# Higher Diploma in Software Development

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#### WEB DESIGN

WEEK 5

**DESIGNING WITH WEB STANDARDS** 

### Learning Objectives

- The Planning of a Web Site
  - Objectives
  - Defining an audience
  - Suitability of site for audience
  - - Key Message of the Site
- Site Structure
  - Site Plan
  - Linking and Navigation
  - Page Level Structure
- Designing a site for Impact
  - Color Schemes, Text and Graphics
- Grabbing your visitors attention

### Planning your Website

- Function dictates design
  - Your web site aims to achieve some function. It doesn't matter how well designed your site is if it doesn't achieve it's purpose
- Design your site on paper before you start your markup
- Start with an OBJECTIVE
  - Every site should have a purpose and that purpose will determine how a site is organized
  - The worst thing you can do is create one page and then keep adding other pages onto it

### Planning your Website

- Define a target audience
  - Who are you aiming your site at? Your site is aimed at attracting visitors and therefore think of *marketing*
- Audience Suitability
  - How will we make our content suitable for our target audience and cater for their particular requirements
  - Color schemes that appeal to adults won't necessarily appeal to children. Fonts and text styles also need to be considered.
- The tone of your site will depend on your audience.

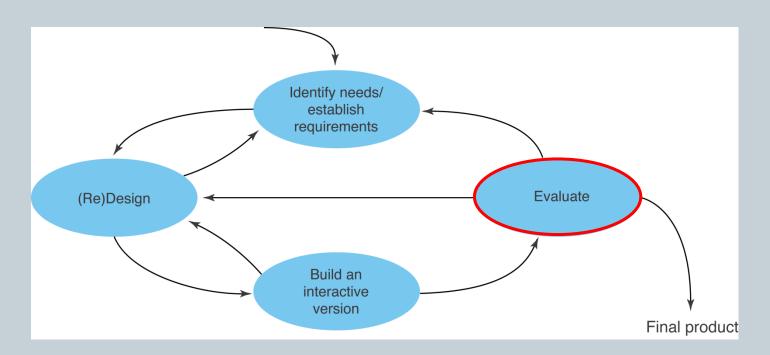
### **Design Considerations**



- You should design your site on paper first rather than going straight to code
- Four core activities
  - Analysis
    - Understand the purpose of the website
  - Prototyping
    - Develop a series of prototype websites
  - o (Re)Design
  - Evaluation
    - Test/evaluate these prototypes with users

### A Simple Interaction Design Model





Sharp, Rogers, Preece, 2006

### Analysis

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#### Define the purpose

 What should the website accomplish, and what should users get from it

#### Define the audience

- Your target market. What are they looking for, and, more importantly, what are they like
  - Characteristics, computer specs, web experience

### Analysis

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- Requirements should be determined by the client
- Good communication between the client and web designer is vital
- There should be some type of interview/questionnaire/focus group
- The iterative process allows for regular interaction between client and designer
- Keep the client engaged and create a sense of ownership

### What kind of questions?

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- What does your organisation do?
- What is the organisation's history?
- What are the goals? Why?
- Tasks to achieve goals
- What are you trying to communicate?
- What differentiates you from your competitors?
- Who is the target market

### Questions continued



- What pictures/photographs/diagrams?
- What about colour?
- Branding Consistent with off-line
- Will pages need to be printed?
- What is the budget, timescale, deadline?
- Who will maintain the site?

