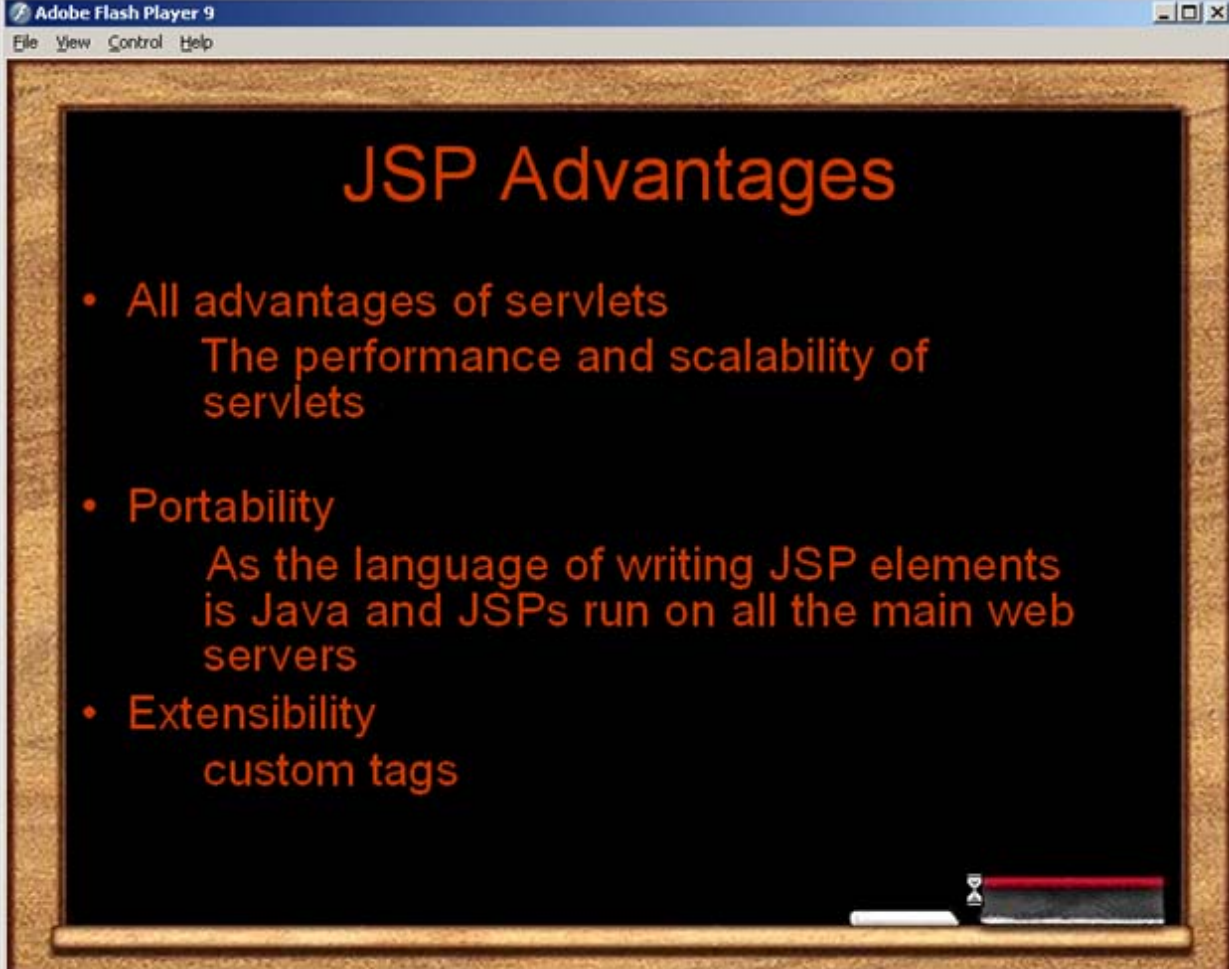


The image shows a screenshot of an Adobe Flash Player 9 window. The window title bar reads "Adobe Flash Player 9" and includes standard window controls (minimize, maximize, close) on the right. Below the title bar is a menu bar with "File", "View", "Control", and "Help". The main content area is a blackboard with a wooden frame, containing the following text:

