

INTRODUCTION TO WEB DEVELOPMENT

Code: COMP07009

Week5

Usability/Accessibility/Navigation/Design/Colour

Reference: <http://www.usereffect.com/download/checklist.pdf>

Web usability

- Make web sites easy to use for an end-user, without the requirement that any specialized training be undertaken.
- The user should be able to intuitively relate the actions needed to perform on the web page with other interactions, eg. press a button to perform some action.
- Present the information to the user in a clear and concise way.
- Give the correct choices to the users in an obvious way.
- Remove any ambiguity regarding the consequences of an action (eg. clicking on delete/remove/purchase).
- Place important items in an appropriate area on a web page or a web application.
- The purpose of a website is to get users to the information they want or need as quickly and easily as possible.

Web usability

- Accessibility
- Identity
- Navigation
- Content

Accessibility

- Site load-time is reasonable
- Adequate text-to-background contrast
- Font size/spacing is easy to read
- Flash & add-ons are used sparingly
 - HTML5 has native multimedia elements to avoid add-ons
- Images have appropriate ALT tags
- Site has custom not-found/404 page

Identity

- Who are you?
- What do you do?
- Company logo is prominently placed
- Tagline makes company's purpose clear
- Home-page is digestible in 5 seconds
- Clear path to company information
- Clear path to contact information

Navigation

- Main navigation is easily identifiable
- Navigation labels are clear & concise
- Number of buttons/links is reasonable
- Company logo is linked to home-page
- Links are consistent & easy to identify
- Site search is easy to access

Sequences

- Sequences arise when material needs to be viewed in a set order or where steps in a process must be carried out one after another.



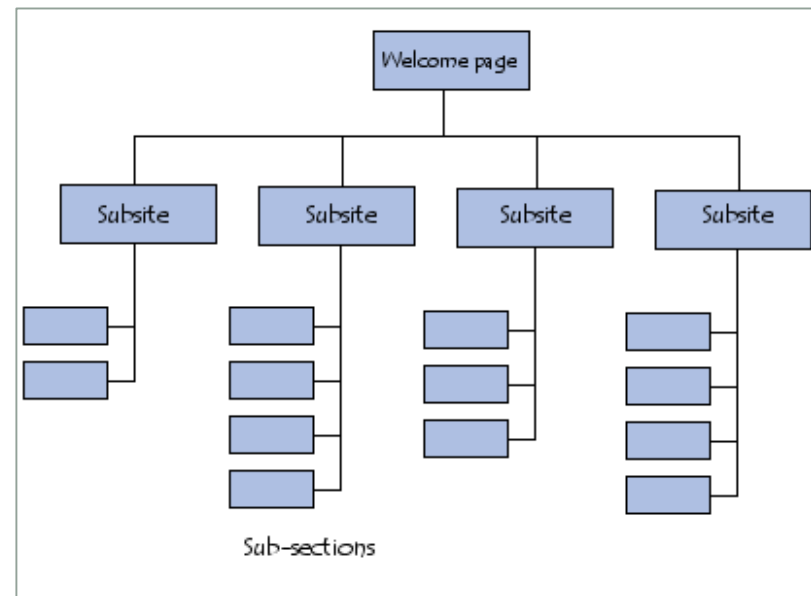
A road map provides orientation in a sequential operation

- The relationship between the URLs of a site's pages reflects the way they are stored on the server.
- A logical structure can be mapped onto any URL structure.

Website Hierarchy

- A site's logical structure comprises the logical relationship among pages.
- In most cases, a large site's structure is composed of smaller sub-structures.
- The fundamental logical structures are the hierarchy and the sequence.
- Hierarchies arise from grouping pages together in categories.

The diagram shows a hierarchical structure of web pages. A legend in the top left corner defines the symbols: a green square for 'Page with Outgoing Links', a light blue square for '„Dead-end“ Page', a blue line for 'Hierarchical Links', and a red line for 'Non-hierarchical Links'. The structure starts with a 'Home Page' (green square) at the top. It has two children (green squares) connected by blue lines. The left child has three children: two green squares and one light blue square. The right child has three children: one green square, one light blue square, and one green square. The leftmost green square has two children (both light blue). The middle green square has two children (both light blue). The rightmost green square has three children (all light blue). Additionally, there are red lines representing non-hierarchical links: one from the left child to the right child, one from the leftmost green square to the middle green square, and two from the bottom-most light blue squares to the rightmost green square.



