

JAVASERVER FACES COURSE

EXERCISE

CONVERTERS IN JSF

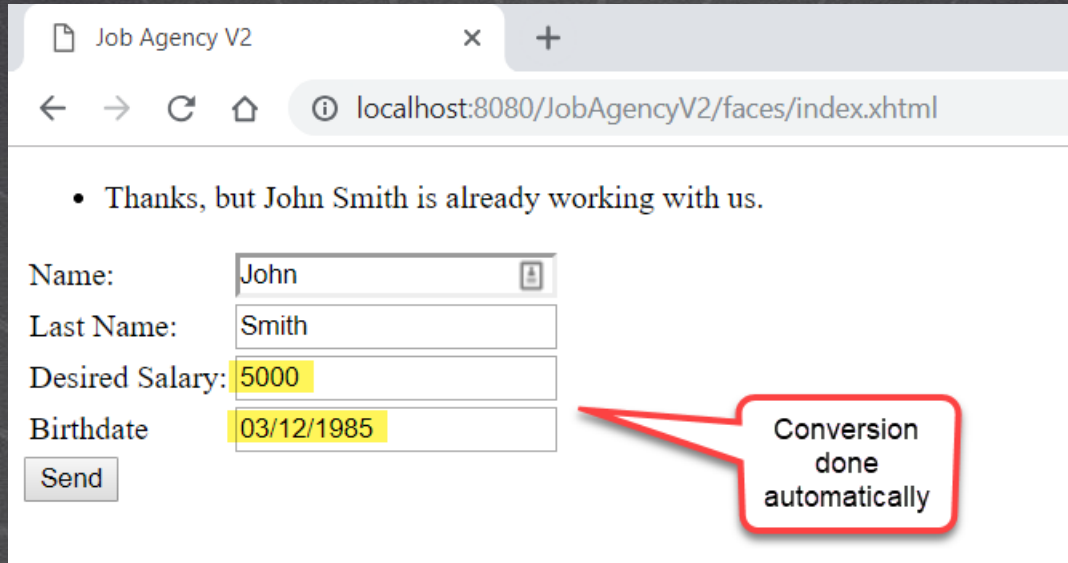


JAVASERVER FACES COURSE

www.globalmentoring.com.mx

EXERCISE OBJECTIVE

Modify the JSF project to implement the management of Converters in JSF. At the end we should observe the following:



The screenshot shows a web browser window with the title 'Job Agency V2' and the address bar displaying 'localhost:8080/JobAgencyV2/faces/index.xhtml'. The page content includes a message: '• Thanks, but John Smith is already working with us.' Below the message is a form with the following fields: 'Name:' with a text input containing 'John', 'Last Name:' with a text input containing 'Smith', 'Desired Salary:' with a text input containing '5000', and 'Birthdate' with a text input containing '03/12/1985'. A 'Send' button is located below the form fields. A red callout box points to the birthdate field with the text 'Conversion done automatically'.

• Thanks, but John Smith is already working with us.

Name:

Last Name:

Desired Salary:

Birthdate:

Conversion done automatically

EXERCISE OBJECTIVE

Change the type of desiredSalary data from String to Integer so that the implicit conversion takes place.

Add a field for the birthdate and use a JSF converter to convert to java.util.Date.