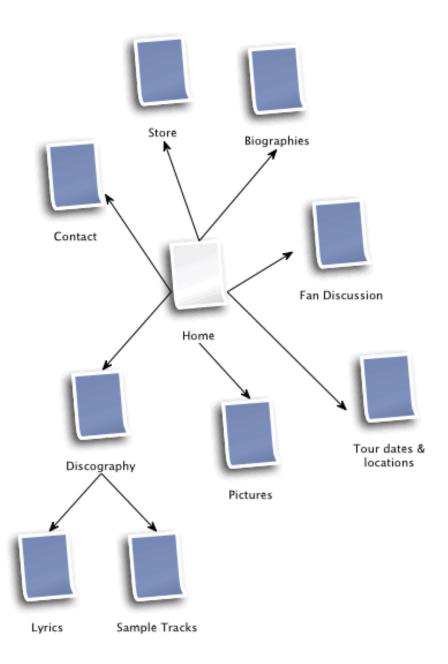
### Prototyping

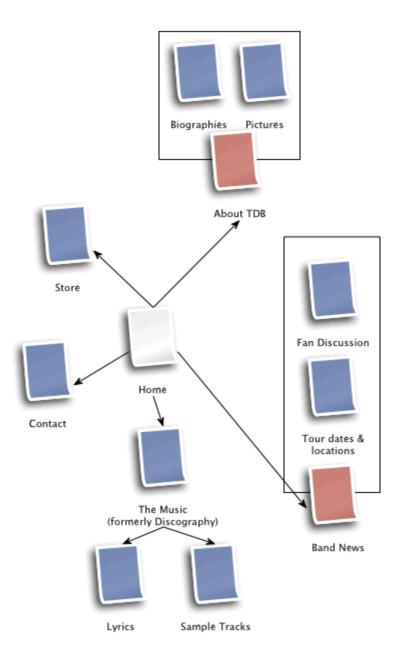


#### Information Architecture

- Think about the audience and the information/services they require
  - How should you structure the website to provide this for them?
- Think about the entire body of content that needs to go on the site
  - How can that be broken down into chunks and how should those chunks relate to each other
  - Techniques like 'card sorting' can help in this respect







- Number each page
- Give a brief description of what each page contains before developing the website further

#### Home

#### TheDungBeatlesRock.com

This page is critical for "selling" TDB to new fans. We have to make it really reflect what the band is about.

- \* Who and what is TDB?
- \* Where can I listen to the music?
- \* Upcoming shows
- Great images of the band playing, easy access to the online store.

### Layout



- Common page elements
  - Header
    - × Logo
    - × Search box
  - Navigation
  - Main content area
  - Footer

### Layout



- Aim to keep important or attention grabbing page elements "above the fold"
- Important to test the layout on different devices/resolutions with a view to meeting this aim
- View on different browsers and version of browsers

http://www.browsershots.org

Adobe browser lab <a href="https://browserlab.adobe.com">https://browserlab.adobe.com</a>

#### Layout

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 If you don't have your content finalised or to hand you can use fake, filler copy

http://www.lipsum.com/

### Colour and Typography



- Designer's playground
- Many good web resources but two to start you off
- Colour
  - http://dev.opera.com/articles/view/8-colour-theory/
- Typography
  - http://dev.opera.com/articles/view/11-typography-on-theweb/

### Good Usability Design

- What about usability?
- How can I make my website easy to use
- Mandel's 3 Golden Rules
  - Place the user in control
  - o Reduce the memory load
  - Make the interface consistent

Source: http://www.theomandel.com/resources/goldenrules.html

#### Place the User in Control

- No unneeded actions
- Flexible interaction
- Direct interaction with objects on screen
- Interactions should be interruptible and undoable

### Reduce the Memory Load

- Reduce the demand on short-term memory
- Meaningful defaults
- Intuitive shortcuts
- Layout based on metaphor
- Progressive disclosure



#### Make the Interface Consistent

- Meaningful tasks
- Don't change unless you have to
- Consistency across browser or platform

### Planning your Web Site

#### Key Messages

- In advertising there is a formula used to measure the effectiveness of an advertisement
- AIDA: Attention, Interest, Desire, and Action
- o If an advert is to work, it must first grab the **attention** of the viewer to stop him from looking away. It must hold the **interest** long enough to make the viewer desire the product being advertised. All of this is wasted, if the viewers **desire** is not sufficiently stimulated to persuade him to take **action** to go out and buy the product.
- This formula can be applied to web design

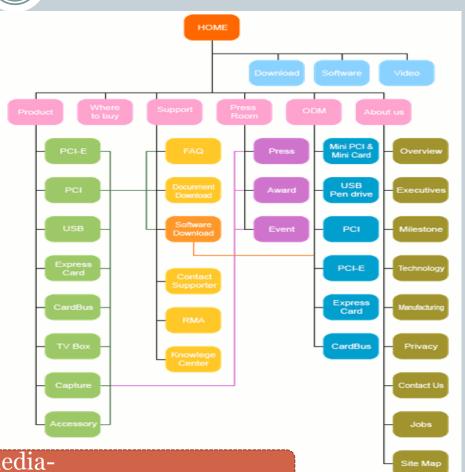
#### Planning your Web Site

- When your home page firsts opens on the visitors monitor, it has to grab that visitors attention immediately
- If the site looks disinteresting or takes a long time to download, the visitor will probably give up and leave your site
- You only have a few seconds to convince the user to stay on your site
- Make a list of what you are trying to say in your site
- Priorities the list and present the most important information first and the least important information last