Site Map - Example

- <http://www.tesco.com/shopping/>

Tesco Customer Sitemap		
Please select from a link below:		
Highlight A - Z: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Clear		
Tesco direct	Fresh food & Groceries	Tesco Bank
Technology & Gaming Home Electrical Home & Furniture DIY & Car Garden Toys Sports & Leisure Baby & Toddler Gifts & Jewellery Books, DVD & CDs Health & Beauty Clothing Delivery Information My Account Our returns policy Tesco Direct Help	Every little helps Favourites Real food recipes Special offers Start shopping Amend your order Book a delivery slot My Account	Insurance Car Insurance Home Insurance Pet Insurance Travel Insurance Life Insurance Health Insurance Dental Insurance
	Wine by the case	Savings Fixed Rate Saver Instant Access Savings Internet Saver Child Trust Fund
	Fine Wine Online Exclusives Special Offers Tesco Wine Select Wine Community Wine Magazine	Online Banking Credit Cards Savings or Loans

Site Map - Example

- <http://www.w3schools.com/sitemap/default.asp>

 **W3Schools Tutorials**

HTML & CSS

- HTML Tutorial
- HTML5 Tutorial
- CSS Tutorial
- CSS3 Tutorial

Browser Scripting

- JavaScript Tutorial
- HTML DOM Tutorial
- jQuery Tutorial
- AJAX Tutorial
- JSON Tutorial
- Google API Tutorial

Server Scripting

- PHP Tutorial
- SQL Tutorial
- ASP Tutorial
- ADO Tutorial
- VBScript Tutorial
- ASP.NET Tutorial
- ASP.NET WebPages Tutorial
- ASP.NET Razor Tutorial
- ASP.NET MVC Tutorial
- ASP.NET WebForms Tutorial
- ASP.NET Mobile Tutorial
- Web Services Tutorial

XML Languages

- XML Tutorial
- DTD Tutorial
- XML DOM Tutorial
- XSLT Tutorial
- XPath Tutorial
- XQuery Tutorial
- XLink Tutorial
- XPointer Tutorial
- Schema Tutorial
- SOAP Tutorial
- WSDL Tutorial
- RSS Tutorial
- RDF Tutorial
- XSL-FO Tutorial
- SVG Tutorial

Web Building

- Web Building
- Web Browsers
- Web Certification
- Web Hosting
- Web TCP/IP
- Web W3C
- Web Quality

Content

- Major headings are clear & descriptive
- Critical content is above the “fold”
- Styles & colors are consistent
- Emphasis (bold, etc.) is used sparingly
- Ads & pop-ups are unobtrusive
- Main copy is concise & explanatory
- URLs are meaningful & user-friendly
- HTML page titles are explanatory

Design

- User looks at top left hand corner first
- Navigation usually along top, or down left-hand side
- Layout should be clear and uncluttered
- Keep layout consistent from page to page
- If possible, avoid user having to scroll
- First impressions count
- Easy to read / navigate / find
- Quick to download
- Provide contact information
- Avoid using one large graphic

Design

- Decide what you want your readers to see first:
 - Mercedes Benz have a logo, Virgin have a text logo



- Group your information into logical groups
- As you arrange type and graphics on the page keep alignment to the forefront of your design.
- Create repetition or items that have repetition across pages and relationships. Repetition adds consistency and strengths the design
- Build strong contrasts that attract the reader

The “Four Second Test”

- www.webpagesthatsuck.com
- “You should be able to look at the home page of any site and figure out what the site is about within four seconds. If you can't, your site has failed”

Poor Design

- Put off the Target Audience
 - “Look and Feel” is all important to attract, and keep the target audience at your site.
- Cause Frustration
 - Fussy layouts can be confusing
 - Too much text to scroll through to find information
 - If the user gets fed up, they will leave the site!

