

JAVASERVER FACES COURSE

EXERCISE

ACTION LISTENER HANDLING IN JSF



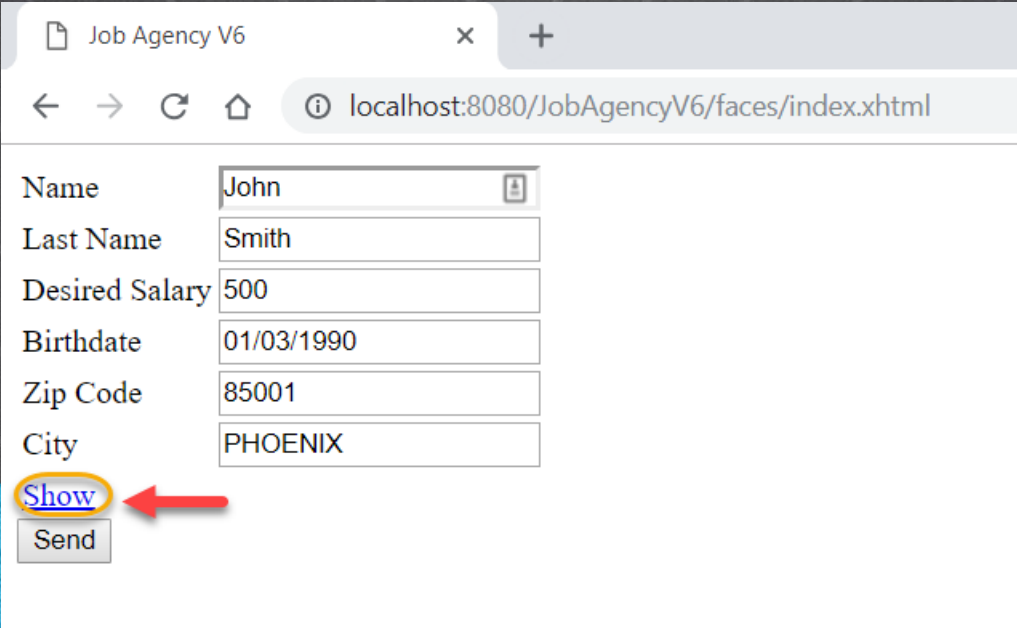
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EXERCISE OBJECTIVE

The objective of this exercise is to put the ActionListener concept into practice.

We will configure a comments field, which will be displayed and hidden dynamically associating an event of type ActionListener. The result is shown below:



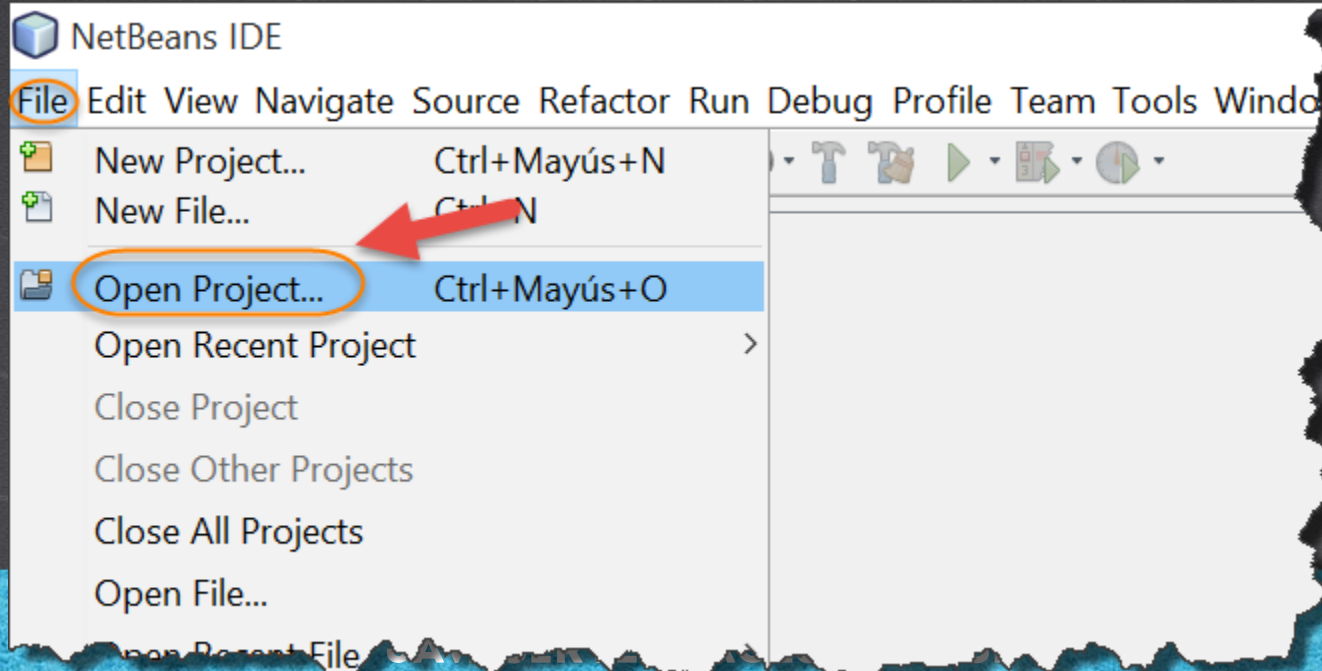
The screenshot shows a web browser window with the title 'Job Agency V6' and the address bar displaying 'localhost:8080/JobAgencyV6/faces/index.xhtml'. The form contains the following fields and values:

Field	Value
Name	John
Last Name	Smith
Desired Salary	500
Birthdate	01/03/1990
Zip Code	85001
City	PHOENIX

Below the fields are two buttons: 'Show' and 'Send'. A red arrow points to the 'Show' button, which is highlighted with a yellow circle.

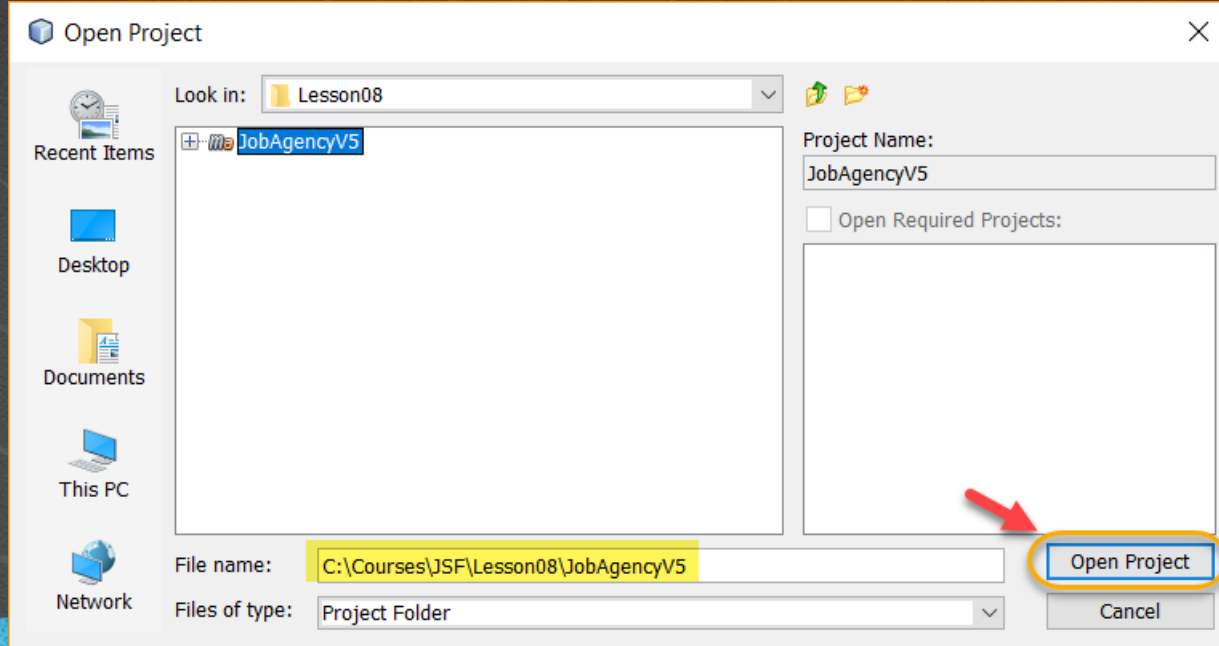
1. OPEN THE PROJECT

We open the JobAgencyV5 project, just in case we do not have it open:



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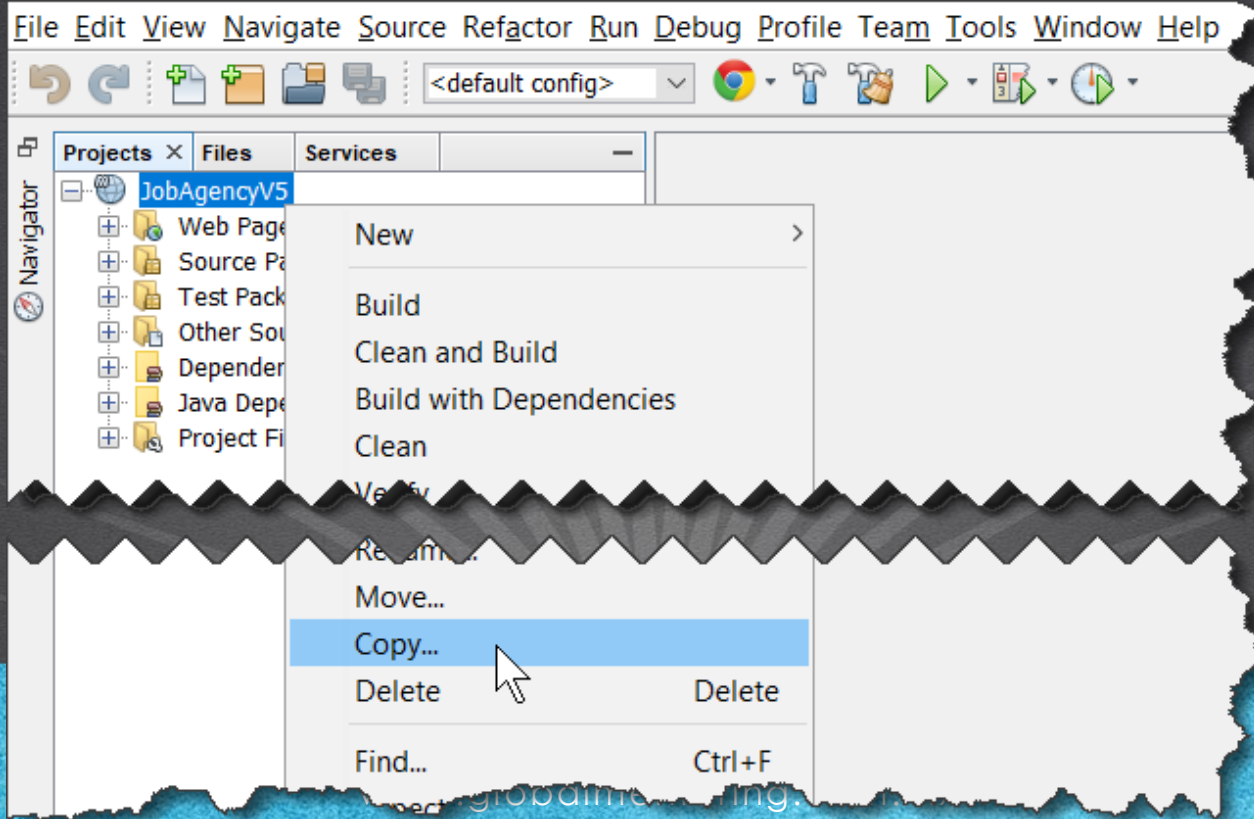


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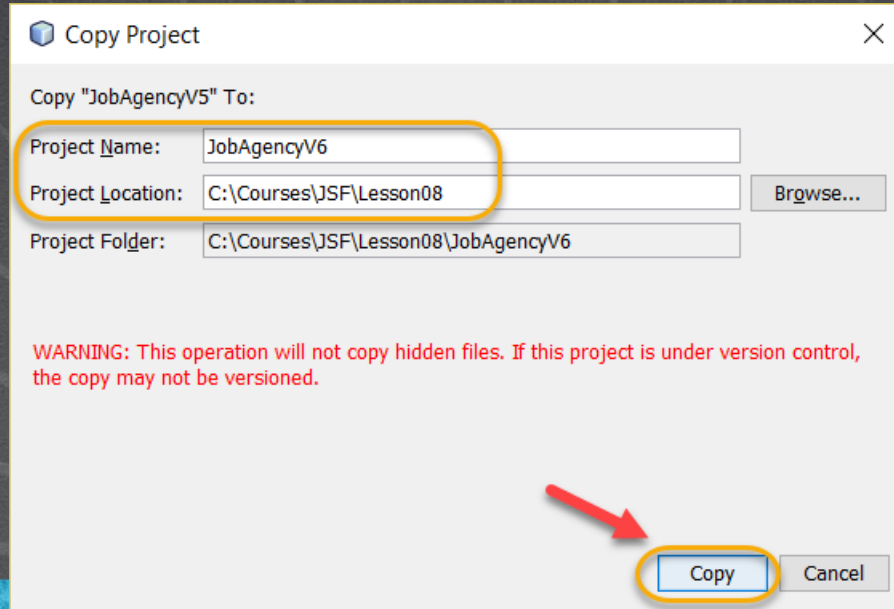
2. COPY THE PROJECT

We copy the JobAgencyV5 project:



2. COPY THE PROJECT

We copy the JobAgencyV5 project and rename it to JobAgencyV6 and deposit it in the new route shown:



Copy Project

Copy "JobAgencyV5" To:

Project Name: JobAgencyV6

Project Location: C:\Courses\JSF\Lesson08 Browse...

Project Folder: C:\Courses\JSF\Lesson08\JobAgencyV6

WARNING: This operation will not copy hidden files. If this project is under version control, the copy may not be versioned.