JSP Advantages

- **Fast and effective**
JSP pages are pre-compiled, JSPs are interpreted only once, to Java byte-code, and re-interpreted only when the file is modified
- **Flexible**
Part of the Sun's J2EE so can easy integrate with other J2EE and Java technologies, such as servlets or EJB
- **One language – Java**
No need to learn other language to write JSP

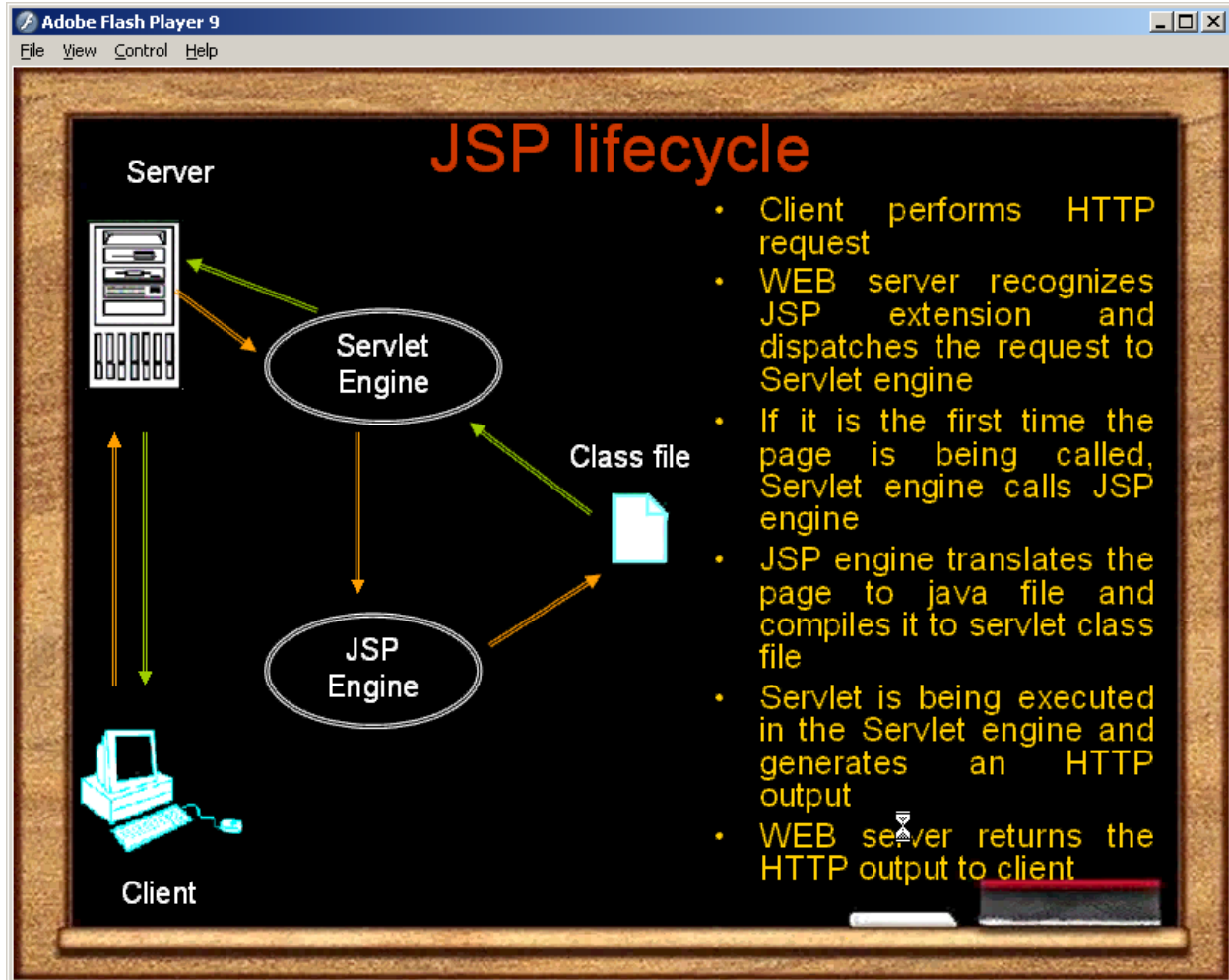
At the bottom right of the blackboard, there is a small icon of a whiteboard eraser and a red horizontal line.