Colour

- One of the first things we notice when we look at a web page
- Can provoke strong physical reactions
- Some brands strongly associated with colour
 - Coca cola
 - <http://www.coca-cola.co.uk/>
 - EasyJet
 - <http://www.easyjet.com>

The Body Shop

THE BODY SHOP. [home](#) [shop](#) [values & campaigns](#) [the lounge](#) [loyalty](#)

SALE gifts make-up bath & body skin care men's home fragrance fragrance wellbeing hair shop by line looks & tips [sign in](#) | [register](#)

Hello Guest, welcome to The Body Shop [register](#) 0 item £0.00 [\(check out\)](#)

CELEBRATING 22 YEARS OF COMMUNITY TRADE

NEW ORGANIC, VIRGIN COCONUT OIL.

[SHOP RANGE](#)

*Terms and conditions apply. Click here for details

20% OFF
SELECTED PRODUCTS*

COCONUT BODY LOTION
NOIX DE COCO LAIT CORPOREL
250 ml (8.4 US FL OZ)

COCONUT BODY BUTTER
NOIX DE COCO BEURRE CORPOREL
250 ml (8.4 US FL OZ)

READ AND WRITE REVIEWS

SALE CONTINUES

[SHOP NOW](#)

SPECIAL MEMBER OFFER

20% off our NEW Tea Tree Skin Care range.

[JOIN NOW](#) [SHOP NOW](#)

*Terms & conditions. Click here for details

SAVE 20%

Shea Body Care range with Community Trade cocoa butter

[SHOP NOW](#)

*Terms & conditions. Click here for details

FREE DELIVERY

FREE Standard Delivery on all orders over £15*

[SHOP NOW](#)

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[about us](#) | [store locator](#) | [careers](#) | [affiliates](#) | [media centre](#) | [help](#) | [contact us](#) | [privacy policy](#) | [terms and conditions](#) | [site map](#)

[OK](#)

Irn Bru



A promotional banner for Irn Bru's 'Bru-Island' campaign. The background is a vibrant blue sky with a palm tree on the left. Two people, a man in a white tank top and a woman in an orange top and blue patterned pants, are smiling and holding bottles of Irn Bru. The man is also holding a small black and white dog. In the bottom left corner, there is a circular logo with a palm tree and the text 'BRU-ISLAND'. In the bottom right corner, there is a beach scene with a blue and orange umbrella and two cans of Irn Bru. The text 'WIN A HOLIDAY ON BRU-ISLAND' is prominently displayed in large, bold, yellow and white letters. Below this, there are two buttons: 'FIND OUT MORE' and 'WATCH THE TV AD'. At the bottom, it says 'GET 10% OFF YOUR HOLS WITH EVERY BRU*' and 'TYPE IN THE DATE CODE ON THE PACK'. The top right corner has a 'STAY IN TOUCH' section with social media icons and a navigation menu with links like 'HOME', 'COMMUNITY CENTRE', 'NEWS', 'OUR DRINKS', 'HOMECOMING', 'OUR LATEST CAMPAIGN', 'SUPER LEAGUE', 'FAVOURITE ADS', 'ADS THAT NEVER RAN', and 'COOKIE SETTINGS'.

STAY IN TOUCH
FOR ALL THE GOOD STUFF

HOME COMMUNITY CENTRE NEWS OUR DRINKS HOMECOMING

OUR LATEST CAMPAIGN SUPER LEAGUE FAVOURITE ADS ADS THAT NEVER RAN

COOKIE SETTINGS

WIN A HOLIDAY ON
BRU-ISLAND

FIND OUT MORE ► WATCH THE TV AD ►

GET 10% OFF
YOUR HOLS WITH EVERY BRU*

TYPE IN THE DATE CODE ON THE PACK

BRU-ISLAND

Barclays



[Personal](#)
[Premier](#)
[Business](#)
[Commercial](#)

[Offers](#) | [Current accounts](#) | [Insurance](#) | [Loans](#) | [Mortgages](#) | [Savings](#) | [Investments](#) | [Credit Cards](#) | [Financial Planning](#) |

Online Personal Banking

[Log in](#)
[Register](#)

- › Demo › Mobile Site
- › Forgotten log in details
- › Forgotten PINsentry
- › More about Online Banking

Ask a question

[Find your answer](#)

Find a Branch or cash machine

[Search](#)


[Top up your mobile phone](#)

Tools & offers

- › Mortgage calculator
- › Buy travel money

IT'S A NICER ISA

2.58% AER

2.55% Tax-free pa (variable)