#### Site Structure

- A Web site's superstructure refers to the actual mechanics of organization and navigation
- Before starting any coding, you should decide how many pages your site will contain and how each page will fit into the structure
- You should draw up a rough plan site showing the pages and the various other pages they relate to. This will also help when designing the navigation system

#### Site Structure



http://www.avermediausa.com/avertv/aboutus/AboutUs.aspx?Id=25

#### Site Structure

#### Linking

- All pages on the site should have a link back to the home page
- o In general, all pages on the site should carry an identical navigation system. Sometimes the home page may act like a splash screen, but should still follow a site wide theme
- The user should not have to use the back button on their browser, that functionality should be included in the site

### Page Level Structure

- You need to decide the shape and size of your page
- Some web users do not like having to scroll up and down pages. Sometimes you may wish to have a page that is not longer than a single screen
- However, some browsers have larger windows that others. Turn on different toolbars and the window will be smaller
- Different monitor resolutions determine how much can fit on the screen

### **Browser Display Statistics**

#### Screen Resolution

Today, most visitors are using a screen resolution higher than 1024x768 pixels:

Date	<u>Higher</u>	1024x768	800x600	640x480	Other
January 2011	85%	14%	0%	0%	1%
January 2010	76%	20%	1%	0%	3%
January 2009	57%	36%	4%	0%	3%
January 2008	38%	48%	8%	0%	6%
January 2007	26%	54%	14%	0%	6%
January 2006	17%	57%	20%	0%	6%
January 2005	12%	53%	30%	0%	5%
January 2004	10%	47%	37%	1%	5%
January 2003	6%	40%	47%	2%	5%
January 2002	6%	34%	52%	3%	5%
January 2001	5%	29%	55%	6%	5%
January 2000	4%	25%	56%	11%	4%

Source: http://www.w3schools.com/browsers/browsers\_display.asp

### Designing a Site for Impact

- Good Web design considers both function and content - both affect the style and tone of the site
- Color schemes must be appropriate to content and design should be consistent
- Variations between pages are good, but within the context of a consistent design style
- The navigation system should generally be kept in the same position on all pages of you site

### Designing a Site for Impact

- You should ask yourself:
  - R: Is this page easy to **read**?
  - S: Is the style **suitable** to its content
  - I: Does the page make an **immediate** impact on the reader
  - A: **Artistically**, is this page interesting and stimulation?

#### Color Contrast

This is black text on a pale blue background

This is yellow text on a red background.

This is green text on a purple background.

This is white text on a blue background.

This is red text on an orange background.

#### **Color Contrast**

- You can add color to graphic elements, to table borders etc
- It can also be very effective to apply different colors to different blocks of text or to different sizes of headings
- Too many colors in a scheme can be distracting, unless done for a specific purpose

### **Balancing Text & Graphics**

- It is important to get a good balance between text and graphics
- Where possible, graphics should be integrated into the text
- They should be relevant and have a purpose within the overall design

### Grabbing your Visitors Attention

- A visitor's attention should be grabbed by the use of headlines, subheadings and graphics
- You need to consider the balance between headlines and body text, as well as match the style and tone of the headlines to the site's purpose and intended audience
- Keep headings short and to the point, keep paragraphs and sentences small and divide them up with relevant subheadings

### Navigation

- There are different ways of moving around a site
  - Text hyperlinks within individual pages
  - Graphics links such as buttons and icons
  - A navigation bar
  - A clickable site map
  - Links generated by active content such as JavaScript
  - The browsers own navigation controls, such as the back button

## **Navigation Bars**

- Navigation bars are often a good way to let users navigate through your site
- They are easy to operate and add contextual information for the user
- Never leave your visitor to a dead end. A dead end is a series of links which lands your visitor on a page from which there are no links back

### Site maps

- Site maps can be textual or graphical map of your site
- They show the relationships between various pages
- Image maps were used to display site maps. An image map is an image with a number of hyperlinks at locations within it.
- They hyperlink uses coordinates of parts of the graphic
- In general, they should be avoided

## UI Design Patterns

- There are a number of recurring design problems faced when trying to create good design
- It is common practice to user recurring solutions to solve these common problems
- Design Patterns are standard reference points for the user interface or web designer
- http://ui-patterns.com/



