

Setting up a development environment

Rodrigo Martins Pagliares

Setting up a development environment

Pre-requisites

- IntelliJ IDEA Ultimate Edition.



**Hello, cruel world in
Jakarta Faces**

with IntelliJ IDEA Ultimate Edition

Software and versions used

- IntelliJ Ultimate Edition - 2023.2
 - ✓ Run configuration pointing to Payara application server
- Payara – 6
- JDK Temurin-21
- Maven pom.xml configuration

```
<maven.compiler.source>21</maven.compiler.source>
<maven.compiler.target>21</maven.compiler.target>
```

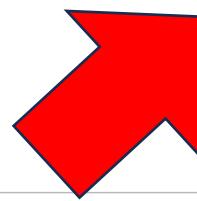
Framework



Jakarta EE: Server Faces (JSF)



JetBrains s.r.o. ✓

[Overview](#) [Versions](#) [Reviews](#)

Install to IntelliJ IDEA 2023.2.4

Compatible with IntelliJ IDEA Ultimate

This plugin supports [Java Server Faces](#) technology of Java EE/Jakarta EE.

Features:

- Syntax and error highlighting.
- JSF-aware coding assistance (code completion, formatting, folding)
- Graphical editor for defining page navigation rules.
- JSF tool window
- @ResourceDependencies and @ResourceDependency annotations support.
- Simplified navigation rules.
- Resource Handlers support.
- Composite components support.
- Code completion, error highlighting, and basic refactorings for the most popular JSF component libraries.

[Issue Tracker](#)[License](#)

<https://tinyurl.com/2s3pnqrjh>

What's New

Unfortunately, JetBrains s.r.o. didn't le

To have full functionality you have to accept [Plugin Marketplace Agreement](#).

[Plugin Versions](#)

Nov 09, 2023

Version 233.11799.6

Jakarta EE: Server Faces (JSF) 232.8660.142→232.8660.142

Framework

Jakarta EE: Server Faces (JSF)JetBrains s.r.o. [Plugin homepage](#)

232.8660.142

[Overview](#) [What's New](#) [Reviews](#) [Additional Info](#)

This plugin supports [Java Server Faces](#) technology of Java EE/Jakarta EE.

Features:

- Syntax and error highlighting.
- JSF-aware coding assistance (code completion, formatting, folding)
- Graphical editor for defining page navigation rules.
- JSF tool window
- `@ResourceDependencies` and `@ResourceDependency` annotations support.
- Simplified navigation rules.
- Resource Handlers support.
- Composite components support.
- Code completion, error highlighting, and basic refactorings for the most popular JSF component libraries.

After clickin on the button in the homepage
(previous slide), this screen appears in IntelliJ

 Cancel OK

Source-code



pagliares / jakarta-faces-hands-on



Type ⌘ to search



Issues

Pull requests

Actions

Projects

Wiki

Security

Insights

Settings

jakarta-faces-hands-on

Public



Unwatch 1

Fork 0

Star 0

main

1 branch 0 tags

Go to file

Add file

Code



pagliaresbcc Create first facelet example with a managed bean

c4ac73a now 2 commits



Source_Code/01/HelloCruelJSFWorld Create first facelet example with a managed bean

now



README.md

Initial commit

2 minutes ago

README.md



jakarta-faces-hands-on

About

No description, website, or topics provided.

Readme

Activity

0 stars

1 watching

0 forks

Releases

No releases published

[Create a new release](#)

Packages

No packages published

[Publish your first package](#)

<https://github.com/pagliares/jakarta-faces-hands-on>



pagliares Pagliares



pagliaresbcc

HC HelloCruelJSFWorl main GlassFish 6.8.0

Project

HelloCruelJSFWorl ~/Dropbox/Disciplinas/UNIFAL-MG

- .idea
- .mvn
- src
 - main
 - java
 - x
 - x
 - res
 - web
 - test
 - target
 - .gitignore
 - mvnw
 - mvnw.cmd
 - pom.xml
 - External Libra
 - Scratches an

Services

GlassFish Ser Running GlassFi He Docker

Edit configuration templates... ?

Run/Debug Configurations

Name: GlassFish 6.8.0 Store as project file

Server Deployment Logs Code Coverage Startup/Connection

Deploy at the server startup

+ - ↑ ↓ ⚪

HelloCruelJSFWorl:war exploded

If you open the project of this lesson on IntelliJ and when deploying to Payara you find an error, verify the run configuration to see if you added the artifact for deployment.

Use custom context root: /

Before launch

+ - ⚪ ↑ ↓

Run Apply Cancel OK

Prerequisites

Prerequisites

- This **tutorial assumes** you have an **application server properly installed** on your **local machine**.
 - ✓ Payara or Glassfish.

Outline

Outline

1. Introduction
2. Create a new Jakarta Enterprise project with JSF
3. Running the project created by IntelliJ
4. Creating the first JSF page (facelet)

Introduction

Introduction

- Jakarta Server Faces(JSF), formerly known as Java Server Faces, is a **Java specification** and **MVC framework** for **building user interfaces** for **web applications**.
- **Required IntelliJ plugin:**
 - ✓ Java EE: Server Faces (JSF) (bundled)

What does IntelliJ provide for JSF?

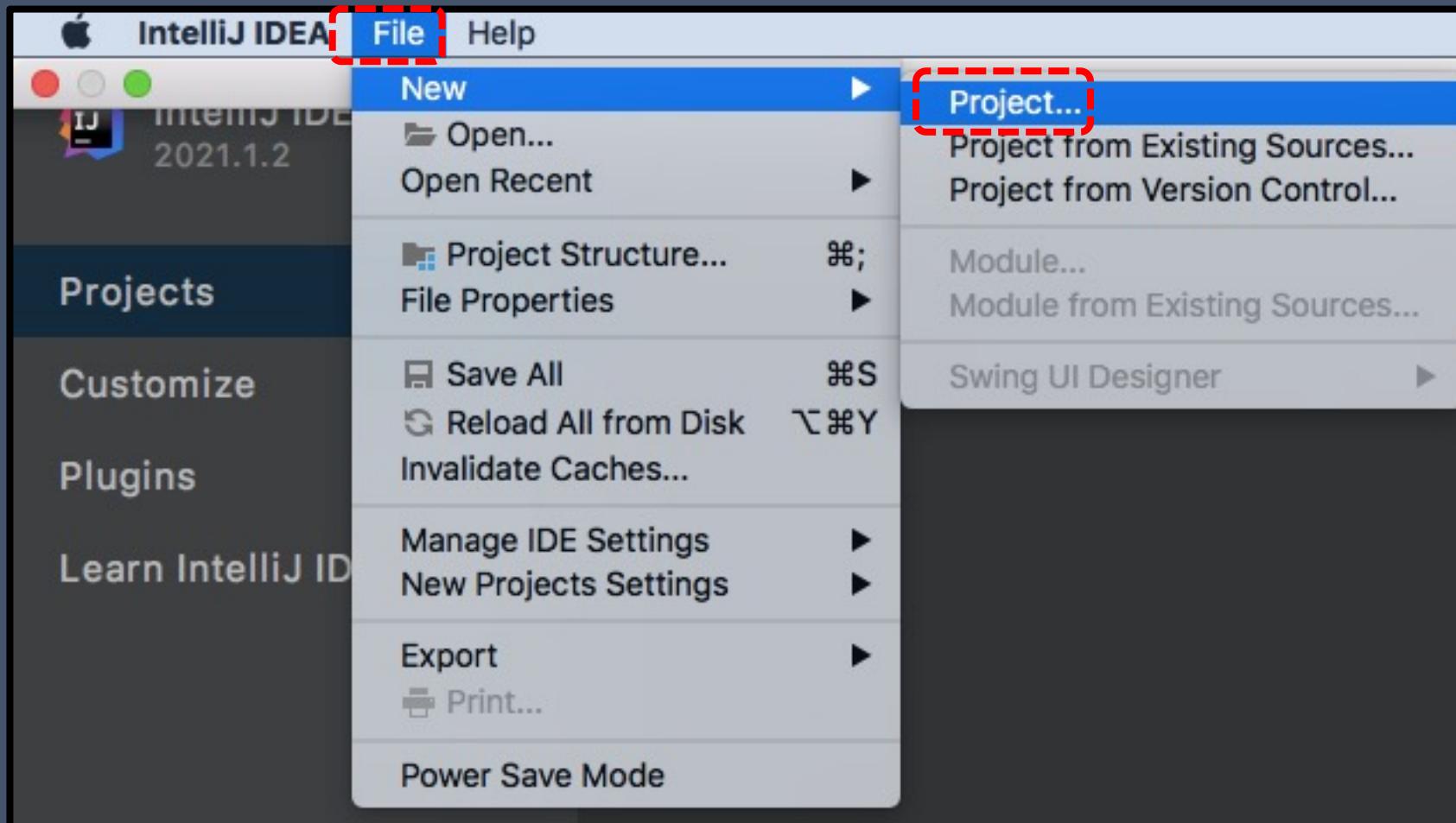
- Coding assistance specific to JSF, including popular JSF component libraries:
 - ✓ RichFaces
 - ✓ ICEfaces
 - ✓ Primefaces
 - ✓ OpenFaces
- Graphical editor for defining page navigation rules.

Create a new
Java Enterprise project with JSF

IntelliJ IDEA

Ultimate 2023.2

JET
BRAINS



From the **main menu** select **File | New | Project**.

Projects

Customize

Plugins

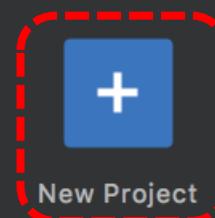
1

Learn IntelliJ IDEA

Welcome to IntelliJ IDEA

Create a new project to start from scratch.

Open existing project from disk or version control.



Alternatively, you can select New Project in the welcome screen just after launching IntelliJ.



IntelliJ IDEA
2021.1.2

Projects

Customize

Plugins

Learn IntelliJ IDEA

New Project

Get from VCS

Name: HelloCruelJSFWorld

Location: ~/Desktop/ HelloCruelJSFWorld

Project template: Servlet, web.xml, index.jsp

Application server: <No application server> New...

Build system: Maven Gradle

Language: Java Kotlin Groovy

Test framework: JUnit TestNG

Group:

Artifact:

Project SDK: 1.8 java version "1.8.0_232"

Enter a name for your project.

Help Cancel Previous Next



IntelliJ IDEA
2021.1.2

Projects

Customize

Plugins

Learn IntelliJ IDEA

New Project

Get from VCS

Name: HelloCruelJSFWorld

Location: ~/Desktop/HelloCruelJSFWorld

Project template: Web application Servlet, web.xml, index.jsp

Application server: <No application server> New...

Build system: Maven Gradle

Language: Java Kotlin Groovy

Test framework: JUnit TestNG

Group: com.example

Artifact: HelloCruelJSFWorld

Project SDK: 1.8 java version "1.8.0_232"

Select a location in your filesystem to create the project. I selected the **Desktop folder** in my **home directory**.

Help Cancel Previous Next



IntelliJ IDEA
2021.1.2

Projects

Customize

Plugins

Learn IntelliJ IDEA

New Project

Name: HelloCruelJSFWorld

Location: ~/Desktop/HelloCruelJSFWorld

Project template: Web application Servlet, web.xml, index.jsp

Application server: <No application server> New...

Build system: Maven Gradle

Language: Java Kotlin Groovy

Test framework: JUnit TestNG

Group: com.example

Artifact: HelloCruelJSFWorld

Project SDK: 1.8 java version "1.8.0_232"

Select a web application template.

Help Cancel Previous Next



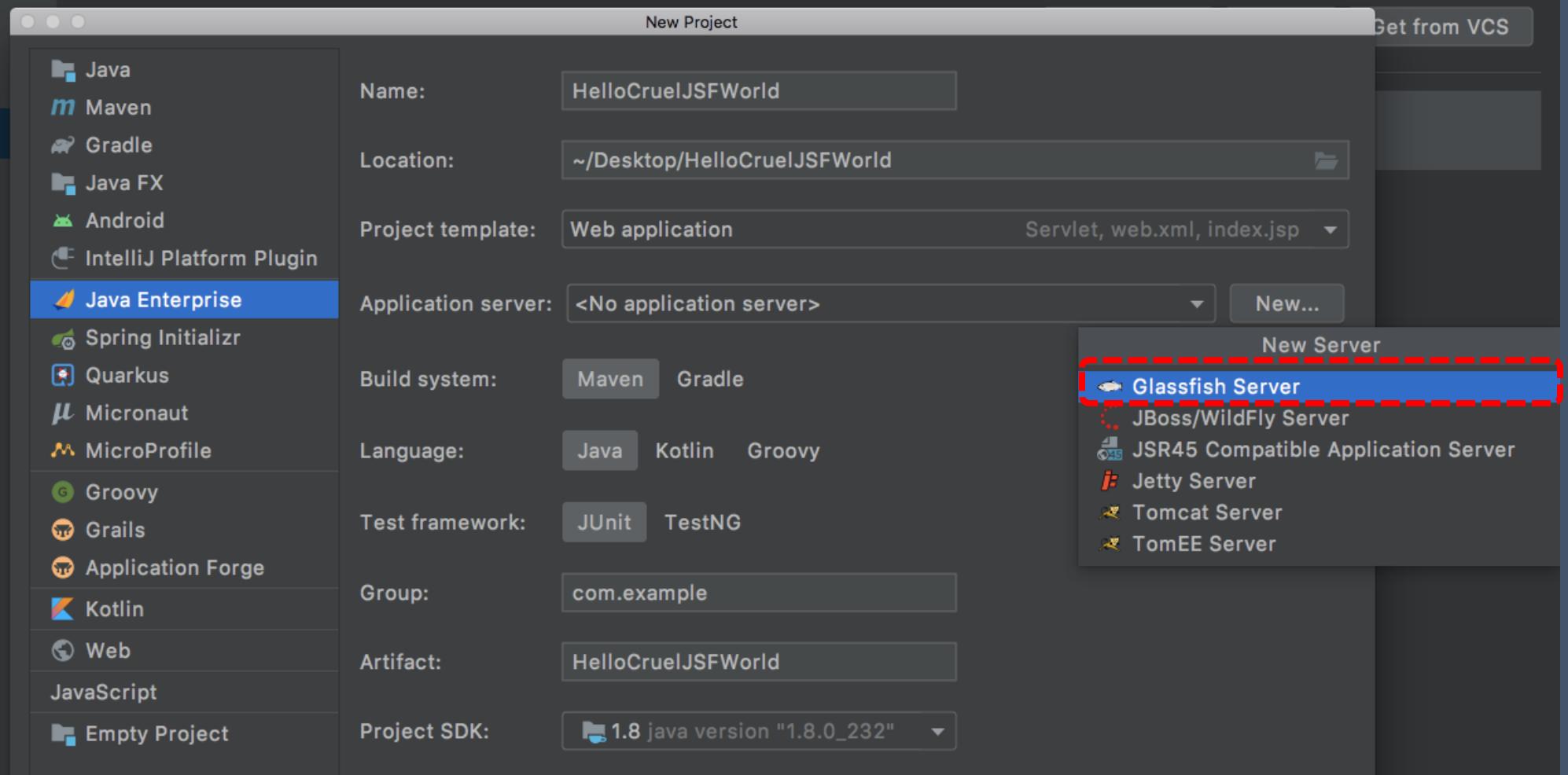


Projects

Customize

Plugins

Learn IntelliJ IDEA



Before continue, you must have already installed Payara application server (Payara is a wrapper to Glassfish, and this tutorial works with both).



IntelliJ IDEA
2021.1.2

Projects

Customize

Plugins

Learn IntelliJ IDEA

New Project

Name: HelloCruelJSFWorld

Location: ~/Desktop/HelloCruelJSFWorld

Project template: Web application Servlet, web.xml, index.jsp

Application server: <No application server> New...

Build system: Maven Gradle

Glassfish Server

GlassFish Home: [] 

GlassFish Version: <unknown>

! Warning: The selected directory is not a valid GlassFish home

Cancel OK

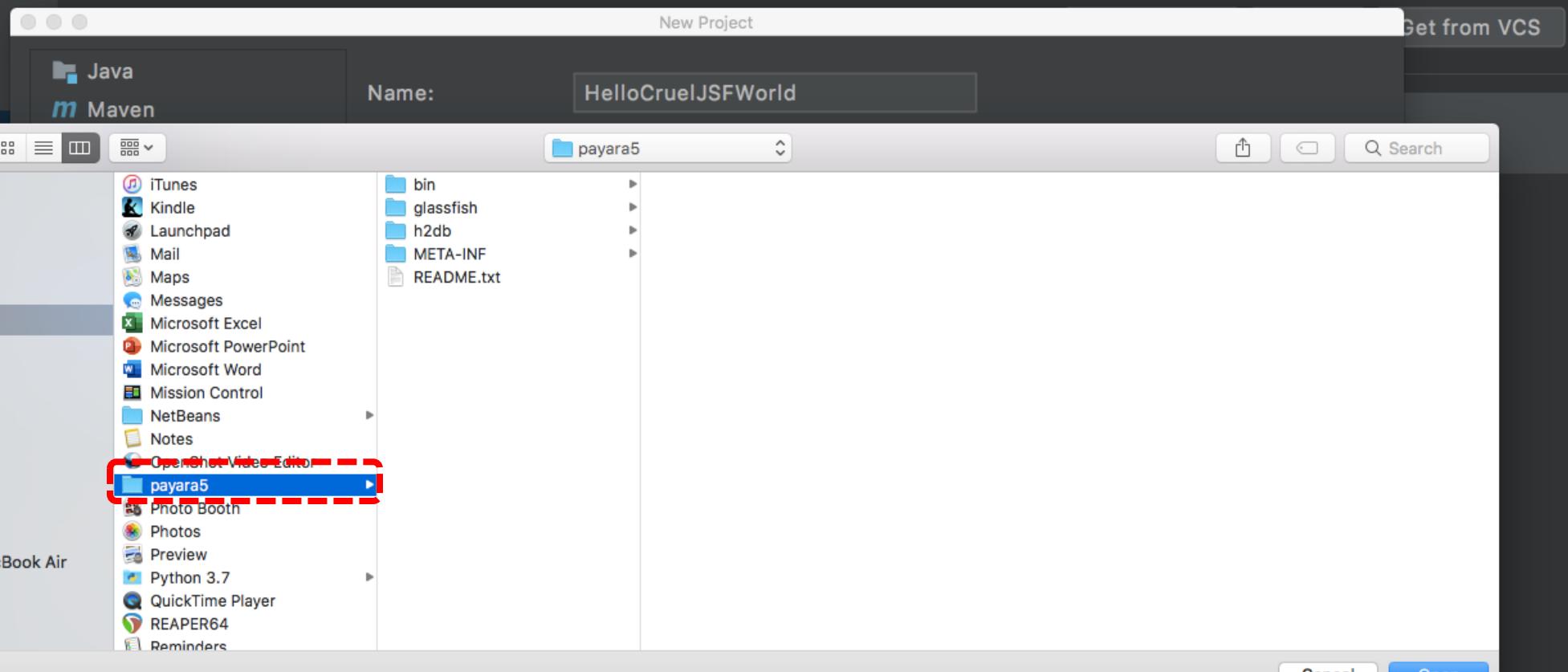
Project SDK: 1.8 java version "1.8.0_232"

Help Cancel Previous Next





IntelliJ IDEA
2021.1.2



I have Payara installed on my Applications folder at MacOS.



