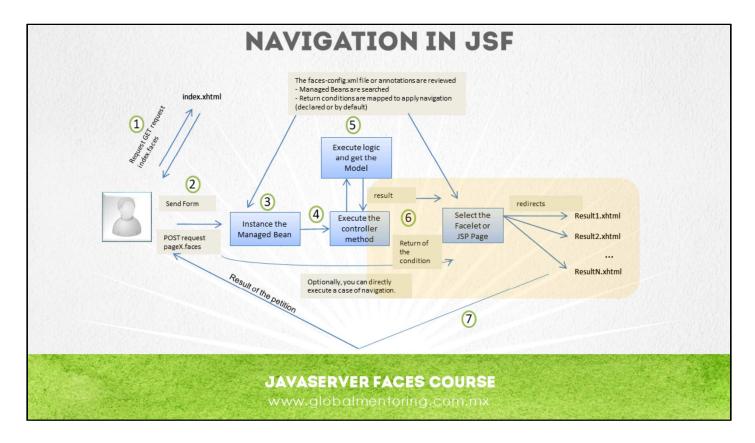Hello, Ubaldo Acosta greets you. Welcome or welcome again. I hope you're ready to start with this lesson.

We are going to study the topic of Navigation Rules in JavaServer Faces.

Are you ready? OK let's go!

In the figure, we highlight step 6. This is where we will normally define the navigation of our Web application.

Next we will see in more detail the navigation management in JSF.

NAVIGATION IN JSF

❑ **Navigation in JSF allows us to move between pages of the same technology.**

❑ **There are two types of Navigation :**
   - ✓ Static Navigation
   - ✓ Dynamic Navigation

❑ **There are several ways to configure navigation :**
   - ✓ Implicit Navigation (JSF 2.x)
   - ✓ Explicit navigation (in the faces-config.xml file)

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The navigation in JSF allows us to move between one and another JSF page.

There are several types of Navigation:

- Static Navigation: The value of the next view is defined by a fixed name (string).

- Dynamic Navigation: The value of the following view depends on the action executed by the user and the return string of the action method executed.

There are several ways to configure navigation:

- Explicit navigation (in the file faces-config.xml): An xml element is added to indicate where the request comes from, what is its output and to which page it should be redirected.

- Implicit Navigation (JSF 2.x): The specified output searches directly for a page with a name identical to the output string in the current directory, with the extension of the current page (eg xhtml or jspx)

In JSF 2.x, explicit navigation (faces-config.xml) takes precedence over implicit navigation.

STATIC NAVIGATION

Static navigation applies in the following cases:
- It is not required to execute Java code on the server side, but only to go to another page
- There is no logic to determine the next page :

Example of static navigation :
- JSF page that initiates the request :

```
<h:commandButton label="Enter" action="login"/>
```

- The next page can be determined in 2 ways :
  a) Outcome by default, search directly the login.xhtml page
  b) Search the outcome in faces-config.xml, finding the case that determines the next page to show

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The element to define which is the next page to show is a string (String) and is known as output (outcome). The outcome can be indicated in 2 places:

- Directly in the action attribute of the JSF component of type submit (static navigation)
- As the return type of an action method within a Managed Bean (dynamic navigation)

Example of static navigation, the outcome is indicated similar to the component:

```
<h:commandButton label="Enter" action="login"/>
```

Once the output is defined (outcome), JSF looks for the next page to show, applying any of the following two ways:

a)   In the file faces-config.xml (case of explicit navigation)

b)   Directly a page called login.xhtml (JSF 2.x) (case of implicit navigation)

Dynamic navigation uses an action method, which has the logic to determine the outcome (output or result of the method that will be used to determine the JSF page to be used).

Once the outcome is determined, a navigation rule can be applied. The action method returns a String, which is used later by the navigation rules either implicit (search a page directly) or explicit (search in the file faces-config.xml).

In the code shown, the action method called verifyuser () returns a string depending on certain applied logic. The String that returns will be our exit (outcome) and with it we will look for a page to show, in our case success.xhtml or failure.xhtml. If it is implicit navigation, it will search for a case called success or failure, thereby determining which page should be shown next.

We will review the topic of action methods in JSF in more detail later.

CREATING NAVIGATION RULES IN JSF

```
<faces-config …>

    <navigation-rule>
        <from-view-id>/index.xhtml</from-view-id>
        <navigation-case>
            <from-outcome>enter</from-outcome>
            <to-view-id>/login.xhtml</to-view-id>
        </navigation-case>
    </navigation-rule>

    …
</faces-config>
```

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We can create navigation rules in the faces-config.xml file.

For this we use the tag <navigation-rule>, with the following:

a) The page from which the request comes (from-view-id)

b) Several navigation cases and for each case of navigation we define:

    i. The output (outcome), either static or dynamic (return string of the action method of the Managed Bean).

    ii. The destination page.

A source page can have several pages as a destination and this depends on the output (outcome).

We can create several navigation rules, and even generic navigation rules. A common case of generic rules is to redirect any page to the index page.

EXERCISES

- ## NOTE:

- This lesson does not leave a new exercise, but lets review the exercise helloworld-jsf from the previous lesson and review the flow of navigation for the case of success or failure to provide a name on the index.xhtml page

- With this revision we will have concluded the navigation theme in JSF.

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JAVASERVER FACES (JSF)

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