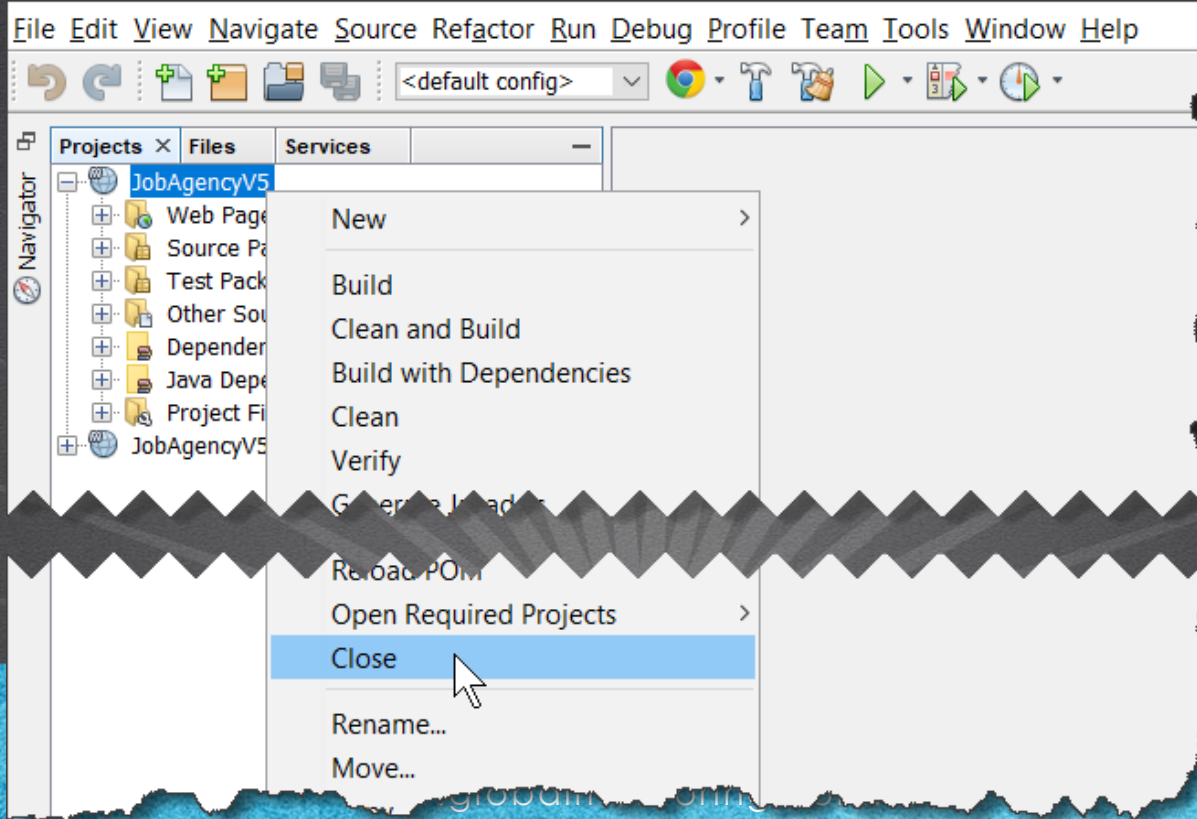
Copy Cancel

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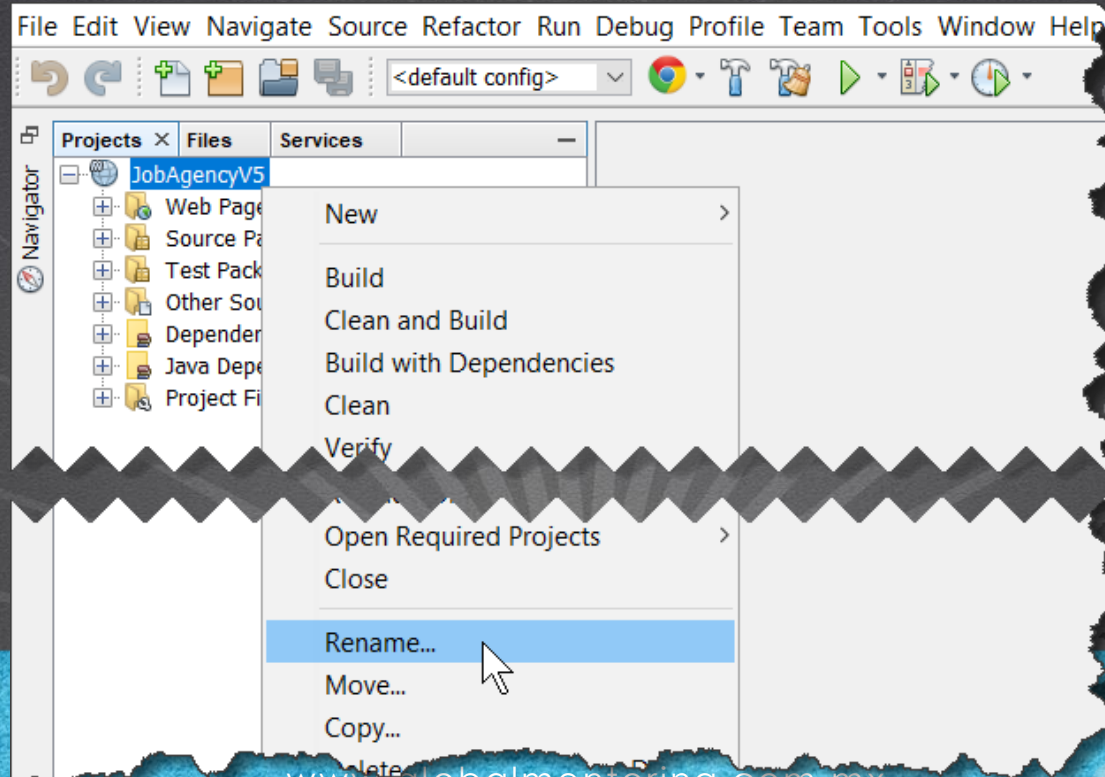
3. CLOSE THE PROJECT