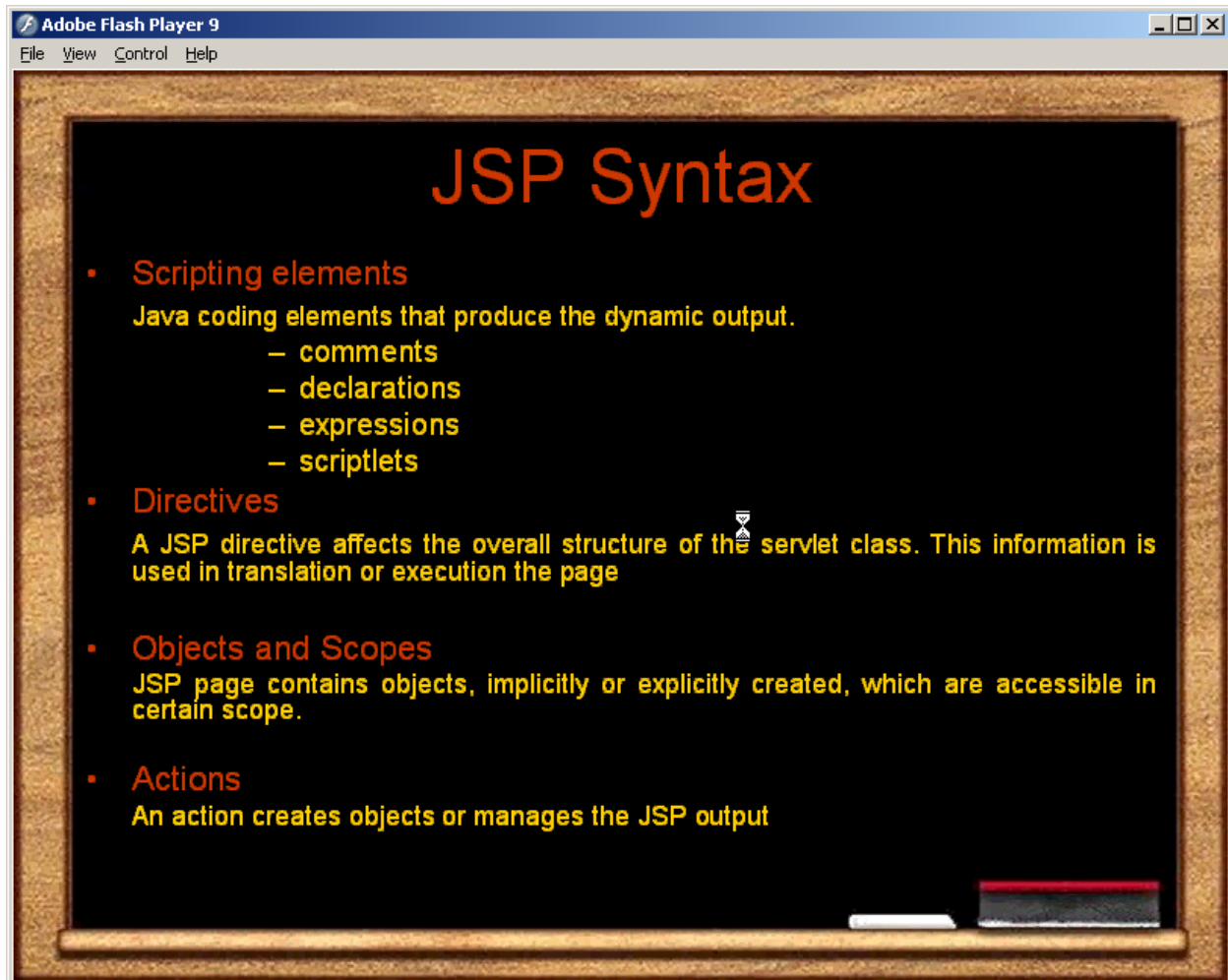


The image shows a screenshot of an Adobe Flash Player 9 window. The window title bar reads "Adobe Flash Player 9" and includes standard window controls (minimize, maximize, close) and a menu bar with "File", "View", "Control", and "Help". The main content area is a blackboard with a gold border. The title "JSP Advantages" is written in large orange text at the top. Below it, there are three bullet points in orange text:

- All advantages of servlets
The performance and scalability of servlets
- Portability
As the language of writing JSP elements is Java and JSPs run on all the main web servers
- Extensibility
custom tags

At the bottom right of the blackboard, there is a small icon of a whiteboard eraser and a red eraser.

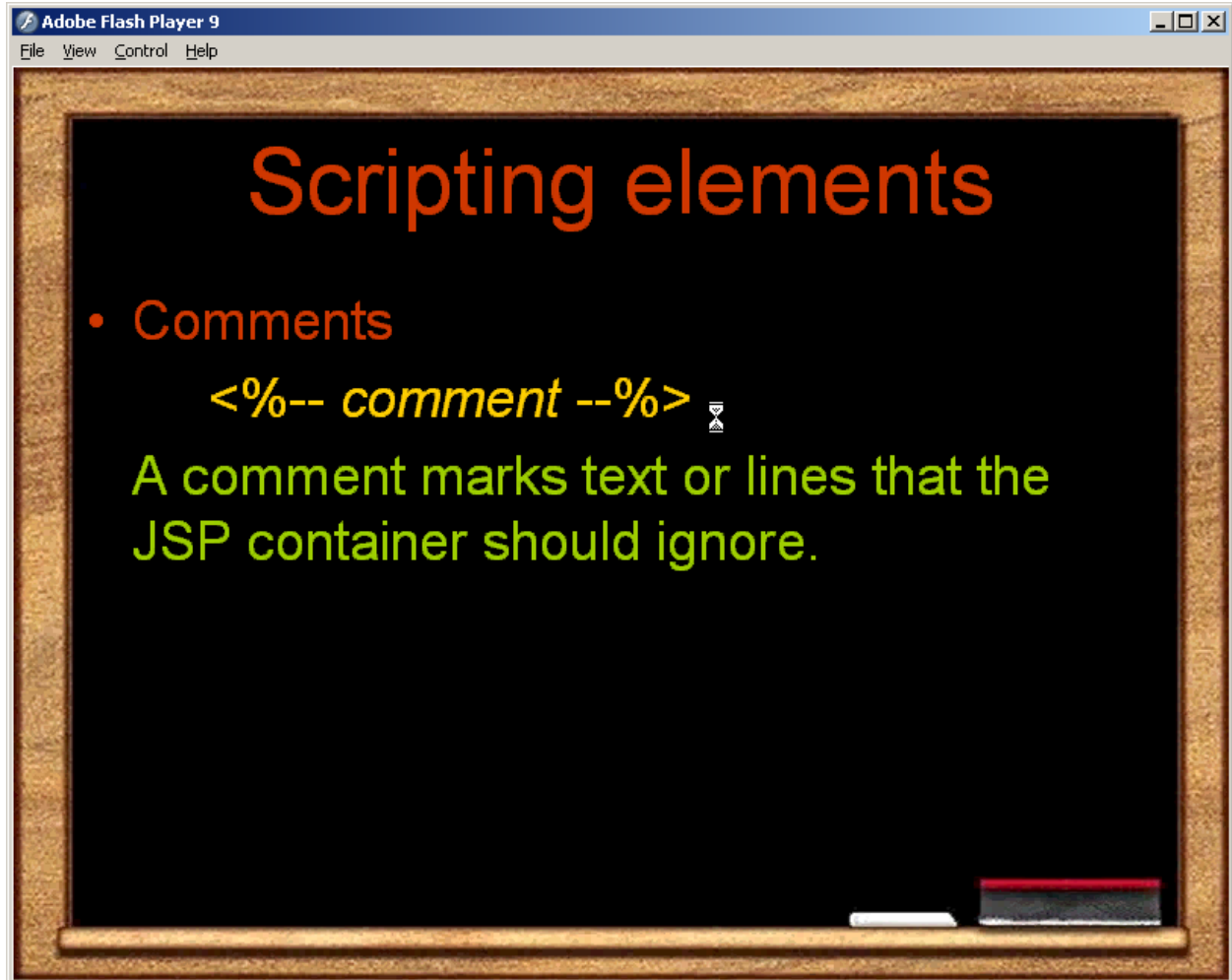




The image shows a screenshot of an Adobe Flash Player 9 window. The window title is "Adobe Flash Player 9" and it has a menu bar with "File", "View", "Control", and "Help". The main content area is a blackboard with a wooden frame. The title "JSP Syntax" is written in large orange letters at the top. Below the title, there are four bullet points in orange, each followed by a description in yellow text. The first bullet point is "Scripting elements" with a sub-list of "comments", "declarations", "expressions", and "scriptlets". The second is "Directives" with a