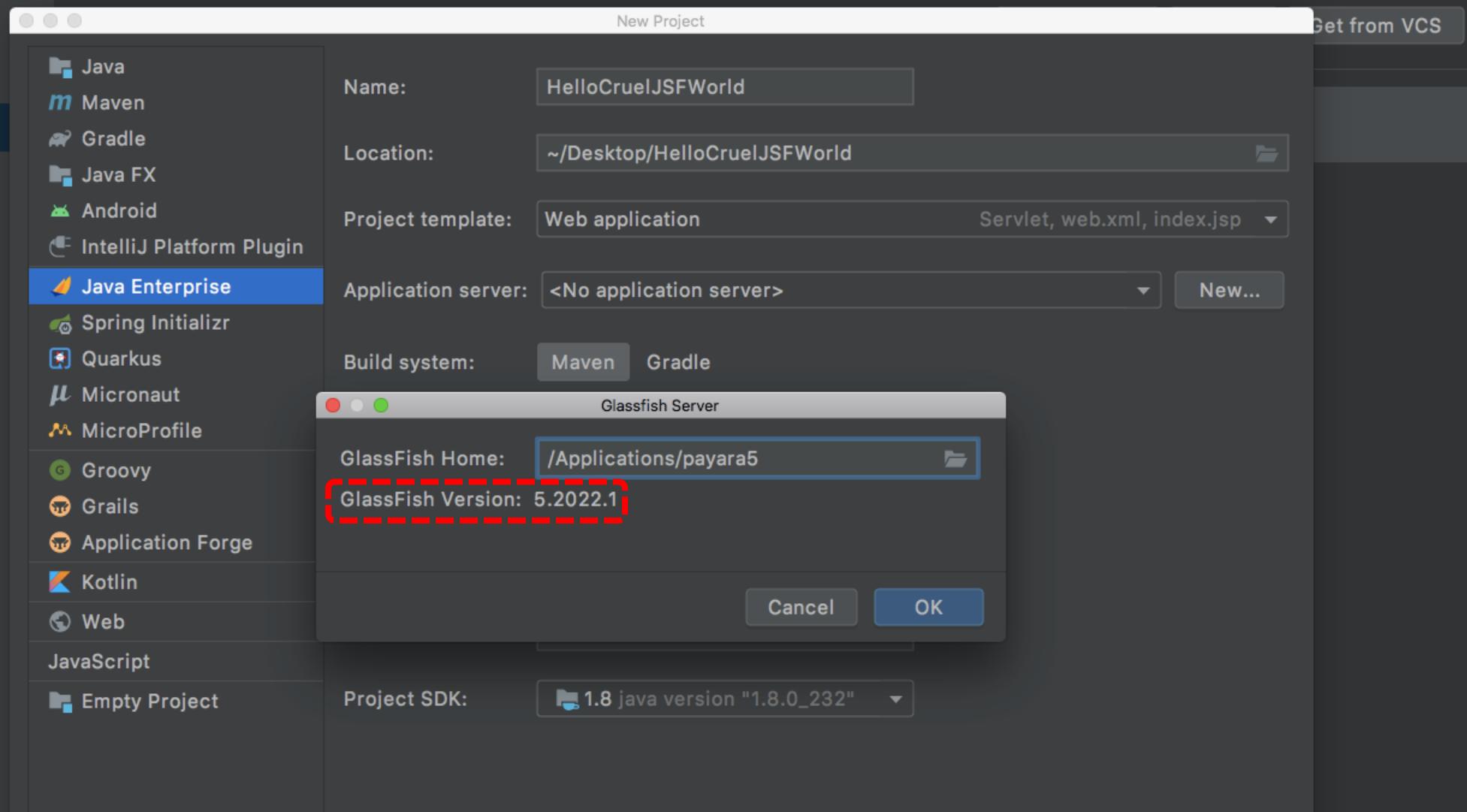
IntelliJ IDEA
2021.1.2

Projects

Customize

Plugins

Learn IntelliJ IDEA



Notice that IntelliJ recognizes Payara as Glassfish.

Previous

Next





IntelliJ IDEA
2021.1.2

Projects

Customize

Plugins

Learn IntelliJ IDEA

New Project

Name: HelloCruelJSFWorld

Location: ~/Desktop/HelloCruelJSFWorld

Project template: Web application Servlet, web.xml, index.jsp

Application server: GlassFish 5.2022.12 New...

Build system: Maven Gradle

Language: Java Kotlin Groovy

Test framework: JUnit TestNG

Group: com.example

Artifact: HelloCruelJSFWorld

Project SDK: 1.8 java version "1.8.0_232"

Help Cancel Previous Next

Get from VCS





IntelliJ IDEA
2021.1.2

Projects

Customize

Plugins

Learn IntelliJ IDEA

New Project

Name: HelloCruelJSFWorld

Location: ~/Desktop/HelloCruelJSFWorld

Project template: Web application Servlet, web.xml, index.jsp

Application server: GlassFish 5.2022.12 New...

Build system: Maven Gradle

Language: Java Kotlin Groovy

Test framework: JUnit TestNG

Group: com.example

Artifact: HelloCruelJSFWorld

Project SDK: 1.8 java version "1.8.0_232"

The 'Build system', 'Language', and 'Test framework' fields are highlighted with red dashed boxes.

We can **choose** the **build tool**, **language** and **test framework**. In this **tutorial** we are going to use **Maven**, **Java**, and **JUnit**

Help

Cancel

Previous

Next





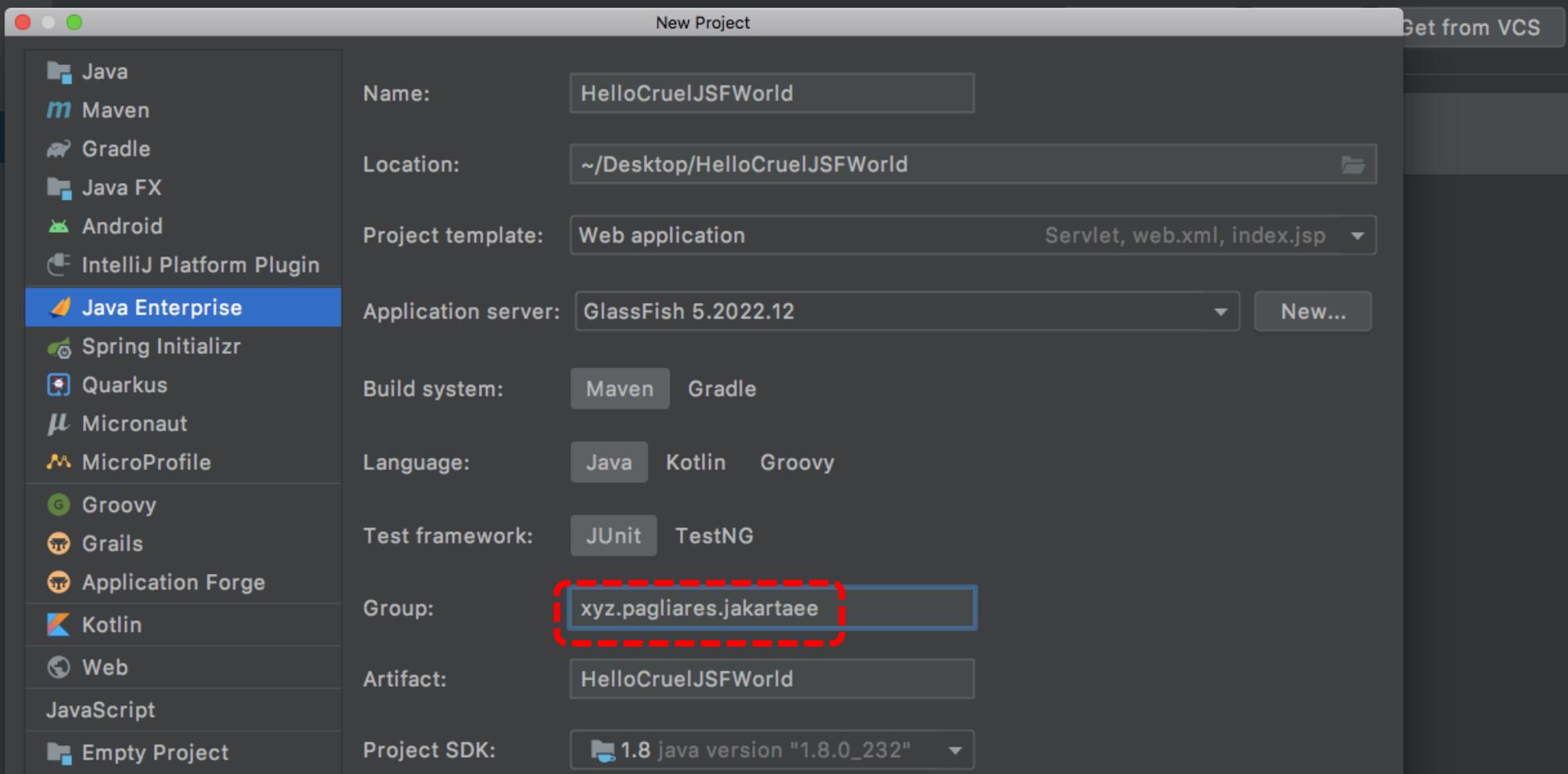
IntelliJ IDEA
2021.1.2

Projects

Customize

Plugins

Learn IntelliJ IDEA



A good practice in Java is to **create classes in packages**. This is also part of the **Maven configuration**. I decided to create a base package called **xyz.pagliares.jakartae**

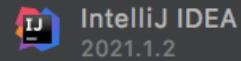
Help

Cancel

Previous

Next



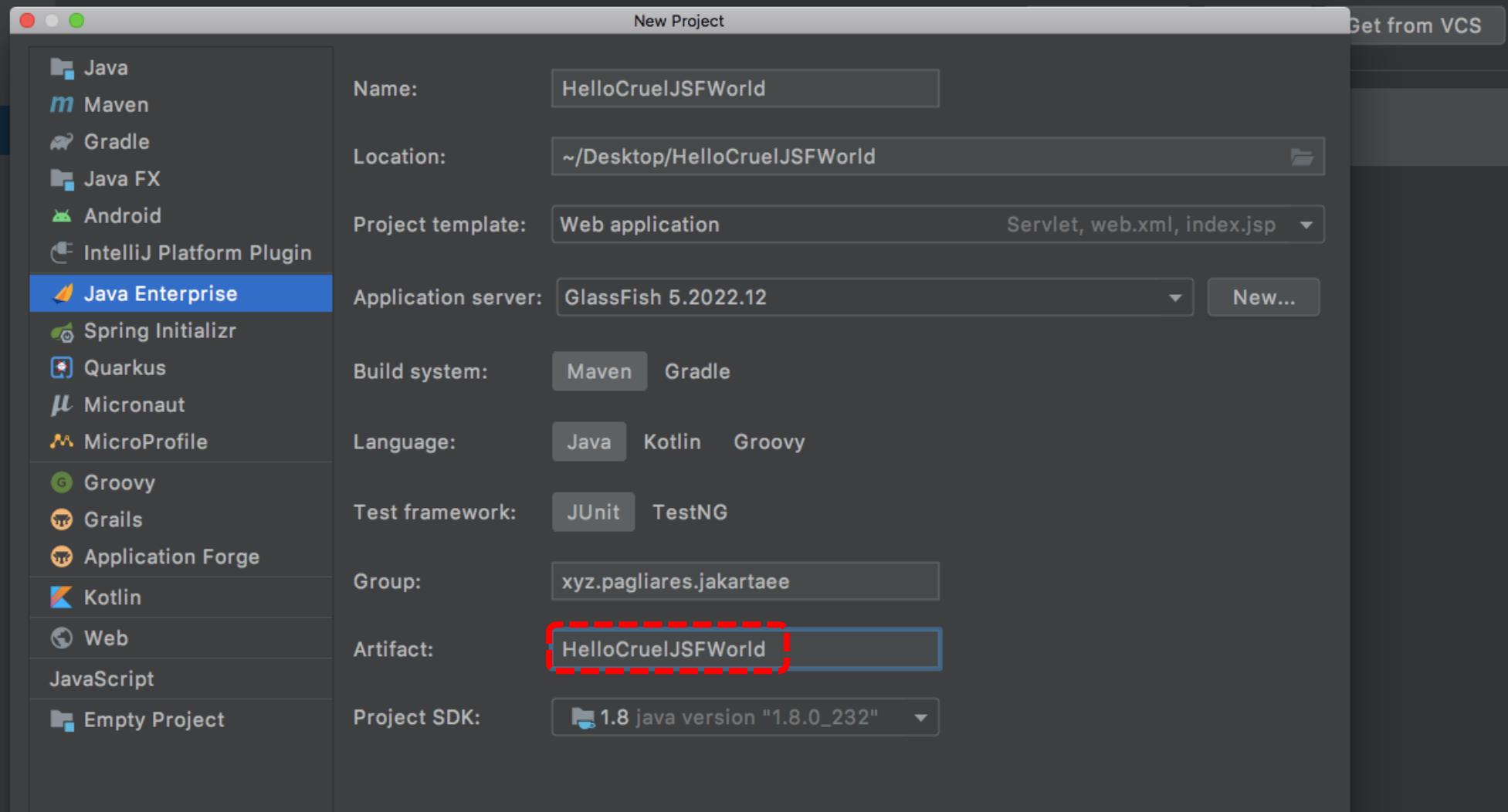


Projects

Customize

Plugins

Learn IntelliJ IDEA



By **default**, the **name** you **used** for the **project** is the **name** of the **artifact** generated by **Maven** after **building** the **project**, but you can **change** it if you **wish**.

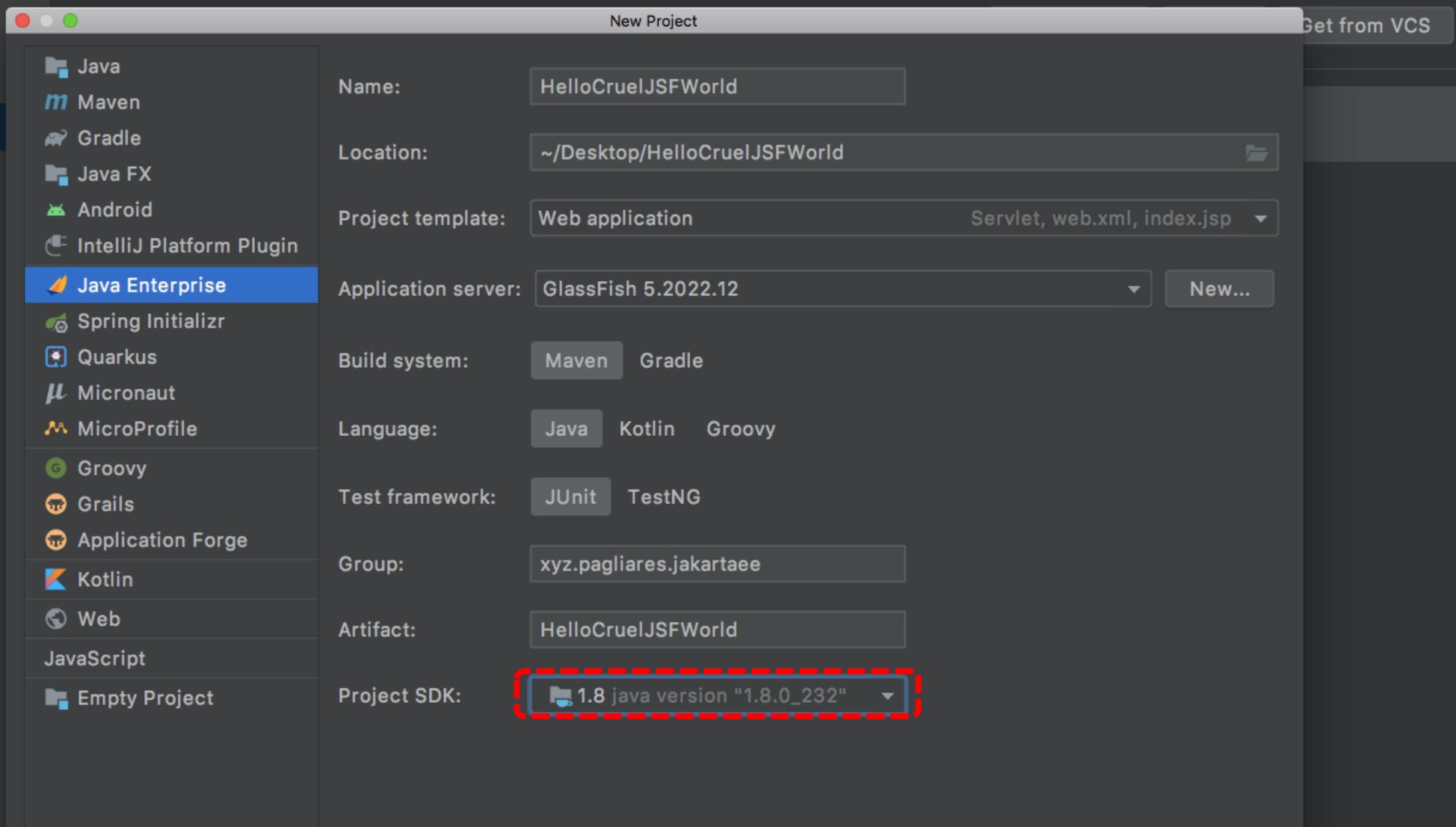


Projects

Customize

Plugins

Learn IntelliJ IDEA



Important: Java EE application servers usually have trouble with newer versions of the JDK. To avoid problems, I suggest using JDK 1.8



IntelliJ IDEA
2021.1.2

Projects

Customize

Plugins

Learn IntelliJ IDEA

New Project

Get from VCS

Name: HelloCruelJSFWorld

Location: ~/Desktop/HelloCruelJSFWorld

Project template: Web application Servlet, web.xml, index.jsp

Application server: GlassFish 5.2022.12 New...

