



JAVASERVER PAGES™
DYNAMICALLY GENERATED WEB CONTENT



Architecture des Systèmes d'Information



JSP



Java Server Pages (1.2)

Recall



- `<%(x) %> X`
 - Declaration : (!)
 - Enclosed Java expressions : (=)
 - Scriptlets : ()
 - JSP Directives : (@)
 - Comments : (--)



Traduction en cours

JEE Presentation Frameworks

- JSP :Java Server Pages
- EL : Expression Language
- JSTL : Java Standard Tag Lib
- UEL : Unified Expression Language
- JSF : Java Serve Face, Facelets



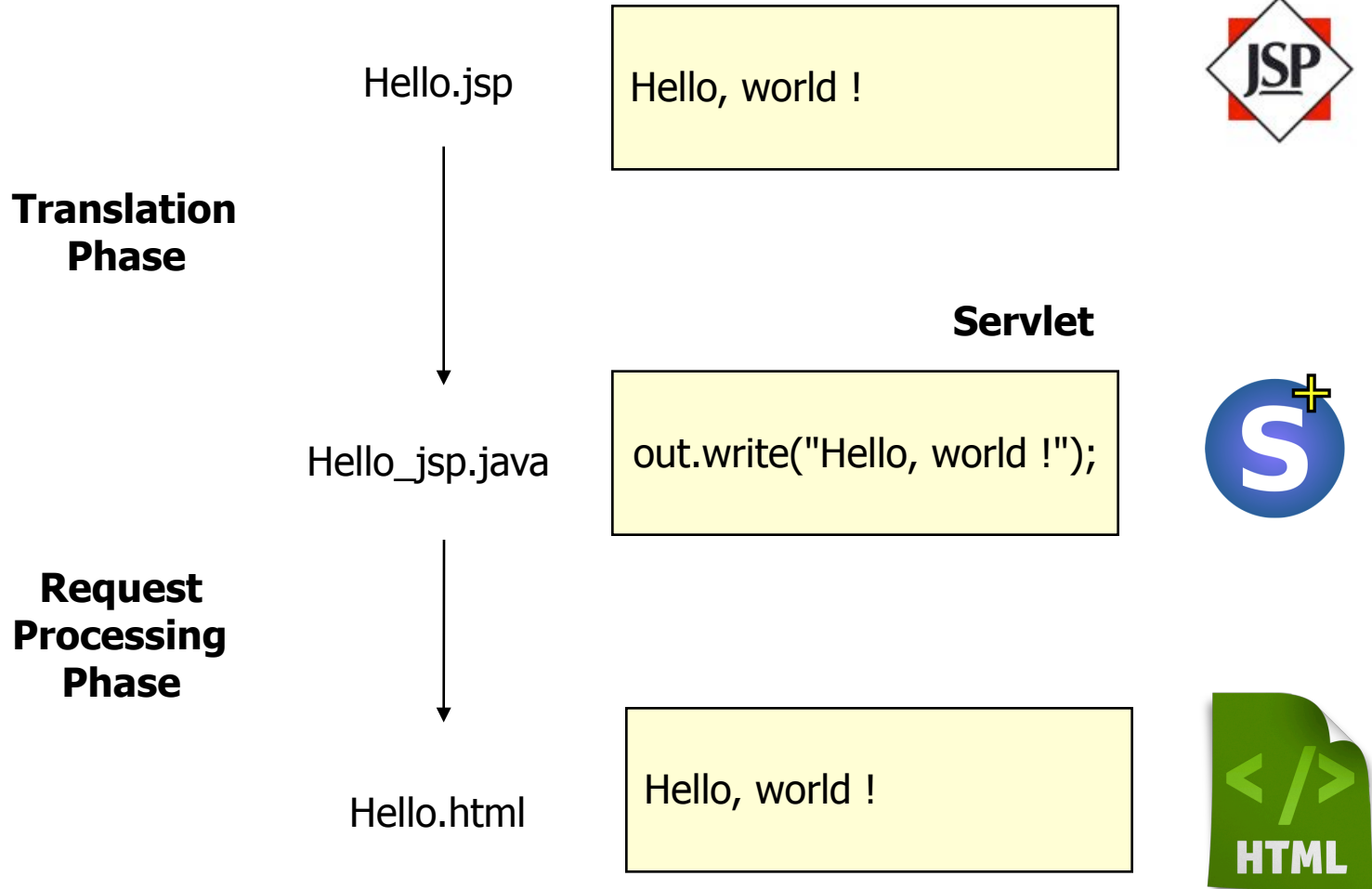
JEE versions and JSP versions



JEE	Date	Servlet	JSP	EL	JSTL	JSF
	janv-99	Servlet 1.1				
	juin-99		JSP 1.0			
JEE2 (J2EE 1.2)	12 Dec 1999	Servlet 2.2	JSP 1.1			