description: "A JSP directive affects the overall structure of the servlet class. This information is used in translation or execution the page". The third is "Objects and Scopes" with a description: "JSP page contains objects, implicitly or explicitly created, which are accessible in certain scope.". The fourth is "Actions" with a description: "An action creates objects or manages the JSP output".

JSP Syntax

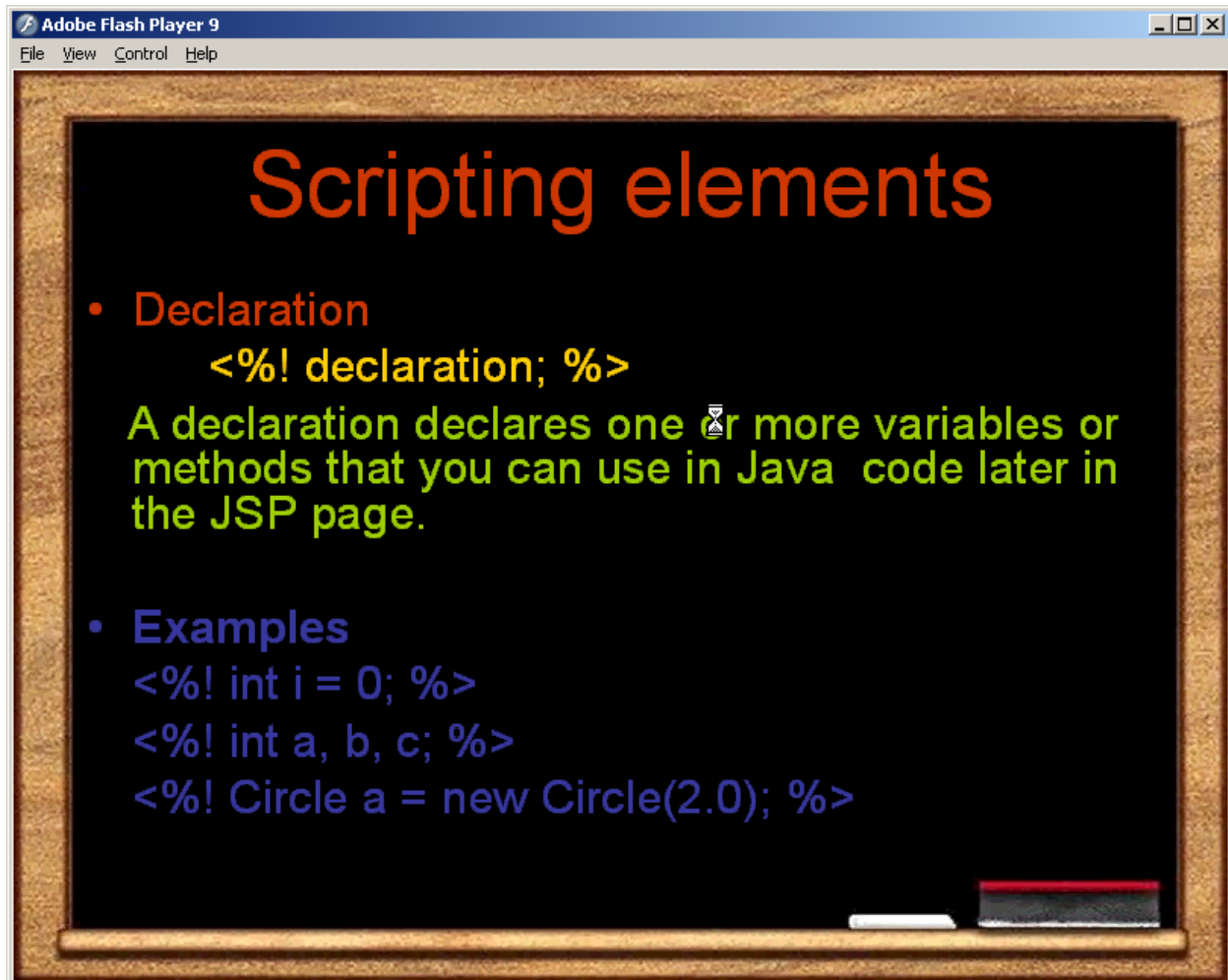
- **Scripting elements**
Java coding elements that produce the dynamic output.
 - comments
 - declarations
 - expressions
 - scriptlets
- **Directives**
A JSP directive affects the overall structure of the servlet class. This information is used in translation or execution the page
- **Objects and Scopes**
JSP page contains objects, implicitly or explicitly created, which are accessible in certain scope.
- **Actions**
An action creates objects or manages the JSP output