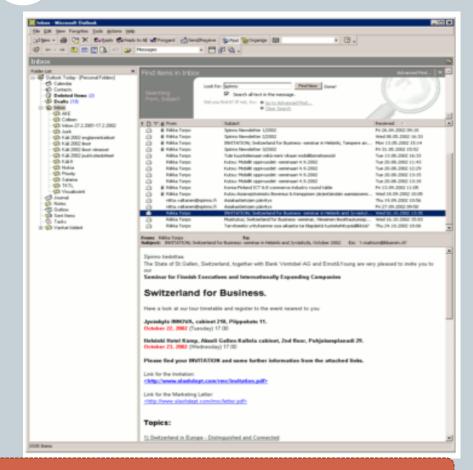
### Search

- Continuous Highlight
- A dynamic query where
  - The user gives a search criteria and the system highlights the matches continuously. The non-hits are filtered out

Source: http://www.cs.helsinki.fi/u/salaakso/patterns/Continuous-Highlight.html

## Data Storage

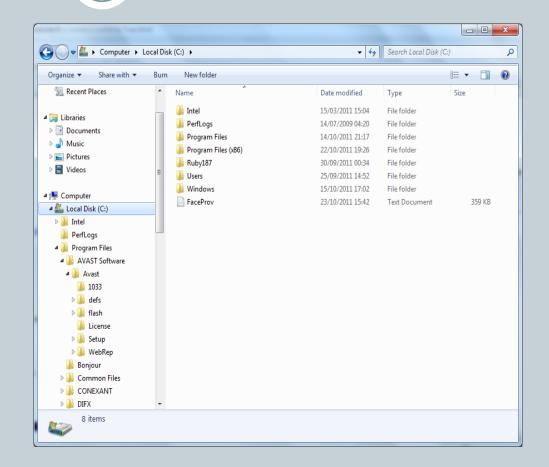
 Data storage saves a fixed set of the user's data; the query which produced the set of results will be lost, but the search results are saved.



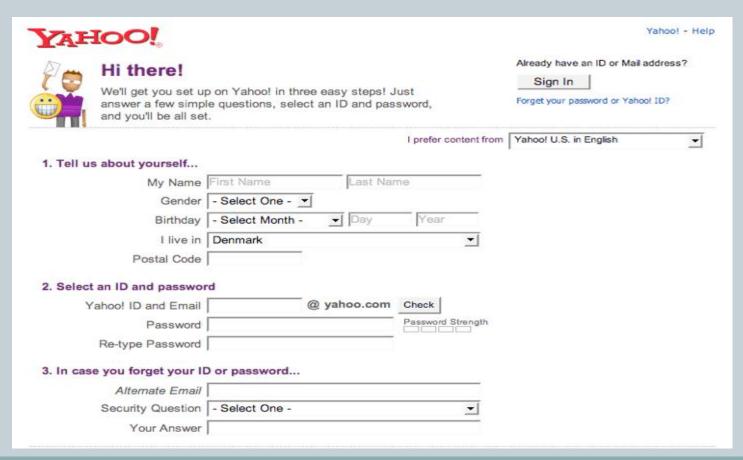
Source: http://www.cs.helsinki.fi/u/salaakso/patterns/Data-Storage.html

#### Tree

Tree is a
visualization of a
hierarchy. In the
most typical
orthogonal 2D
layout of the Tree,
the hierarchy level
is shown by
indentation on the
left side of the
Tree nodes.



## **Account Registration**



### Archive

#### October 2007

[Sunspots] The barnacle edition

[On Writing] Zappos, Chocolove, and Bill Bryson

László Moholy-Nagy's visual representation of Finnegan's Wake

Product Blog update

TIECON Midwest on Oct 5 in Chicago

The business version of an internal affairs cops

[Screens Around Town] Design Shack, iSquint, and LinkedIn

iPhone: Context over consistency

SEED almost sold out

Ask 37signals: How to escape the waterfall?

Cool design detail at Monome

#### September 2007

Ask 37signals: Pressure to grow?

[Sunspots] The milk edition

The management philosophy of Craigslist CEO Jim Buckmaster

Ask 37signals: How do you keep up with new technology?

Product Blog update

Waking up the sleepers

Ask 37signals

Can you be innovative by standing still?

Erling Ellingsen's \$2 multi-touch pad

A great experience... on radio!