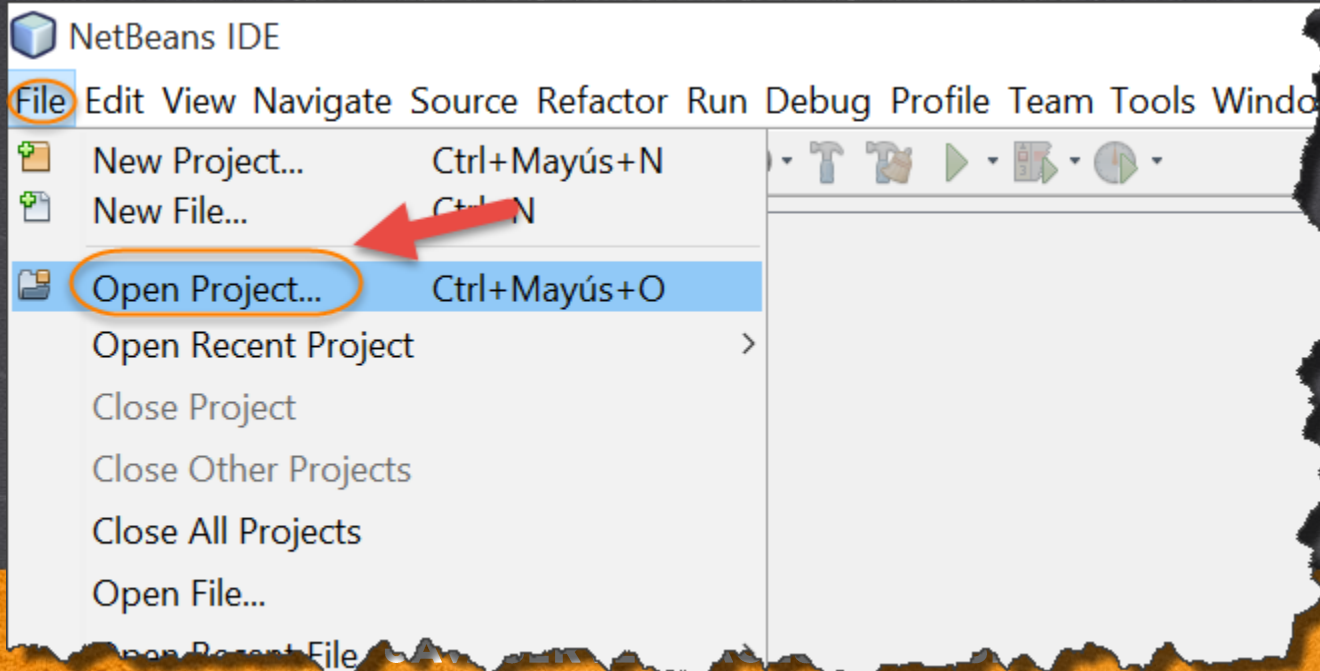


JAVASERVER FACES COURSE

www.globalmentoring.com.mx

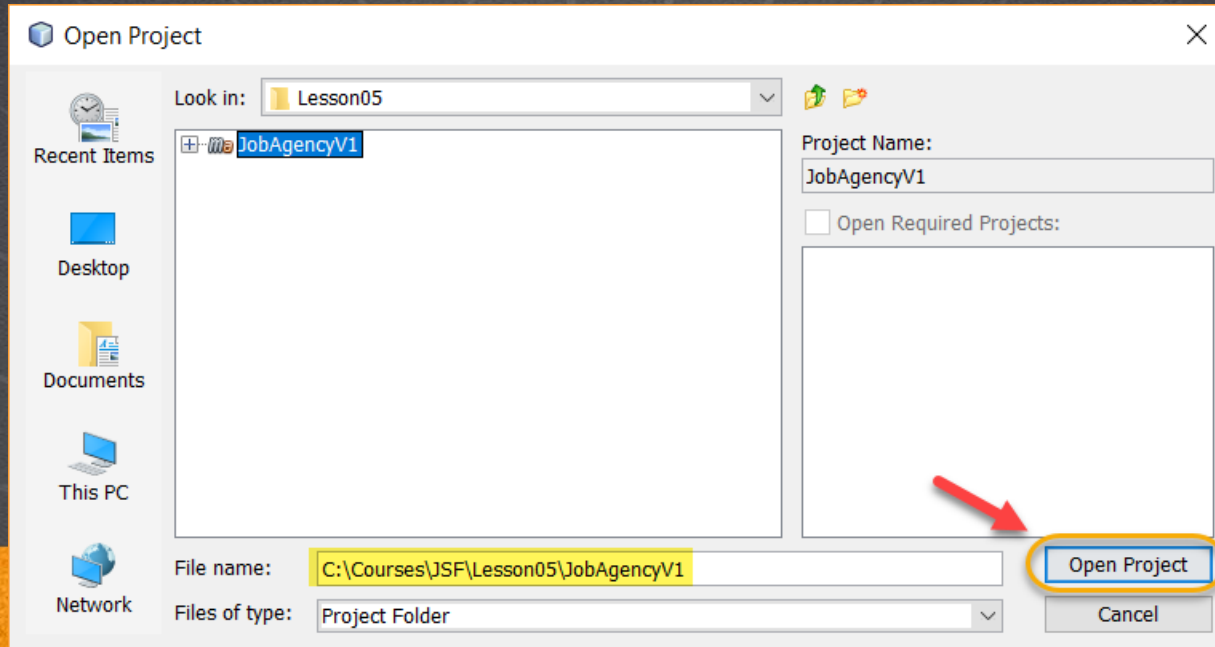
1. OPEN THE PROJECT

We opened the JobAgencyV1 project of the last