We closed the previous project, and left only the new open :



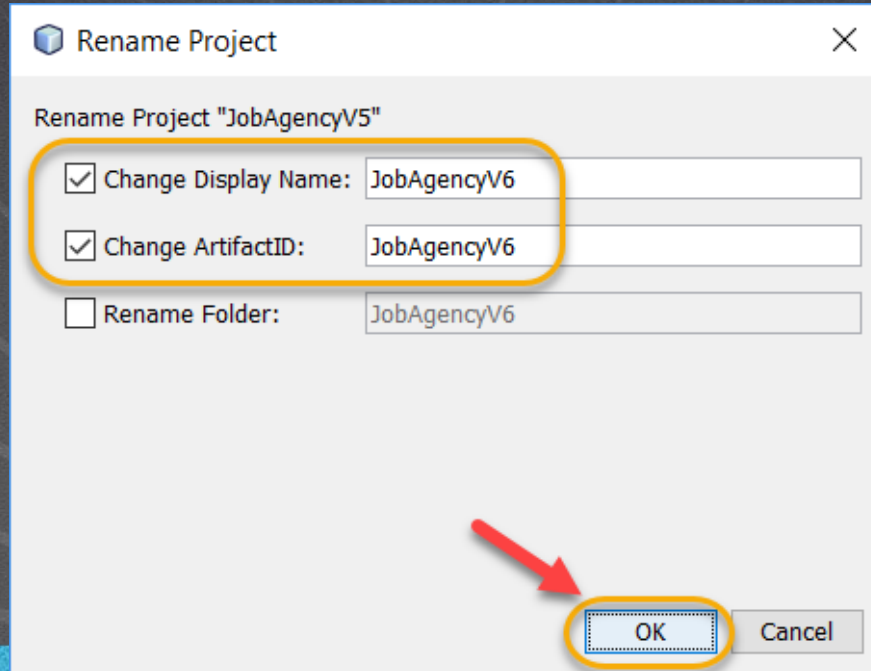
4. RENAME THE PROJECT

We changed the name of the project to JobAgencyV6 :



4. RENAME THE PROJECT

We changed the name of the project to JobAgencyV6 :



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5. MODIFY THE JAVA CLASS

Modify the class Candidato.java, add the comment field:

```
private String comment;
```

Generate the getters and setters methods for this new field.



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5. MODIFY THE CODE

Candidate.java:

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```
package beans.model;

import java.util.Date;
import javax.inject.Named;
import javax.enterprise.context.RequestScoped;
import org.apache.logging.log4j.*;

@Named
@RequestScoped
public class Candidate {

    Logger log = LogManager.getRootLogger();

    private String name;
    private String lastName;
    private int desiredSalary;
    private Date birthdate;
    private String zipCode;
    private String city;
    private String comment;

    public Candidate() {
        log.info("Creating the Candidate object");
        this.setName("Introduce your name");
    }

    public String getName() {
        return name;
    }
}
```


5. MODIFY THE CODE

Candidate.java:

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```
public void setName(String name) {
    this.name = name;
    log.info("Modifying the name property:" + this.name);
}

public String getLastName() {
    return lastName;
}

public void setLastName(String lastName) {
    this.lastName = lastName;
    log.info("Modifying the lastName property:" + this.name);
}

public int getDesiredSalary() {
    return desiredSalary;
}

public void setDesiredSalary(int desiredSalary) {
    this.desiredSalary = desiredSalary;
    log.info("Modifying the desiredSalary property:" + this.desiredSalary);
}

public Date getBirthdate() {
    return birthdate;
}
```

5. MODIFY THE CODE

[Candidate.java:](#)

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```
public void setBirthdate(Date birthdate) {
    this.birthdate = birthdate;
    log.info("Modifying the birthdate property:" + this.birthdate);
}

public String getZipCode() {
    return zipCode;
}

public void setZipCode(String zipCode) {
    this.zipCode = zipCode;
    log.info("Modifying the zipCode property:" + this.zipCode);
}

public String getCity() {
    return city;
}

public void setCity(String city) {
    this.city = city;
    log.info("Modifying the city property:" + this.city);
}

public String getComment() {
    return comment;
}
```

5. MODIFY THE CODE

[Candidate.java:](#)

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```
public void setComment(String comment) {  
    this.comment = comment;  
}  
}
```


6. MODIFY THE XHTML FILE

Modify the index.xhtml file to hide / show the comment field:

```
<tr>
  <td>
    <h:commandLink actionListener="#{vacantForm.hideComment}"
      immediate="true" rendered="#{!vacantForm.commentSent}"
      value="#{msgs['vacantForm.show']}" />
    <h:commandLink actionListener="#{vacantForm.hideComment}"
      immediate="true" rendered="#{vacantForm.commentSent}"
      value="#{msgs['vacantForm.hide']}" />
  </td>
</tr>
```