Recent job postings on the 37signals Job Board

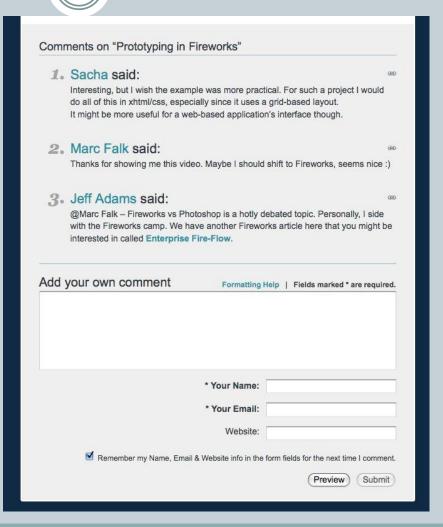
Announcing the SEED Conference featuring Jim Coudal, Jason Fried, and Carlos Segura

I'll buy if

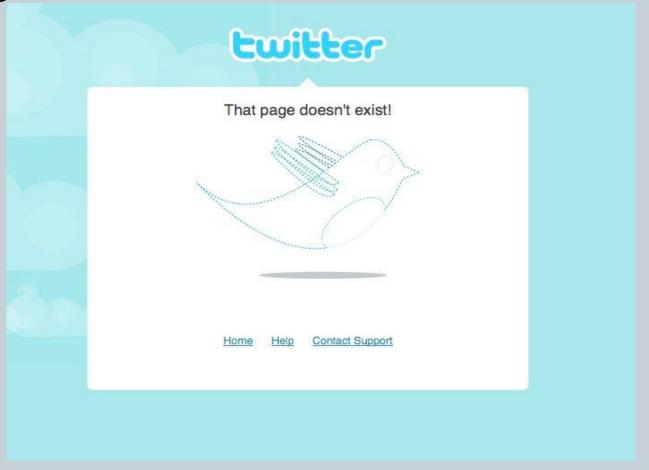
### Articles



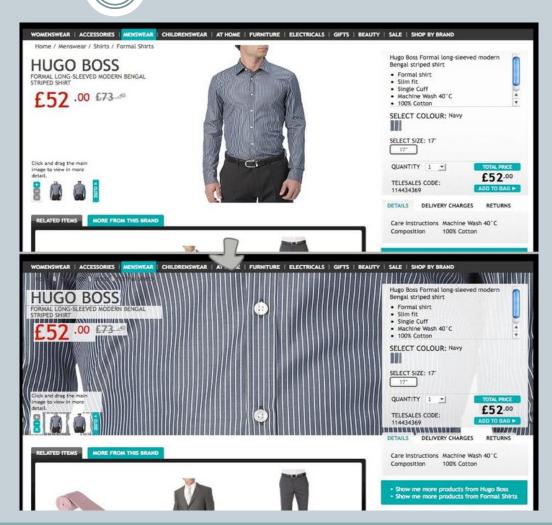
#### Comments



Error Pages



## Image Zoom



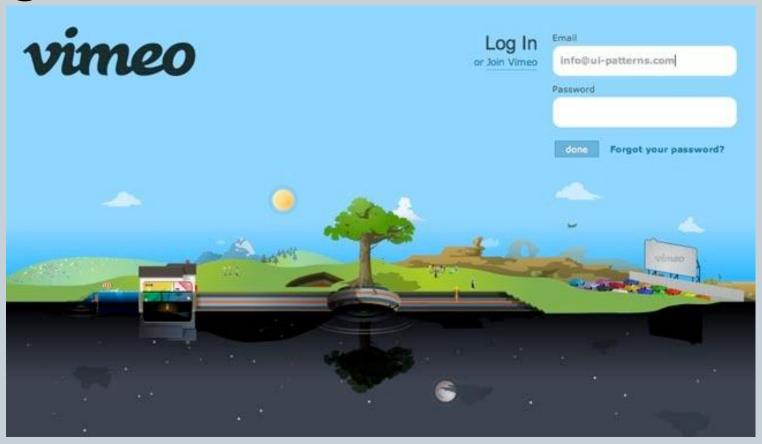
## Input Feedback

Please log in first and then we'll send you right along.	
Username:	
Password:	( <u>I forgot my password/username</u> )
	Remember me on this computer
	Sign in
The username and/or password you entered is invalid.	
Username:	
Password:	( <u>I forgot my password/username</u> )
	Remember me on this computer
	(Sign in )

### Live Filter



## Login Forms



### Wiki

See also [edit]

- Design patterns
- Gameplay
- Information architecture
- Interaction
- Interactivity
- Interface design
- Usability
- User-centered design