Build system: Maven Gradle

Language: Java Kotlin Groovy

Test framework: JUnit TestNG

Group: xyz.pagliares.jakartaee

Artifact: HelloCruelJSFWorld

Project SDK: 1.8 java version "1.8.0_232"

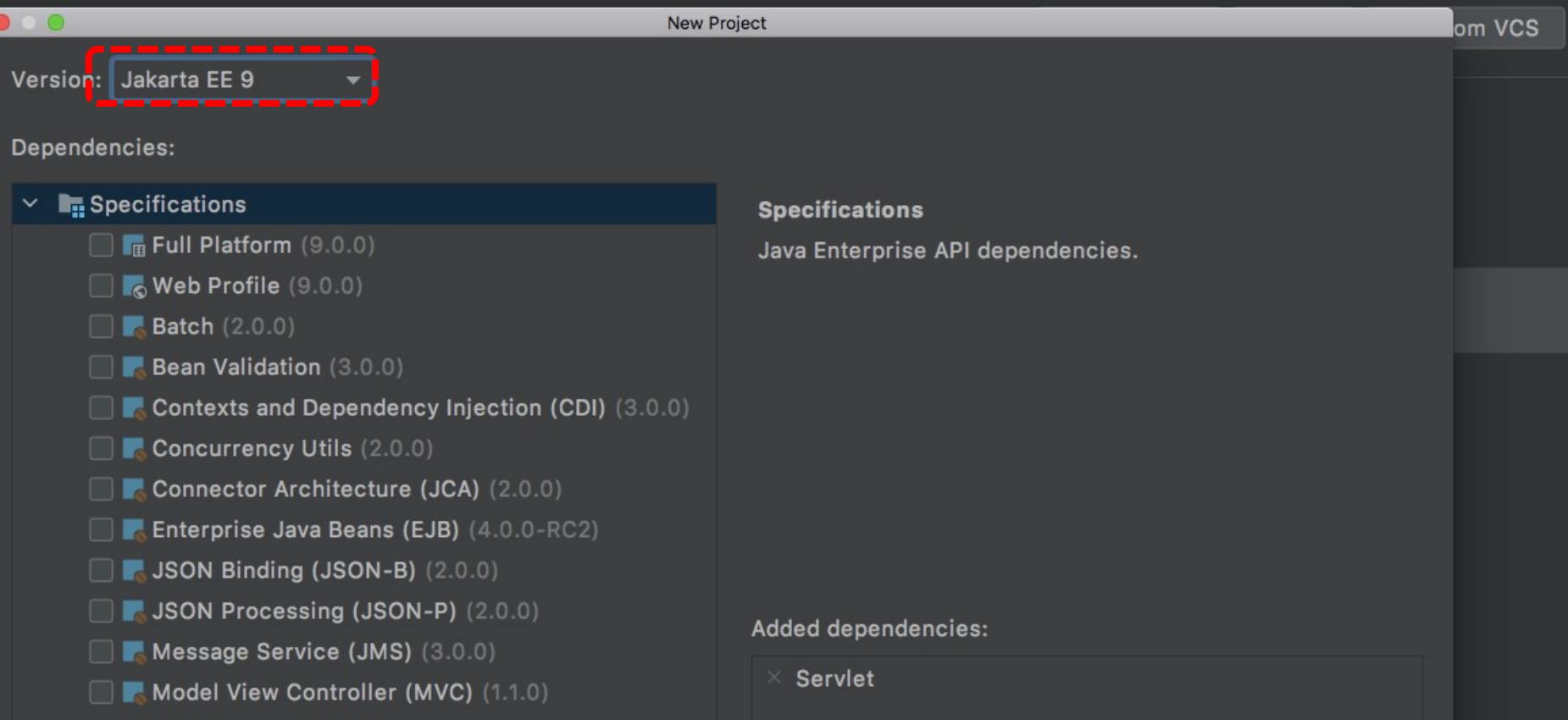
Click Next.

Help Cancel Previous **Next**



IntelliJ IDEA

2021.1.2



I'm going to use Jakarta EE 9 in this tutorial. Select it from this menu.

- Servlet (8.0.0)
- Transaction (JTA) (2.0.0)
- WebSocket (2.0.0)
- XML Web Services (JAX-WS) (3.0.0)

Help

Cancel

Previous

Finish





IntelliJ IDEA
2021.1.2

Projects

Customize

Plugins

Learn IntelliJ IDEA

New Project

Version: Jakarta EE 9

Dependencies:

Specifications

Full Platform (9.0.0)
Web Profile (9.0.0)
Batch (2.0.0)
Bean Validation
Contexts and I
Concurrency I
Connector Arc
Enterprise Java
JSON Binding
JSON Process
Message Serv
Model View Controller (MVC) (1.1.0)
Persistence (JPA) (3.0.0)
RESTful Web Services (JAX-RS) (3.0.0)
Security (2.0.0)
Server Faces (JSF) (3.0.0)
 Servlet (5.0.0)
Transaction (JTA) (2.0.0)
WebSocket (2.0.0)
XML Web Services (JAX-WS) (3.0.0)

Specifications

Java Enterprise API dependencies.

In the **Dependencies** list, you can see that the **web application template** includes only the **Servlet framework** under **Specifications**.

Help Cancel Previous Finish



IntelliJ IDEA
2021.1.2

New Project

Get from VCS

Version: Jakarta EE 9

Projects

Customize

Plugins

Learn IntelliJ IDEA

Dependencies:

Specifications

Full Platform (9.0.0)

Web Profile (9.0.0)

Full Platform

Includes most of Jakarta EE specifications.
Compatible servers: GlassFish 6.x

Add also the dependency for Server Faces (JSF) (3.0.0)

Added dependencies:

- Server Faces (JSF)
- Servlet

Help Cancel Previous Finish

Server Faces (JSF) (3.0.0)

Servlet (5.0.0)

Transaction (JTA) (2.0.0)

WebSocket (2.0.0)

XML Web Services (JAX-WS) (3.0.0)



IntelliJ IDEA
2021.1.2

New Project

Get from VCS

Version: Jakarta EE 9

Dependencies:

Specifications

- Full Platform (9.0.0)
- Web Profile (9.0.0)
- Batch (2.0.0)
- Bean Validation (3.0.0)
- Contexts and Dependency Injection (CDI) (3.0.0)
- Concurrency Utils (2.0.0)
- Connector Architecture (JCA) (2.0.0)
- Enterprise Java Beans (EJB) (4.0.0-RC2)
- JSON Binding (JSON-B) (2.0.0)
- JSON Processing (JSON-P) (2.0.0)
- Message Service (JMS) (3.0.0)
- Model View Controller (MVC) (1.1.0)
- Persistence (JPA) (3.0.0)
- RESTful Web Services (JAX-RS) (3.0.0)
- Server Faces (JSF) (3.0.0)
- Servlet (5.0.0)
- Transaction (JTA) (2.0.0)
- WebSocket (2.0.0)
- XML Web Services (JAX-WS) (3.0.0)

Full Platform

Includes most of Jakarta EE specifications.
Compatible servers: GlassFish 6.x

[Web site](#) [Specification](#)

Click Finish

× Servlet

Help Cancel Previous **Finish**

HelloCruelJSFWorld

GlassFish 5.2022.12

Project HelloCruelJSFWorld ~/Des... pom.xml (HelloCruelJSFWorld) x HelloServlet.java x index.jsp x Maven Database Maven

Structure .idea src HelloCruelJSFWorld.iml pom.xml External Libraries Scratches and Consoles

1 <%@ page contentType="text/html; charset=UTF-8" pageEncoding="UTF-8" %>

2 <!DOCTYPE html>

3 <html>

4 <head>

5 <title>JSP - Hello World</title>

6 </head>

7 <body>

8 <h1><%= "Hello World!" %>

9 </h1>

10

11 Hello Servlet

12 </body>

13 </html>

root > page

Services GlassFish Server Not Started GlassFish 5.2022.12 [local] HelloCruelJSFWorld:war exploded Select service to view details

Project created !

Problems Terminal Profiler TODO Services Build Event Log

Download pre-built shared indexes: Reduce the indexing time and CPU load with pre-built JDK and Maven library shared indexes // Alway... (2 minutes ago)

Project

HelloCruelJSFWorld ~/Desktop/HelloCruelJS

src

main

java

xyz.pagliares.jakartae HelloCruelJ

HelloServlet

resources

webapp

WEB-INF

web.xml

index.jsp

test

HelloCruelJSFWorld.iml

pom.xml

External Libraries

< 1.8 > /Library/Java/JavaVirtualMachines/a

Maven: jakarta.faces:jakarta.faces-api:3.0.0

Maven: jakarta.servlet:jakarta.servlet-api:5.0.0

Maven: org.apiguardian:apiguardian-api:1.1.0

Maven: org.junit.jupiter:junit-jupiter-api:5.7.0

Maven: org.junit.jupiter:junit-jupiter-engine:5.7.0

Maven: org.junit.platform:junit-platform-common:1.1.0

Services

GlassFish Server

Not Started

GlassFish 5.2022.12

HelloCruelJSFWorld:war exploded

Project pom.xml (HelloCruelJSFWorld) HelloServlet.java index.jsp Maven Database Maven

1 <%@ page contentType="text/html; charset=UTF-8" pageEn

2 <!DOCTYPE html>

3 <html>

4 <head>

5 <title>JSP - Hello World</title>

6 </head>

7 <body>

8 <h1><%= "Hello World!" %>

9 </h1>

10

11 Hello Servlet

12 </body>

13 </html>

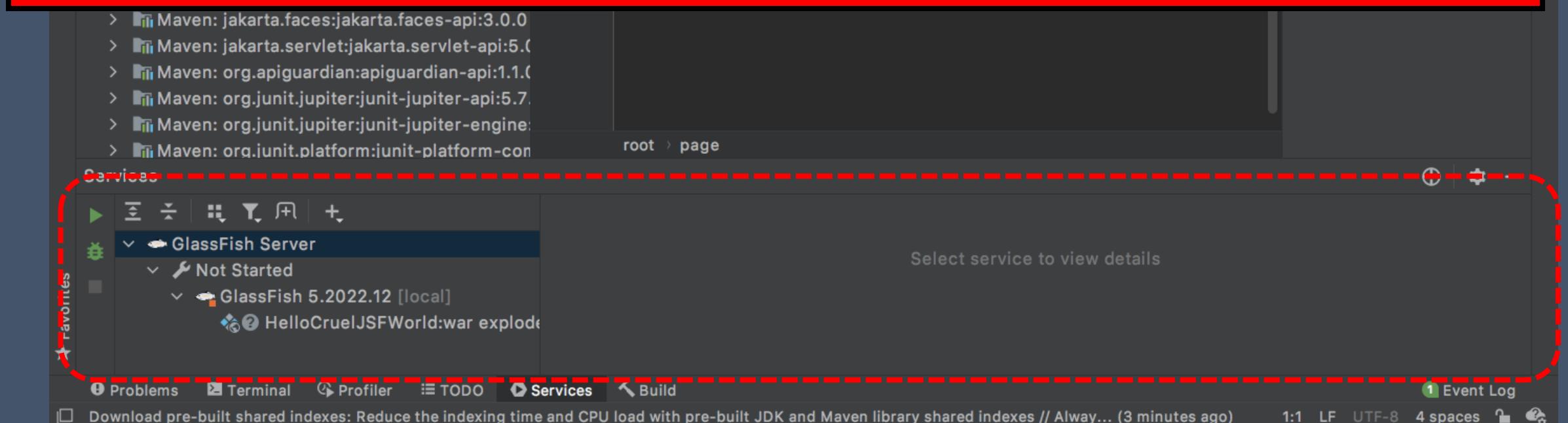
Problems Terminal Profiler TODO Build Event Log

Download pre-built shared indexes: Reduce the indexing time and CPU load with pre-built JDK and Maven library shared indexes // Alway... (3 minutes ago)

1:1 LF UTF-8 4 spaces

```
<%@ page contentType="text/html; charset=UTF-8" pageEncoding="UTF-8" %>
<!DOCTYPE html>
<html>
<head>
<title>JSP - Hello World</title>
</head>
</html>
```

Since we indicate the use of Payara during the project creation, the window Services is shown (As already mentioned, Payara is a wrapper for Glassfish, and it is detected as a Glassfish application server by IntelliJ).



The screenshot shows the IntelliJ IDEA interface with a Java web application project named "HelloCruelJSFWorld".

Project Structure: The left sidebar displays the project structure with a red dashed box highlighting the "HelloCruelJSFWorld" folder. Inside, there are subfolders ".idea", "src", and "main". The "main" folder contains "java" (with a file "HelloServlet.java"), "resources", "webapp" (containing "WEB-INF" with "web.xml" and "index.jsp"), "test", and the project's "pom.xml" file.

Maven: The right sidebar shows the Maven tool window with sections for "HelloCruelJSFWorld" (Lifecycle, Plugins, Dependencies), "Database", and "Maven".

Services: The bottom-left sidebar shows the services configuration, with "GlassFish Server" selected and its status as "Not Started".

Code Editor: The central area shows the code editor with the file "index.jsp" open. The code is a JSP page that includes a title, a greeting message, and a link to a servlet.

```
<%@ page contentType="text/html; charset=UTF-8" pageEncoding="UTF-8" %>
<!DOCTYPE html>
<html>
<head>
    <title>JSP - Hello World</title>
</head>
<body>
    <h1><%= "Hello World!" %></h1>
    <br/>
    <a href="hello-servlet">Hello Servlet</a>
</body>
</html>
```

Text Overlay: A large red box covers the bottom-right portion of the screen with the text: "Project window with the standard Maven structure of directories and files."

Bottom Navigation: The footer navigation bar includes links for "Problems", "Terminal", "Profiler", "TODO", "Services", "Build", "Event Log", and status indicators for "1:1 LF UTF-8 4 spaces".

HelloCruelJSFWorld

Project pom.xml (HelloCruelJSFWorld) HelloServlet.java JSP index.jsp Maven Database Maven

Structure

HelloCruelJSFWorld ~/Desktop/HelloCruelJSFWorld

- .idea
- src
 - main
 - java
 - xyz.pagliares.jakartae HelloCruelJSFWorld
 - resources
 - webapp
 - WEB-INF
 - web.xml
 - index.jsp
 - test
- HelloCruelJSFWorld.iml
- pom.xml

External Libraries

- < 1.8 > /Library/Java/JavaVirtualMachines/jdk-1.8.0_291.jdk/Contents/Home/jre/lib/jrt-fs.jar
- Maven: jakarta.faces:jakarta.faces-api:3.0.0
- Maven: jakarta.servlet:jakarta.servlet-api:5.0.0
- Maven: org.apiguardian:apiguardian-api:1.1.0
- Maven: org.junit.jupiter:junit-jupiter-api:5.7.2
- Maven: org.junit.jupiter:junit-jupiter-engine:5.7.2
- Maven: org.junit.platform:junit-platform-common:1.7.2

Services

GlassFish Server

- Not Started
 - GlassFish 5.2022.12 [local]
 - HelloCruelJSFWorld:war exploded

Editor

Problems Terminal Profiler TODO Build Event Log

Download pre-built shared indexes: Reduce the indexing time and CPU load with pre-built JDK and Maven library shared indexes // Always... (3 minutes ago)

1:1 LF UTF-8 4 spaces

Project HelloCruelJSFWorld pom.xml (HelloCruelJSFWorld) HelloServlet.java index.jsp Maven Database m Maven

src

main

java

xyz.pagliares.jakartae HelloCruelJ

HelloServlet

resources

webapp

WEB-INF

web.xml

index.jsp

test

HelloCruelJSFWorld.iml

pom.xml

External Libraries

< 1.8 > /Library/Java/JavaVirtualMachines/a

Maven: jakarta.faces:jakarta.faces-api:3.0.0

Maven: jakarta.servlet:jakarta.servlet-api:5.0.0

Maven: org.apiguardian:apiguardian-api:1.1.0

Maven: org.junit.jupiter:junit-jupiter-api:5.7.0

Maven: org.junit.jupiter:junit-jupiter-engine:5.7.0

Maven: org.junit.platform:junit-platform-con

Services

GlassFish Server

Not Started

GlassFish 5.2022.12 [local]

HelloCruelJSFWorld:war exploded

Select service to view details

Problems Terminal Profiler TODO Build Event Log

Download pre-built shared indexes: Reduce the indexing time and CPU load with pre-built JDK and Maven library shared indexes // Alway... (3 minutes ago)

1:1 LF UTF-8 4 spaces

Maven Window

```
1 <%@ page contentType="text/html; charset=UTF-8" pageEn
2 <!DOCTYPE html>
3 <html>
4   <head>
5     <title>JSP - Hello World</title>
6   </head>
7   <body>
8     <h1><%= "Hello World!" %>
9   </h1>
10    <br/>
11    <a href="hello-servlet">Hello Servlet</a>
12  </body>
13 </html>
```



Click here to hide the Maven view and get more space to work. Click again to get back the window if necessary.

The screenshot shows the IntelliJ IDEA interface with the Maven view closed. The left side features the Project Structure sidebar with sections for Project, .idea, src (main and java), test, HelloCruelJSWorld.iml, pom.xml, and External Libraries. The External Libraries section lists several Maven dependencies. The main workspace contains the code editor with the file index.jsp open, displaying its JSP code. Below the code editor is a Services panel showing GlassFish Server (Not Started) with a GlassFish 5.2022.12 [local] instance. The bottom navigation bar includes links for Problems, Terminal, Profiler, TODO, Services, Build, Event Log, and a status bar at the bottom.

Click here to hide the Maven view and get more space to work. Click again to get back the window if necessary.

