CSCU9A2 SPRING 2017

WEB DESIGN PRACTICAL 5: DESIGN AND TESTING

Aims

By the end of this workshop, students should be able to:

- Identify general principles of good web design
- Use standard tools to test the quality of their web page
- Use Krug's testing method to evaluate the navigation of a web page

There is no checkpoint on this sheet; however, doing these exercises will help you to be better prepared for the final exam.

This practical is not about writing web pages: it is about testing your web pages to ensure quality. You'll cover useful resources for help with web page testing:

- Taking screenshots
- Accessibility Testing
- Colour Blindness Testing
- Viewing your web site in other browsers (including text only browsers)
- Using validation services to check your HTML and CSS are correct.

Taking Screenshots

Screenshots can be useful for various reasons:

- Testing the layout of your web page by showing someone a printout.
- Testing colour choices by printing out in black and white.
- Including a screenshot (or part of one) in a report.

Simply press **Alt + Print Screen** to capture the active window and then **paste** into a Word document or similar.

Accessibility Testing – W3C

The World Wide Web consortium (W3C) have published a detailed set of prioritized guidelines for how to ensure that web pages are accessible to as many people as possible. The Americans also have the Americans with Disabilities Act, specifically Section 508, to deal with accessibility.

A useful introduction to accessibility is:

`www.w3.org/standards/webdesign/accessibility`

There is also a very long list of accessibility tools at

`www.w3.org/WAI/ER/tools/Overview.html`

W3C have guidelines on how to do a preliminary review of accessibility for a web site:

`www.w3.org/WAI/eval/preliminary.html`

In this practical, we'll follow the steps below to evaluate the accessibility of a few websites.

1. Select a representative sample of pages.
2. Examine the selected pages using graphical browsers
3. Examine the selected pages using specialized browsers
4. Use automated Web accessibility evaluation tools
5. Summarize the results obtained

Select a representative page sample

In most cases, this will be the home page of a site, since most users will visit this.

For the exercises below we will use the home page of the University of Stirling:
`www.stir.ac.uk`

Examine pages using graphical browsers

Using your usual browser, try adjusting settings to see what happens to your web pages.

1. Turn off the sound (if at home; it is already turned off in the labs), and check whether audio content is still available through text equivalents.

2. Use browser controls to vary font-size: verify that the font size changes on the screen accordingly; and that the page is still usable at larger font sizes.

3. Try resizing the application window to verify that horizontal scrolling is not required.

4. Without using the mouse, use the keyboard to navigate through the links and form controls on a page (for example, using the "*Tab*" key), making sure that you can access all links and form controls, and that the links clearly indicate what they lead to.

How was it? Did you find it easy to use the web page while changing these settings?

Examine pages using specialized browsers

This one's hard to do at the University because only IE is provided (and Firefox in certain labs, and with some effort). We'll combine this step with the next step:

Use automated Web accessibility evaluation tools

Of course, you should always test your web pages in different (graphical) browsers, so if you develop in Firefox, test in Explorer (and Opera, Safari, Chrome etc). A very useful thing is to test in a text-only browser such as Lynx. If you do not have Lynx available on your computer, there are various web services around that emulate Lynx. One example is

`http://www.delorie.com/web/lynxview.html`

Try using this emulator to view the CSCU9A2 website. Try using it to view your own personal website that you created in the earlier practicals. [Note that the Delorie checker is intended to be used only for checking websites you develop yourself. To prove that you are the developer, you must create a file named `delorie.htm`, `delorie.html`, or `delorie.gif` on the server hosting your web page. To do this, right-click within your Web folder, choose New → New Text Document, and create a file with one of the required names. The file does not need to contain anything.]

Another very useful tool is the **WAVE** tool at `wave.webaim.org`, which gives a graphical report combining features of W3C guidelines and Section 508 Guidelines.

1. Go to the WAVE tool at `wave.webaim.org`.
2. First try looking at the division's homepage, at `www.cs.stir.ac.uk`
3. Click the Contrast tab. Are there any problems with the colour contrast on this page? Try using the "Desaturate page" command at the bottom of the Contrast tab to see what the page looks like in greyscale.
4. Try looking at Amazon (`www.amazon.co.uk`) both in your browser and in WAVE.
5. Now try out a web page of your own, e.g. any page you made in the earlier practicals.

Colour Blindness Testing

Colour usage can be particularly problematic for people with some form of colour blindness. There are several tools to help you choose effective colour contrasts, for example, see:

`http://gmazzocato.altervista.org/colorwheel/wheel.php`

This will allow you to choose colours and see how those colours appear to people with different kinds of colour blindness.

Validation

Of course, you should also **validate** your web pages using the W3C validator `validator.w3.org` to make sure the HTML is correct.

Go to the validator and try out the following websites:

`www.cs.stir.ac.uk`

`www.cs.stir.ac.uk/~ces/simplepage.html`

`www.amazon.co.uk`

Web Design

What makes a good web page? What makes a bad one? A useful resource for web designers is `www.webpagesthatsuck.com`. Be amazed at the very poor design out there.

Look at some of the examples listed at these sites:

`www.angelfire.com/super/badwebs`

`www.worstoftheweb.com`

`www.webpagesthatsuck.com`

Find an example for each of these features that make a web site difficult to use:

- Mystery meat navigation
- Excessive size
- Poor use of colour

For more information on how to design correctly, and in particular to use proper contrast techniques, please read:

`www.webdesignerdepot.com/2010/09/fully-understanding-contrast-in-design/`

See the course website for more links to web design guidelines.

The Trunk Test

Steve Krug's Trunk Test is a test of site navigation. Given a previously unseen web page, locate the following items as quickly as possible:

- Site ID (What site is this?)
- Page Name (Where am I?)
- Sections (Are the sites major sections outlined?)
- Local Navigation
- Where am I (is there a "You are here?)
- How can I search (For large sites only)

Once you are satisfied that all of the items included in this test are clearly and quickly identifiable at a glance, you can be fairly sure that the site has a workable navigation system.

⇒ *Go to webpagesthatsuck. Try the trunk test on a couple of examples.*

Steve Krug has a really nice video about usability testing:

http://www.sensible.com/rsme.html

You will need headphones for this (there is sound).