The image shows a screenshot of the Adobe Flash Player 9 interface. The window title is "Adobe Flash Player 9" and the menu bar includes "File", "View", "Control", and "Help". The main content area is a blackboard with a wooden frame. The title "Scripting elements" is written in large orange letters. Below it, a bullet point "• Comments" is followed by the code snippet `<%-- comment --%>` in yellow. A small hourglass icon is positioned to the right of the code. Below the code, the text "A comment marks text or lines that the JSP container should ignore." is written in green. At the bottom of the blackboard, there is a white eraser and a red chalk.

Scripting elements

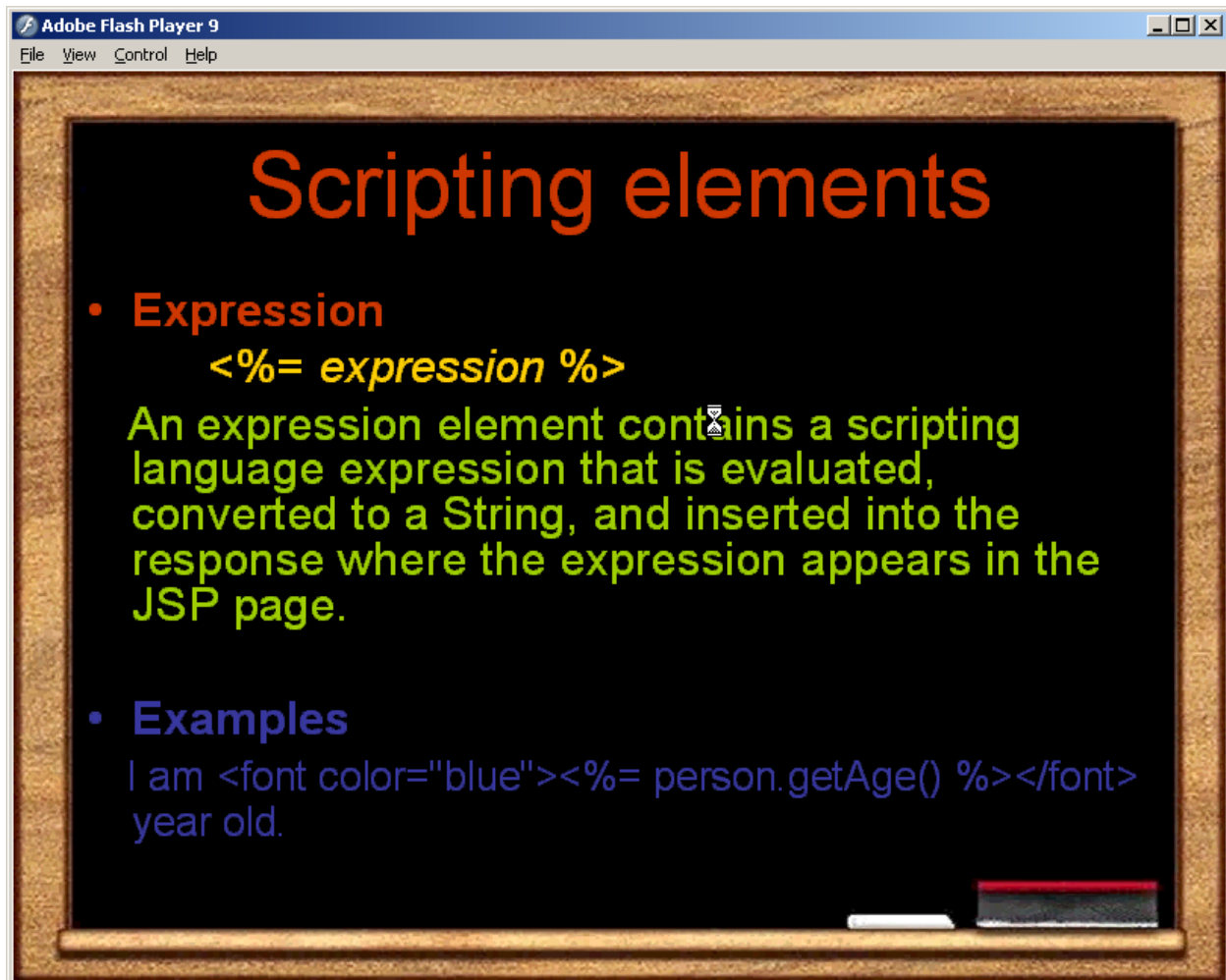
- Comments
`<%-- comment --%>`
A comment marks text or lines that the JSP container should ignore.