Golden ISA

Open a Golden ISA within minutes*
*for Barclays Online Banking customers
Conditions apply. Rates are variable.
Transfers can't be made from other ISAs

[Find out more >](#)

› Insurance

Home insurance

Get **Half Price Contents** when you buy Barclays Home Insurance
Find out more

- › Car insurance
- › Travel insurance
- › Life insurance
- › Health insurance

› Current Accounts

Additions Active

Get an Additions Active account **packed with extras** for £14 a month
Find out more

- › Barclays Bank Account
- › Current Account Plus
- › Premier Banking

› Savings

Instant access savings
Save for the short term
Tax-free savings
Compare all savings

› Loans

Personal loans

Barclayloan Plus available at **9.9% typical APR**
Find out more

- › Homeowner loans

› Barclaycard

- › Barclaycard Platinum
- › Barclaycard Initial
- › Full card range

› Mortgages

Fixed rate Mortgages

New **5 year fixed** rate mortgage available
Find out more

- › Tracker Mortgages
- › Offset Mortgages
- › Compare our Mortgages

Your home may be repossessed if you do not keep up repayments on your mortgage.

"The Winners" LOCAL BUSINESSES

Find out who is Britain's Best Local Business

- › Meet the winning businesses

"Make the most of your savings"

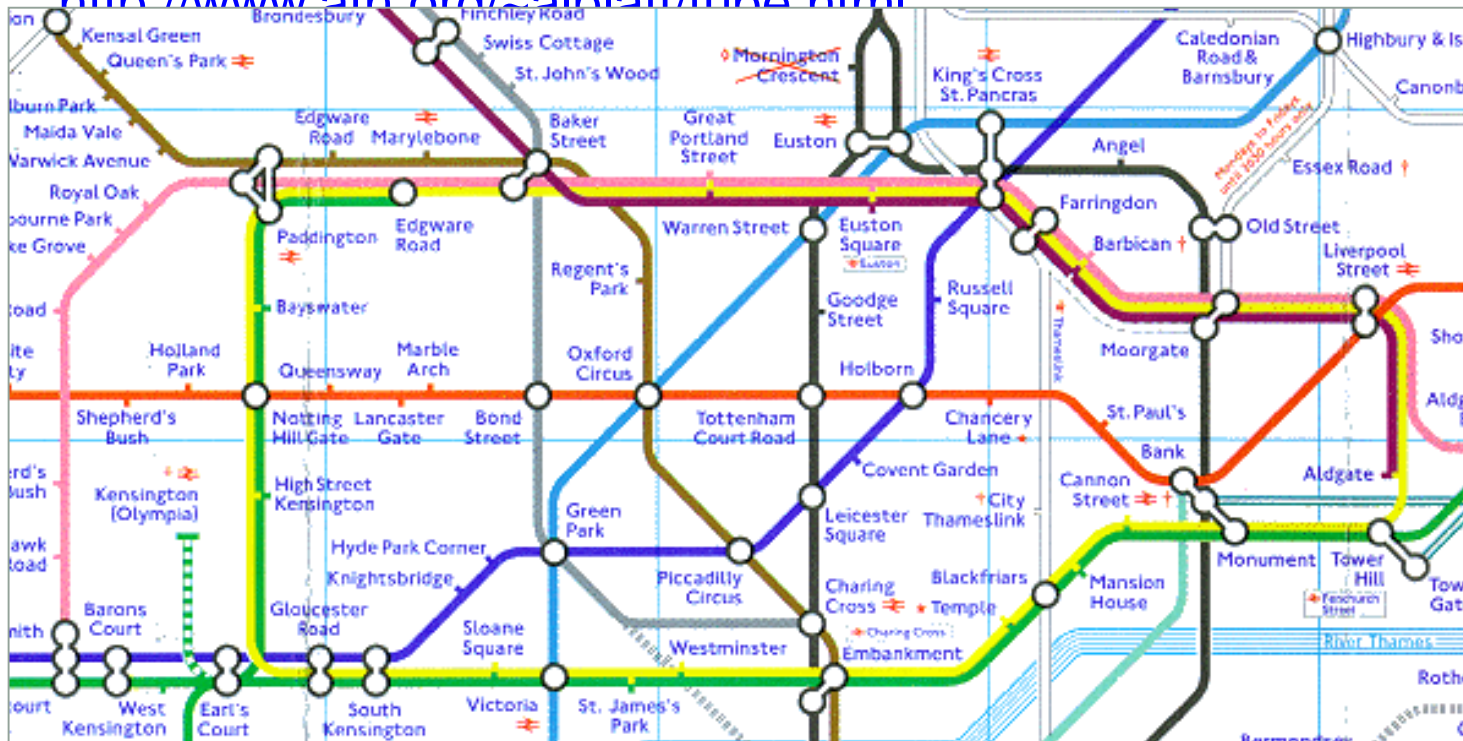


- › Find out how an offset mortgage can help make your savings work harder
- › Other smart ways to save in a recession

Colour

- Can be a good way of making sense of complex information
- Eg the London Underground map

<http://www.afn.org/~alplatt/tube.html>