6. MODIFY THE XHTML

Modify the index.xhtml file to add the comment field:

```
<h:panelGroup rendered="#{vacantForm.commentSent}">
  <table>
    <tr>
      <td><h:outputLabel for="comment" value="#{msgs['vacantForm.comment']}" /></td>
    </tr>
    <tr>
      <td><h:inputTextarea id="comment" cols="50" rows="10" value="#{candidate.comment}"
/></td>
    </tr>
  </table>
</h:panelGroup>
```


6. MODIFY THE CODE

[index.xhtml:](#)

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```
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml"
      xmlns:h="http://java.sun.com/jsf/html"
      xmlns:f="http://xmlns.jcp.org/jsf/core">
  <h:head>
    <title>Job Agency V6</title>
  </h:head>
  <h:body>
    <h:form id="vacantForm">

      <h:messages globalOnly="true" ></h:messages>

      <table>
        <tr>
          <td><h:outputLabel for="name" value="#{msgs['vacantForm.name']}" /></td>
          <td><h:inputText id="name" required="true" value="#{candidate.name}" /></td>
          <td><h:message for="name" /></td>
        </tr>
        <tr>
          <td><h:outputLabel for="lastName" value="#{msgs['vacantForm.lastName']}" /></td>
          <td><h:inputText id="lastName" required="true" value="#{candidate.lastName}" /></td>
          <td><h:message for="lastName" /></td>
        </tr>
      </table>
    </h:form>
  </h:body>
</html>
```


6. MODIFY THE CODE

[index.xhtml:](#)

Click to download

```
<tr>
  <td><h:outputLabel for="desiredSalary" value="#{msgs['vacantForm.desiredSalary']}" /></td>
  <td><h:inputText id="desiredSalary" required="true"
    value="#{candidate.desiredSalary}"
    <f:validateLongRange minimum="500" maximum="5000"/>
  </h:inputText></td>
  <td><h:message for="desiredSalary" /></td>
</tr>
<tr>
  <td><h:outputLabel for="birthdate" value="#{msgs['vacantForm.birthdate']}" /></td>
  <td><h:inputText id="birthdate" required="true"
    value="#{candidate.birthdate}"
    <f:convertDateTime pattern="MM/dd/yyyy" />
  </h:inputText></td>
  <td><h:message for="birthdate" /></td>
</tr>
<tr>
  <td><h:outputLabel for="zipCode" value="#{msgs['vacantForm.zipCode']}" /></td>
  <td><h:inputText id="zipCode" immediate="true"
    onchange="this.form.submit()" required="true"
    value="#{candidate.zipCode}"
    valueChangeListener="#{vacantForm.zipCodeListener}" /></td>
  <td><h:message for="zipCode" /></td>
</tr>
```

6. MODIFY THE CODE

[index.xhtml:](#)

Click to download

```
<tr>
  <td><h:outputLabel for="city" value="#{msgs['vacantForm.city']}" /></td>
  <td><h:inputText id="city" required="true"
    value="#{candidate.city}" /></td>
  <td><h:message for="city" /></td>
</tr>
</table>
<table>
  <tr>
    <td>
      <h:commandLink actionListener="#{vacantForm.hideComment}"
        immediate="true" rendered="#{!vacantForm.commentSent}"
        value="#{msgs['vacantForm.show']}" />
      <h:commandLink actionListener="#{vacantForm.hideComment}"
        immediate="true" rendered="#{vacantForm.commentSent}"
        value="#{msgs['vacantForm.hide']}" />
    </td>
  </tr>
</table>
<h:panelGroup rendered="#{vacantForm.commentSent}">
  <table>
    <tr>
      <td><h:outputLabel for="comment" value="#{msgs['vacantForm.comment']}" /></td>
    </tr>
    <tr>
      <td><h:inputTextarea id="comment" cols="50" rows="10" value="#{candidate.comment}" /></td>
    </tr>
  </table>
</h:panelGroup>
```

6. MODIFY THE CODE

[index.xhtml:](#)

Click to download

```
<h:commandButton action="#{vacantForm.send}" value="#{msgs['vacantForm.send']}" />
</h:form>
</h:body>
</html>
```


7. MODIFY A JAVA CLASS

Modify the VacantForm.java class to process the action method to show / hide the comment field.

Add the following field for VacanteForm.java:

```
private boolean commentSent = false;
```

We add the getter / setter methods for this new field.

7. MODIFY A JAVA CLASS

Add the following method in the VacantForm.java class:

```
public void hideComment (ActionEvent actionEvent) {  
    this.commentSent = !this.commentSent;  
}
```

This is the ActionListener method that is called when the user clicks on the show / hide link. The ActionListener simply hides all the components of the h:panelGroup.

And add the following libraries to the VacanteForm.java class:

```
import javax.faces.event.ActionEvent;
```

7. MODIFY THE FILE

VacanteForm.java:

Click to download

```
package beans.backing;

import beans.model.Candidate;
import javax.inject.*;
import javax.enterprise.context.RequestScoped;
import javax.faces.application.FacesMessage;
import javax.faces.component.*;
import javax.faces.context.FacesContext;
import javax.faces.event.*;
import org.apache.logging.log4j.*;

