# CGS 3175: Internet Applications Fall 2007

### Introduction To JavaScript – Part 2

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# Things to Try Yourself

- 23. Create a 5<sup>th</sup> and 6<sup>th</sup> version of the XHTML document in this set of notes using the external script library. In version 5, put the <script> element before the <h1> element and in version 6, put the <script> element after the <h1> element. What effect does this have on the way the browser displays the page? Is the effect similar to any of the other versions we already created?
- 24. Using version 2 (page 17) of the XHTML document in this set of notes as a template. Modify the document using the JavaScript statement document.writeln(" your text here "); so that the new version of the document simply prints the message in the user's browser as shown on the next page.

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# Things to Try Yourself

🖉 Practice Problem 24 - Windows Internet Explorer
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File       Edit       Yiew       Favorites       Tools       Help         Google       Image: Complete in the state
This JavaScript example simply prints the following message: Working with Javascript is really neat!! I want to learn more!!!!! Your message
can vary 🙂
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Done My Computer 100% •

# Triggering A Script

- In the examples from part 1 of the JavaScript notes, the scripts were triggered automatically. In other words, the visitor didn't need to do anything for the script to execute.
- These were "automatically triggered" scripts. Sometimes you do not want the script to run until the visitor does something to trigger it. For example, you might want to run a script when the visitor mouses over a particular image or link, or when a page is loaded.
- These actions mousing over or loading a page are called intrinsic events.
- There are currently 18 predefined intrinsic events you can use as triggers to determine when a script will run. The table on the next couple of pages list these intrinsic events and which elements they work with.



# Table of Intrinsic Events

Event	Works With	When
onblur	<a>, <area/>,<button>,<input/>, <label>, <select>, <textarea>&lt;/td&gt;&lt;td&gt;The visitor leaves an element that was previously in focus (see onfocus below).&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;onchange&lt;/td&gt;&lt;td&gt;&lt;input&gt;, &lt;select&gt;, &lt;textarea&gt;&lt;/td&gt;&lt;td&gt;The visitor modifies the value or contents of the element.&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;onclick&lt;/td&gt;&lt;td&gt;&lt;pre&gt;All elements except &lt;applet&gt;,   &lt;base&gt;, &lt;basefont&gt;,&lt;br&gt;,   &lt;font&gt;, &lt;frame&gt;, &lt;frameset&gt;,   &lt;head&gt;, &lt;html&gt;, &lt;iframe&gt;,   &lt;meta&gt;, &lt;param&gt;, &lt;script&gt;,   &lt;style&gt;, &lt;title&gt;&lt;/pre&gt;&lt;/td&gt;&lt;td&gt;The visitor clicks on the specified area.&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;ondblclick&lt;/td&gt;&lt;td&gt;Same as for onclick&lt;/td&gt;&lt;td&gt;The visitor double clicks the specified area.&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;onfocus&lt;/td&gt;&lt;td&gt;&lt;a&gt;, &lt;area&gt;,&lt;button&gt;,&lt;input&gt;,&lt;br&gt;&lt;label&gt;, &lt;select&gt;, &lt;textarea&gt;&lt;/td&gt;&lt;td&gt;The visitor selects, clicks, or tabs to the specified element.&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;onkeydown&lt;/td&gt;&lt;td&gt;&lt;input&gt; (of type name or password),&lt;br&gt;&lt;textarea&gt;&lt;/td&gt;&lt;td&gt;The visitor types something in the specified element.&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;onkeypress&lt;/td&gt;&lt;td&gt;&lt;input&gt; (of type name or password),&lt;br&gt;&lt;textarea&gt;&lt;/td&gt;&lt;td&gt;The visitor types something in the specified element.&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;onkeyup&lt;/td&gt;&lt;td&gt;&lt;input&gt; (of type name or password),&lt;br&gt;&lt;textarea&gt;&lt;/td&gt;&lt;td&gt;The visitor lets go of the key after typing in the specified element.&lt;/td&gt;&lt;/tr&gt;&lt;/tbody&gt;&lt;/table&gt;</textarea></select></label></button></a>	

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# Table of Intrinsic Events (continued)