Project

HelloCruelJSWorld ~/Desktop/HelloCruelJS

.idea

src

main

java

test

HelloCruelJSWorld.iml

pom.xml

External Libraries

< 1.8 > /Library/Java/JavaVirtualMachines/a

Maven: jakarta.faces:jakarta.faces-api:3.0.0

Maven: jakarta.servlet:jakarta.servlet-api:5.0.0

Maven: org.apiguardian:apiguardian-api:1.1.0

Maven: org.junit.jupiter:junit-jupiter-api:5.7.0

Maven: org.junit.jupiter:junit-jupiter-engine:5.7.0

Maven: org.junit.platform:junit-platform-con

Services

GlassFish Server

Not Started

GlassFish 5.2022.12 [local]

HelloCruelJSWorld:war exploded

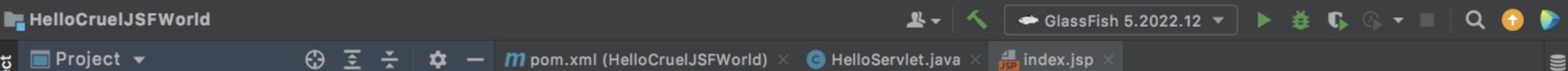
Select service to view details

Problems Terminal Profiler TODO Services Build

Download pre-built shared indexes: Reduce the indexing time and CPU load with pre-built JDK and Maven library shared indexes // Alway... (3 minutes ago)

Event Log

1:1 LF UTF-8 4 spaces



```
1 <%@ page contentType="text/html; charset=UTF-8" pageEncoding="UTF-8" %>
2 <!DOCTYPE html>
3 <html>
4   <head>
5     <title>JSP - Hello World</title>
6   </head>
7   <body>
8     <h1><%= "Hello World!" %>
9   </h1>
10  <br/>
11  <a href="hello-servlet">Hello Servlet</a>
12  </body>
13 </html>
```

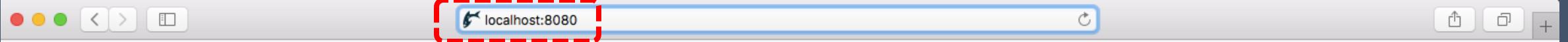
root > page

Services

The Services tool window shows a tree structure. Under 'GlassFish Server', it lists 'Not Started' and 'GlassFish 5.2022.12 [local]'. The 'GlassFish 5.2022.12' node has a child 'HelloCruelJSWorld:war exploded'.

Now we have much more space to work.

**Running the project created by
IntelliJ**



Safari Can't Connect to the Server

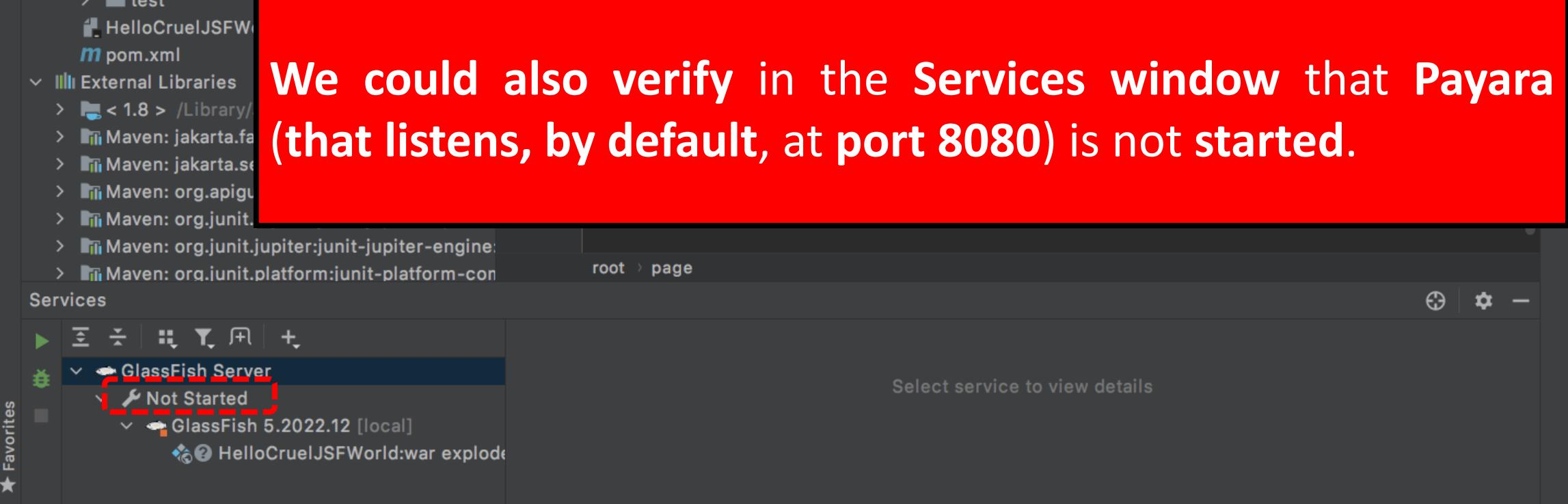
Safari can't open the page "localhost:8080" because Safari can't connect to the server "localhost".

Notice that in my local machine, Payara (that listens, by default, at port 8080) is not started.

The screenshot shows the IntelliJ IDEA interface. The top bar displays the project name "HelloCruelJSWorld" and the GlassFish 5.2022.12 server. The left sidebar shows the "Project" view with the "HelloCruelJSWorld" project expanded, revealing its structure: .idea, src, main, java, resources, webapp, WEB-INF, web.xml, and index.jsp. The "Structure" and "Favorites" tabs are also visible. The right side shows the code editor with the file "index.jsp" open. The code contains JSP syntax, including page directives, HTML tags, and a scriptlet. The code editor has syntax highlighting and line numbers.

```
<%@ page contentType="text/html; charset=UTF-8" pageEncoding="UTF-8" %>
<!DOCTYPE html>
<html>
<head>
    <title>JSP - Hello World</title>
</head>
<body>
    <h1><%= "Hello World!" %>
</h1>
<br/>
```

We could also verify in the Services window that Payara (that listens, by default, at port 8080) is not started.



Project

HelloCruelJSFWorld ~/Desktop/HelloCruelJS

- .idea
- src
 - main
 - java
 - xyz.pagliares.jakartae HelloCruelJ
 - resources
 - webapp
 - WEB-INF
 - web.xml
 - index.jsp
 - test
- HelloCruelJSWorld.iml
- pom.xml

External Libraries

- < 1.8 > /Library/Java/JavaVirtualMachines/a
- Maven: jakarta.faces:jakarta.faces-api:3.0.0
- Maven: jakarta.servlet:jakarta.servlet-api:5.0.0
- Maven: org.apiguardian:apig

index.jsp

```
<%@ page contentType="text/html; charset=UTF-8" pageEncoding="UTF-8" %>
<!DOCTYPE html>
<html>
<head>
    <title>JSP - Hello World</title>
</head>
<body>
    <h1><%= "Hello World!" %>
    </h1>
    <br/>
    <a href="hello-servlet">Hello Servlet</a>
</body>
</html>
```

Since we select Payara as application server during project creation, a Run Configuration was automatically created. Let's execute it by clicking this green triangle !

Project pom.xml (HelloCruelJSFWorld) HelloServlet.java index.jsp

```
1 <%@ page contentType="text/html; charset=UTF-8" pageEncoding="UTF-8" %>
2 <!DOCTYPE html>
3 <html>
4   <head>
5     <title>JSP - Hello World</title>
6   </head>
7   <body>
```

Database Maven

We can place the cursor at the upper edge of the Services Window and drag it to increase the size of the window and better see the output.

Services

GlassFish Server Running GlassFish 5.2022.12 [local] HelloCruelJSFWorld:war exploded

Server GlassFish Log

Deployment	Output
✓ HelloCruelJSFWorld:war exploded	Exploded: Artifact is being deployed, please wait... [2022-02-27 03:52:56,538] Artifact HelloCruelJSFWorld:war exploded: Artifact is deployed successfully [2022-02-27 03:52:56,540] Artifact HelloCruelJSFWorld:war exploded: Deploy took 10,659 milliseconds

Problems Terminal Profiler TODO Services Build Event Log

Build completed successfully in 7 sec, 988 ms (a minute ago) LF UTF-8 4 spaces

HelloCruelJSFWorld > src > main > webapp > **index.jsp**

GlassFish 5.2022.12

Project pom.xml (HelloCruelJSFWorld) HelloServlet.java index.jsp

Structure Services Services

Server GlassFish Log

Deployment Output

Running

GlassFish 5.2022.12 [local]

HelloCruelJSFWorld:war exploded

Glassfish51Agent
Detected server admin port: 4848
Detected server http port: 8080
[2022-02-27 03:52:28,202] Artifact HelloCruelJSFWorld:war exploded: Waiting for server connection to start artifact deployment...
Waiting for domain1 to start
Successfully started the domain : domain1
domain Location: /Applications/payara5/glassfish/domains/domain1
Log File: /Applications/payara5/glassfish/domains/domain1/logs/server.log
Admin Port: 4848
Command start-domain executed successfully.
Connected to server
[2022-02-27 03:52:45,881] Artifact HelloCruelJSFWorld:war exploded: Artifact is being deployed, please wait...
[2022-02-27 03:52:56,538] Artifact HelloCruelJSFWorld:war exploded: Artifact is deployed successfully
[2022-02-27 03:52:56,540] Artifact HelloCruelJSFWorld:war exploded: Deploy took 10,659 milliseconds

Payara successfully started !

Favorites

Problems Terminal Profiler TODO Services Build Event Log

Build completed successfully in 7 sec, 988 ms (2 minutes ago)

13:8 LF UTF-8 4 spaces

Database Maven

Payara successfully started !

HelloCruelJSFWorld > src > main > webapp > **JSP** index.jsp

GlassFish 5.2022.12

Project pom.xml (HelloCruelJSFWorld) HelloServlet.java index.jsp

Structure Services Services

Server GlassFish Log

Deployment Output

Running

GlassFish 5.2022.12 [local]

HelloCruelJSFWorld:war exploded

.Glassfish51Agent
Detected server admin port: 4848
Detected server http port: 8080
[2022-02-27 03:52:28,202] Artifact HelloCruelJSFWorld:war exploded: Waiting for server connection to start artifact deployment...
Waiting for domain1 to start
Successfully started the domain : domain1
domain Location: /Applications/payara5/glassfish/domains/domain1
Log File: /Applications/payara5/glassfish/domains/domain1/logs/server.log
Admin Port: 4848
Command start-domain executed successfully.
Connected to server
[2022-02-27 03:52:45,881] Artifact HelloCruelJSFWorld:war exploded: Artifact is being deployed, please wait...
[2022-02-27 03:52:56,538] Artifact HelloCruelJSFWorld:war exploded: Artifact is deployed successfully
[2022-02-27 03:52:56,540] Artifact HelloCruelJSFWorld:war exploded: Deploy took 10,659 milliseconds

Favorites

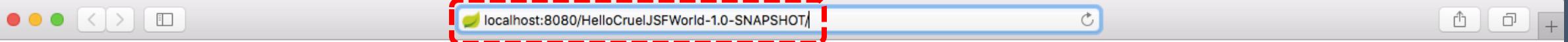
Problems Terminal Profiler TODO Services Build Event Log

Build completed successfully in 7 sec, 988 ms (2 minutes ago)

13:8 LF UTF-8 4 spaces

Database Maven

Hello, cruel JSF world project deployed



Hello World!

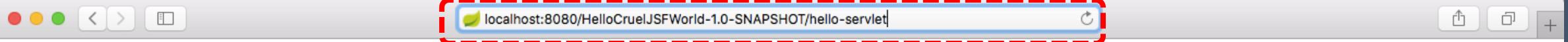
[Hello Servlet](#)

IntelliJ automatically opens the web browser and shows the initial web page (`index.jsp`)

Hello World!

[Hello Servlet](#)

Click the link to test the Servlet generated by IntelliJ
(HelloServlet.java)



Hello World!

Servlet is also working.

Creating the first JSF page (facelet)



- ▶ Getting started
- ▶ IDE configuration
- ▶ Project configuration
- Search everywhere
- ▶ Write and edit source code
- ▶ Compilation and building
- ▶ Running
- ▶ Debugging
- ▶ Deploy your application
- ▶ Testing
- ▶ Analysis
- ▶ Version control
- ▶ Remote development
- ▶ Integrated tools
- ▶ Kotlin
- ▶ Scala
- ▶ Groovy
- ▶ JVM frameworks
- ▶ Non-JVM technologies
- ▶ Reference

Ultimate

Jakarta Server Faces (JSF)

Last modified: 28 July 2023

Required plugin: [Jakarta EE: Server Faces \(JSF\)](#)

Support for [Jakarta Server Faces ↗](#) (JSF), formerly known as JavaServer Faces, is not bundled with IntelliJ IDEA. You can install the [Jakarta EE: Server Faces \(JSF\) ↗](#) plugin from JetBrains Marketplace as described in [Install plugins](#).

You can find the documentation for JSF in [earlier versions of IntelliJ IDEA Help ↗](#).

Important: 2023, november



[What's new](#) | [Issue tracker](#) | [Submit support request](#)

Copyright © 2000–2023 JetBrains s.r.o.

JET
BRAINS



Framework

Jakarta EE: Server Faces (JSF)



JetBrains s.r.o.

Install to IntelliJ IDEA 2023.2.4

Compatible with IntelliJ IDEA Ultimate

[Overview](#)[Versions](#)[Reviews](#)

This plugin supports [Java Server Faces](#) technology of Java EE/Jakarta EE.

Features:

- Syntax and error highlighting.
- JSF-aware coding assistance (code completion, formatting, folding)
- Graphical editor for defining page navigation rules.
- JSF tool window
- @ResourceDependencies and @ResourceDependency annotations support.
- Simplified navigation rules.
- Resource Handlers support.
- Composite components support.
- Code completion, error highlighting, and basic refactorings for the most popular JSF component libraries.

Important: 2023, november

[Issue Tracker](#)[License](#)

What's New

Unfortunately, JetBrains s.r.o. didn't le

To have full functionality you have to accept [Plugin Marketplace Agreement](#).



Plugin Versions

Nov 02, 2023

Version 233.11555.11

A adaptme-web main

Payara web profile

Project

- adaptme-web ~/Dropbox/Software...
- .idea
- .mvn
- src
 - main
 - java
 - HelloServlet
 - resources
 - webapp
 - WEB-INF
 - index.html
 - JSP index.jsp
 - index.xhtml
 - test
 - target
 - .gitignore
 - mvnw
 - mvnw.cmd
 - pom.xml
- External Libraries
- Scratches and Consoles

index.jsp HelloServlet.java index.html index.xhtml pom.xml (adaptme-web)

16 <maven.compiler.source> 17 </maven.compiler.source>

Plugins Marketplace Installed 2

/suggested

Search Results (1)

Jakarta EE: Server Faces (JSF) Framework JetBrains Installed 232.8660.142

This plugin is suggested because your project uses java:jakarta.faces:jakarta.faces-api library

Important: 2023, november

I managed to install it within IntelliJ

Services

GlassFish Server Running Payara web profile adaptme-web

[2023-11-05 01:28:48,880] Artifact adaptme-web:war exploded: Deploy took 181 mill

[2023-11-05 01:36:38,251] Artifact adaptme-web:war exploded: Artifact is being de

[2023-11-05 01:36:38,430] Artifact adaptme-web:war exploded: Artifact is deployed

26:22 LF UTF-8 4 spaces

The screenshot shows the IntelliJ IDEA interface with the Jakarta EE: Server Faces (JSF) plugin installed from the Marketplace. A prominent red banner at the bottom of the screen displays the text "Important: 2023, november" and "I managed to install it within IntelliJ". The IntelliJ UI includes the standard top navigation bar, a project structure tree on the left, and a central editor window showing Java code. The right side features a "Plugins" tool window with the Marketplace tab selected, showing the installed JSF plugin. The status bar at the bottom indicates the current time and encoding.

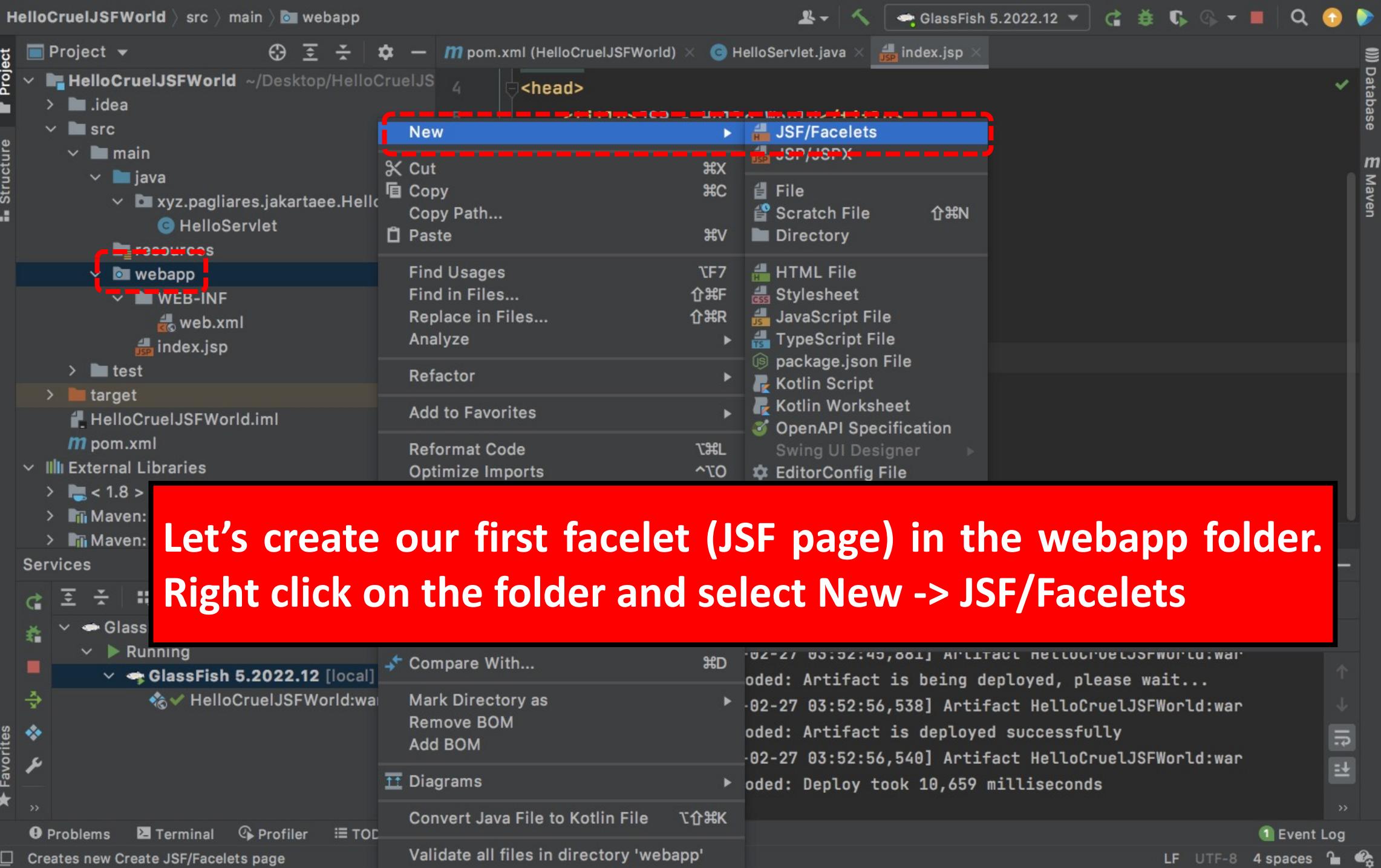
The screenshot shows the IntelliJ IDEA interface with the project 'adaptme-web' open. The pom.xml file is the active editor. A large red box highlights the following code snippet:

```
<maven.compiler.source>11</maven.compiler.source>
<maven.compiler.target>11</maven.compiler.target>
<dependencies>
    <dependency>
        <groupId>jakarta.faces</groupId>
        <artifactId>jakarta.faces-api</artifactId>
        <version>3.0.0</version>
        <scope>provided</scope>
    </dependency>
```

If you already started with a IntelliJ project but forgot to include JSF in addition to servlet, this is the Entry needed (the same generated by IntelliJ when selected during project creation)

The screenshot shows the IntelliJ IDEA interface with the GlassFish Log tab active. A large red box highlights the following log entries:

```
[2023-11-05 01:28:48,880] Artifact adaptme-web:war exploded: Deploy took 181 mill.
[2023-11-05 01:36:38,251] Artifact adaptme-web:war exploded: Artifact is being de...
[2023-11-05 01:36:38,430] Artifact adaptme-web:war exploded: Artifact is deployed
```



HelloCruelJSFWorld > src > main > webapp

GlassFish 5.2022.12

Project pom.xml (HelloCruelJSFWorld) HelloServlet.java index.jsp

Structure

HelloCruelJSFWorld ~/Desktop/HelloCruelJS

- .idea
- src
 - main
 - java
 - xyz.pagliares.jakartae HelloCruelJ
 - resources
 - webapp
 - WEB-INF
 - web.xml
 - index.jsp
- test
- target
 - HelloCruelJSFWorld.iml
 - pom.xml

External Libraries

- < 1.8 > /Library/Java/JavaVirtualMachines/a
- Maven: jakarta.faces:jakarta.faces-api:3.0.0
- Maven: jakarta.servlet:jakarta.servlet-api:5.0

Create JSF/Facelets Page

- index.xhtml
- JSF file
- Facelets file**
- html

Name it **index.xhtml** (**facelets** have **.xhtml** extension). I selected **Facelets file** in this **example**, but if you are **curious**, bear in mind that the option **JSF file** just adds an **additional namespace** and an **additional tag** to the generated **facelet** (you can **try** if you **wish**).