The image shows a screenshot of the Adobe Flash Player 9 interface. The window title is "Adobe Flash Player 9" and the menu bar includes "File", "View", "Control", and "Help". The main content area is a blackboard with a wooden frame. The title "Scripting elements" is written in large orange letters. Below the title, there are three bullet points: "Declaration" in orange, "Examples" in blue, and three code snippets in blue. The code snippets are: "<%! int i = 0; %>", "<%! int a, b, c; %>", and "<%! Circle a = new Circle(2.0); %>". A small hourglass icon is visible in the text "one or more variables".

Scripting elements

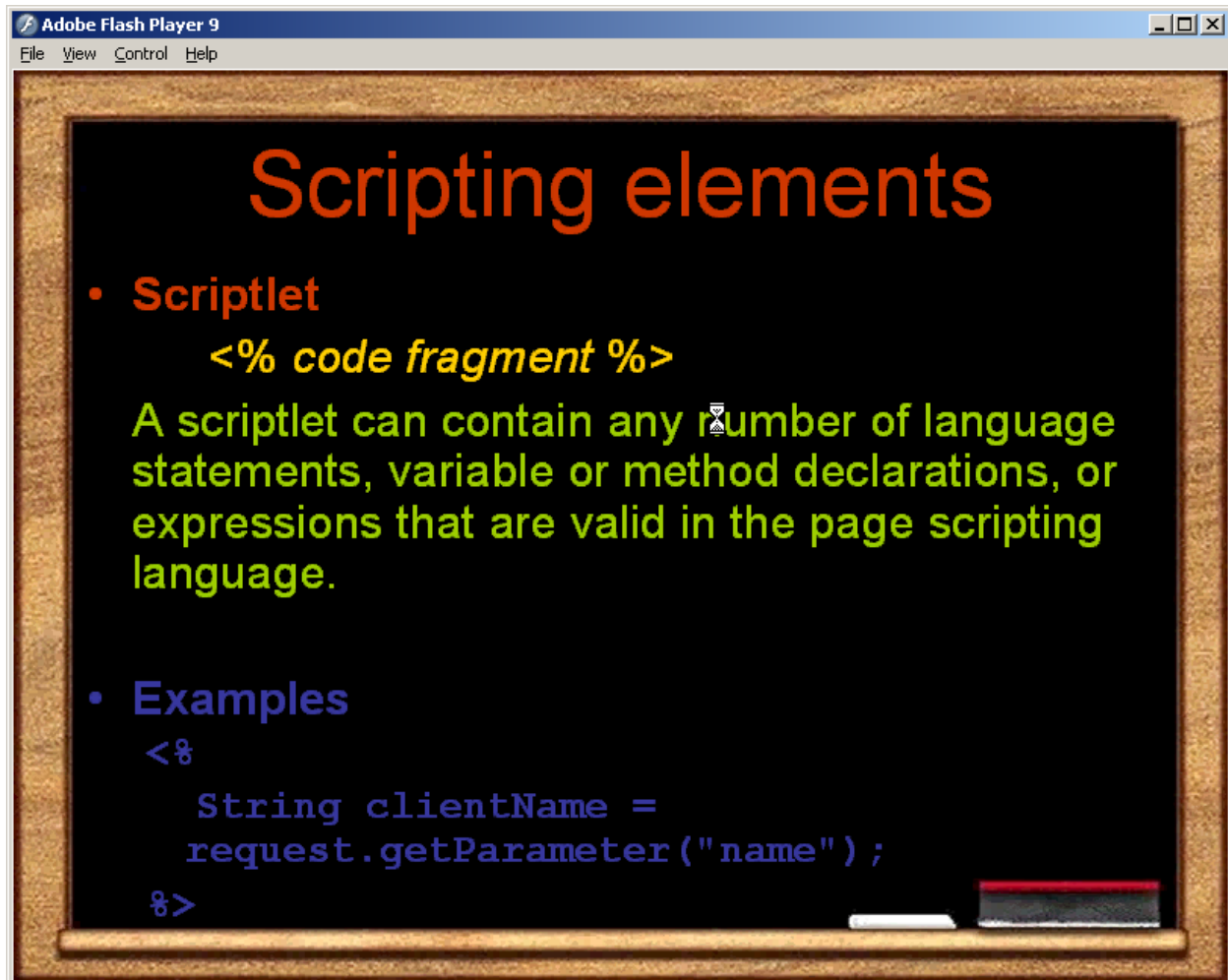
- **Declaration**
`<%! declaration; %>`
A declaration declares one or more variables or methods that you can use in Java code later in the JSP page.
- **Examples**
`<%! int i = 0; %>`
`<%! int a, b, c; %>`
`<%! Circle a = new Circle(2.0); %>`



The image shows a screenshot of the Adobe Flash Player 9 interface. The window title is "Adobe Flash Player 9" and the menu bar includes "File", "View", "Control", and "Help". The main content area displays a slide with a black background and a wooden frame. The slide title is "Scripting elements" in orange. It contains two bullet points: "Expression" and "Examples". The "Expression" bullet point includes the code snippet `<%= expression %>` and a description: "An expression element contains a scripting language expression that is evaluated, converted to a String, and inserted into the response where the expression appears in the JSP page." The "Examples" bullet point includes the code snippet `I am <%= person.getAge() %>` followed by "year old." on the next line.

Scripting elements

- **Expression**
`<%= expression %>`
An expression element contains a scripting language expression that is evaluated, converted to a String, and inserted into the response where the expression appears in the JSP page.
- **Examples**
I am `<%= person.getAge() %>`
year old.



The image shows a screenshot of the Adobe Flash Player 9 interface. The window title is "Adobe Flash Player 9" and the menu bar includes "File", "View", "Control", and "Help". The main content area is a blackboard with a wooden frame. The title "Scripting elements" is written in large orange letters. Below it, there are two bullet points: "Scriptlet" and "Examples". The "Scriptlet" section includes the code snippet "<% code fragment %>" and a description: "A scriptlet can contain any number of language statements, variable or method declarations, or expressions that are valid in the page scripting language." The "Examples" section shows a code snippet in blue text: "<% String clientName = request.getParameter('name'); %>".

Scripting elements

- **Scriptlet**
`<% code fragment %>`
A scriptlet can contain any number of language statements, variable or method declarations, or expressions that are valid in the page scripting language.
- **Examples**
`<%
String clientName =
request.getParameter("name");
%>`