Event	Works With	When
onload	<body>, <frameset></frameset></body>	The page is loaded in the browser.
onmousedown	Same as for onclick	The visitor presses the mouse button down over the element.
onmousemove	Same as for onclick	The visitor moves the mouse over the specified element after having pointed at it.
onmouseout	Same as for onclick	The visitor moves the mouse away from the specified element after having been over it.
onmouseover	Same as for onclick	The visitor points the mouse at the element.
onmouseup	Same as for onclick	The visitor lets the mouse button go after having clicked on the element.
onreset	form (not input of type reset)	The visitor clicks the form's reset button.
onselect	<input/> (of type name or password), <textarea>&lt;/td&gt;&lt;td&gt;The visitor selects one or more characters or words in the element.&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;onsubmit&lt;/td&gt;&lt;td&gt;form (not input of type submit)&lt;/td&gt;&lt;td&gt;The visitor clicks the form's submit button.&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;onunload&lt;/td&gt;&lt;td&gt;&lt;body&gt;, &lt;frameset&gt;&lt;/td&gt;&lt;td&gt;The browser loads a different page after the specified page had been loaded.&lt;/td&gt;&lt;/tr&gt;&lt;/tbody&gt;&lt;/table&gt;</textarea>	

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## Using An Intrinsic Event – onclick

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
   "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<title>Triggering Scripts - onclick </title>
<style type="text/css">
<!-- body {background-color:#CCFFCC; }</pre>
-->
</style>
</head>
<body>
Click here for the <a href="time.html"</p>
onclick="alert('Today is '+ Date() ) "> current time.</a>
The rest of the page goes here
</body>
</html>
```

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# Using An Intrinsic Event – onclick

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Click here for the current time.	Click here for the <u>current time.</u>			
The rest of the page goes here	The rest of the page goes here			
After user clicks	Interview Internet Explorer Today is Thu Nov 08 15:14:00 2007			
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### Using An Intrinsic Event – onmouseover

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
  "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<title>Triggering Scripts - onmouseover </title>
<style type="text/css">
<!-- body {background-color:#CCFFCC; }</pre>
     div {border:1px solid black; width:300px; }
-->
</style>
</head>
<body>
<div>
Move mouse
here for the current time.
</div>
The rest of the page goes here...
</body>
</html>
```

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## Using An Intrinsic Event – onmouseover

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🔆 🍄 😁 🕶 🏈 Trigge X >> 👘 📩 🕆 🛅 🔺				
Move mouse here for the current time.	Move mouse here for the current time.			
The rest of the page goes here	The rest of the page goes here			
After user clicks anyv In paragraph	where Windows Internet Explorer Today is Thu Nov 08 15:26:13 2007			
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## Using An Intrinsic Event – onmousedown

