1 Creating a Simple JSP File

```jsp
<%@ page language="java" contentType="text/html; charset=UTF-8"    pageEncoding="UTF-8"%>

<!DOCTYPE html>

<html>

<head>

<meta charset="UTF-8">

<title>Simple JSP</title>

</head>

<body>

<%

    out.println("<h2>My first JSP page.</h2>");

%>

</body>

</html>
```

2 JSP Implicit Objects

index.jsp

```jsp
<%@ page language="java" contentType="text/html; charset=UTF-8"    pageEncoding="UTF-8"%>

<%@ page errorPage = "handle-error.jsp" %>

<!DOCTYPE html>

<html>

<head>

<meta charset="UTF-8">

<title>JSP Implicit Objects</title>

</head>

<body>


<%

    String responseCheck = request.getParameter("office");

    if (responseCheck != null ) {
```

```jsp
                response.setStatus(response.SC_MOVED_TEMPORARILY);

                response.setHeader("Location", "response-redirect.jsp?office=" + responseCheck);

        }


        String errorCheck = request.getParameter("error");

        if (errorCheck != null ) {

                int x = 0;

                if (x == 0)

                        throw new RuntimeException("Exception has been raised");

        }
%>
<%


    int serverPort =  request.getServerPort() ;

    out.println("The Server is running on port " + String.valueOf(serverPort) + "<br>");

    out.println("Servlet Name is " + config.getServletName() + "<br>");

    out.println("Server Info:" + application.getServerInfo() + "<br>");


    String pageName = page.toString();

    out.println("The name of the page is " + pageName + "<br>");


    pageContext.setAttribute("userid", "John Doe");

    out.println("userId attribute from pageContext: " + pageContext.getAttribute("userid") + "<br>");
%>
<a href="index.jsp?office=head_office">Show usage of response object</a><br>
<a href="index.jsp?error=1">Show usage of error  object</a><br>


<%
    if (response.containsHeader("Office"))

            out.println("Current location is " + response.getHeader("Office"));
```

```
    %>
```

```
</body>
```

```
</html>
```

response-redirect.jsp

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

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<meta charset="UTF-8">
```

```
<title>Get Header Example</title>
```

```
</head>
```

```
<body>
```

```
<%

    String office = request.getParameter("office");

    if (office != null)

        out.println("value of Office obtained :" + office + "<br>");

    else

        out.println("No value of Office found<br>");

%>
```

```
</body>
```

```
</html>
```

handle-error.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8    pageEncoding="UTF-8"
isErrorPage = "true"%>
```

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

<meta charset="UTF-8">

<title>Error Handling page</title>

</head>

<body>

<% exception.printStackTrace(response.getWriter()); %>

<hr>

An exception was generated. Details are above:

</body>

</html>

3 JSP Directives

index.jsp

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

  <%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>

  <%@ taglib prefix="fmt" uri="http://java.sun.com/jsp/jstl/fmt"%>

<!DOCTYPE html>

<!--

Download jstl.jar from http://central.maven.org/maven2/javax/servlet/jstl/1.2/jstl-1.2.jar

-->

<html>

<head>

<meta charset="UTF-8">

<title>JSP Directives</title>

</head>

<body>

This is content from the main file.

<%@ include file="included.jsp" %>

<hr>

Example of using JSTL taglibs for formatting output

<p>

Currency = <fmt:formatNumber value = "145" type = "currency"/>

<p>

<p>

<c:set var = "now" value = "<%= new java.util.Date()%>" />

Current date and time is <fmt:formatDate pattern = "yyyy-MM-dd hh:mm:ss" value = "${now}" />

</p>

</body>

</html>

included.jsp

<% out.println("This is content from included file.

"); %>

4 JSP Action Tags

index.jsp

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

<!DOCTYPE html>

<html>

<head>

<meta charset="UTF-8">

<title>JSP Action Tags</title>

</head>

<body>

Usage of useBean tag

<jsp:useBean id="productBean" class="com.ecommerce.ProductBean" scope="session"></jsp:useBean>

<jsp:setProperty property="productId" name="productBean" value="18791"/>

<jsp:setProperty property="productName" name="productBean" value="Optical Wireless Mouse"/>

<jsp:setProperty property="price" name="productBean" value="600.00"/>

Access bean properties from another page

Use Forward action to go to Google

<hr>

<jsp:text>

    <![CDATA[This is my content.
This will show within a text action tag exactly as it has been entered]]>

</jsp:text>

</body>

</html>

forward.jsp

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


<jsp:forward page="forwarded.jsp"></jsp:forward>
```

forwarded.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"    pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Forward Test</title>
</head>
<body>
This page came from forward.jsp by using jsp:forward action tag


</body>
</html>
```

showbean.jsp

```jsp
<%@ page language="java" contentType="text/html; charset=UTF-8"    pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Display Bean properties</title>
</head>
<body>
<jsp:useBean id="productBean" class="com.ecommerce.ProductBean" scope="session"></jsp:useBean>
     Product Id:    <jsp:getProperty name="productBean" property="productId" /> <br>
     Product Name:    <jsp:getProperty name="productBean" property="productName" /> <br>
     Product Price:    <jsp:getProperty name="productBean" property="price" /> <br>


</body>
</html>
```

ProductBean

```java
package com.ecommerce;
import java.io.Serializable;


public class ProductBean implements Serializable{
     private String productId;
     private String productName;
     private double price;


     public void setProductId(String value) {
         this.productId = value;
     }
     public void setProductName(String value) {
         this.productName = value;
```

```java
    }
    public void setPrice(double value) {
        this.price = value;
    }


    public String getProductId() {
        return this.productId;
    }
    public String getProductName() {
        return this.productName;
    }
    public double getPrice() {
        return this.price;
    }
}
```

5 Session Handling

index.jsp

```jsp
<%@ page language="java" contentType="text/html; charset=UTF-8"    pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>JSP Sessions</title>
</head>
<body>
<%
  if (request.getParameter("error") != null)
      out.println("<b>Your session has expired or is invalid.</b><br>");
%>
```

```
<form action="login.jsp" metho="post">

 Name <input name="name" id="name" maxlength=40><br>

 Password <input type="password" name="pwd" id="pwd" maxlength="10"><br>

 <button>Submit</button>


</form>
</body>
</html>
```

login.jsp

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

<%


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

    String pwd = request.getParameter("pwd");


    if (name == null || name.equals("") || pwd == null || pwd.equals("")) {

        response.sendRedirect("index.jsp?error=1");

    } else {


        session.setAttribute("name", name);

        response.sendRedirect("dashboard.jsp");


    }
%>
```

dashboard.jsp

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

<!DOCTYPE html>

<html>

<head>

<meta charset="UTF-8">
```

```
<title>Dashboard</title>

</head>

<body>

<%

    if (session.getAttribute("name") == null) {

        response.sendRedirect("index.jsp?error=1");

    }

%>

<b>Hello <%= session.getAttribute("name") %></b><br>

<a href="logout.jsp">Click here to logout</a>

</body>

</html>
```

logout.jsp

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

<!DOCTYPE html>

<html>

<head>

<meta charset="UTF-8">

<title>Session Logout</title>

</head>

<body>

<%

    session.invalidate();

%>

<b>Your session has terminated.</b><br>

<a href="index.jsp">Login again</a>

</body>

</html>
```