The screenshot shows the IntelliJ IDEA interface with the following details:

- Project View:** Shows the project structure under "HelloCruelJSFWorld". Key components include:
 - main:** Contains **java** and **resources** folders.
 - java:** Contains a package **xyz.pagliares.jakartae HelloCruelJ** with a class **HelloServlet**.
 - webapp:** Contains **WEB-INF** and **index.jsp**.
 - WEB-INF:** Contains **web.xml**.
 - index.jsp** and **index.xhtml** are listed under **index.jsp**.
- Code Editor:** Displays the content of **index.xhtml**. The code includes XML declarations, meta-information, and an HTML structure with a head section.
- Toolbars:** Standard IntelliJ IDEA toolbars for navigation and file operations.
- Sidebar:** Shows "Database" and "Maven" sections.

Facelet created. Double click the tab to maximize the editor window.

The terminal window displays the following deployment logs:

```
exploded: Artifact is deployed successfully
[2022-02-27 03:52:56,540] Artifact HelloCruelJSFWorld:war
exploded: Deploy took 10,659 milliseconds
```

Below the terminal, the status bar indicates: "Build completed successfully in 7 sec, 988 ms (28 minutes ago)".

Project

m pom.xml (HelloCruelJSFWorld) x C HelloServlet.java x JSP index.jsp x JSF index.xhtml x

```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <!--
3   Created by IntelliJ IDEA.
4   User: pagliares
5   Date: 27/02/22
6   Time: 16:19
7 -->
8 <!DOCTYPE html
```

Database

Maven

Include a title for our facelet. This title appears at the web browser tab.

Favorites

```
13      xmlns:h="http://java.sun.com/jsf/html">
14
15      <h:head>
16          <title>Title</title>
17      </h:head>
18
19      <h:body>
20
21      </h:body>
22
23  </html>
```

html > head > title

Project

Structure

Favorites

pom.xml (HelloCruelJSFWorld) × HelloServlet.java × index.jsp × index.xhtml ×

```
1   <?xml version="1.0" encoding="UTF-8"?>
2   <!--
3       Created by IntelliJ IDEA.
4       User: pagliares
5       Date: 27/02/22
6       Time: 16:19
7   -->
8   <!DOCTYPE html
9       PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
10      "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
11
12  <html xmlns="http://www.w3.org/1999/xhtml"
13      xmlns:h="http://java.sun.com/jsf/html">
14
15  <h:head>
16      <title>Hello, cruel JSF world !</title>
17  </h:head>
18
19  <h:body>
20      |
21  </h:body>
22
23  </html>
```

html > body

Project

Structure

Maven

pom.xml (HelloCruelJSFWorld) × HelloServlet.java × index.jsp × index.xhtml ×

```
1   <?xml version="1.0" encoding="UTF-8"?>
2   <!--
3       Created by IntelliJ IDEA.
4       User: pagliares
5       Date: 27/02/22
6       Time: 16:19
7   -->
8   <!DOCTYPE html
9       PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
10      "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
```

Now let's include a message to appear in the navigator viewport.

Favorites

```
15          <title>Hello, cruel JSF world !</title>
16      </h:head>
17
18      <h:body>
19          <div style="border: 1px dashed red; padding: 10px; text-align: center;>
20              Hello, cruel Jakarta Server Faces (JSF) world !
21          </div>
22      </h:body>
23
24
25  
```

html > body

Project pom.xml (HelloCruelJSFWorld) HelloServlet.java index.jsp index.xhtml

Structure Database Maven

main
 java
 xyz.pagliares.jakartae HelloCruelJ
 HelloServlet
 resources
 webapp
 WEB-INF
 web.xml
 index.jsp
 index.xhtml

test
target
HelloCruelJSFWorld.iml

```
14  
15 <h:head>  
16   <title>Hello, cruel JSF world !</title>  
17 </h:head>  
18  
19 <h:body>  
20   Hello, cruel Jakarta Server Faces (JSF) world !  
21 </h:body>  
22  
23 </html>
```

Let's see what happens if we try to access our facelet.

Maven: org.apiguardian:apiguardian-api:1.1.0

html > body

Services

GlassFish Server
 Running
 GlassFish 5.2022.12 [local]
 HelloCruelJSFWorld:war exploded

Server GlassFish Log

Deployment

HelloCruelJSFWorld:v
exploded: Artifact is being deployed, please wait...
[2022-02-27 03:52:56,538] Artifact HelloCruelJSFWorld:war
exploded: Artifact is deployed successfully
[2022-02-27 03:52:56,540] Artifact HelloCruelJSFWorld:war
exploded: Deploy took 10,659 milliseconds

Problems Terminal Profiler TODO Services Build

Build completed successfully in 7 sec, 988 ms (today 15:52)

Event Log

Hello World!

[Hello Servlet](#)

let's **include** the **name** of the **facelet** (**index.xhtml**) at the **end** of our **web root context**.



HTTP Status 404 - Not Found

type Status report

messageNot Found

descriptionThe requested resource is not available.

Payara Server 5.2022.1 #badassfish

It doesn't work ! We need to redeploy our application.

Project

Structure

Database

Maven

Code Editor (index.xhtml)

Run Configuration Dialog: Update 'GlassFish 5.2022.12'

- Update resources
- Update classes and resources
- Redeploy
- Restart server

Cancel OK

But before configuring JSF in `web.xml` file, let's try redeploying the app to see if it solves the problem.

Project pom.xml (HelloCruelJSFWorld) HelloServlet.java index.jsp index.xhtml

Structure Database Maven

Application redeployed

index.xhtml

```
<h:head>
    <title>Hello, cruel JSF world !</title>
</h:head>
<h:body>
    Hello, cruel Jakarta Server Faces (JSF) world !
</h:body>
</html>
```

External Libraries

- < 1.8 > /Library/Java/JavaVirtualMachines/
- Maven: jakarta.faces:jakarta.faces-api:3.0.0
- Maven: jakarta.servlet:jakarta.servlet-api:5.0.0
- Maven: org.apiguardian:apiguardian-api:1.1.0

Services

GlassFish Server

- Running
- GlassFish 5.2022.12 [local]
- HelloCruelJSFWorld:war exploded

Deployment

- HelloCruelJSFWorld:war exploded

Output

```
[2022-02-27 05:12:58,071] Artifact HelloCruelJSFWorld:war exploded: Artifact is being deployed, please wait...
[2022-02-27 05:15:00,185] Artifact HelloCruelJSFWorld:war exploded: Artifact is deployed successfully
[2022-02-27 05:15:00,196] Artifact HelloCruelJSFWorld:war exploded: Deploy took 126,827 milliseconds
```

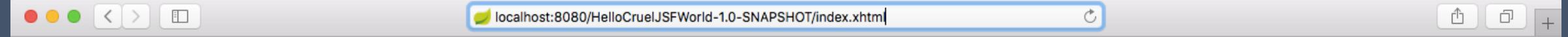
Problems Terminal Profiler TODO Services Build

Build completed successfully in 6 sec, 117 ms (today 17:12)

Event Log

Hello, cruel Jakarta Server Faces (JSF) world !

Our first JSF facelet !



Hello, cruel Jakarta Server Faces (JSF) world !

Note: If you have experience with JSF prior to JSF 2.0, you may be surprised with this application working !

Project index.xhtml × web.xml ×

Structure Database Maven

```
1   <?xml version="1.0" encoding="UTF-8"?>
2   <web-app xmlns="https://jakarta.ee/xml/ns/jakartaee"
3       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4       xsi:schemaLocation="https://jakarta.ee/xml/ns/jakartaee https://jakarta.ee/xml/ns/jakartaee/web-app_5_0.xsd"
5       version="5.0">
6       <servlet>
7           <servlet-name>Faces Servlet</servlet-name>
8           <servlet-class>jakarta.faces.webapp.FacesServlet</servlet-class>
9           <load-on-startup>1</load-on-startup>
10      </servlet>
11      <servlet-mapping>
12          <servlet-name>Faces Servlet</servlet-name>
13          <url-pattern>/faces/*</url-pattern>
14      </servlet-mapping>
15      <session-config>
16          <session-timeout>
17              30
18          </session-timeout>
19      </session-config>
20      <welcome-file-list>
21          <welcome-file>faces/index.xhtml</welcome-file>
22      </welcome-file-list>
23  </web-app>
```

Note: This is the print of a JSF application prior to JSF 2.0

```
1   <?xml version="1.0" encoding="UTF-8"?>
2   <web-app xmlns="https://jakarta.ee/xml/ns/jakartaee"
3       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4       xsi:schemaLocation="https://jakarta.ee/xml/ns/jakartaee https://jakarta.ee/xml/ns/jakartaee/web-app_5_0.xsd"
5       version="5.0">
6       <servlet>
7           <servlet-name>Faces Servlet</servlet-name>
8           <servlet-class>jakarta.faces.webapp.FacesServlet</servlet-class>
9           <load-on-startup>1</load-on-startup>
10      </servlet>
11      <servlet-mapping>
12          <servlet-name>Faces Servlet</servlet-name>
13          <url-pattern>/faces/*</url-pattern>
14      </servlet-mapping>
15      <session-config>
16          <session-timeout>
17              30
18          </session-timeout>
19      </session-config>
20      <welcome-file-list>
21          <welcome-file>faces/index.xhtml</welcome-file>
22      </welcome-file-list>
23  </web-app>
```

Note: Prior to JSF 2.0, in order to enable the JSF servlet to translate the **xhtml page**, you needed to ensure that the **web.xml** file contained a **servlet element** indicating the **javax.faces.webapp.FacesServlet** class and its associated **servlet-mapping url**.

```
1   <?xml version="1.0" encoding="UTF-8"?>
2   <web-app xmlns="https://jakarta.ee/xml/ns/jakartaee"
3       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4       xsi:schemaLocation="https://jakarta.ee/xml/ns/jakartaee https://jakarta.ee/xml/ns/jakartaee/web-app_5_0.xsd"
5       version="5.0">
6       <servlet>
7           <servlet-name>Faces Servlet</servlet-name>
8           <servlet-class>jakarta.faces.webapp.FacesServlet</servlet-class>
9           <load-on-startup>1</load-on-startup>
10      </servlet>
11      <servlet-mapping>
12          <servlet-name>Faces Servlet</servlet-name>
13          <url-pattern>/faces/*</url-pattern>
14      </servlet-mapping>
15      <session-config>
16          <session-timeout>
17              30
18          </session-timeout>
19      </session-config>
20      <welcome-file-list>
21          <welcome-file>faces/index.xhtml</welcome-file>
22      </welcome-file-list>
23  </web-app>
```

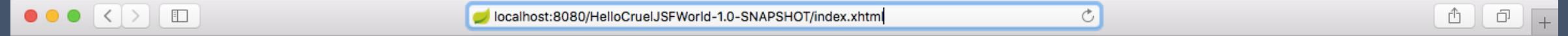
Since the **release** of JSF 2.0, if using a **Servlet 3.x container**, the **FacesServlet** is **automatically mapped** for you, so there is no requirement to **adjust** the **web.xml configuration** to run your **facelets**.

Project pom.xml (HelloCruelJSFWorld) × HelloServlet.java × index.xhtml × web.xml ×

Structure Database Maven

```
1  <?xml version="1.0" encoding="UTF-8"?>
2  <web-app xmlns="https://jakarta.ee/xml/ns/jakartaee"
3      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4      xsi:schemaLocation="https://jakarta.ee/xml/ns/jakartaee https://jakarta.ee/xml/ns/jakartaee/web-app_5_0.xsd"
5      version="5.0">
6  </web-app>
```

Back to our project, open the `web.xml` file. Note that no additional configuration is needed to run our facelet, since we are using Jakarta EE 10 (JSF 3.0).



Hello, cruel Jakarta Server Faces (JSF) world !

Hence, when we explicitly type index.xhtml in our URL, our facelet works.



Hello World!

[Hello Servlet](#)

However, notice that if access the web application by the web context root (without including index.xhtml or index.jsp, the view invoked is the jsp (index.jsp))

Hello World!

[Hello Servlet](#)

This **behavior** can be **changed** to load **index.xhtml** as the welcome **view (facelet)** to our **application**. In this case, we need to **change** the **file web.xml**.

Project

Structure

Favorites

m pom.xml (HelloCruelJSFWorld) x C HelloServlet.java x JSF index.xhtml x web.xml x

```
1  <?xml version="1.0" encoding="UTF-8"?>
2  <web-app xmlns="https://jakarta.ee/xml/ns/jakartaee"
3      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4      xsi:schemaLocation="https://jakarta.ee/xml/ns/jakartaee https://jakarta.ee/xml/ns/jakartaee/web-app_5_0.xsd"
5      version="5.0">
6  </web-app>
```

Database

Maven

Open the file web.xml.

Project

m pom.xml (HelloCruelJSFWorld) x C HelloServlet.java x JSF index.xhtml x web.xml x

```
1  <?xml version="1.0" encoding="UTF-8"?>
2  <web-app xmlns="https://jakarta.ee/xml/ns/jakartaee"
3      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4      xsi:schemaLocation="https://jakarta.ee/xml/ns/jakartaee https://jakarta.ee/xml/ns/jakartaee/web-app_5_0.xsd"
5      version="5.0">
6
7      <welcome-file-list>
8          <welcome-file>index.xhtml</welcome-file>
9      </welcome-file-list>
10
11 </web-app>
```

Database

Maven

Include the welcome-file-list element

Favorites

web-app

Project

m pom.xml (HelloCruelJSFWorld) x C HelloServlet.java x JSF index.xhtml x web.xml x

```
1  <?xml version="1.0" encoding="UTF-8"?>
2  <web-app xmlns="https://jakarta.ee/xml/ns/jakartaee"
3      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4      xsi:schemaLocation="https://jakarta.ee/xml/ns/jakartaee https://jakarta.ee/xml/ns/jakartaee/web-app_5_0.xsd"
5      version="5.0">
6
7      <welcome-file-list>
8          <welcome-file>index.xhtml</welcome-file>
9      </welcome-file-list>
10
11 </web-app>
```

Database

m Maven

Let's redeploy the application to Payara.

Favorites

web-app

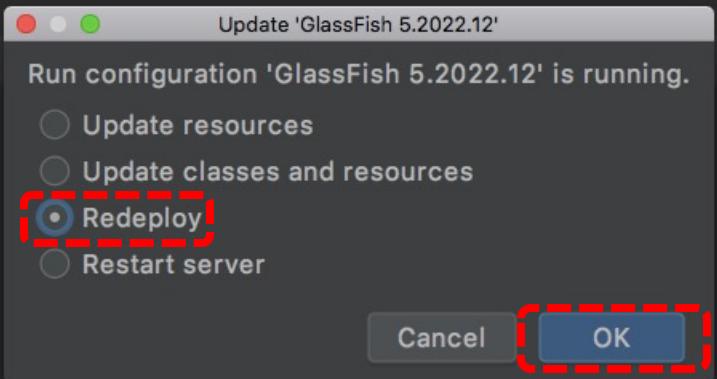
Project

pom.xml (HelloCruelJSFWORLD) x HelloServlet.java x index.xhtml x web.xml x

```
1  <?xml version="1.0" encoding="UTF-8"?>
2  <web-app xmlns="https://jakarta.ee/xml/ns/jakartaee"
3      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4      xsi:schemaLocation="https://jakarta.ee/xml/ns/jakartaee https://jakarta.ee/xml/ns/jakartaee/web-app_5_0.xsd"
5      version="5.0">
6
7      <welcome-file-list>
8          <welcome-file>index.xhtml</welcome-file>
9      </welcome-file-list>
10
11 </web-app>
```

Structure

Favorites



web-app

Project

pom.xml (HelloCruelJSFWorld) × HelloServlet.java × index.xhtml × web.xml ×

```
1  <?xml version="1.0" encoding="UTF-8"?>
2  <web-app xmlns="https://jakarta.ee/xml/ns/jakartaee"
3      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4      xsi:schemaLocation="https://jakarta.ee/xml/ns/jakartaee https://jakarta.ee/xml/ns/jakartaee/web-app_5_0.xsd"
5      version="5.0">
6
7      <welcome-file-list>
8          <welcome-file>index.xhtml</welcome-file>
9      </welcome-file-list>
10
11 </web-app>
```

Database

Maven

Structure

m Maven

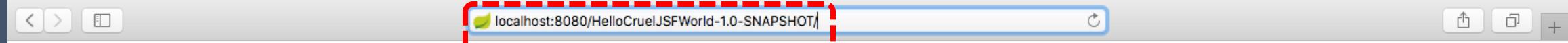
web-app

Deployed !

