Web Design Principles and Problems

… and more about accessibility

Assignment Pt 1 results
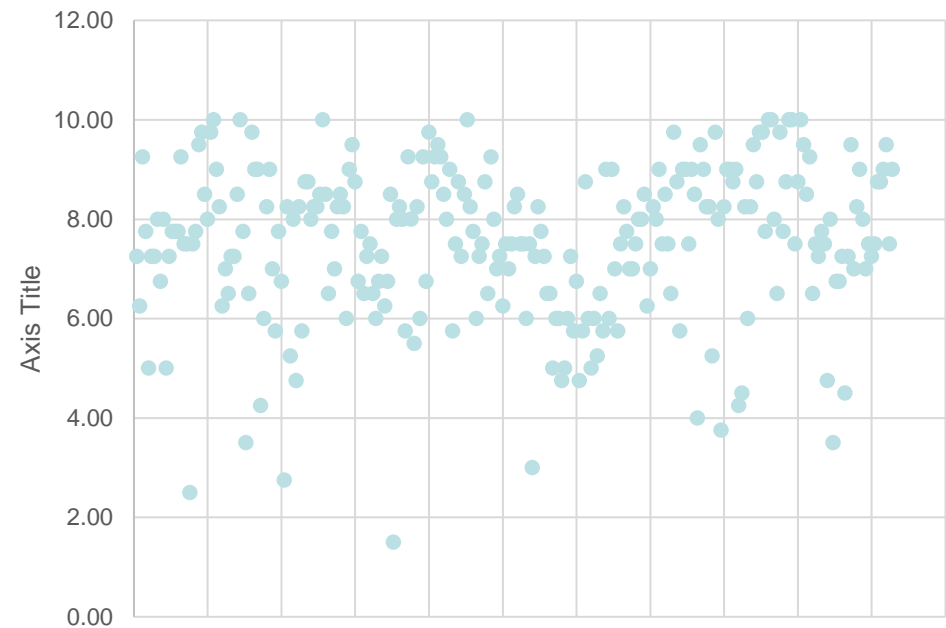
Assignment Pt 1 mean: 7.53
Assignment Pt 1 stdev: 1.56

Forum post 1 average: 1.44
Forum post 2 average: 1.29

Student marks Assignment Pt 1

COMP1710/6780 Roadmap for Semester 2 2022 (Subject to change)

	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Teaching Break	Teaching Break	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Final Exam
Lectures	Intro to Course	Intro to web dev & design	Content types, learning styles, user reqs	Image credibility, perspective taking	HCI, Web dev in the industry	Video editing, Web dev tools			Good & bad web design	Cyber sec & Phishing	Academic writing, Javascript	ePubs, Javascript	Front & back end	Exam hints & tips	
MOOC/ labs	MOOC	MOOC1&2 Intro to labs & tools	MOOC3 & Creating HTML files	MOOC4 & HTML forms, source logs	MOOC5	MOOC6 & video editing			Assignment #2 assistance	Good & bad web design & phishing	TBC	ePubs & remedial	Assignment #3 assistance	TBC	
Assessment				Assign Pt 1						Assign Pt2			Assign Pt 3		
Others						Continuous Improvement – Attend a continuous improvement meeting									
				Experiment Participation – Attend experiments totalling 2 hours offered by SONA or us. →											

Week and date	Subjects/Labs		Week and date	Subjects/Labs
Wk1 - 25/7/22	Introduction to course, MOOC1 available, no labs		12/9/22	Non-teaching week
Wk2 - 1/8/22	Introduction to webdev/design, MOOC2		Wk 7 - 19/9/22	Good and Bad web design, Assign pt2 assistance labs
Wk3 - 8/8/22	Content types and roles, User Reqs, Perspective taking, MOOC3		Wk 8 - 26/9/22	Cyber security and phishing, Good/bad web design + phishing lab, also CI
Wk4 - 15/8/22	Image/info credibility, User Reqs, Perspective taking, MOOC4		Wk 9 - 3/10/22	Report writing, Javascript, No labs?
Wk5 - 22/8/22	Human Computer Interaction, Webdev tools MOOC5		Wk 10 - 10/10/22	ePublications, Javascript, Remedial labs and ePubs
Wk6 - 29/8/22	Video editing, Webdev tools, MOOC6		Wk 11 - 17/10/22	Frontend and Backend, Assignpt3 assistance labs
5/9/22	Non-teaching week		Wk 12 - 24/10/22	Final exam tips