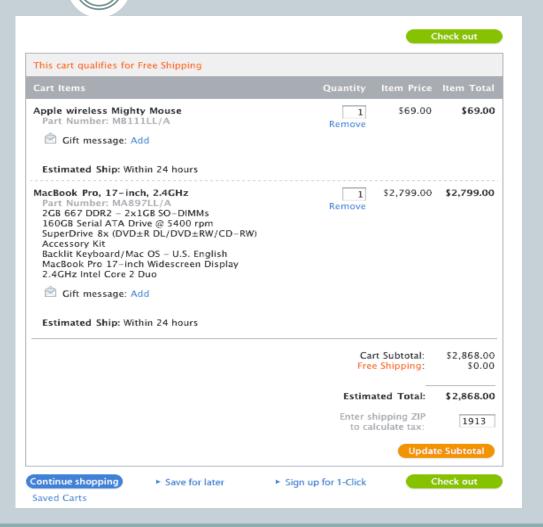
#### Online Pattern collections

[edit]

- Interaction Design Patterns in Games ② a collection of patterns describing solutions to common usability and accessibility problems in games.
- Yahoo! Design Pattern Library
- UI-patterns.com &
- J. Tidwell, Common Ground 🗗
- van Welie's patterns for Web, GUI, and mobile design @
- Lancaster University, PoInter: Patterns of INTERaction collection <a href="#">B</a>
- Weh Patterns: A UC Berkeley Resource to Building User Interfaces 50

## 7.2 Web Design

## **Shopping Cart**



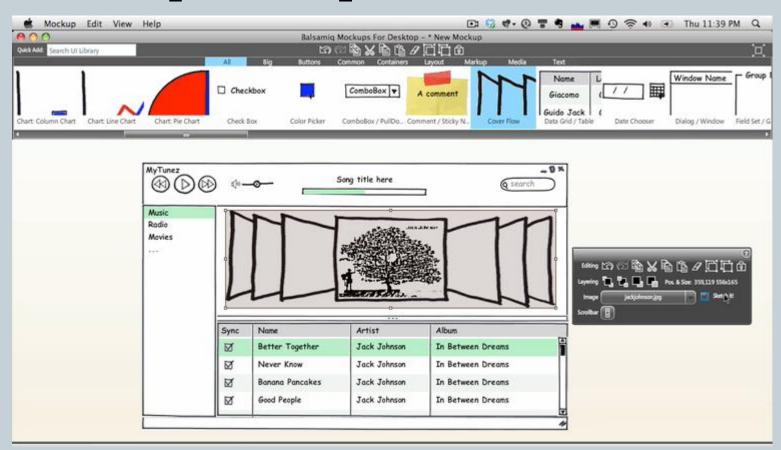
## Planning Web Design

Sketch, draw, doodle

Wireframes

Mood Boards

## Balsamiq Mockups





#### **Images**

- Make sure you include the alt tag that is meaningful <img src="images/boat.jpg" alt="this is our boat we rented on holiday" />
- For meaningless images, like a spacer, use alt = ""
- Do not put text into images

#### Streaming Video Media

- Where a plug-in is required, include a clear link
- Use a captioning tool to provide descriptive text and captions equivalent to audio tracks



#### **CSS**

- CSS can be used for the strict separation of content and presentation
- Test you pages with and without style sheets to be certain if they are readable with styles turned off
- Structured markup conveys more meaning when style is switched off.
  - e.g. Use to style rather thank just <div class = "firstPar">
- Don't trust a single browser
- Just because your CSS passes access validity tests doesn't mean that it is. Use your own judgement as well



#### **Forms**

- Remember to associate form fields with appropriate labels
- Try and look at User Interface patterns that are already available as a starting ping

http://www.ui-patterns.com

- Navigation
  - Use sufficiently large targets for clicking
  - Header tags can help give structure to a page, like the index of a book: chapter, section, subheading



#### Color

- Color may be used to denote information, but it should be reinforced with other visual cues such as bolding, or underlying links
- Use care when creating harmonious color schemes, whose differences might not be apparent to those who have certain types of color blindness.
  - Use <a href="http://www.vischeck.com">http://www.vischeck.com</a> to see how you page would appear to people with various types of color blindess
- Avoid red/green combinations
- Background and foreground should have sufficient contrast

## Take Home Message

- Low-fidelity prototyping allows for early user or stakeholder involvement
- Early prototyping avoids redesign at later stages (cheaper)
- Use wireframes and storyboards before coding to avoid headaches and extra work