JEE3 (J2EE 1.3)	24-sept-01	Servlet 2.3	JSP 1.2			
JEE4 (J2EE 1.4)	11-nov-03	Servlet 2.4	JSP 2.0			
JEE5	11 May 2006	Servlet 2.5	JSP 2.1		JSTL 1.2	JSF 1.2
JEE6	10 Dec 2009	Servlet 3.0	JSP 2.2	EL 2.2	JSTL 1.2	JSF 2.0
JEE7	12-juin-13	Servlet 3.1	JSP 2.3	EL 3.0	JSTL 1.2	JSF 2.2



From jsp to servlet to html (static) Jsp=Html



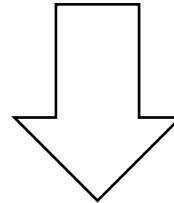
Simple html to JSP compiled servlet



Hello, world !



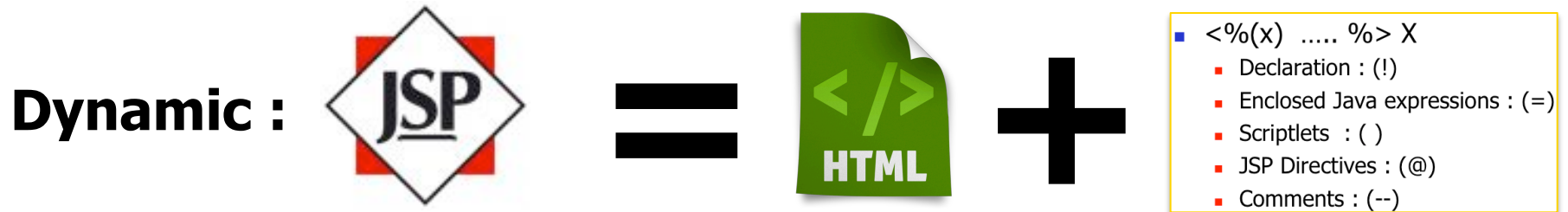
**Translation
Phase**



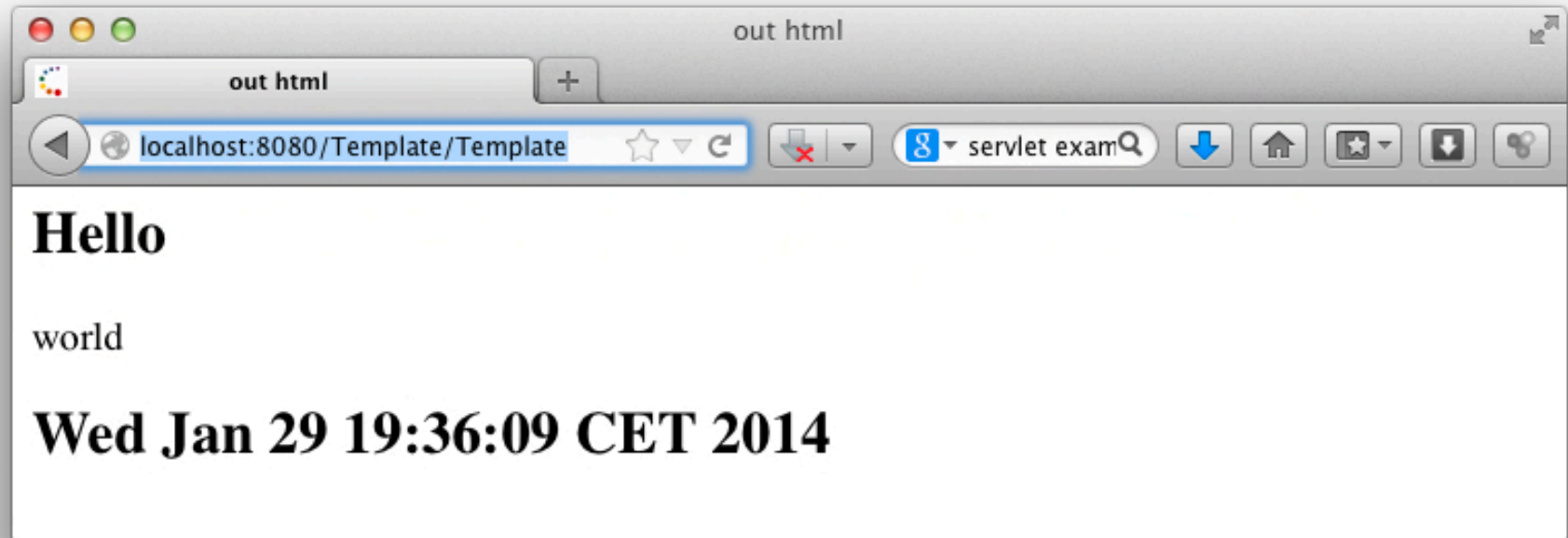
```
_jspService(HttpServletRequest request,  
                HttpServletResponse response)  
{  
...  
    out.write("Hello, world !");  
...  
}
```