Favorites

Services

GlassFish Server	Deployment	Output
Running	✓ HelloCruelJSFWorld:v	[2022-02-27 06:54:30,235] Artifact HelloCruelJSFWorld:war exploded: Artifact is being deployed, please wait...
GlassFish 5.2022.12 [local]	✓ HelloCruelJSFWorld:war exploded	[2022-02-27 06:54:33,317] Artifact HelloCruelJSFWorld:war exploded: Artifact is deployed successfully
		[2022-02-27 06:54:33,319] Artifact HelloCruelJSFWorld:war exploded: Deploy took 3,084 milliseconds



Hello, cruel Jakarta Server Faces (JSF) world !

localhost:8080/HelloCruelJSFWORLD-1.0-SNAPSHOT/

JSF is now our welcome file !

Hello World!

[Hello Servlet](#)

If you want, you can still access the JSP file by appending **index.jsp** at the end of the URL (**web root context**).

Your first JSF managed bean

JSF managed bean

- **Managed Bean** is a **regular Java Bean class registered with JSF**.
 - ✓ In other words, **Managed Beans** is a **Java bean managed by JSF framework**.
- **A managed bean may contain:**
 - ✓ The **getter and setter methods**.
 - ✓ **Business logic**.
 - ✓ **A backing bean**.
 - A **bean that contains HTML form values**.

JSF managed bean

- **Managed beans work as Model for UI component.**
- **Managed Bean can be accessed from JSF page.**
- In **JSF 1.2**, a **managed bean had to register it in JSF configuration file** such as faces-config.xml.
- From **JSF 2.0 onwards, managed beans can be easily registered using annotations.**
 - ✓ Keeps beans and its registration at one place.
 - ✓ Easier to manage.

Project

SampleJSFProject ~/Desktop/SampleJSFProj

- > .idea
- < src
 - < main
 - < java
 - xyz.pagliares.SampleJSFProject
 - HelloServlet
 - resources
 - < webapp
 - WEB-INF
 - index.jsp
 - index.xhtml
 - > test
 - > target
 - pom.xml
 - SampleJSFProject.iml

External Libraries

Scratches and Consoles

Services

GlassFish Server

 - < Running
 - < GlassFish 5.2022.1 [local]
 - SampleJSFProject:war exploded

Favorites

Project

New

Cut ⌘X

Copy ⌘C

Copy Path...

Paste ⌘V

Find Usages ⌥F7

Find in Files... ⌘⌘F

Replace in Files... ⌘⌘R

Analyze ▶

Refactor ▶

Add to Favorites ▶

Reformat Code ⌘L

Optimize Imports ⌘O

Delete... ⌘⌫

Build Module 'SampleJSFProject' ⌘F9

Rebuild '...es.SampleJSFProject'

Run 'Tests in 'xyz.pagliares.SampleJSFProject'' ⌘↑R

Debug 'Tests in 'xyz.pagliares.SampleJSFProject'' ⌘↑D

More Run/Debug ▶

Open In ▶

Local History ▶

Reload from Disk ▶

Compare With... ⌘D

Mark Directory as ▶

Remove BOM ▶

Add BOM ▶

Diagrams ▶

Convert Java File to Kotlin File ⌘⌘K

- transitional//EN"
- D/xhtml1-transitional.dtd">
- Rename... ⌘F6
- Move Package or Directory... F6
- Copy Classes... F5
- Generify...
- Migrate to AndroidX...
- Add Right-to-Left (RTL) Support...

1,515] Artifact SampleJSFProject:war
is deployed successfully
1,518] Artifact SampleJSFProject:war
took 4,709 milliseconds

Project + - | Settings - | index.xhtml x

SampleJSFProject ~/Desktop/SampleJSFProj

.idea

src

main

java

xyz.pagliares.SampleJSFProject

HelloServlet

resources

webapp

WEB-INF

index.jsp

index.xhtml

test

target

pom.xml

SampleJSFProject.iml

External Libraries

Scratches and Consoles

index.xhtml

3 Created by IntelliJ IDEA.

4 User: pagliares

5 Date: 24/02/22

6 Time: 19:10

7 -->

8 <!DOCTYPE html

9 PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"

10 "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

Rename

Rename package 'xyz.pagliares.SampleJSFProject' and its usages to:

xyz.pagliares.SampleJSFProject

Search in comments and strings Search for text occurrences

Scope

Project Files

Cancel Preview Refactor

Services

GlassFish Server

Running

GlassFish 5.2022.1 [local]

SampleJSFProject:war exploded [Sy]

Server GlassFish Log

Deployment

Output

[2022-02-26 03:17:31,515] Artifact SampleJSFProject:war exploded: Artifact is deployed successfully

[2022-02-26 03:17:31,518] Artifact SampleJSFProject:war exploded: Deploy took 4,709 milliseconds

Problems Terminal Profiler TODO Build Services Event Log

Build completed successfully in 4 sec, 808 ms (today 15:17) 21:9 LF UTF-8 4 spaces

Project + ☰ ✖ ⚙️ - JSF index.xhtml ×

SampleJSFProject ~/Desktop/SampleJSFProj... 3 Created by IntelliJ IDEA.

.idea 4 User: pagliares

src 5 Date: 24/02/22

 main 6 Time: 19:10

 java 7 -->

 xyz.pagliares.SampleJSFProject 8 <!DOCTYPE html

 HelloServlet 9 PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"

 resources 10 "HTTP://WWW.W3.ORG/TR/XHTML1/DTD/XHTML1-TRANSITIONAL.DTD">

 webapp

 WEB-INF

 index.jsp

 index.xhtml

 test

target

pom.xml

SampleJSFProject.iml

External Libraries

Scratches and Consoles

Renaming dialog: Rename package 'xyz.pagliares.SampleJSFProject' and its usages to: xyz.pagliares

Search in comments and strings Search for text occurrences

Scope: Project Files

Buttons: ? Cancel Preview Refactor

Services

GlassFish Server

Running

GlassFish 5.2022.1 [local]

SampleJSFProject:war exploded [Sy...]

Server GlassFish Log ×

Deployment Output

✓ SampleJSFProject:war ex [2022-02-26 03:17:31,515] Artifact SampleJSFProject:war exploded: Artifact is deployed successfully

[2022-02-26 03:17:31,518] Artifact SampleJSFProject:war exploded: Deploy took 4,709 milliseconds

Problems Terminal Profiler TODO Build Services Event Log

Build completed successfully in 4 sec, 808 ms (today 15:17) 21:9 LF UTF-8 4 spaces

Project index.xhtml x

SampleJSFProject ~/Desktop/SampleJSFProj .idea src main java xyz.pagliares.SampleJSFProject HelloServlet resources webapp WEB-INF index.jsp index.xhtml test target pom.xml SampleJSFProject.iml External Libraries Scratches and Consoles

index.xhtml

```
3     Created by IntelliJ IDEA.  
4     User: pagliares  
5     Date: 24/02/22  
6     Time: 19:10  
7     -->  
8     <!DOCTYPE html  
9             PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"  
10            "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">  
F</title>
```

Rename package 'xyz.pagliares.SampleJSFProject' and its usages to:
 Search for text occurrences
Scope: Project Files

Services

GlassFish Server
Running
GlassFish 5.2022.1 [local]
SampleJSFProject:war exploded [Sy]

Server GlassFish Log

Deployment Output
SampleJSFProject:war ex [2022-02-26 03:17:31,515] Artifact SampleJSFProject:war exploded: Artifact is deployed successfully
[2022-02-26 03:17:31,518] Artifact SampleJSFProject:war exploded: Deploy took 4,709 milliseconds

Problems Terminal Profiler TODO Build Services Event Log

Build completed successfully in 4 sec, 808 ms (today 15:17) 21:9 LF UTF-8 4 spaces

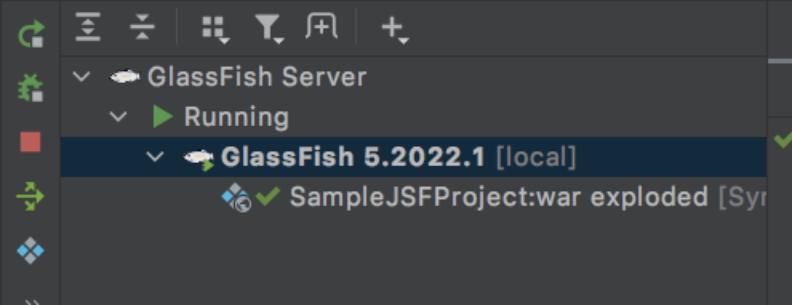
Project

Structure

The screenshot shows the IntelliJ IDEA interface with the 'Project' tool window open. The project structure is as follows:

- SampleJSFProject** (~/Desktop/SampleJSFProj)
- .idea**
- src**
 - main**
 - java**
 - xyz.pagliares.jsfproject** (selected)
 - HelloServlet**
 - resources**
 - webapp**
 - WEB-INF**
 - index.jsp**
 - index.xhtml**
 - test**
 - target**
 - pom.xml**
 - SampleJSFProject.iml**
 - External Libraries**
 - Scratches and Consoles**

Services



Server ➤ GlassFish Log ✕

Employment

put

2022-02-26 03:17:31,515] Artifact SampleJSFProject:war

Exploded: Artifact is deployed successfully

2022-02-26 03:17:31,518] Artifact SampleJSFProject:war

Exploded: Deploy took 4.709 milliseconds

Project ▾ index.xhtml ×

SampleJSFProject ~/Desktop/SampleJSFProject

- .idea
- src
 - main
 - java
 - xyz.pagliares.jsfproject
 - HelloServlet
 - resources
 - webapp
 - WEB-INF
 - index.jsp
 - index.xhtml
 - test
 - target
 - pom.xml
 - SampleJSFProject.iml

External Libraries

Scratches and Consoles

Services

GlassFish Server

 - Running
 - GlassFish 5.2022.1 [local]

SampleJSFProject:war ex

New

 - Cut ⌘X
 - Copy ⌘C
 - Copy Path... ⌘V
 - Paste ⌘V
 - Find Usages ⌘F7
 - Find in Files... ⌘F
 - Replace in Files... ⌘R
 - Analyze
 - Refactor
 - Add to Favorites
 - Reformat Code ⌘L
 - Optimize Imports ⌘O
 - Delete... ⌘X
 - Build Module 'SampleJSFProject'
 - Rebuild '...agliares.jsfproject' ⌘⌘F9
 - Run 'Tests in 'xyz.pagliares.jsfproject'' ⌘↑R
 - Debug 'Tests in 'xyz.pagliares.jsfproject'' ⌘↑D
 - More Run/Debug
 - Open In
 - Local History
 - Reload from Disk
 - Compare With... ⌘D
 - Mark Directory as
 - Remove BOM
 - Add BOM
 - Diagrams

- Java Class
- Kotlin Class/File
- File
- Scratch File ↑⌘N
- Package
- package-info.java

- HTML File
- Stylesheet
- JavaScript File
- TypeScript File
- package.json File
- Kotlin Script
- Kotlin Worksheet
- OpenAPI Specification
- Swing UI Designer
- EditorConfig File
- Resource Bundle
- XML Configuration File
- Diagram
- Servlet
- Web Filter
- Web Listener
- HTTP Request

Project index.xhtml x

SampleJSFProject ~/Desktop/SampleJSFProj

src

main

java

xyz.pagliares.jsfproject

HelloServlet

resources

webapp

WEB-INF

index.jsp

index.xhtml

test

target

pom.xml

SampleJSFProject.iml

External Libraries

Scratches and Consoles

3 Created by IntelliJ IDEA.

4 User: pagliares

5 Date: 24/02/22

6 Time: 19:10

7 -->

8 <!DOCTYPE html

9 PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"

10 "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

11

12 <html xmlns="http://www.w3.org/1999/xhtml"

13 xmlns:h="http://java.sun.com/jsf/html">

14

15 New Package

16 xyz.pagliares.jsfproject.beans

17 </h:head>

18

19 <h:body>

 html > body

Services

GlassFish Server

Running

GlassFish 5.2022.1 [local]

SampleJSFProject:war exploded [Sy]

Server GlassFish Log

Deployment

Output

[2022-02-26 04:42:26,258] Artifact SampleJSFProject:war exploded: Artifact is deployed successfully

[2022-02-26 04:42:26,283] Artifact SampleJSFProject:war exploded: Deploy took 11,614 milliseconds

Project index.xhtml x

SampleJSFProject ~/Desktop/SampleJSFProj

.idea

src

main

java

xyz.pagliares.jsfproject

beans

HelloServlet

resources

webapp

WEB-INF

index.jsp

index.xhtml

test

target

pom.xml

SampleJSFProject.iml

External Libraries

Scratches and Consoles

index.xhtml

3 Created by IntelliJ IDEA.

4 User: pagliares

5 Date: 24/02/22

6 Time: 19:10

7 -->

8 <!DOCTYPE html

9 PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"

10 "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

11

12 <html xmlns="http://www.w3.org/1999/xhtml"

13 xmlns:h="http://java.sun.com/jsf/html">

14

15 <h:head>

16 <title>Hello Jakarta Server Faces - JSF</title>

17 </h:head>

18

19 <h:body>

 html > body

Services

GlassFish Server

Running

GlassFish 5.2022.1 [local]

SampleJSFProject:war exploded [Sy]

Server GlassFish Log x

Deployment

Output

[2022-02-26 04:42:26,258] Artifact SampleJSFProject:war

exploded: Artifact is deployed successfully

[2022-02-26 04:42:26,283] Artifact SampleJSFProject:war

exploded: Deploy took 11,614 milliseconds

Project

Structure

6

The screenshot shows the IntelliJ IDEA file structure for a Java web project named "SampleJSFProject". The tree view displays the following hierarchy:

- SampleJSFProject (~Desktop/SampleJSFProject)
 - .idea
 - src
 - main
 - java
 - xyz.pagliares.jsfproject
 - beans
 - resources
 - webapp
 - WEB-INF
 - index.jsp
 - index.xhtml
 - test
 - target
 - pom.xml
 - SampleJSFProject.iml
 - External Libraries
 - Scratches and Consoles

A screenshot of the GlassFish Services window. The sidebar shows icons for Java EE, Java SE, and Java ME. The main area displays a tree structure under 'GlassFish Server'. The 'Running' node is expanded, showing the 'GlassFish 5.2022.1 [local]' node, which is also selected. Below it, the 'SampleJSFProject:war exploded' node is shown with a green checkmark and a blue icon.

Problems Terminal Profiler TODO

index.xhtml

- Cut
- Copy
- Copy Path...
- Paste
-
- Find Usages
- Find in Files...
- Replace in Files...
- Analyze
-
- Refactor
-
- Add to Favorites
-
- Reformat Code
- Optimize Imports
- Delete...
-
- Build Module 'Sample'
- Rebuild '...es.jsfproj'
- Run 'Tests in 'xyz.page.html''
- Debug 'Tests in 'xyz.page.html''
- More Run/Debug
-
- Open In
-
- Local History
- Reload from Disk
-
- Compare With...
-
- Mark Directory as
- Remove BOM
- Add BOM
-
- Diagrams

The screenshot shows the IntelliJ IDEA interface with a context menu open. The menu bar at the top has 'File' selected. The main window displays a file tree on the left and a code editor on the right. A context menu is open over a piece of code, with 'Java Class' highlighted in blue. Other options in the menu include 'Kotlin Class/File', 'File', 'Scratch File', 'Package', and 'package-info.java'. Below this is a separator line, followed by options for HTML, CSS, JavaScript, TypeScript, package.json, Kotlin Script, Kotlin Worksheet, OpenAPI Specification, Swing UI Designer, EditorConfig File, Resource Bundle, XML Configuration File, Diagram, Servlet, Web Filter, Web Listener, and HTTP Request. At the bottom of the menu, there are several log entries from the artifact sample.

- ▶ C Java Class
- Kotlin Class/File
- File
- Scratch File
- Package
- package-info.java
- ▶ HTML File
- Stylesheet
- JavaScript File
- TypeScript File
- package.json File
- Kotlin Script
- Kotlin Worksheet
- OpenAPI Specification
- Swing UI Designer
- EditorConfig File
- Resource Bundle
- XML Configuration File
- Diagram
- Servlet
- Web Filter
- Web Listener
- HTTP Request

42:26,258] Artifact Sample
ifact is deployed successfully
42:26,283] Artifact Sample
Loy took 11,614 milliseconds

The screenshot shows the IntelliJ IDEA interface with the following details:

- Project View:** Shows the project structure for "SampleJSFProject". The "src/main/java/xyz.pagliares.jsfproject" package is selected.
- Code Editor:** An XHTML file named "index.xhtml" is open. The code includes DOCTYPE, XML namespace declarations, and a title element.
- Tool Window:** A "Services" tool window is open, showing the GlassFish Server status. It lists "GlassFish 5.2022.1 [local]" as running, with "SampleJSFProject:war exploded" deployed.
- Bottom Status Bar:** Shows build statistics: "Build completed successfully in 9 sec, 850 ms (3 minutes ago)".

A modal dialog box is displayed, prompting the user to choose a Java class type (Class, Interface, Enum, Annotation) for the new managed bean.