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
   "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<title>Triggering Scripts - onmousedown </title>
<style type="text/css">
<!-- body {background-color:#CCFFCC;</pre>
     div {border:1px solid black; width:300px; padding:4px 4px
4px 4px; }
-->
</style>
</head>
<body>
<div>
Move the mouse
anywhere in the box and press a mouse button to get the current
time.
</div>
The rest of the page goes here...
</body>
</html>
```

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#### Using An Intrinsic Event – onmousedown 🖉 Triggering Scripts - onmousedown - Windows Intern... 💶 🗖 🔀 🌔 Triggering Scripts - onmousedown - Windows Intern... 💶 🗖 🗙 🔏 E:\Courses\CGS 3175 🗸 😽 🗙 Google 🏉 E:\Courses\CGS 3175 🔽 😽 🗙 Google View Favorites Tools Help Edit View Favorites Tools Help File Edit File Google G-Google G-💙 Go 🚸 🌍 🌄 👻 🌺 🗸 Go 🗄 🌍 🚰 🛨 🌺 Settings • 🔘 Settings 🗸 88 🕶 « 🌈 Trigge... 🗴 » 晴 自 🚖 🏤 🛅 • 🔊 4 88 🕶 « 🌔 Trigge... 🗴 » 🛅 - 🔊 **h i** Move the mouse anywhere in the box and press a Move the mouse anywhere in the box and press a mouse button to get the current time. mouse button to get the current time. The rest of the page goes here ... The rest of the page goes here ... Windows Internet Explorer X Today is Thu Nov 08 15:35:34 2007 After user moves mouse into the box and presses any mouse button OK. 😡 My Computer 🕄 100% 😡 My Computer 100% Done Done CGS 3175: Internet Applications (JavaScript – Part 2) Page 12 © Mark Llewellyn

# Creating A Button To Trigger A Script

- You can associate a button with a script to give your visitor full control over when the script should be executed.
- As we did earlier, you simply create a button, then associate a script with the onclick intrinsic event. You can use any intrinsic event with a button, but onclick makes the most sense.
- You can also add images to buttons. Simply insert the image between the opening and closing button tags.
- The example on the next page illustrates using a button to trigger a script.

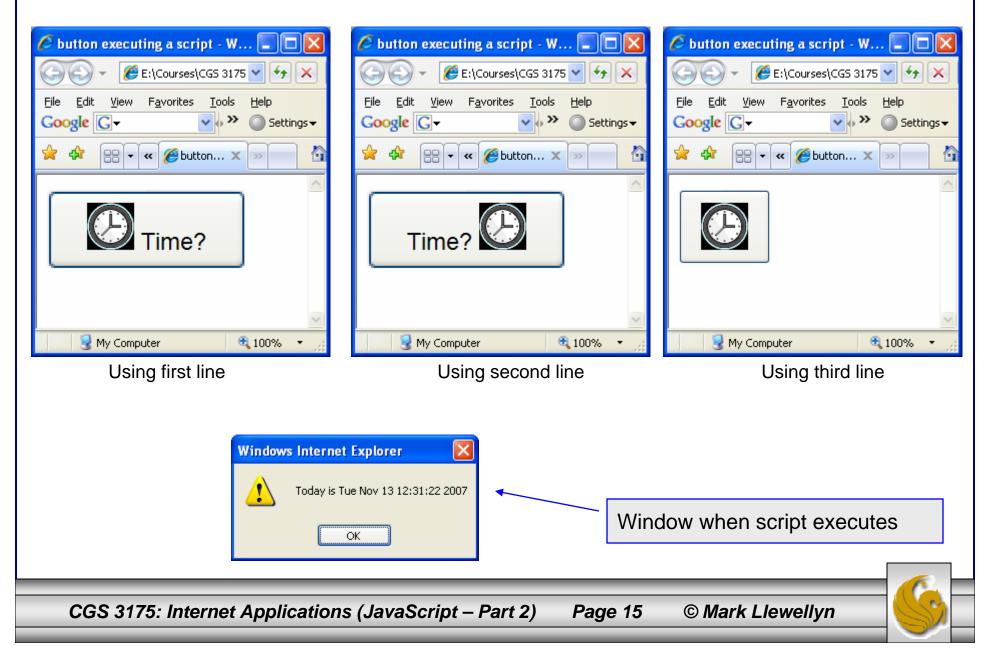
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## Creating A Button To Trigger A Script

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
   "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
                                                                       The three different
<html xmlns="http://www.w3.org/1999/xhtml">
                                                                       lines show different
                                                                       versions of the
<head>
                                                                       button – trv all
<title>button executing a script </title>
                                                                       three of them.
</head>
<body>
<div>
<button type="button" name="time" onclick="alert('Today is '+ Date() )"</pre>
style="font: 1.5em Helvetica, Arial, sans-serif; background:blue:
color:black; padding:.3em" ><img src="clock.bmp" alt="a clock" />
Time?</button>
<!-- <button type="button" name="time" onclick="alert('Today is '+</pre>
Date() )" style="font: 1.5em Helvetica, Arial, sans-serif;
background:blue: color:black; padding:.3em">Time? <img src="clock.bmp"</pre>
alt="a clock" />Time?</button> -->
<!-- <button type="button" name="time" onclick="alert('Today is '+</pre>
Date() )" style="font: 1.5em Helvetica, Arial, sans-serif;
background:blue: color:black; padding:.3em"><img src="clock.bmp" alt="a</pre>
clock" /></button> -->
</div>
</body>
</html>
```

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## Creating A Button To Trigger A Script



# Things to Try Yourself

25. Modify any of the example XHTML documents that illustrate the intrinsic events to try some of the intrinsic events that were not illustrated in the notes such as onmouseup.