lesson only in case we do not have it open:



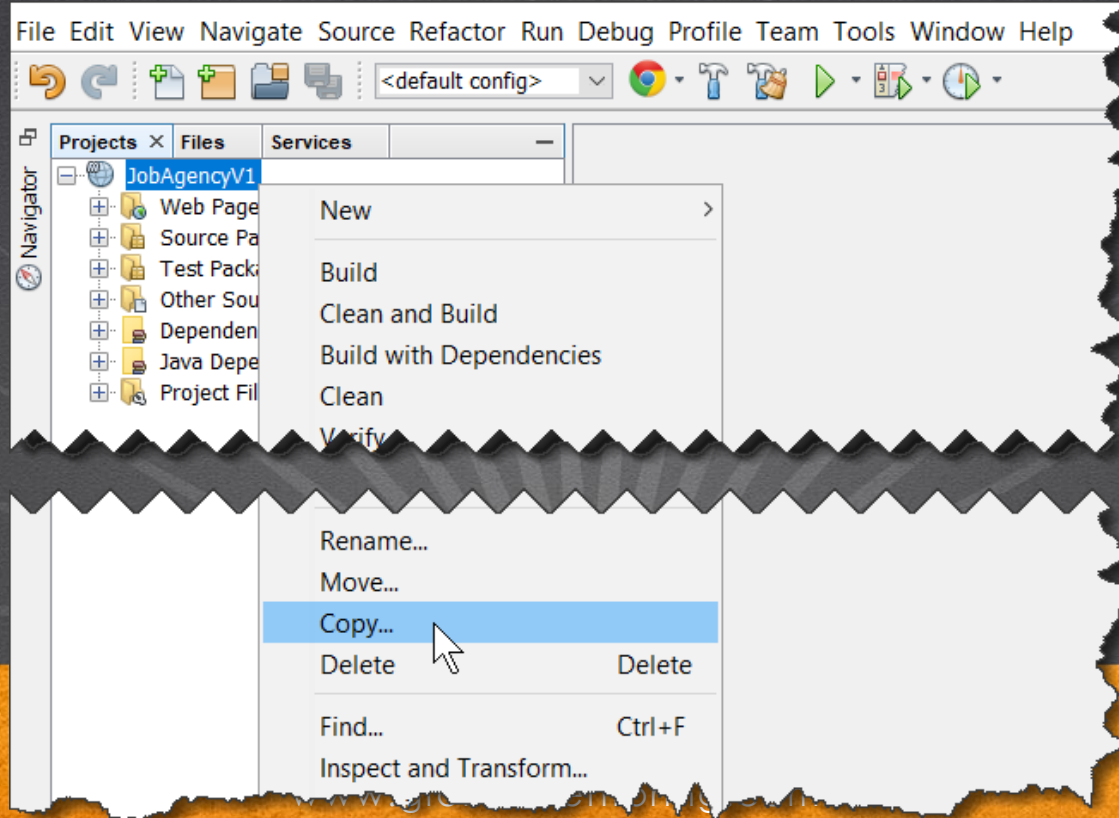
1. OPEN THE PROJECT

We opened the JobAgencyV1 project of the last lesson only in case we do not have it open:



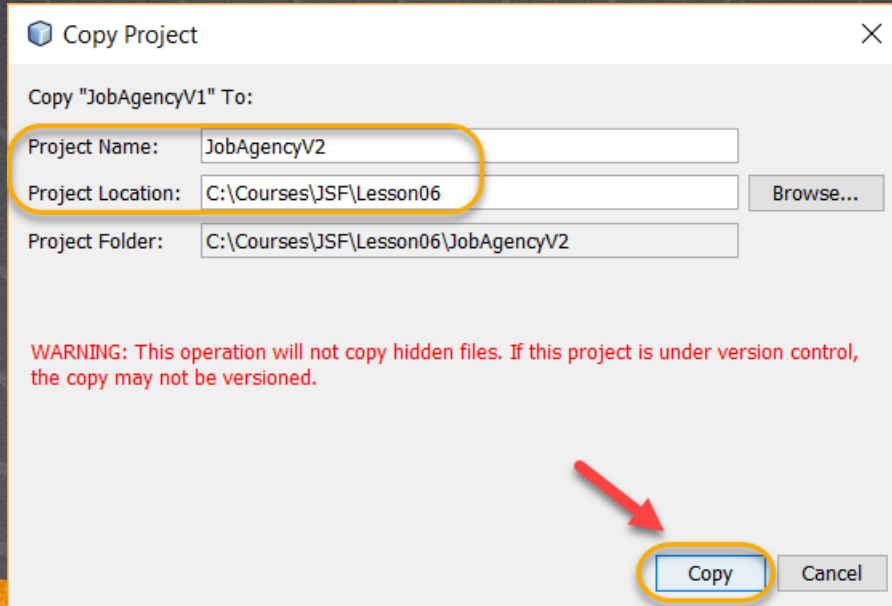
2. COPY THE PROJECT

We copy the JobAgencyV1 project:



2. COPY THE PROJECT

We copy the JobAgencyV1 project and rename it to JobAgencyV2 and deposit it in the new path shown:



Copy Project

Copy "JobAgencyV1" To:

Project Name: JobAgencyV2

Project Location: C:\Courses\JSF\Lesson06 Browse...