Project + - | Database
SampleJSFProject ~/Desktop/SampleJSFProj 1
.idea
src
main
java
xyz.pagliares.jsfproject
beans
HelloManagedBean
HelloServlet
resources
webapp
WEB-INF
index.jsp
index.xhtml
test
target
pom.xml
SampleJSFProject.iml
External Libraries
Scratches and Consoles

index.xhtml x HelloManagedBean.java x

```
package xyz.pagliares.jsfproject.beans;  
  
public class HelloManagedBean {  
}
```

Services + - | Favorites

GlassFish Server
Running
GlassFish 5.2022.1 [local]
SampleJSFProject:war exploded [Sy]

Server GlassFish Log x

Deployment	Output
✓ SampleJSFProject:war ex	[2022-02-26 04:42:26,258] Artifact SampleJSFProject:war exploded: Artifact is deployed successfully
	[2022-02-26 04:42:26,283] Artifact SampleJSFProject:war exploded: Deploy took 11,614 milliseconds

Project + - | Database
SampleJSFProject ~/Desktop/SampleJSFProj 1
.idea 2
src 3
main 4
java 5
xyz.pagliares.jsfproject 6
beans
HelloManagedBean
HelloServlet
resources
webapp
WEB-INF
index.jsp
index.xhtml
test
target
pom.xml
SampleJSFProject.iml
External Libraries
Scratches and Consoles

index.xhtml x HelloManagedBean.java x

```
package xyz.pagliares.jsfproject.beans;
  
@Named
public class HelloManagedBean {  
}
```

Services + - | Favorites

GlassFish Server
Running
GlassFish 5.2022.1 [local]
SampleJSFProject:war exploded [Sy]

Server GlassFish Log x

Deployment	Output
✓ SampleJSFProject:war ex	[2022-02-26 04:42:26,258] Artifact SampleJSFProject:war exploded: Artifact is deployed successfully
	[2022-02-26 04:42:26,283] Artifact SampleJSFProject:war exploded: Deploy took 11,614 milliseconds

Project - index.xhtml x HelloManagedBean.java x pom.xml (SampleJSFProject) x

Database m Maven

Structure

Project Tree:

- SampleJSFProject ~/Desktop/SampleJSFProj
- .idea
- src
 - main
 - java
 - xyz.pagliares.jsfproject
 - beans
 - HelloManagedBean
 - HelloServlet
 - resources
 - webapp
 - WEB-INF
 - web.xml
 - index.jsp
 - index.xhtml
 - test
 - target
 - pom.xml
 - SampleJSFProject.iml
- External Libraries
- Scratches and Consoles

Favorites

Code Editor (HelloManagedBean.java):

```
package xyz.pagliares.jsfproject.beans;

import javax.annotation.Named;

public class HelloManagedBean {
```

Issues:

- 1 warning
- 1 error

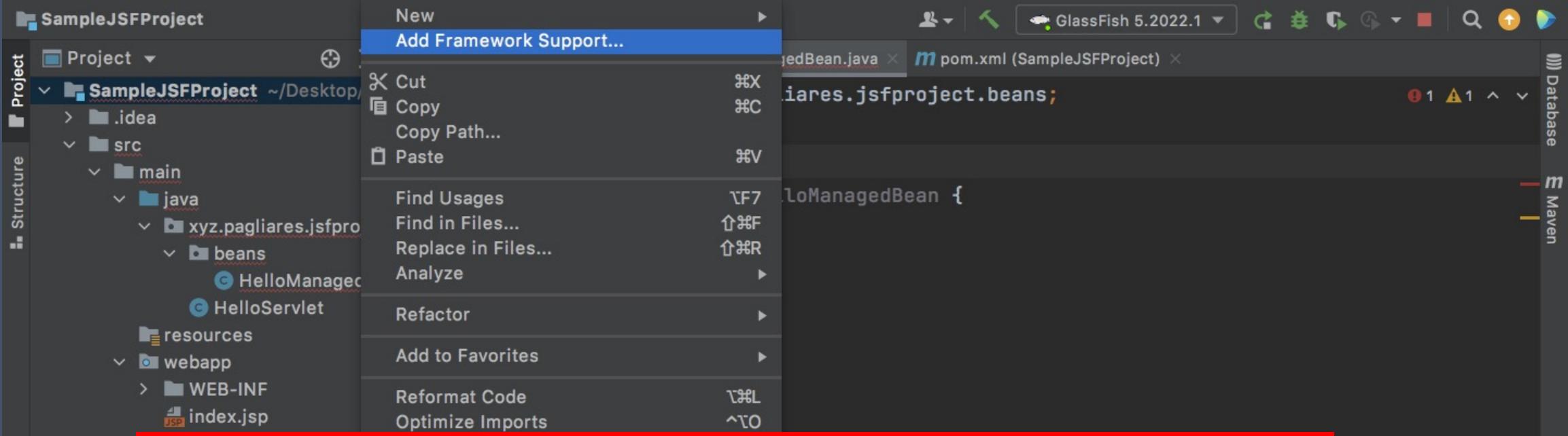
No beans.xml

Project index.xhtml × HelloManagedBean.java × pom.xml (SampleJSFProject) ×

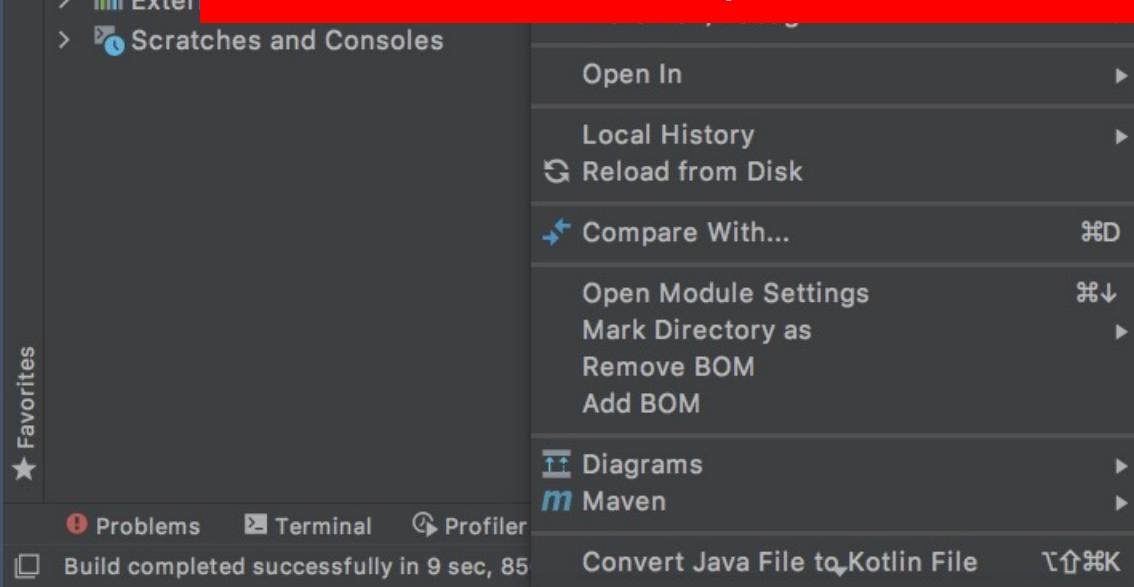
```
20      <dependency>
21          <groupId>jakarta.faces</groupId>
22          <artifactId>jakarta.faces-api</artifactId>
23          <version>3.0.0</version>
24          <scope>provided</scope>
25      </dependency>
26      <dependency>
27          <groupId>jakarta.servlet</groupId>
28          <artifactId>jakarta.servlet-api</artifactId>
29          <version>5.0.0</version>
30          <scope>provided</scope>
31      </dependency>
32      <dependency>
33          <groupId>org.junit.jupiter</groupId>
34          <artifactId>junit-jupiter-api</artifactId>
35          <version>${junit.version}</version>
36          <scope>test</scope>
37      </dependency>
38      <dependency>
39          <groupId>org.junit.jupiter</groupId>
40          <artifactId>junit-jupiter-engine</artifactId>
41          <version>${junit.version}</version>
42          <scope>test</scope>
43      </dependency>
```

Favorites

project > groupId



Alternative in next hidden slide. My version of IntelliJ – 2023, does not have this menu item



Logging Frameworks
Java Specifications
JSON Libraries
JVM Languages
Language Runtime
Core Utilities
Mocking
Web Assets
Annotation Libraries
Logging Bridges
HTTP Clients
Dependency Injection
XML Processing
Web Frameworks
I/O Utilities
Defect Detection Metadata
Code Generators
Configuration Libraries
OSGi Utilities
Android Platform
Reflection Libraries
JDBC Drivers
Concurrency Libraries
Assertion Libraries
Validation Libraries
Collections
Bytecode Libraries
Data Formats
Aspect Oriented

Date	May 18, 2022
Files	pom (11 KB) jar (147 KB) View All
Repositories	Central Press (fn) F to exit full screen
Ranking	#406 in MvnRepository (See Top Artifacts) #28 in Java Specifications
Used By	1,140 artifacts

Note: There is a new version for this artifact

New Version	4.1.0.Alpha1
-------------	--------------

Maven Gradle Gradle (Short) Gradle (Kotlin) SBT Ivy Grape Leiningen Buildr

```
<!-- https://mvnrepository.com/artifact/jakarta.enterprise/jakarta.enterprise.cdi-api -->
<dependency>
    <groupId>jakarta.enterprise</groupId>
    <artifactId>jakarta.enterprise.cdi-api</artifactId>
    <version>4.0.1</version>
</dependency>
```

Include comment with link to declaration

Compile Dependencies (5)

Category/License	Group	Version	Version
Annotation Lib EPL 2.0 GPL	jakarta.annotation » jakarta.annotation-api	2.1.0	2.1.1
Java Spec EPL 2.0 GPL	jakarta.el » jakarta.el-api	5.0.0	5.0.1
Java Spec Apache 2.0	jakarta.enterprise » jakarta.enterprise.lang-model	4.0.1	✓
Dep Injection Apache 2.0	jakarta.inject » jakarta.inject-api	2.0.1	✓
Java Spec EPL 2.0 GPL	jakarta.interceptor » jakarta.interceptor-api	2.1.0	✓

CDI dependency

Atlassian Public

KtorEAP

Popular Tags

aar amazon android apache api
application arm assets aws build
build-system client clojure cloud
commons config cran data
database eclipse example extension
framework github gradle groovy
http javascript jboss kotlin library
logging maven module npm
persistence plugin rest rlang sdk
server service spring sql starter
testing tools ui web webapp

About

Web site developed by [@frodriguez](#)

Powered by: Scala, Play, Spark, Akka and Cassandra

SampleJSFProject

Project index.xhtml HelloManagedBean.java pom.xml (SampleJSFProject)

Add Frameworks Support

Please select the desired technologies.
This will download all needed libraries and create Facets in project configuration.

Java EE (9)

Java EE version: Jakarta EE 9

- Batch Applications
- Bean Validation
- CDI: Contexts and Dependency Injection
- Concurrency Utils (JSR 236)
- Connector Architecture (JSR 322)
- EJB: Enterprise Java Beans
- JavaEE Application
- JavaEE Security
- JAX RESTful Web Services
- JMS: Java Message Service
- JSON Binding
- JSON Processing (JSR 353)
- Transaction API (JSR 907)
- WebSocket

JBoss

- Arquillian JUnit
- JBoss Drools
- Thymeleaf
- IE Conditional Comments Support
- Java 8 Time API Compatibility

Cancel OK

Project Structure Favorites

SampleJSFProject

Project index.xhtml HelloManagedBean.java pom.xml (SampleJSFProject)

Add Frameworks Support

Please select the desired technologies.
This will download all needed libraries and create Facets in project configuration.

Java EE (9)

- Batch Applications
- Bean Validation
- CDI: Contexts and Dependency Injection (2.0.3)
- Concurrency Utils (JSR 236)
- Connector Architecture (JSR 322)
- EJB: Enterprise Java Beans
- JavaEE Application
- JavaEE Security
- JAX RESTful Web Services
- JMS: Java Message Service
- JSON Binding
- JSON Processing (JSR 353)
- Transaction API (JSR 907)
- WebSocket

JBoss

- Arquillian JUnit
- JBoss Drools
- Thymeleaf
- IE Conditional Comments Support
- Java 8 Time API Compatibility

Create beans.xml

Libraries

- Use library: [No library selected]
- Download
- Set up library later

10 JARs will be downloaded into lib directory
Project library JBoss Weld-2.0.3 will be created

Configure...

Cancel OK

Project Structure Database Maven

Favorites

SampleJSFProject

Project index.xhtml HelloManagedBean.java pom.xml (SampleJSFProject)

Add Frameworks Support

Please select the desired technologies.
This will download all needed libraries and create Facets in project configuration.

Java EE (9)

- Batch Applications
- Bean Validation
- CDI: Contexts and Dependency Injection (2.0.3)
- Concurrency Utils (JSR 236)
- Connector Architecture (JSR 322)
- EJB: Enterprise Java Beans
- JavaEE Application
- JavaEE Security
- JAX RESTful Web Service
- JMS: Java Message Service
- JSON Binding
- JSON Processing (JSR 353)
- Transaction API (JSR 907)
- WebSocket

JBoss

- Arquillian JUnit
- JBoss Drools
- Thymeleaf
- IE Conditional Comments Support
- Java 8 Time API Compatibility

Create beans.xml

Libraries

Use library: [No library selected]

Download

Set up library later

10 JARs will be downloaded into lib directory
Project library JBoss Weld-2.0.3 will be created

Configure...

Downloading JBoss Weld-2.0.3 Library

Downloading 29 files...

.../j2ee_libs/cdi/weld/2.0.3/weld-core-jsf.jar'

?

Cancel OK

Project Database

Structure Maven

Favorites

The screenshot shows the IntelliJ IDEA interface with the following details:

- Title Bar:** SampleJSFProject
- Toolbars:** Standard IntelliJ toolbars.
- Project View (Left):** Shows the project structure under "SampleJSFProject".
 - src:** Contains:
 - main:** java (xyz.pagliares.jsfproject), beans (HelloManagedBean, HelloServlet).
 - resources:**
 - webapp:** WEB-INF (web.xml, index.jsp, index.xhtml).
 - test**
 - target:** pom.xml, SampleJSFProject.iml.
- Code Editor (Right):** Displays the file `HelloManagedBean.java`.

```
package xyz.pagliares.jsfproject.beans;  
  
@Named  
public class HelloManagedBean {  
}
```
- Status Bar:** Shows "Indexing library 'JBoss Weld-2.0.3'".
- Bottom Navigation:** Problems, Terminal, Profiler, TODO, Build, Services.
- Bottom Status:** Build completed successfully in 9 sec, 850 ms (9 minutes ago).
- Right Sidebar:** Shows Database and Maven tabs.

The screenshot shows an IDE interface with the following details:

- Title Bar:** SampleJSFProject
- Toolbar:** Includes icons for Project, Build, Services, and various system status.
- Project Explorer (Left):** Shows the project structure:
 - SampleJSFProject (~/Desktop/SampleJSFProj)
 - .idea
 - lib
 - src
 - main
 - java
 - xyz.pagliares.jsfproject
 - beans
 - HelloManagedBean
 - HelloServlet
 - resources
 - webapp
 - WEB-INF
 - beans.xml
 - web.xml
 - index.jsp
 - index.xhtml
 - test
 - target (highlighted in brown)
 - pom.xml
 - SampleJSFProject.iml
 - External Libraries
 - Scratches and Consoles
- Code Editor (Center):** Displays the HelloManagedBean.java file content:

```
package xyz.pagliares.jsfproject.beans;  
  
@Named  
public class HelloManagedBean {  
}
```
- Toolbars (Right):** Database, Maven
- Bottom Bar:** Problems, Terminal, Profiler, TODO, Build, Services, Event Log, Build completed successfully in 9 sec, 850 ms (10 minutes ago), 3:7 LF UTF-8 4 spaces

Project

SampleJSFProject ~/Desktop/SampleJSFProj...
> .idea
> lib
> src
 > main
 > java
 xyz.pagliares.jsfproject
 beans
 HelloManagedBean
 HelloServlet
 resources
 > resources
 > webapp
 > WEB-INF
 beans.xml
 web.xml
 index.jsp
 index.xhtml
 > test
> target
 pom.xml
 SampleJSFProject.iml
> External Libraries
> Scratches and Consoles



index.xhtml



HelloManagedBean.java



beans.xml



pom.xml (SampleJSFProject)



m Maven

```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <beans xmlns="http://xmlns.jcp.org/xml/ns/javaee"
3   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4   xsi:schemaLocation="http://xmlns.jcp.org/xml/ns/javaee
5     http://xmlns.jcp.org/xml/ns/javaee/beans_1_1.xsd"
6   bean-discovery-mode="all">
7 </beans>
```

Favorites

```
package xyz.pagliares.jsfproject.beans;
```

@Named

- Import class
 - Create annotation 'Named'
 - Add Maven dependency...

 - Create Test
 - Create subclass

Make 'HelloManagedBean' package-private

Project + ☰ ✖ | ⚙️ -

index.xhtml x HelloManagedBean.java x pom.xml (SampleJSFProject) x

SampleJSFProject ~/Desktop/SampleJSFProj 1

.idea
lib
src
 main
 java
 xyz.pagliares.jsfproject
 beans
 HelloManagedBean
 HelloServlet
 resources
 webapp
 WEB-INF
 beans.xml
 web.xml
 index.jsp
 index.xhtml

test
target
pom.xml
SampleJSFProject.iml
External Libraries
Scratches and Consoles

1 2 3 4 5 6 7 8

```
package xyz.pagliares.jsfproject.beans;  
  
import javax.inject.Named;  
  
@Named  
public class HelloManagedBean {  
}
```

Database
Maven

★ Favorites

Project - index.xhtml HelloManagedBean.java pom.xml (SampleJSFProject) Maven - Database

Structure Maven - SampleJSFProject

Favorites

SampleJSFProject ~/Desktop/SampleJSFProj

.idea

lib

src

main

java

xyz.pagliares.jsfproject

beans

HelloManagedBean

HelloServlet

resources

webapp

WEB-INF

beans.xml

web.xml

index.jsp

index.xhtml

test

target

pom.xml

SampleJSFProject.iml

External Libraries

Scratches and Consoles

1 <?xml version="1.0" encoding="UTF-8"?>

2 <project xmlns="http://maven.apache.org/POM/4.0.0"