Colour

- Adds another dimension
- Suggests their own meaning
- Trigger feelings
- Help with orientation
- Structure
- Facilitate access to information
- Perceived unconsciously

Colour

- Colour may influence users responses to Web pages
- An individual's response to particular colours may be emotive and/or determined by cultural conventions, personal taste and fashion
- Precise control over colours is not possible
- Wide personal and cultural diversity among the responses to any particular colour or combination of colours

Influences

- Biological bases
 - Red more intense than blue.
 - Red draws our attention 64%, whereas blue only 2%
- Cultural bases
 - Black = death, mystery
 - White = purity, virginity
- Individual bases
 - Personal
- Conditions
 - Colour Blindness

Colour Associations

- Black
 - evil, death, night
- Red
 - heat, intensity , energy, alert, love, fun
- Blue
 - trust, calm, reliability
- Green
 - envy, nature, vegetation, peace
- Orange
 - Creativity, competition, excitability
- And many more

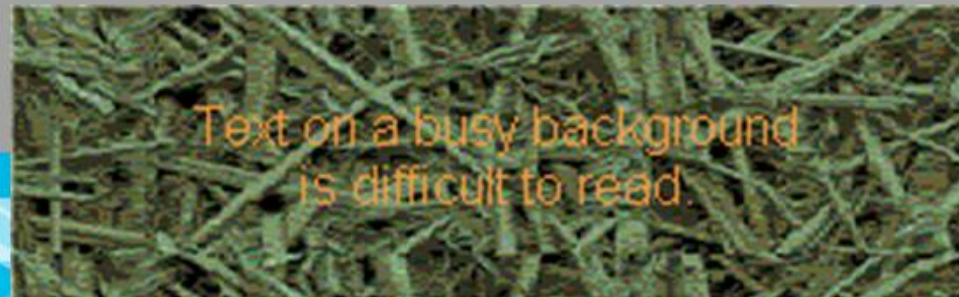
Background Colours



The effect of different background colours on the same site

Graphical Background

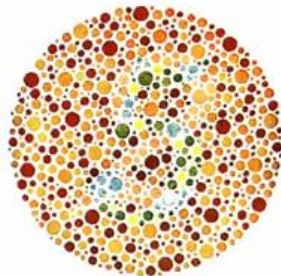
- ***Graphical backgrounds***
 - ***Avoid using busy, complicated background pictures on web pages. Brickwork or wicker weave, for example, might add interest, but reading anything other than large text against such a background is difficult.***
 - ***Text on a busy background is difficult to read.***