Week and date	Subjects/Labs		Week and date	Subjects/Labs
Wk1 - 25/7/22	Introduction to course, MOOC1 available, no labs		12/9/22	Non-teaching week
Wk2 - 1/8/22	Introduction to webdev/design, MOOC2		Wk 7 - 19/9/22	Design and accessibility, Assign pt2 assistance labs
Wk3 - 8/8/22	Content types and roles, User Reqs, Perspective taking, MOOC3		Wk 8 - 26/9/22	Cyber security and phishing, Good/bad web design + phishing lab, also CI
Wk4 - 15/8/22	Image/info credibility, User Reqs, Perspective taking, MOOC4		Wk 9 - 3/10/22	Report writing, Javascript, No labs?
Wk5 - 22/8/22	Human Computer Interaction, Webdev tools MOOC5		Wk 10 - 10/10/22	ePublications, Javascript, Remedial labs and ePubs
Wk6 - 29/8/22	Video editing, Webdev tools, MOOC6		Wk 11 - 17/10/22	Frontend and Backend, Assignpt3 assistance labs
5/9/22	Non-teaching week		Wk 12 - 24/10/22	Final exam tips

**Wk9
Australian Labour Day
Public holiday**
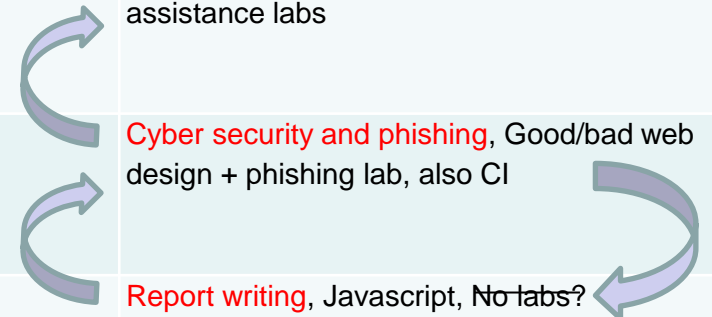
25% / 100% Assessment items behind us, assessment items in front of us

Task		%	Due Date (AEST/AEDT)	Marks/Feedback Returned
Assignment (30%) INDIVIDUAL				
Section 0: Topic Submission	Preferred topic	0%	End of Week 2 (Friday 12 August 5pm but there is leeway)	End of Week 4 (extended deadline to 21 August) Note that 'no news is good news'; we will only contact students with problematic topics
Assignment 1: Website Submission	5 Webpages minimum	10%	Assignment Pt1 Due Monday 29 August 11:00am AEST	Second week of teaching break
Assignment 2: Website Submission	2 Webpages minimum	10%	Assignment Pt2 Due Monday 26 September 11:00am AEST	Week 9
Assignment 3: Website Submission	Complete Website	10%	Assignment Pt3 Due Monday 24 October 11:00am AEDT	Within fortnight following the end of course
Communication and Participation + Report (25%) INDIVIDUAL				
Piazza forum posting + CI) contribution	**4/6**	6% posts; 4% CI	Posts as for Assign 1 and 2; CI as completed in 2nd half semester	Posts as for Assign 1 and 2; CI as completed in 2nd half semester
Report		15%	Report due Sunday 30/10/2022 AEDT	Within fortnight following the end of course
Examined Material (45%) INDIVIDUAL				
Online Quizlets	**11/15**	15%	End of every week	On submission
Final Exam		30%		

part ✓ (Piazza forum posting)

part ✓ (Online Quizlets)