@Named
@RequestScoped
public class VacantForm {

    Logger log = LogManager.getRootLogger();

    @Inject
    private Candidate candidate;

    private boolean commentSent = false;

    public VacantForm() {
        log.info("Creating VacantForm object");
    }

    public void setCandidate(Candidate candidate) {
        this.candidate = candidate;
    }
}
```


7. MODIFY THE FILE

VacanteForm.java:

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```
public String send() {
    log.info("send() Name=" + this.candidate.getName());
    log.info("send() Desired Salary=" + this.candidate.getDesiredSalary());

    if (this.candidate.getName().equals("John")) {

        if (this.candidate.getLastName().equals("Smith")) {
            String msg = "Thanks, but John Smith is already working with us.";
            FacesMessage facesMessage = new FacesMessage(FacesMessage.SEVERITY_ERROR, msg, msg);
            FacesContext facesContext = FacesContext.getCurrentInstance();
            String componentId = null; //This is a global message
            facesContext.addMessage(componentId, facesMessage);
            return "index";
        }
        return "success";//success.xhtml
    } else {
        return "failure"; //failure.xhtml
    }
}
```

7. MODIFY THE FILE

VacanteForm.java:

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```
//Method of type Value Change Listener
public void zipCodeListener(ValueChangeEvent valueChangeEvent) {
    FacesContext facesContext = FacesContext.getCurrentInstance();
    UIViewRoot uiViewRoot = facesContext.getViewRoot();
    String newZipCode = (String) valueChangeEvent.getNewValue();
    if ("85001".equals(newZipCode)) {
        log.info("Modify the city value dynamically with ValueChangeListener");
        //We use the name of the form of index.xhtml to find the component
        UIInput cityInputText = (UIInput) uiViewRoot.findComponent("vacantForm:city");
        String city = "PHOENIX";
        cityInputText.setValue(city);
        cityInputText.setSubmittedValue(city);
        //Return the response
        facesContext.renderResponse();
    }
}

public void hideComment(ActionEvent actionEvent) {
    this.setCommentSent(!this.commentSent);
    log.info("Executing actionEvent hideComment");
}

public boolean isCommentSent() {
    return commentSent;
}
```

7. MODIFY THE FILE

[VacanteForm.java:](#)

Click to download

```
public void setCommentSent(boolean commentSent) {  
    this.commentSent = commentSent;  
}  
}
```


8. MODIFY A PROPERTIES FILE

We modify the file of messages.properties and messages_es.properties to add the labels of the new field:

```
vacantForm.comment = Comment  
vacantForm.show = Show  
vacantForm.hide = Hide
```

8. MODIFY THE FILE

[messages.properties:](#)

Click to download

```
vacantForm.name=Name  
vacantForm.lastName=Last Name  
vacantForm.desiredSalary=Desired Salary  
vacantForm.birthdate=Birthdate  
vacantForm.zipCode=Zip Code  
vacantForm.city=City  
vacantForm.send=Send  
vacantForm.comment=Comment  
vacantForm.show=Show  
vacantForm.hide=Hide
```

9. MODIFY THE FILE

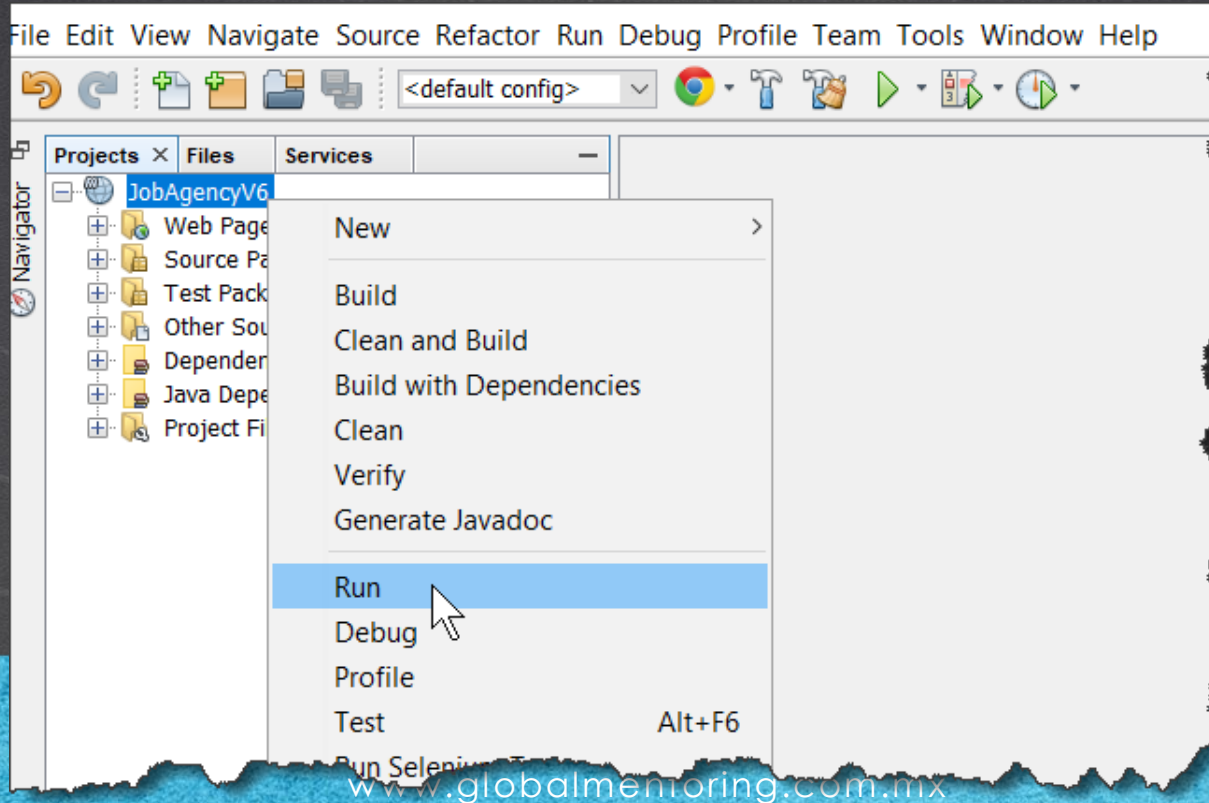
[messages_es.properties:](#)

Click to download