Foreground / Background

Use of Color

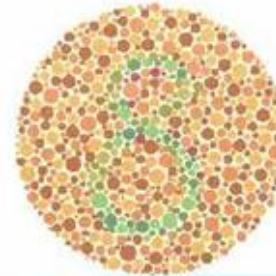
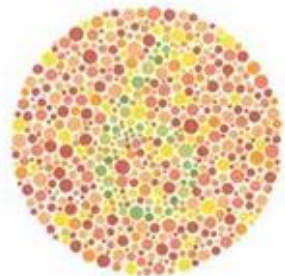
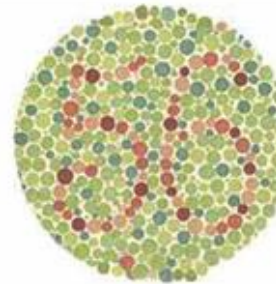
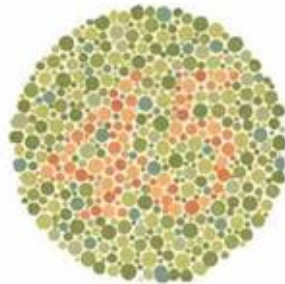
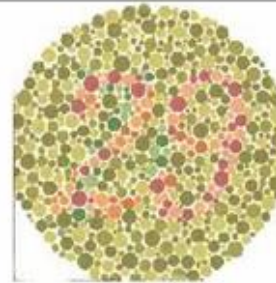
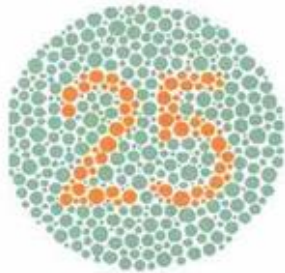
- *Ensure that foreground and background color combinations provide sufficient contrast when viewed by someone with color vision deficiency, or when viewed on a black and white screen.*
- *To see an example of a test for color blindness, go to*
www.toledobend.com/colorblind/Ishihara.html.



The test to the left is simpler.
The individual with normal color vision will see a 5 revealed in the dot pattern.
An individual with Red/Green (the most common) color blindness will see a 2 revealed in the dots.

Examples used in Eye Tests

Use of Color



Contrast

- Good tonal contrast makes pages more accessible and usable, but tonal values are not always easy to use.
- Tonal contrast should be checked by converting to greyscale



Tonal contrast (identical colours are shown by the same number)

Combination of Colours



Combinations of colour affect the way the size of coloured objects and colour itself is perceived. The same colour will not look the same in every context.