Aesthetics ⟷ Usability
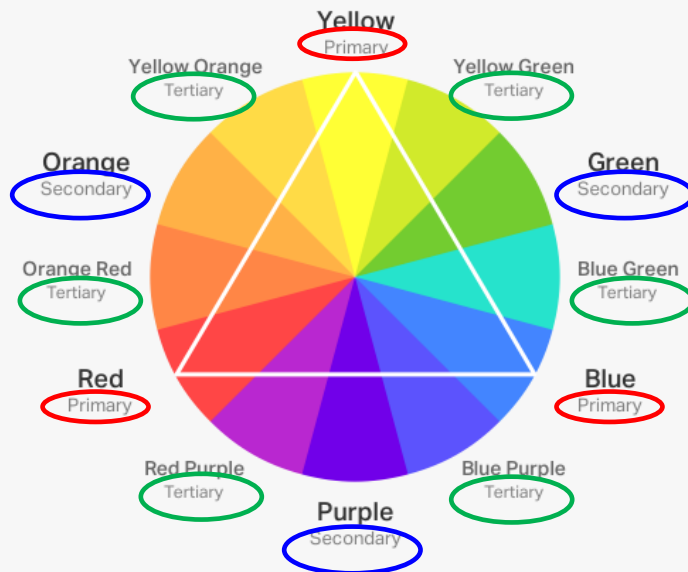
"…aesthetics refers to the emotional components"

"The usability of an interface refers to its capacity to support task completion."

"… by understanding how design factors affect users, it is possible to build systems targeted to certain effects and outcomes."

Note: We discussed design and usability in detail in Weeks 3&4

Pavlas, Lim Salas (2010) The Influence of Aesthetic and Usability Web Design Elements on Viewing Patters and User Response: An Eye-tracking Study

6

Colour has its own theory!

Primary colours
There are three primary colours: yellow, red and blue (though we tend to seem them as magenta, cyan and yellow)

Secondary colours
When we merge the primary colours we get secondary colours: orange, purple, green

Tertiary colours
When we merge the primary colours we get secondary colours: orange, purple, green

Australian
National
University
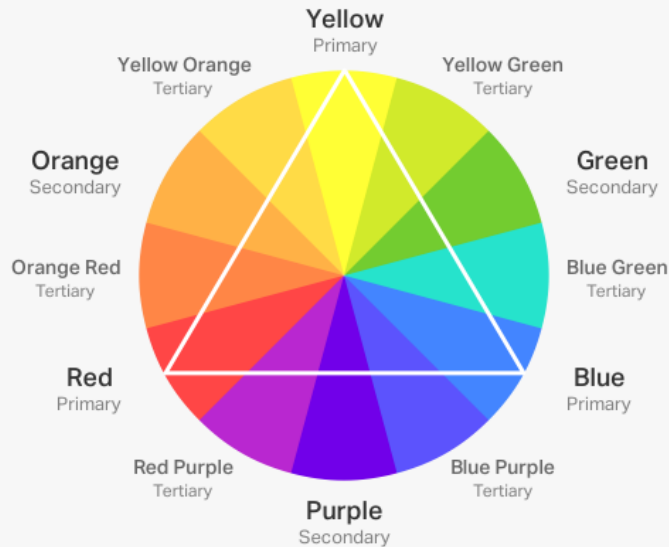
Colour schemes - 4 main types

Monochrome – different saturations of the same colour

Complementary – Two colours from opposite sides of the colour wheel

**Analogous** – three colours next to each other on the colour wheel

Triadic – three colours at points of a triangle drawn in the wheel

Complementary is great for high contrast
Analogous is great for continuous colour

Why should I care?

Why should you care?

•Colour has a huge effect on your visitors and sets the context of your content

•If your development is big, you will have a designer who selects the colours and tells you what they are

•If you development is small, you will have to select the colours

•Knowing what colours (including the specific code) will make your life a lot easier.
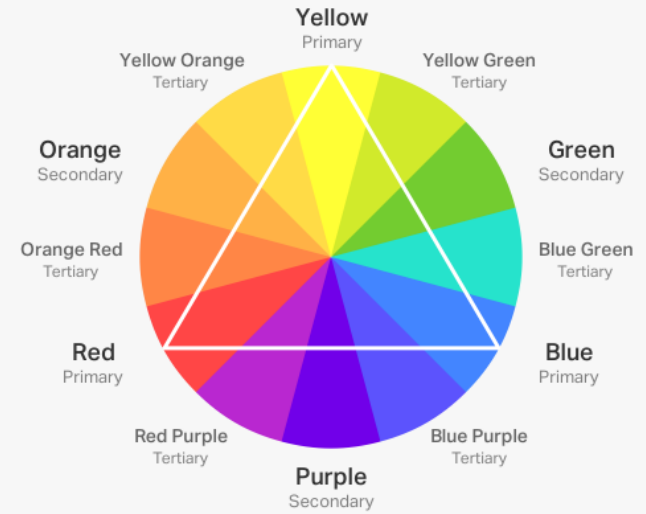
This colour **patented** by a catfood manufacturer, hex colour is 751A80 RGB is 117,26,96

Commercial sites need to pay attention to colour

•Research shows that the visual representations on a website may play a factor in up to 96% of purchase decision.