Project Folder: C:\Courses\JSF\Lesson06\JobAgencyV2

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

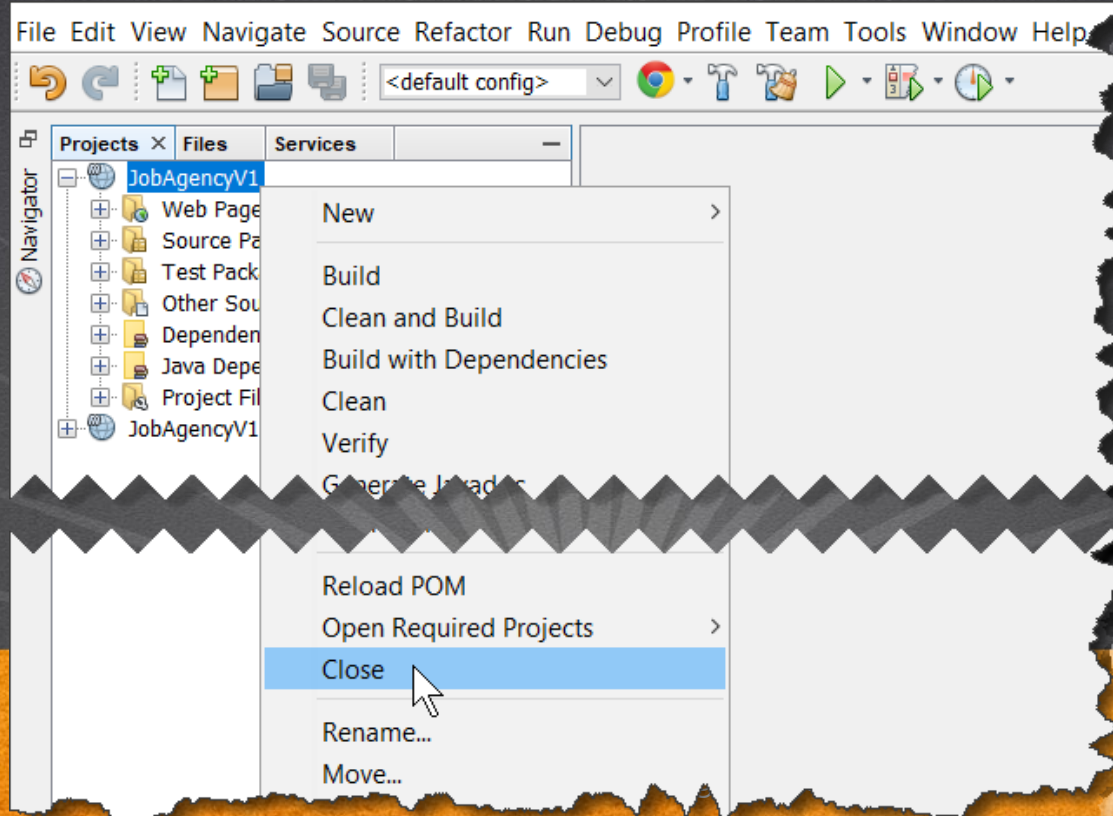
Copy Cancel

JAVASERVER FACES COURSE

www.globalmentoring.com.mx

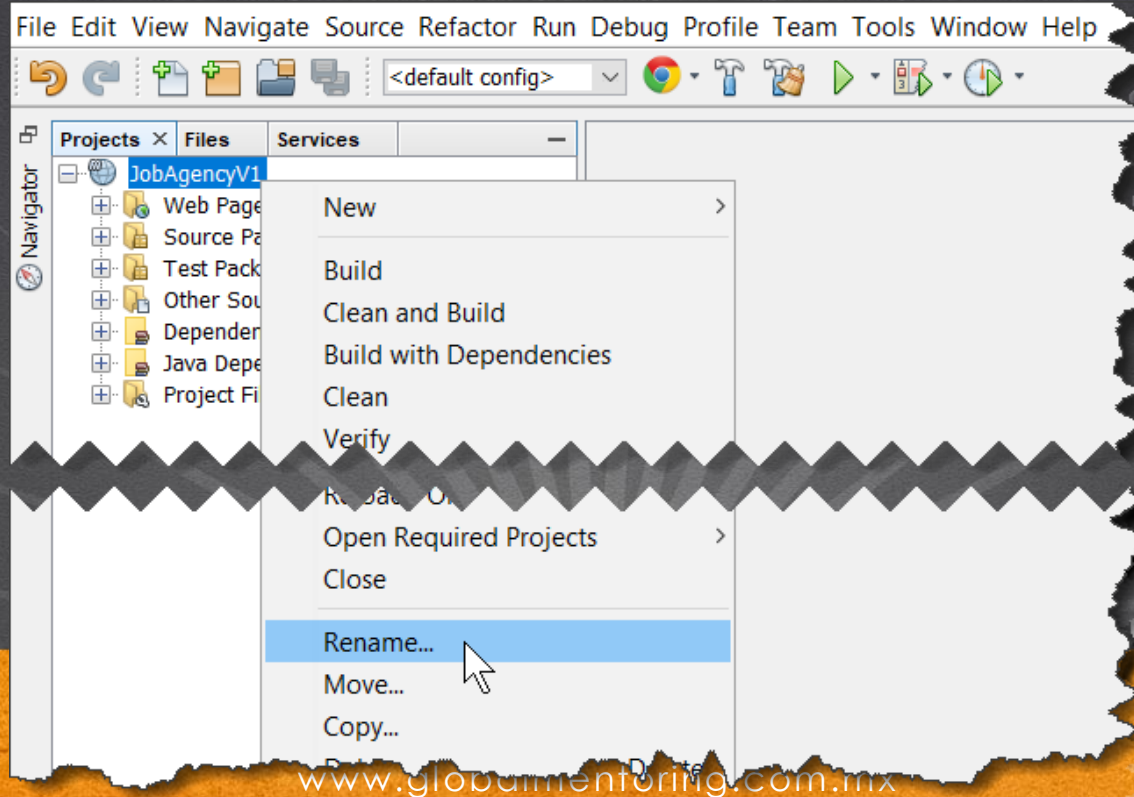
3. CLOSE THE PREVIOUS PROJECT

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



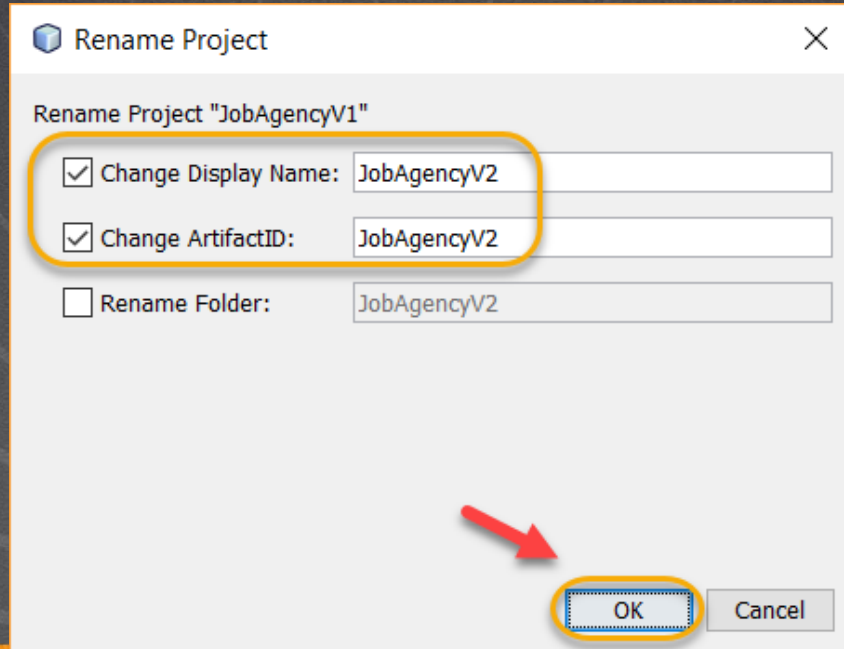
4. RENAME THE PROJECT

We changed the name of the project to JobAgencyV2:



4. RENAME THE PROJECT

We changed the name of the project to JobAgencyV2:



JAVASERVER FACES COURSE

www.globalmentoring.com.mx

5. MODIFY THE JAVA CLASS

In the class Candidate.java, change the data type of the field "desiredSalary" from String to int. The variable should look like this:

```
private int desiredSalary;
```

The set / get methods have to be changed in the same way. Remaining the code as shown:

```
public int getDesiredSalary() {  
    return desiredSalary;  
}  
  
public void setDesiredSalary(int desiredSalary) {  
    this.desiredSalary = desiredSalary;  
}
```


5. MODIFY THE JAVA CLASS

In the Candidate.java class, add the following code:

```
private Date birthDate;

public Date getBirthDate() {
    return birthDate;
}

public void setBirthDate(Date birthDate) {
    this.birthDate = birthDate;
}
```

Add the following import to the beginning of the Candidate class:

```
import java.util.Date;
```

5. MODIFY THE CODE

Candidate.java:

[Click to download](#)

```
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;

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

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

5. MODIFY THE CODE

Candidate.java:

Click to download

```
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);  
}
```

JAVASERVER FACES COURSE

www.globalmentoring.com.mx

5. MODIFY THE CODE

Candidate.java:

[Click to download](#)

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

JAVASERVER FACES COURSE

www.globalmentoring.com.mx

6. MODIFY THE XHTML

In the file index.xhtml, add a line plus `<tr>`, after the desiredSalary:

```
<tr>
    <td><h:outputLabel for="birthdate" value="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>
```

6. MODIFY THE CODE

[index.xhtml:](#)

Click to download

```
<!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 V2</title>
  </h:head>
  <h:body>
    <h:form>

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

      <table>
        <tr>
          <td><h:outputLabel for="name" value="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="Last Name:" /></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>
```

JAVASERVER FACES COURSE

www.globalmentoring.com.mx

6. MODIFY THE CODE

[index.xhtml:](#)

Click to download

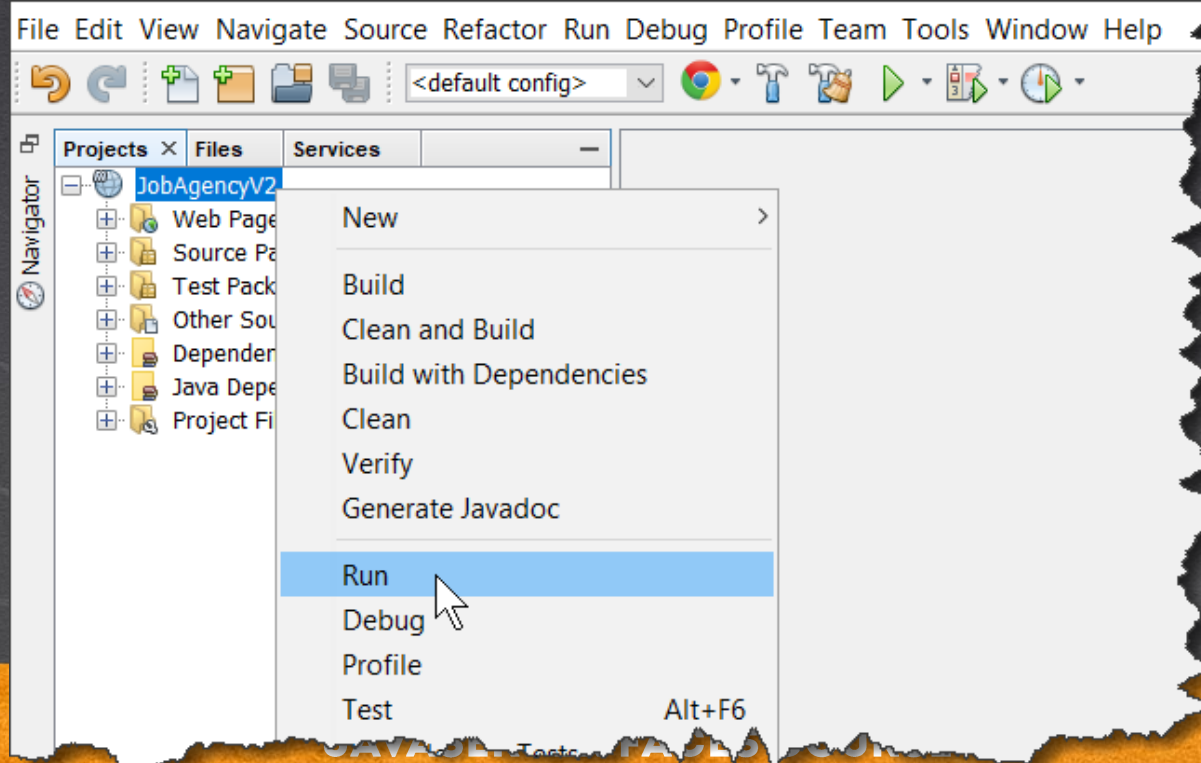
```
<tr>
  <td><h:outputLabel for="desiredSalary" value="Desired Salary:" /></td>
  <td><h:inputText id="desiredSalary" required="true"
    value="#{candidate.desiredSalary}"
    <f:validateLongRange minimum="500" maximum="5000"/>
  </h:inputText></td>
  <td><h:message for="desiredSalary" /></td>
</tr>
<tr>
  <td><h:outputLabel for="birthdate" value="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>
</table>
<h:commandButton action="#{vacantForm.send}" value="Send" />
</h:form>
</h:body>
</html>
```

JAVASERVER FACES COURSE

www.globalmentoring.com.mx

7. EXECUTE THE PROJECT

Execute the application:

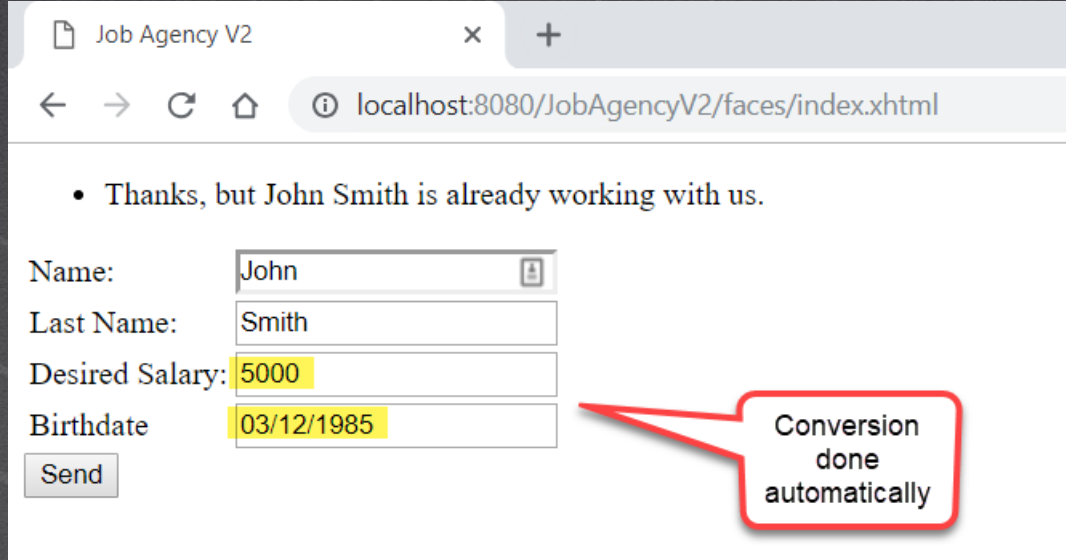


7. EXECUTE THE PROJECT

- Run the JobAgencyV2 application:
- Enter the following information and click Send request :
 - Nombre: John
 - Apellido: Smith