The effect of colour combinations on perception of size



The effect of colour combinations on perception of colour

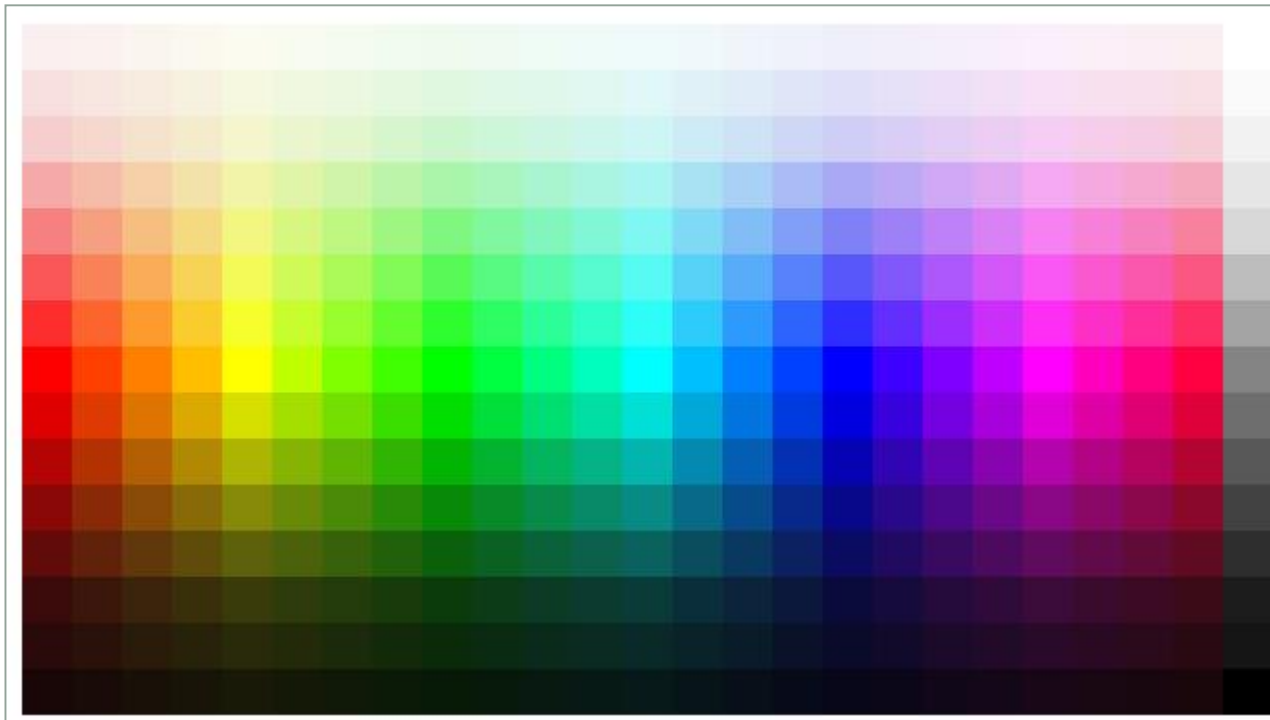
Navigation by Colour

- *Because some users cannot distinguish colors or shades of colors, do not use color to exclusively define the navigation of your site.*
 - *For example, do not tell the user to "follow the blue buttons to learn about Student Life, and the purple buttons to learn about Class Signup Procedures."*
 - *Color may be used, but in conjunction with text (on the buttons or next to the buttons). Therefore, you might make the Student Life buttons blue, but you would have the appropriate text on or next to them to explain where the button will take the user*

Student LifeClass Signup
Procedures

HTML Colour Chart

- <http://html-color-codes.info/>



HTML Colour Picker

- <http://html-color-codes.info/>



The image shows a web-based HTML Colour Picker interface. At the top, there is a text input field labeled "Insert your color code:" containing the value "FFFFFF", followed by a "GO" button. Below this is a large color selection area consisting of a square gradient from black to white and a vertical color bar. To the right of the color selection area is a preview box. Below the preview box are input fields for color models: RGB (R: 255, G: 255, B: 255), HSB (H: 0, S: 0, V: 100), and a hex code field containing "#FFFFFF".

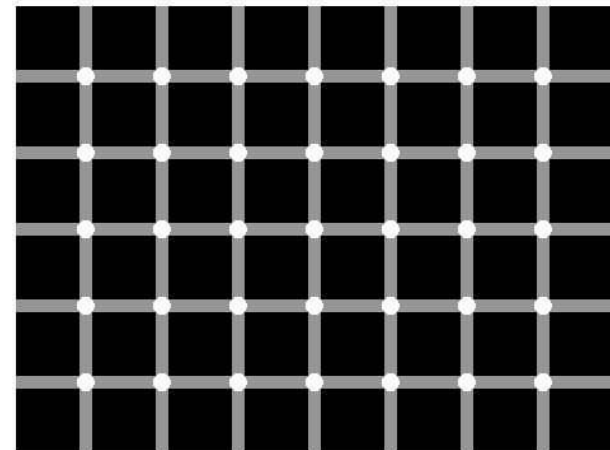
Insert your color code:

R H °
G S %
B V %

#

Optical Illusions

- <http://www.optillusions.com/>
- Count the black dots ..

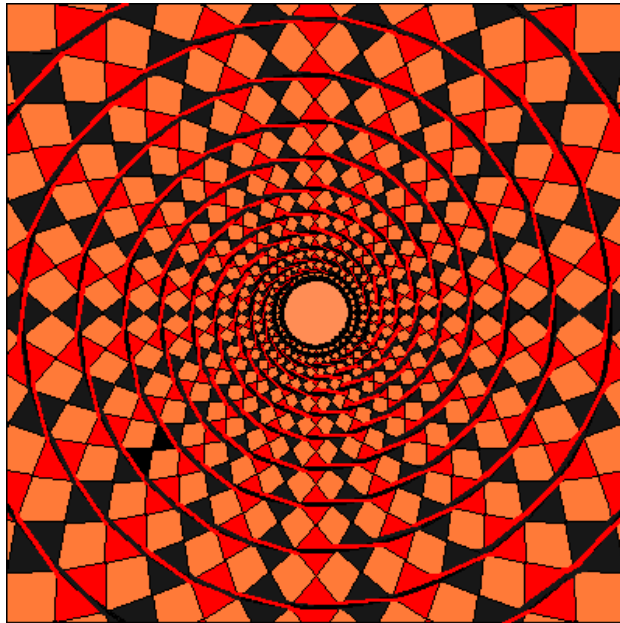
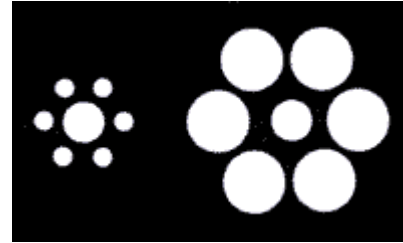


- What's the correct colour?