3 xmlns:xsi="http://www.w3.org/2001/XMLSchema-ir

4 xsi:schemaLocation="http://maven.apache.org/PO

5 <modelVersion>4.0.0</modelVersion>

6

7 <groupId>xyz.pagliares</groupId>

8 <artifactId>SampleJSFProject</artifactId>

9 <version>1.0-SNAPSHOT</version>

10 <name>SampleJSFProject</name>

11 <packaging>war</packaging>

12

13 <properties>

14 <maven.compiler.target>1.8</maven.compiler.targ

15 <maven.compiler.source>1.8</maven.compiler.sour

16 <junit.version>5.7.1</junit.version>

17 </properties>

18

19 <dependencies>

20 <dependency>

21 <groupId>jakarta.faces</groupId>

22 <artifactId>jakarta.faces-api</artifactId>

23 <version>3.0.0</version>

24 <scope>provided</scope>

project > groupId

Project - index.xhtml HelloManagedBean.java pom.xml (SampleJSFProject) Maven

SampleJSFProject ~/Desktop/SampleJSFProj .idea lib src main java xyz.pagliares.jsfproject beans HelloManagedBean HelloServlet resources webapp WEB-INF beans.xml web.xml JSP index.jsp JSP index.xhtml test target pom.xml SampleJSFProject.iml External Libraries Scratches and Consoles

```
<?xml version="1.0" encoding="UTF-8"?>
<project xmlns="http://maven.apache.org/POM/4.0.0"
          xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
          xsi:schemaLocation="http://maven.apache.org/PO
<modelVersion>4.0.0</modelVersion>

<groupId>xyz.pagliares</groupId>
<artifactId>SampleJSFProject</artifactId>
<version>1.0-SNAPSHOT</version>
<name>SampleJSFProject</name>
<packaging>war</packaging>

<properties>
    <maven.compiler.target>1.8</maven.compiler.target>
    <maven.compiler.source>1.8</maven.compiler.source>
    <junit.version>5.7.1</junit.version>
</properties>

<dependencies>
    <dependency>
        <groupId>jakarta.faces</groupId>
        <artifactId>jakarta.faces-api</artifactId>
        <version>3.0.0</version>
        <scope>provided</scope>
    </dependency>
</dependencies>
```

project > groupId

Project + - | index.xhtml x HelloManagedBean.java x

main

java

xyz.pagliares.jsfproject

beans

HelloManagedBean

HelloServlet

resources

webapp

WEB-INF

beans.xml

web.xml

JSP index.jsp

JSF index.xhtml

test

target

pom.xml

SampleJSFProject.iml

External Libraries

Scratches and Consoles

Build: Sync x Build Output x

Sync: At 26/02/22 16:55 5 sec, 44 ms

index.xhtml

```
1 package xyz.pagliares.jsfproject.beans;
2
3 import javax.inject.Named;
4
5 @Named
6 @RequestScoped
7 @RequestCookieMap jakarta.faces.context
8 @RequestCookieMap jakarta.faces.annotation
9 @RequestMap jakarta.faces.annotation
@RequestParameterMap jakarta.faces.annotation
@RequestScoped javax.enterprise.context
@RequestParameterValuesMap jakarta.faces.bean
@RequestScoped jakarta.faces.bean
@RequestWrapper javax.xml.ws
```

Press ⌘ to insert, ⌘ to replace Next Tip

Database Maven

Favorites



Project + - | ☰ Database
main m Maven
java HelloManagedBean.java
 xyz.pagliares.jsfproject
 beans
 HelloManagedBean
 HelloServlet
 resources
 webapp
 WEB-INF
 beans.xml
 web.xml
 index.jsp
 index.xhtml
 test
 target
 pom.xml
 SampleJSFProject.iml
External Libraries
Scratches and Consoles

Build: Sync × Build Output ×

Sync: At 26/02/22 16:55 5 sec, 44 ms

index.xhtml x HelloManagedBean.java x

```
1 package xyz.pagliares.jsfproject.beans;  
2  
3 import javax.enterprise.context.RequestScoped;  
4 import javax.inject.Named;  
5  
6 @Named  
7 @RequestScoped  
8 public class HelloManagedBean {  
9 }  
10
```

Project Structure Favorites

Problems Terminal Profiler TODO Build Services Event Log

Build completed successfully in 9 sec, 850 ms (16 minutes ago) 7:15 LF UTF-8 4 spaces

Project index.xhtml × HelloManagedBean.java × Database
Structure Maven

```
1 package xyz.pagliares.jsfproject.beans;
2
3 import javax.enterprise.context.RequestScoped;
4 import javax.inject.Named;
5
6 @Named
7 @RequestScoped
8 public class HelloManagedBean {
9     private String message = "Hello JSF Managed Bean World !";
10
11
12
13 }
14
```

Favorites

Project index.xhtml x HelloManagedBean.java x

```
1 package xyz.pagliares.jsfproject.beans;
2
3 import javax.enterprise.context.RequestScoped;
4 import javax.inject.Named;
5
6 @Named
7 @RequestScoped
8 public class HelloManagedBean {
9     private String message = "Hello JSF Managed Bean World !";
10 }
```

Structure Favorites

File Edit View Insert Tools Window Help

Show Context Actions

- Paste ⌘V
- Copy / Paste Special ▶
- Column Selection Mode ⇧⌘8
- Find Usages ⌘F7
- Refactor ▶
- Folding ▶
- Analyze ▶
- Go To ▶
- Generate... ⌘N
- Open In ▶
- Local History ▶
- Compare with Clipboard ▶
- Diagrams ▶
- Create Gist... ▶

Project

Structure

Favorites

index.xhtml x HelloManagedBean.java x

```
1 package xyz.pagliares.jsfproject.beans;
2
3 import javax.enterprise.context.RequestScoped;
4 import javax.inject.Named;
5
6 @Named
7 @RequestScoped
8 public class HelloManagedBean {
9     private String message = "Hello JSF Managed Bean World !";
10
11
12     Generate
13     Constructor
14     Getter
15     Setter
16 }
```

Generate

Constructor

Getter

Setter

Getter and Setter

equals() and hashCode()

toString()

Override Methods... ^O

Delegate Methods...

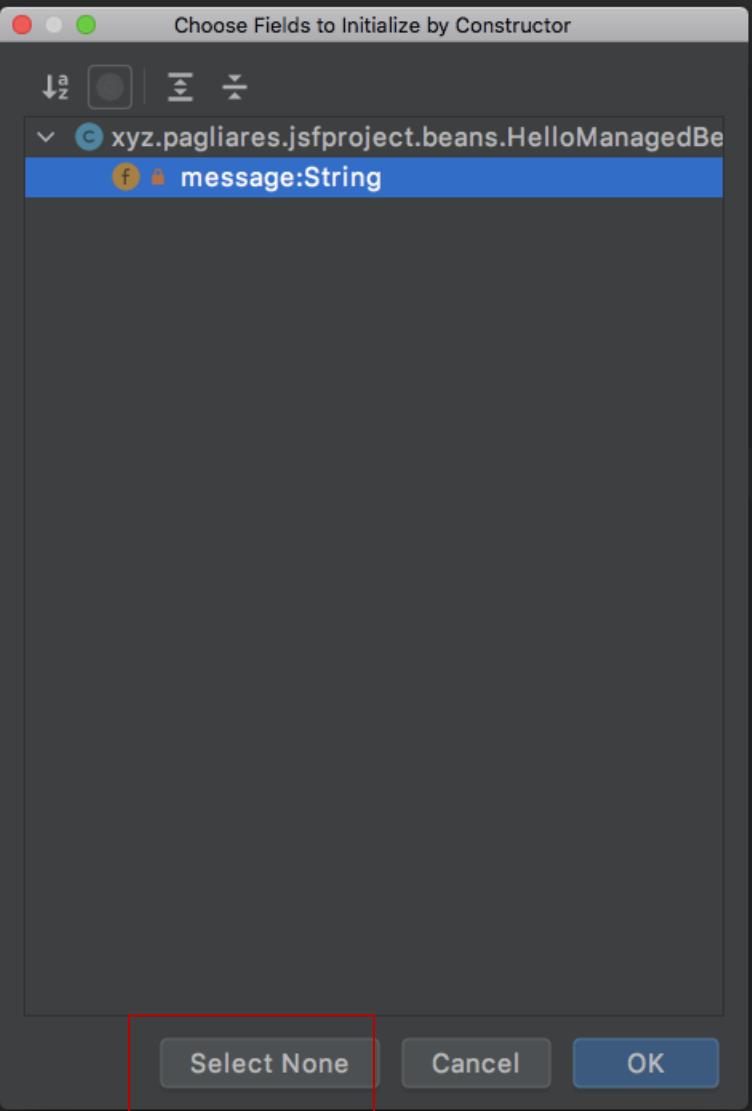
Test...

Copyright

Project

index.xhtml < HelloManagedBean.java <

```
1 package xyz.pagliares.jsfproject.beans;
2
3 import javax.enterprise.context.Re
4 import javax.inject.Named;
5
6 @Named
7 @RequestScoped
8 public class HelloManagedBean {
9     private String message = "Hell
10
11
12
13
14
15 }
16
```



Favorites

Project index.xhtml × HelloManagedBean.java × Database Maven

Structure

```
1 package xyz.pagliares.jsfproject.beans;
2
3 import javax.enterprise.context.RequestScoped;
4 import javax.inject.Named;
5
6 @Named
7 @RequestScoped
8 public class HelloManagedBean {
9     private String message = "Hello JSF Managed Bean World !";
10
11     public HelloManagedBean() {
12     }
13 }
```

Favorites

Project index.xhtml x HelloManagedBean.java x Database

Structure Maven

```
1 package xyz.pagliares.jsfproject.beans;
2
3 import javax.enterprise.context.RequestScoped;
4 import javax.inject.Named;
5
6 @Named
7 @RequestScoped
8 public class HelloManagedBean {
9     private String message = "Hello JSF Managed Bean World !";
10
11     public HelloManagedBean() {
12         System.out.println("JSF Managed bean started");
13     }
14 }
15
```

Project

index.xhtml x HelloManagedBean.java x

```
1 package xyz.pagliares.jsfproject.beans;
2
3 import javax.enterprise.context.RequestScoped;
4 import javax.inject.Named;
5
6 @Named
7 @RequestScoped
8 public class HelloManagedBean {
9     private String message = "Hello JSF Managed Bean World !";
10
11     public HelloManagedBean() {
12         System.out.println("JSF Managed bean started");
13     }
14
15
16     Generate
17     Constructor
18     Getter
19     Setter
20     Getter and Setter
21     equals() and hashCode()
22     toString()
23     Override Methods... ^O
24     Delegate Methods...
25     Test...
26     Copyright
```

Favorites

Problems

Terminal

Profiler

TODO

Build

Services

1 Event Log

 Generate getter and setter

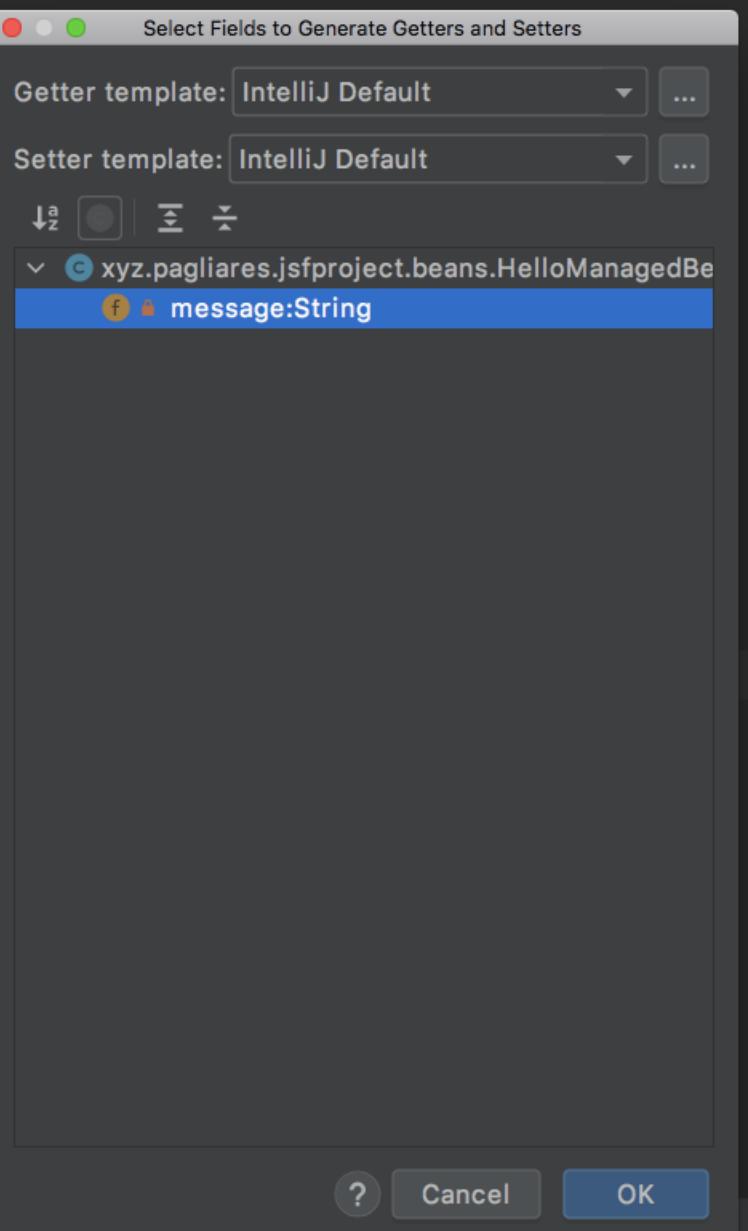
15:1 LF UTF-8 4 spaces

Project

Structure

Favorites

```
1 package xyz.pagliares.jsfproject.beans;
2
3 import javax.enterprise.context.Re
4 import javax.inject.Named;
5
6 @Named
7 @RequestScoped
8 public class HelloManagedBean {
9     private String message = "Hell
10
11     public HelloManagedBean() {
12         System.out.println("JSF Ma
13     }
14
15
16 }
```



Project index.xhtml x HelloManagedBean.java x

Structure Database

```
1 package xyz.pagliares.jsfproject.beans;
2
3 import javax.enterprise.context.RequestScoped;
4 import javax.inject.Named;
5
6 @Named
7 @RequestScoped
8 public class HelloManagedBean {
9     private String message = "Hello JSF Managed Bean World !";
10
11     public HelloManagedBean() {
12         System.out.println("JSF Managed bean started");
13     }
14
15     public String getMessage() {
16         return message;
17     }
18
19     public void setMessage(String message) {
20         this.message = message;
21     }
22 }
```

Favorites

User: pagliares
Date: 24/02/22
Time: 19:10

-->

```
<!DOCTYPE html
PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

<html xmlns="http://www.w3.org/1999/xhtml"
      xmlns:h="http://java.sun.com/jsf/html">

    <h:head>
        <title>Hello Jakarta Server Faces - JSF</title>
    </h:head>

    <h:body>
        Hello from Facelets
    </h:body>

</html>
```

Favorites

Project

- SampleJSFProject ~/Desktop/SampleJSFProject
- .idea
- lib
- src
 - main
 - java
 - xyz.pagliares.jsfproject
 - beans
 - HelloManagedBean
 - HelloServlet
 - resources
 - webapp
 - WEB-INF
 - beans.xml
 - web.xml
 - index.jsp
 - index.xhtml
 - test
 - target
 - pom.xml
 - SampleJSFProject.iml

External Libraries

Scratches and Consoles

Database

Maven

User: pagliares
Date: 24/02/22
Time: 19:10

```
4      User: pagliares
5      Date: 24/02/22
6      Time: 19:10
7      -->
8      <!DOCTYPE html
9          PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
10         "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
11
12     <html xmlns="http://www.w3.org/1999/xhtml"
13           xmlns:h="http://java.sun.com/jsf/html">
14
15     <h:head>
16         <title>Hello Jakarta Server Faces - JSF</title>
17     </h:head>
18
19     <h:body>
20         #{hello}
21     </h:>  helloManagedBean
22
23     </html>
```


User: pagliares
Date: 24/02/22
Time: 19:10

```
4      User: pagliares
5      Date: 24/02/22
6      Time: 19:10
7      -->
8      <!DOCTYPE html
9          PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
10         "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
11
12     <html xmlns="http://www.w3.org/1999/xhtml"
13           xmlns:h="http://java.sun.com/jsf/html">
14
15     <h:head>
16         <title>Hello Jakarta Server Faces - JSF</title>
17     </h:head>
18
19     <h:body>
20         #{helloManagedBean.message}
21     </h:body>
22
23     </html>
```

User: pagliares
Date: 24/02/22
Time: 19:10

```
4      User: pagliares
5      Date: 24/02/22
6      Time: 19:10
7      -->
8      <!DOCTYPE html
9          PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
10         "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
11
12     <html xmlns="http://www.w3.org/1999/xhtml"
13           xmlns:h="http://java.sun.com/jsf/html">
14
15     <h:head>
16         <title>Hello Jakarta Server Faces - JSF</title>
17     </h:head>
18
19     <h:body>
20         #{helloManagedBean.message}
21     </h:body>
22
23     </html>
```

★ Favorites

Project

Structure

Database

Maven

Project + - × ⚙ - index.xhtml HelloManagedBean.java

SampleJSFProject ~/Desktop/SampleJSFProject

- .idea
- lib
- src
 - main
 - java
 - xyz.pagliares.jsfproject
 - beans
 - HelloManagedBean
 - HelloServlet
 - resources
 - webapp
 - WEB-INF
 - beans.xml
 - web.xml
 - index.jsp
 - index.xhtml
 - test
 - target
 - pom.xml
 - SampleJSFProject.iml

Structure Database Maven

index.xhtml

```
7    <!-->
8    <!DOCTYPE html
9      PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
10     "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
11
12   <html xmlns="http://www.w3.org/1999/xhtml"
13     xmlns:h="http://java.sun.com/jsf/html">
14
15   <h:head>
16     Update 'GlassFish 5.2022.1'
17     Run configuration 'GlassFish 5.2022.1' is running.
18
19   <h:body>
20
21   </h:body>
```

Cancel OK

Services

Project + - ⚙ - Services

GlassFish Server

- Running
- GlassFish 5.2022.1 [local]
- SampleJSFProject:war exploded [Re]

Server GlassFish Log

Deployment Output

✓ SampleJSFProject:war ex

```
[2022-02-26 04:42:26,258] Artifact SampleJSFProject:war
exploded: Artifact is deployed successfully
[2022-02-26 04:42:26,283] Artifact SampleJSFProject:war
exploded: Deploy took 11,614 milliseconds
```

Favorites ★

Problems Terminal Profiler TODO Build Services Event Log

Run selected configuration 20:33 LF UTF-8 4 spaces



Hello from Facelets

Hello JSF Managed Bean World !

ERROR:

If nothing appears to you, you may be with the problem of JSF
not being recognized

(If this is the case, see next slide for a possible solution)

HC HelloCruelJSFWorl Version control

GlassFish 6.8.0

m pom.xml (HelloCruelJSFWorl) web.xml index.xhtml HelloManagedBean.java

```
xmlelement.xsi- http://www.w3.org/2001/XMLSchema-instance
xsi:schemaLocation="https://jakarta.ee/xml/ns/jakartaee https://jakarta.ee/xml/ns/jakartaee/web-app_5_0.xs
version="5.0">

<servlet>
    <servlet-name>Faces Servlet</servlet-name>
    <servlet-class>jakarta.faces.webapp.FacesServlet</servlet-class>
    <load-on-startup>1</load-on-startup>
</servlet>

<servlet-mapping>
    <servlet-name>Faces Servlet</servlet-name>
    <url-pattern>*.xhtml</url-pattern>
    <url-pattern>/javax.faces.resource/*</url-pattern>
</servlet-mapping>

<welcome-file-list>
    <welcome-file>index.xhtml</welcome-file>
</welcome-file-list>

```

Difficult error to find the cause. Some recent version os Jakarta EE do not demand configuring the Faces Servlet on web.xml. But, in my tests, the absence of this configuration was causing the components to not be rendered.

Solution: Configure the Faces Servlet on web.xml

Questions?