```
vacantForm.name=Nombre  
vacantForm.lastName=Apellido  
vacantForm.desiredSalary=Sueldo Deseado  
vacantForm.birthdate=Fecha de nacimiento  
vacantForm.zipCode=Codigo Postal  
vacantForm.city=Ciudad  
vacantForm.send=Enviar  
vacantForm.comment=Comentario  
vacantForm.show=Mostrar  
vacantForm.hide=Ocultar
```

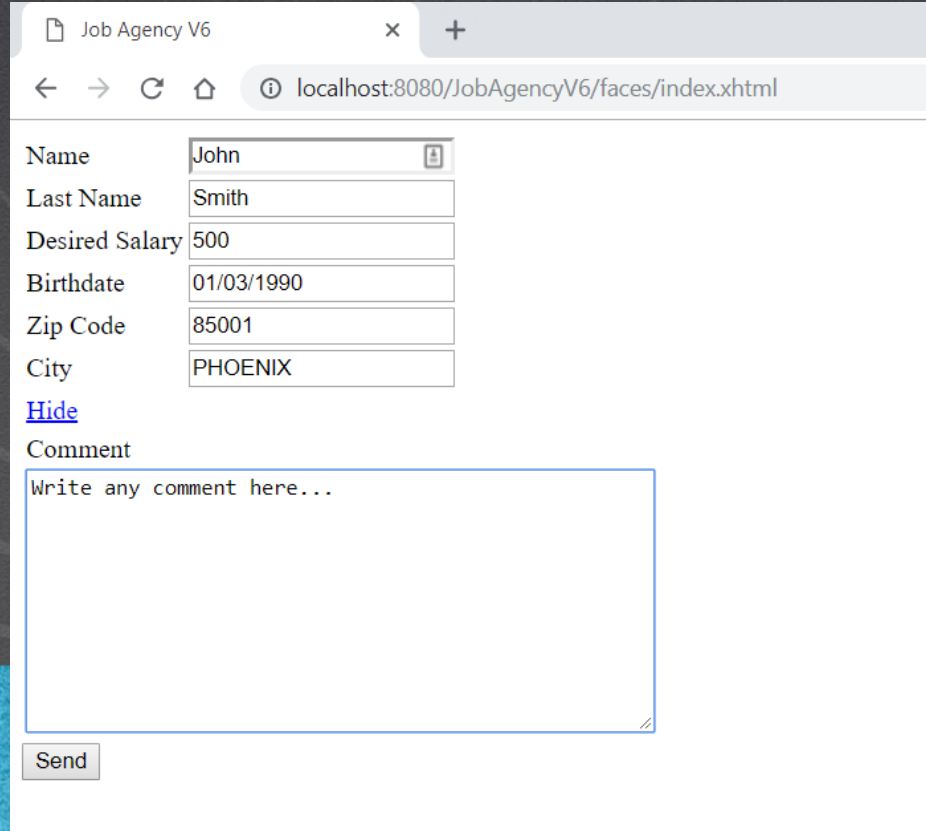

10. EXECUTE THE PROJECT

Execute the project:



10. EXECUTE THE PROJECT

The result is as follows:



Job Agency V6

localhost:8080/JobAgencyV6/faces/index.xhtml

Name

Last Name

Desired Salary

Birthdate

Zip Code

City

[Hide](#)

Comment

Write any comment here...

EXERCISE CONCLUSION

- With this exercise we have added the ActionListener concept with JSF.
- We add a new field called comment, which is shown or hidden depending on the requested action, and it has been processed by means of an ActionListener type method.
- With this we have already the bases of the management of actions with JSF.



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ONLINE COURSE

JAVASERVER FACES (JSF)

By: Eng. Ubaldo Acosta



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