YELLOW BLUE ORANGE
 BLACK RED GREEN
 PURPLE YELLOW RED
 ORANGE GREEN BLACK
 BLUE RED PURPLE
 GREEN BLUE ORANGE

Optical Illusions

- Is the left center circle bigger?
- It's a spiral, right?



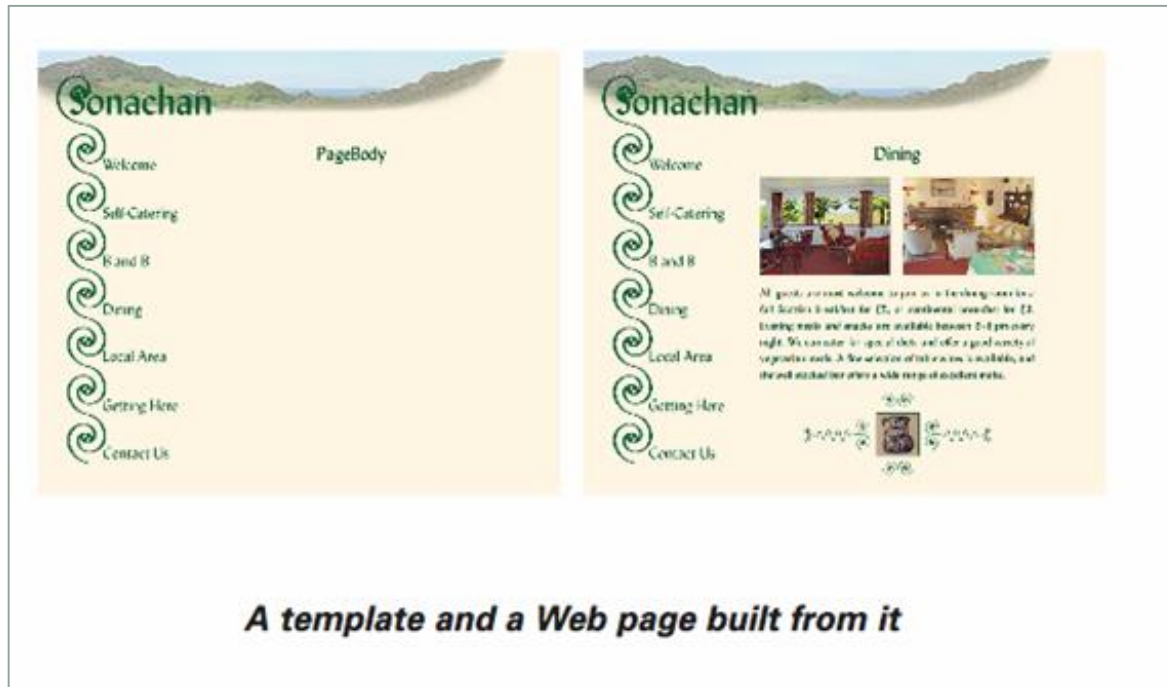
Browser Issues

- Every Web browser interprets HTML and CSS tags a little differently.
- Never trust the implementation of HTML, CSS, JavaScript, Java, or any plug-in architecture until you have seen your Web pages displayed and working reliably in each brand of browser.
- If significant numbers of your readers are using the Macintosh, Linux, or UNIX operating systems, you should also test your more complex pages and programming functionality in those operating systems.
- check browser

<http://www.anybrowser.com/index.html>

Templates

- A Web page built from it



URLs

- Use a conventional name for the home page allows viewers to enter the domain name instead of the complete URL.
- Use URLs whose structure reflects the hierarchy of the site allows users to move up the hierarchy by removing components from the end of the URLs.
- Choose URLs that do not alter over time is necessary to avoid bookmarks and links becoming invalid.

Lab

- Make sure that you have completed previous labs, particularly the lab on using CSS for styling and layout
- You should also be working on your first assessment
 - Create index page and other html documents
 - Introduction
 - Working links (internal and external)
 - Design, Usability, Colour, Accessibility
 - Layouts for the home page and other pages for the second assessment
- Check you can upload them