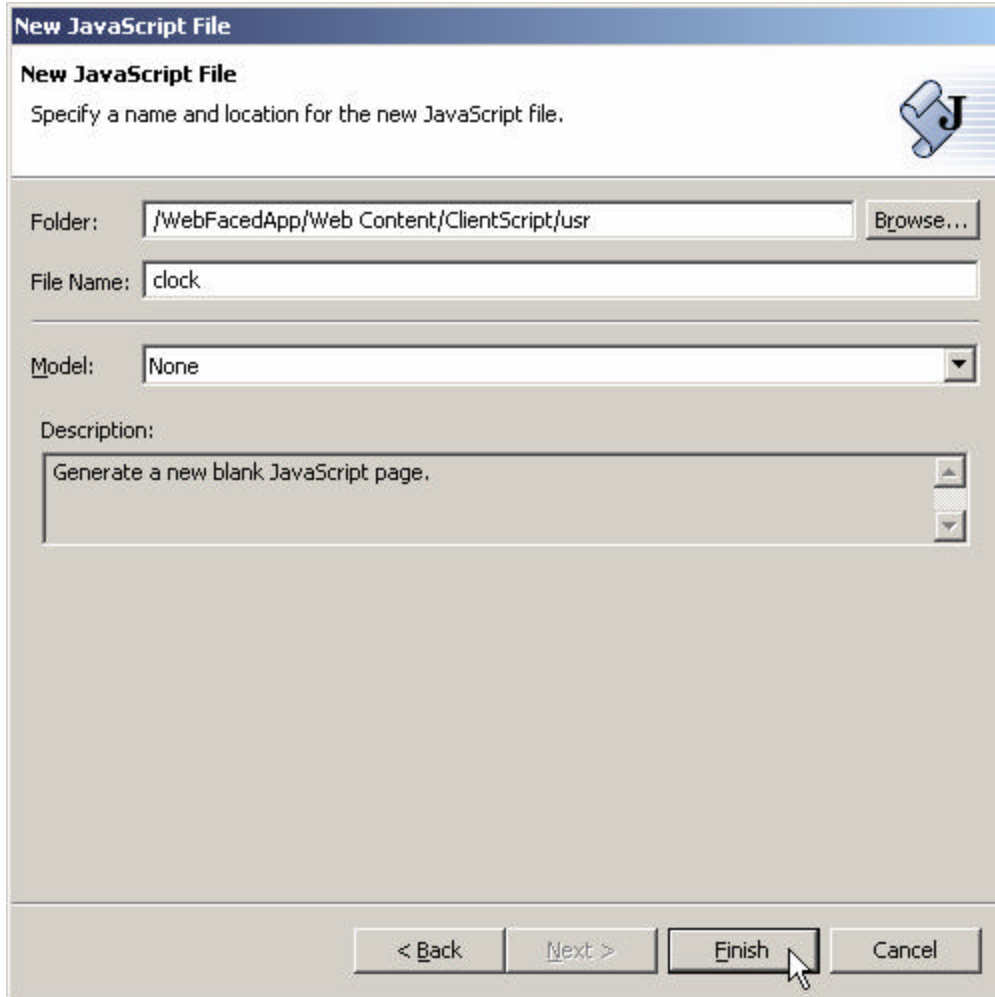


- From the Dialog Box select Web → JavaScript File



- Click Next





- For the Filename enter **Clock**
- Click Finish

#### \_\_ 4. **Modify Javascript File for desired functionality**

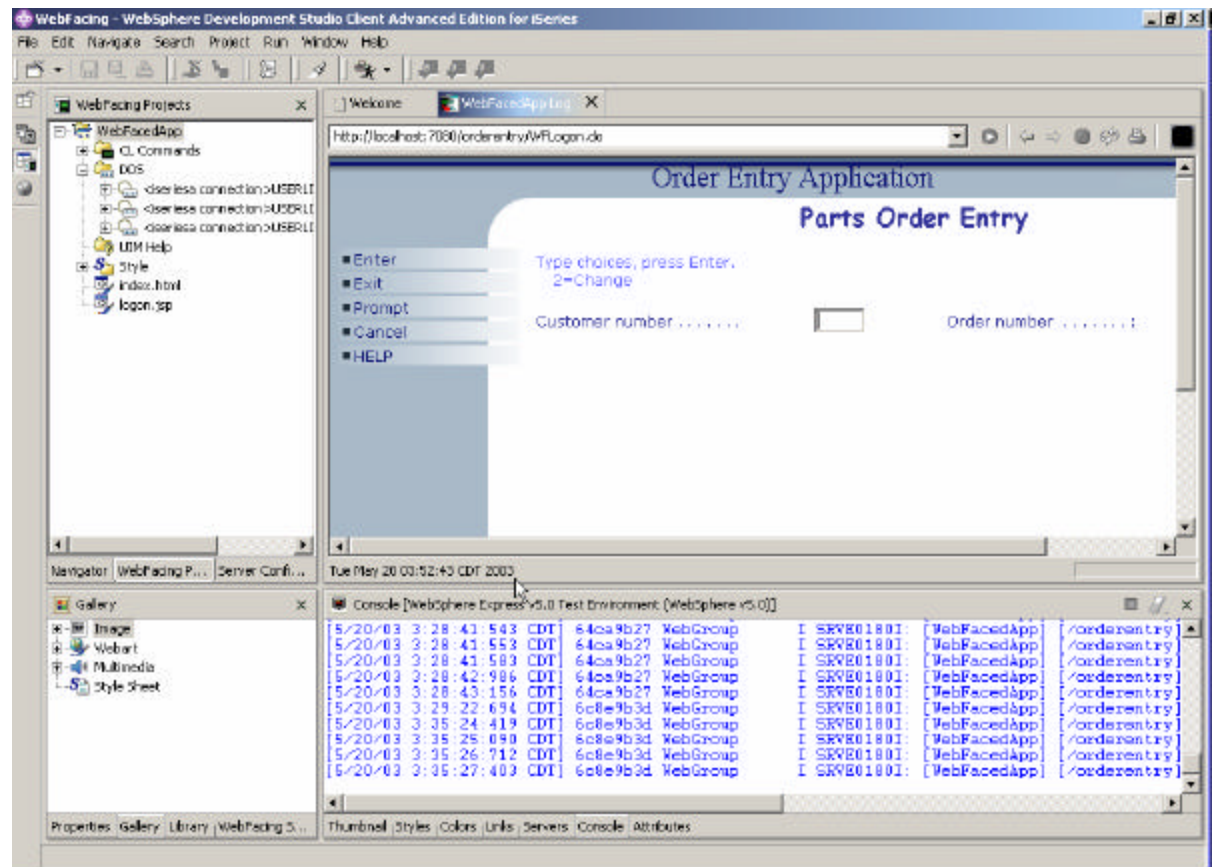
- Change the Clock.js file source code **EXACTLY** as shown below

```
*Clock.js X
// Clock.js
function doClock() {
    window.setTimeout( "doClock()", 1000 );
    today = new Date();
    self.status = today.toString();
}
doClock()
```

- Be sure your code matches exactly or the clock will get runtime errors
- Save the Changes by clicking on File -> Save Clock.js from menu bar

\_\_\_ 5. Using the WebSphere Application Server Express V5.0 test environment to show the changes

- Go back to WebFacing Projects view by clicking on WebFacing Projects tab
- Right mouse click on the **WebFacedApp** project icon
- Select **Run on server** from the pop up menu
- In the Server Selection pop-up window **select WebSphere Express V5.0 Test Environment under User Existing Server Click Finish**
- In your browser pane click on the top **Order Entry Application** link and sign in with your iSeries user name and password when prompted.
- Notice that in the status bar of the browser window the clock is displayed and is updated every second.



**Congratulations, you have completed Customizing the WebFaced Application Lab.**