

# JAVABEAN

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# A JAVABEAN

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- A JavaBean is an ordinary Java class that conforms to the following rules:
  1. A JavaBean class should implement the Serializable interface.
  2. A JavaBean must have a public, no-argument constructor (a default constructor).
  3. The JavaBean class attributes must be accessed via accessor and mutator methods that follow a standard naming convention (getXxxx and setXxxx, isXxxx for Boolean attributes).

# WHY USE JAVABEAN

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1. Can be more user-friendly and less intimidating for non-Java Web Designers who work with a JSP
2. Using JavaBeans rather than Java Scriptlets in your JSP allows better separation of the view logic from the business logic.

# ACCESSING JAVABEANS IN JSP

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Basic JSP tags:

- **<jsp:useBean id="bean's name" scope="bean's scope" class="bean's class name" />**
- **<jsp:setProperty name="bean's id" property="property name" value="value" />**
- **<jsp:getProperty name="bean's id" property="property name" />**

## THE USEBEAN TAG (EXAMPLE)

```
<jsp:useBean id="student" scope="session" class="model.StudentBean" />
```

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### Java Scriptlet Equivalent:

```
<%@ page import="model.StudentBean" %>

<%

    StudentBean student = (StudentBean) session.getAttribute(student);

    if (student == null){

        student = new StudentBean();

        session.setAttribute ("student", student);}

%>
```

## USEBEAN TAG RULES

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1. JSP bean tags use XML syntax – must include a slash to close the tag.
2. **scope** controls how long the bean object is available
  - **page** - current page only – stored in pageContent object.
  - **request** – all components with access to current request object.
  - **session** – all components with access to current session object.
  - **application** – all components that have access to ServletContext object.

## THE SETPROPERTY TAG (EXAMPLE)

```
<jsp:setProperty name="student" property="firstName" value="Ali" />
```

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### Java Scriptlet Equivalent:

```
<%  
    student.setFirstName ("Ali");  
%>
```

## SETPROPERTY TAG RULES

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1. JSP bean tags use XML syntax – must include a slash to close the tag.
2. The name attribute of the setProperty tag must match the id in the useBean tag.
3. The setProperty tag cannot be used to set null values or an empty string.



## THE GETPROPERTY TAG (EXAMPLE)

```
<jsp:getProperty name="student" property="firstName" />
```

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### Java Scriptlet Equivalent:

```
<%= student.getFirstName(); %>
```

## GETPROPERTY TAG RULES

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1. JSP bean tags use XML syntax – must include a slash to close the tag.
2. The name attribute of the getProperty tag must match the id in the useBean tag.
3. The getProperty tag cannot be used to set null values or an empty string.