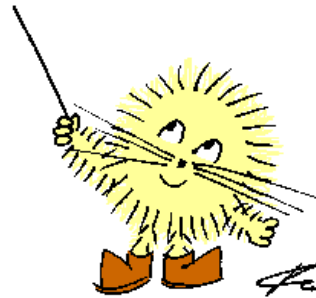


## Advanced Webpages, Widgets, HTML5, and more

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Ken McInnes



### Advanced Webpages

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***Having made our webpage, we want to make sure it***

- can be viewed on any device, and*
- can be found and indexed by Search Engines*

***If we use XHTML as the standard for our webpage, and add a 'doctype' at the beginning of the page,***

- the browsers will use that standard to render the page*
- the page can be validated against the doctype, and*
- it should be able to be viewed on any device.*

***If we use a good **title** and **meta description** they will help Search Engines index our pages, so people can find them.***

## Advanced Webpages

Some standard headings lines that should be added:

```
<?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"
xml:lang="en" lang="en">
<head>
<title>Page title goes here</title>
<meta http-equiv="Content-Type"
content="text/html; charset=utf-8" />
<meta name="description" content="... details go here ..." />
<meta name="keywords" content="keyword, keyword, keyword" />
</head>
<body>
. . . . .
</body>
</html>
```

**Should** include  
xml declaration

html **should** include  
xml namespace

**Must** include content type **text/html**,  
**should explicitly** include **charset**

**description** is used by search engines,  
**keywords** may help indexing.

## Advanced Webpages

Now that we have a doctype and character encoding we can “validate” our webpage against it, either by:

- Using the W3C validator <http://validator.w3.org>
- Add-on the WebDeveloper toolbar into Firefox.  
This enables you to more easily validate local or online webpages.  
Select ‘Tools’ / ‘Add-ons’ look for ‘Web developer’ or directly at :  
<https://addons.mozilla.org/firefox/60/>

**After fixing any coding errors in our webpage, we can confidently and happily ensure that the quality of the webpages should enable them to be seen on all devices.**

There are many other useful “Add-ons” such as “FireBug” 😊

## Widgets

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**Widgets** are a way of making a small website in to a “stand-alone” application – a Web App.

**The “Opera” browser includes a “Widget Maker”, so if we install Opera, and follow the developer guidelines, we can make Widgets.**

See how: <http://www.opera.com/company/education/dev/widgets/>

See also “Widgetize” <http://widgets.opera.com/widgetize/start>

After installing a widget, if you want to remove it, use 'start'/settings'/control panel' 'Add/remove program'

## Widgets

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**Some useful Opera Widgets:**

<http://widgets.opera.com/>

Geolocator <http://widgets.opera.com/widget/26182/>

Google Translator <http://widgets.opera.com/widget/14511/>

**Some useful Chrome Widgets:**

<https://chrome.google.com/webstore?hl=en-US>

**Some useful Apple Widgets:**

<http://www.apple.com/downloads/dashboard/>

## HTML5

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**HTML5** adds many new elements, to provide a greater range of structural elements to webpages.

Structural elements include:

- [header](#), [nav](#), [footer](#), [section](#), [article](#), [aside](#), [details](#), [summary](#), [figure](#), [figcaption](#).

New media elements:

- [audio](#), [video](#), [embed](#).

A [canvas](#) element,

to enable graphic objects, such as drawings, vector graphics, maps to be included directly in the webpage.

Improved form control elements, offline storage, etc.

## HTML5

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**Useful References / demos:**

<http://www.w3schools.com/html5>

<http://html5rocks.com>

<http://html5rocks.com/resource>

<http://diveintohtml5.org>

<http://html5demos.com/>

Mozilla / Webkit Demos, etc.

<https://demos.mozilla.org/en-US/>

<http://www.webkit.org/demos/>

## CSS3

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**CSS3** is a range of new styles that are progressively being implemented, providing an amazing range of new ways of presenting content.

**Color:**

*Provides better definitions of color, such as Hue, Saturation and Lightness (HSL).  
Provides alpha channels (opacity for text, color)*

**Box:**

*Provides definitions that enable the 'incorrect' Internet Explorer box models to be used. Box shadows, curved corners on boxes, box placement, etc*

*... and many other*

## CSS3

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**Useful References:**

<http://www.w3schools.com/css3>

<http://www.css3.info/>

<http://www.alistapart.com>

*Many HTML5 / CSS3 demos focus on animations, transitions and using JavaScript, eg. Chrome Demos, etc.*

<http://www.chromeexperiments.com/>

<http://chrome.angrybirds.com/>

*eg. Mozilla / Webkit Demos, etc.*

<https://demos.mozilla.org/en-US/>

<http://www.webkit.org/demos/>

*... Lots of fun ... Enjoy ...*

## ... and More ...

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*The new wave / sea change that HTML5 and CCS3 is bringing to web page markup is sweeping through very quickly.*

*Browsers (Firefox, Chrome, Opera) are changing rapidly to accommodate these changes.*

*Internet Explorer has been holding back the wave that has been forming for many years.*

*IE9 is now available, but it is now not very relevant.*

*Most, except the corporate world, left it behind years ago.*

*IE is not relevant to mobile platforms.*

*Devices need to have some 'local storage' to store/keep 'page state', other than cookies/sessions.*

*eg. when you use an App offline, or a phone loses coverage.*

## ... and still More ...

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*Devices now have a greater range of **viewport** sizes the scale and size of the view of the webpage*

*Devices and webpages are now **location aware**.*

*IP addresses, mobile phone location, and built-in GPS, now mean that many webpages are now location aware.*

*Portable devices can be rotated, so orientation can change, so the webpage may need to be **orientation aware**,*

*eg. if a user changes the orientation of the device from landscape to portrait, the page may need to change.*

*Portable devices can be geographically orientated, can be **gyroscopically aware**, eg, point to north, the south, etc.*

*eg. if a user changes the direction of the device, the page may need to change.*