Static VS dynamic web page



Dynamic Html page



Html Hello world servlet : dynamic



```
import java.io.*;
import javax.servlet.http.*;
import javax.servlet.*;
public class HelloServlet extends HttpServlet {

    public void doGet (                HttpServletRequest request,
                                HttpServletResponse response)

        throws ServletException, IOException {

        response.setContentType ("text/plain");
        PrintWriter out = response.getWriter();
        out.println(

                                "<html>" +
                                "<head>" +
                                "<title>out html</title>" +
                                "</head>" +
                                "<body>" +
                                "<h2>hello</h2>" +
                                "world" +
                                "<h2>");

        out.print(new java.util.Date() );
        out.println(

                                "</h2>" +
                                "</body>" +
                                "</html>"

        );
    }
}
```


Dynamic



```
protected void doGet(HttpServletRequest request, HttpServletResponse
response)
    throws ServletException, IOException {

    PrintWriter out = response.getWriter();
    out.println(
        "<html>" +
            "<head>" +
                "<title>out html</title>" +
            "</head>" +
            "<body>" +
                "<h2>Hello</h2>" +
                "world" +
                "<h2>");

    out.print(new java.util.Date() );

    out.println(
        "</h2>" +
        "</body>" +
        "</html>"
    );

}
```



HTML Template

```
<html>
  <head>
    <title>Hello </title>
  </head>

  <body>
    <h2>Hello </h2>

    <h2>It is $Time$ </h2>

  </body>
</html>
```

**Script
Tag
Label**

HelloTemplate

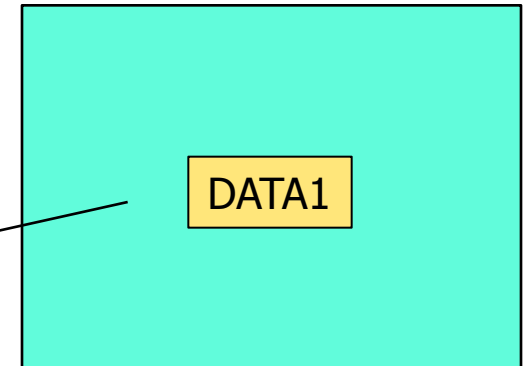
HTML Template Engine : Dynamic



View (template)

Data Model

```
<html>
  <head>
    <title>Hello </title>
  </head>
  <body>
    <h2>Hello $DATA1$ </h2>
    <h2>It is $Time$ </h2>
  </body>
</html>
```



Tag Handler

`new java.util.Date()`

HelloTemplate

\$: Label
</> : Tag



JSP notation

- JSP Directives (`<%@`)
 - Declaration (`<%!`)
 - Scriptlets (`<%`)
 - Java expressions (`<%=`)Enclosed
 - Comments (`<%--`)
-
- JSP Action (`<jsp:... />`)

- `<%(x) %> X`
 - Declaration : (!)
 - Enclosed Java expressions : (=)
 - Scriptlets : ()
 - JSP Directives : (@)
 - Comments : (--)



JSP notation elements



- JSP directives are messages for the JSP engine :
 - Transformation : Compilation Directives

- JSP Script : Java executed during request processing time
 - Declarations : Servlet objects declaration
 - Expressions : One line embedded Java expressions
 - Scriptlets : Multiple lines Java block with control flow statements
 - Comments

- JSP Actions, request processing flow
 - HTML, XML extension expanded during request processing time

