**JSP Implicit Objects**

JSP provides standard or predefined implicit objects, which can use directly in JSP page using**JSP Scriptlet**. The implicit objects are Servlet API class type and created by JSP containers

There are **9 jsp implicit objects**. These objects are created by the web container (JSP containers) that are available to all the jsp pages.

The available implicit objects are out, request, response, page, pageContext, exception, config, session and application.

List of all 9 implicit object are;

|  |  |
| --- | --- |
| **Class type** | **Object** |
| 1 | HttpServletRequest | request |
| 2 | HttpServletResponse | response |
| 3 | ServletConfig | config |
| 4 | ServletContex | application |
| 5 | HttpSession | session |
| 6 | JspWriter/PrintWriter | out |
| 7 | Exception | exception |
| 8 | PageContext | pagecontext |
| 9 | Object | page |

All implicit objects of jsp are accessible with in the expression and scriptlet of the jsp, but not accessible in the declaration tags of the jsp.

In a jsp session and exception object are not available always. Because session object depends on session attribute of the page directive and exception depends on isErrorPage attribute of the page directive.

In a jsp, session object is available, if session equals to true in page directive.

In a jsp an exception object is available, if isErrorPage is equal to true in page directive.

## Request Implicit Object

The JSP request is an implicit object of type HttpServletRequest i.e. created for each jsp request by the web container. It can be used to get request information such as parameter, header information, remote address, server name, server port, content type, character encoding etc.

It can also be used to set, get and remove attributes from the jsp request scope.

Example of request implicit object where we are printing the name of the user with welcome message.

**Example of JSP request implicit object**

index.html

**Example**

**<form** action="welcome.jsp"**>**

**<input** type="text" name="uname"**>**

**<input** type="submit" value="go"**><br/>**

**</form>**

welcome.jsp

## Example

<%

String name=request.getParameter("uname");

**out**.**print**("welcome "+name);

%>

## Response Implicit Object

In JSP, response is an implicit object of type HttpServletResponse. The instance of HttpServletResponse is created by the web container for each jsp request.

It can be used to add or manipulate response such as redirect response to another resource, send error etc.

Example of response implicit object where we are redirecting the response to the Google.

## Example of response implicit object

index.html

## Example

**<form** action="welcome.jsp"**>**

**<input** type="text" name="uname"**>**

**<input** type="submit" value="go"**><br/>**

**</form>**

welcome.jsp

## Example

<%

response.sendRedirect("http://www.google.com");

%>

## Config Implicit Object

config object is an implicit object of type ServletConfig and it is created by the container, whenever servlet object is created. This object can be used to get initialization parameter for a particular JSP page.

config object is created by the web container for every jsp page. It means if a web application has three jsp pages then three config object are created.

In jsp, it is not mandatory to configure in web.xml. If we configure a jsp in web.xml then the logical name and init parameter given in web.xml file are stored into config object by the container.

config object is accessible, only if the request is given to the jsp by using its url pattern, but not with name of the jsp.

config object is accessible, only if the request is given to the jsp by using its url pattern, but not with name of the jsp.

## Example of config implicit object

## index.html

**<form** action="welcome.jsp"**>**

**<input** type="text" name="uname"**>**

**<input** type="submit" value="go"**><br/>**

**</form>**

## web.xml file

**<web-app>**

**<servlet>**

**<servlet-name>**Home**</servlet-name>**

**<jsp-file>**/welcome.jsp**</jsp-file>**

**<init-param>**

**<param-name>**dname**</param-name>**

**<param-value>**sun.jdbc.odbc.JdbcOdbcDriver**</param-value>**

**</init-param>**

**</servlet>**

**<servlet-mapping>**

**<servlet-name>**Home**</servlet-name>**

**<url-pattern>**/welcome**</url-pattern>**

**</servlet-mapping>**

**</web-app>**

## welcome.jsp

<%

**out**.**print**("Welcome "+request.getParameter("uname"));

String driver=config.getInitParameter("dname");

