

# JSP - HANDLING DATE

[http://www.tutorialspoint.com/jsp/jsp\\_handling\\_date.htm](http://www.tutorialspoint.com/jsp/jsp_handling_date.htm)

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One of the most important advantages of using JSP is that you can use all the methods available in core Java. This tutorial would take you through Java provided **Date** class which is available in **java.util** package, this class encapsulates the current date and time.

The Date class supports two constructors. The first constructor initializes the object with the current date and time.

```
Date ( )
```

The following constructor accepts one argument that equals the number of milliseconds that have elapsed since midnight, January 1, 1970

```
Date(long millisec)
```

Once you have a Date object available, you can call any of the following support methods to play with dates:

SN	Methods with Description
1	<b>boolean after(Date date)</b> Returns true if the invoking Date object contains a date that is later than the one specified by date, otherwise, it returns false.
2	<b>boolean before(Date date)</b> Returns true if the invoking Date object contains a date that is earlier than the one specified by date, otherwise, it returns false.
3	<b>Object clone( )</b> Duplicates the invoking Date object.
4	<b>int compareTo(Date date)</b> Compares the value of the invoking object with that of date. Returns 0 if the values are equal. Returns a negative value if the invoking object is earlier than date. Returns a positive value if the invoking object is later than date.
5	<b>int compareTo(Object obj)</b> Operates identically to compareTo(Date) if obj is of class Date. Otherwise, it throws a ClassCastException.
6	<b>boolean equals(Object date)</b> Returns true if the invoking Date object contains the same time and date as the one specified by date, otherwise, it returns false.
7	<b>long getTime( )</b> Returns the number of milliseconds that have elapsed since January 1, 1970.
8	<b>int hashCode( )</b> Returns a hash code for the invoking object.
9	<b>void setTime(long time)</b> Sets the time and date as specified by time, which represents an elapsed time in milliseconds from midnight, January 1, 1970
10	<b>String toString( )</b> Converts the invoking Date object into a string and returns the result.

## Getting Current Date & Time

This is very easy to get current date and time in JSP program. You can use a simple Date object with *toString()* method to print current date and time as follows:

```
<%@ page import="java.io.*,java.util.*, javax.servlet.*" %>
<html>
<head>
<title>Display Current Date & Time</title>
</head>
<body>
<center>
<h1>Display Current Date & Time</h1>
</center>
<%
    Date date = new Date();
    out.print( "<h2 align=\"center\">" +date.toString()+"</h2>" );
%>
</body>
</html>
```

Now let us keep about code in CurrentDate.jsp and then call this JSP using URL <http://localhost:8080/CurrentDate.jsp>. This would produce following result:

## DISPLAY CURRENT DATE & TIME

**Mon Jun 21 21:46:49 GMT+04:00 2010**

Try to refresh URL <http://localhost:8080/CurrentDate.jsp> and you would find difference in seconds everytime you would refresh.

## Date Comparison:

As I mentioned above you can use all the available Java methods in your JSP scripts. In case you need to compare two dates, following are the methods:

- You can use *getTime()* to obtain the number of milliseconds that have elapsed since midnight, January 1, 1970, for both objects and then compare these two values.
- You can use the methods *before()*, *after()*, and *equals()*. Because the 12th of the month comes before the 18th, for example, *new Date(99, 2, 12).before(new Date (99, 2, 18))* returns true.
- You can use the *compareTo()* method, which is defined by the *Comparable* interface and implemented by *Date*.

## Date Formatting using SimpleDateFormat:

*SimpleDateFormat* is a concrete class for formatting and parsing dates in a locale-sensitive manner. *SimpleDateFormat* allows you to start by choosing any user-defined patterns for date-time formatting.

Let us modify above example as follows:

```
<%@ page import="java.io.*,java.util.*" %>
<%@ page import="javax.servlet.*,java.text.*" %>
<html>
<head>
<title>Display Current Date & Time</title>
</head>
<body>
<center>
<h1>Display Current Date & Time</h1>
</center>
```

```

<%
    Date dNow = new Date( );
    SimpleDateFormat ft =
    new SimpleDateFormat ("E yyyy.MM.dd 'at' hh:mm:ss a zzz");
    out.print( "<h2 align=\"center\">" + ft.format(dNow) + "</h2>");
%>
</body>
</html>

```

Compile above servlet once again and then call this servlet using URL <http://localhost:8080/CurrentDate>. This would produce following result:

## DISPLAY CURRENT DATE & TIME

**Mon 2010.06.21 at 10:06:44 PM GMT+04:00**

### Simple DateFormat format codes:

To specify the time format use a time pattern string. In this pattern, all ASCII letters are reserved as pattern letters, which are defined as the following:

Character	Description	Example
G	Era designator	AD
y	Year in four dig its	2001
M	Month in year	July or 07
d	Day in month	10
h	Hour in A.M./P.M. (1~12)	12
H	Hour in day (0~23)	22
m	Minute in hour	30
s	Second in minute	55
S	Millisecond	234
E	Day in week	Tuesday
D	Day in year	360
F	Day of week in month	2 (second Wed. in July)
w	Week in year	40
W	Week in month	1
a	A.M./P.M. marker	PM
k	Hour in day (1~24)	24
K	Hour in A.M./P.M. (0~11)	10
z	Time zone	Eastern Standard Time
'	Escape for text	Delimiter

"	Single quote	`
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For a complete list of constant available methods to manipulate date, you can refer to standard Java documentation.