 - Sueldo Deseado: 5000
 - Fecha de Nacimiento: 03/12/1985
- The pattern of the date of birth that was specified is:
MM/dd/yyyy (month / day / year)

18. EXECUTE THE PROJECT

We execute the application. The result is similar to the following:



Job Agency V2

localhost:8080/JobAgencyV2/faces/index.xhtml

- Thanks, but John Smith is already working with us.

Name:

Last Name:

Desired Salary:

Birthdate:

Conversion done automatically

IN CASE OF PROBLEMS

1. Stop Glassfish server
 2. Execute Clean & Build again
 3. Run the application
- Repeat the steps above if apply any changes to the code and find errors in the application.
 - If the problem is not solved, you can try loading the resolved project, which is 100% functional

EXTRA TASKS

It is left as extra tasks to test more cases with the form and verify that the validations and conversions are applied correctly.

Finally, you should check the server log to see that everything works as expected considering the phases of the life cycle of JSF.



JAVASERVER FACES COURSE

www.globalmentoring.com.mx

CONCLUSION OF THE EXERCISE

- With this exercise we have put into practice the Converters concept in JSF.
- We test with different types of data to see how this concept works in JSF.
- With this we already have the bases to apply converters in JSF.



JAVASERVER FACES COURSE

www.globalmentoring.com.mx

ONLINE COURSE

JAVASERVER FACES (JSF)

By: Eng. Ubaldo Acosta



JAVASERVER FACES COURSE

www.globalmentoring.com.mx