**out**.**print**("driver name is="+driver);

%>

## Page Implicit Object

In JSP, page is an implicit object of type Object class. When a jsp is translated to an internal Servlet, we can find the following statement in the service() method of servlet.  
Object page=this;

For using this object it must be cast to Servlet type.For example:

## Example

<% (HttpServlet)page.log("message"); %>

Since, it is of type Object it is less used because you can use this object directly in jsp.For example:

## Example

<% **this**.log("message"); %>

## Session Implicit Object

In JSP, session is an implicit object of type HttpSession.This object used to set,get or remove attribute or to get session information.

## Example of Session implicit object

index.html

## Example

**<form** action="welcome.jsp"**>**

**<input** type="text" name="uname"**>**

**<input** type="submit" value="go"**><br/>**

**</form>**

welcome.jsp

## Example

<%

String name=request.getParameter("uname");

**out**.**print**("Welcome "+name);

session.setAttribute("user",name);

<a href="second.jsp">second jsp page</a>

%>

One.jsp

## Example

<%

String name=(String)session.getAttribute("user");

**out**.**print**("Hello "+name);

%>

## Exception Implicit Object

JSP, exception is an implicit object of type java.lang.Throwable class. This object can be used to print the exception. But it can only be used in error pages.

## Example of Exception implicit object

index.html

## Example

**<form** action="welcome.jsp"**>**

**<input** type="text" name="uname"**>**

**<input** type="submit" value="go"**><br/>**

**</form>**

welcome.jsp

## Example

<%

response.sendRedirect("http://www.google.com");

%>

## Application Implicit Object

In JSP, application is an implicit object of type ServletContext. this application object in the Servlet programming is ServletContext.

For all jsp in a web application, there must be a single application object with application object we can share the data from one JSP to any other JSP in the web application.

The instance of ServletContext is created only once by the web container when application or project is deployed on the server.

This object can be used to get initialization parameter from configuration file (web.xml). It can also be used to get, set or remove attribute from the application scope.

## Example of Application implicit object

## index.html

**<form** action="welcome.jsp"**>**

**<input** type="text" name="uname"**>**

**<input** type="submit" value="go"**><br/>**

**</form>**

## welcome.jsp

<%

**out**.**print**("Welcome "+request.getParameter("uname"));

String driver=application.getInitParameter("dname");

**out**.**print**("driver name is="+driver);

%>

## web.xml

**<web-app>**

**<servlet>**

**<servlet-name>**One**</servlet-name>**

**<jsp-file>**/welcome.jsp**</servlet-class>**

**</servlet>**

**<servlet-mapping>**

**<servlet-name>**One**</servlet-name>**

**<url-pattern>**/welcome**</url-pattern>**

**</servlet-mapping>**

**<context-param>**

**<param-name>**dname**</param-name>**

**<param-value>**sun.jdbc.odbc.JdbcOdbcDriver**</param-value>**

**</context-param>**

**</web-app>**

**PageContext Implicit Object**

In JSP, pageContext is an implicit object of type PageContext class.The pageContext object can be used to set,get or remove attribute from one of the following scopes.

* page
* request
* session
* application

In JSP, page scope is the default scope.

**Example of pageContext implicit object**

index.html

**Example**

**<form** action="welcome.jsp"**>**

**<input** type="text" name="uname"**>**

**<input** type="submit" value="go"**><br/>**

**</form>**

**welcome.jsp**

**Example**

<%

<%

String name=request.getParameter("uname");

**out**.**print**("Welcome "+name);

pageContext.setAttribute("user",name,PageContext.SESSION\_SCOPE);

<a href="One.jsp">One jsp page</a>

%>

**One.jsp**

**Example**

String name=(String)pageContext.getAttribute("user",PageContext.SESSION\_SCOPE);

**out**.**print**("Hello "+name);