Warm Colors

• Colour plays a significant role in helping customer to navigate the site – where to visit next, buttons to push, attention focus.

• Branding – companies have logos and colour design standards; these need to be used to help visitors orient themselves in online spaces

Other aspects of colour to consider:

Cool Colors

Contrast – emphasizes key point
Warm vs *Cool* – creates moods. Warm is comforting / happy but can be too energetic in reds especially. Cool is peaceful but can become too formal or cold. Colours can be *shaded* by adding black and *lightened* by adding white but remain within your colour palette.
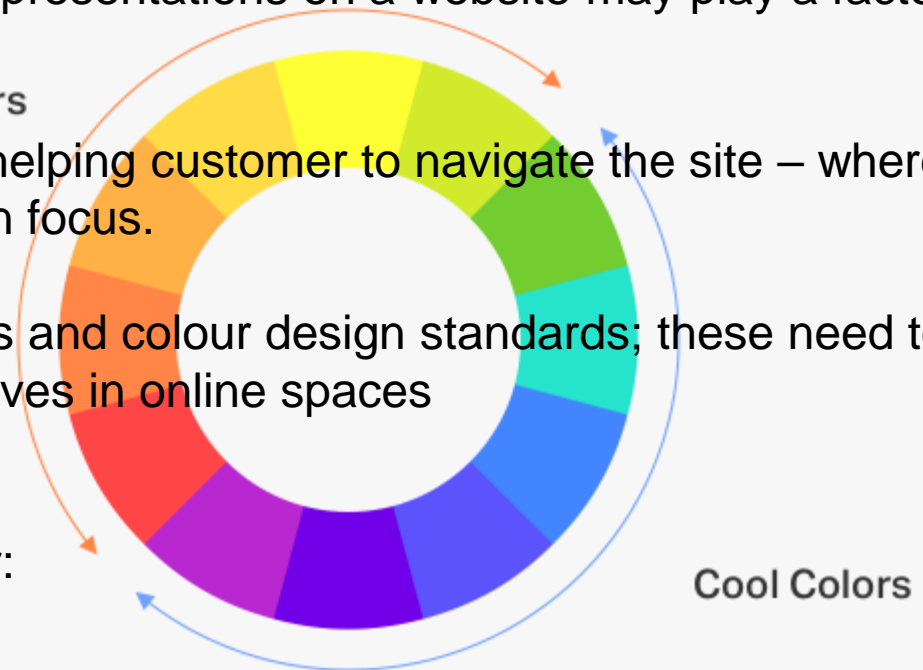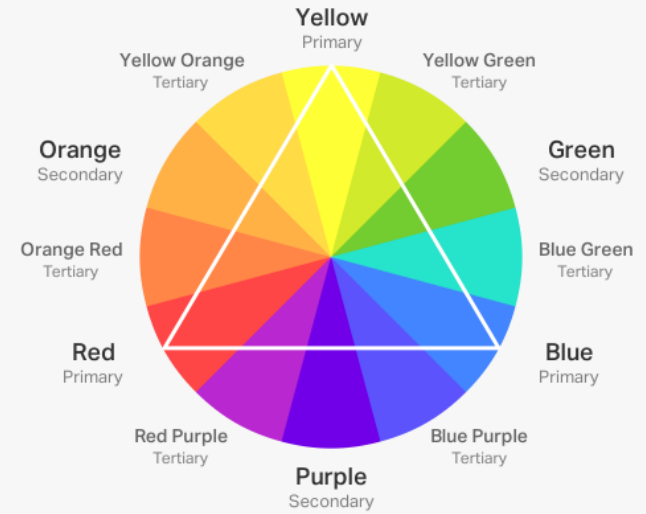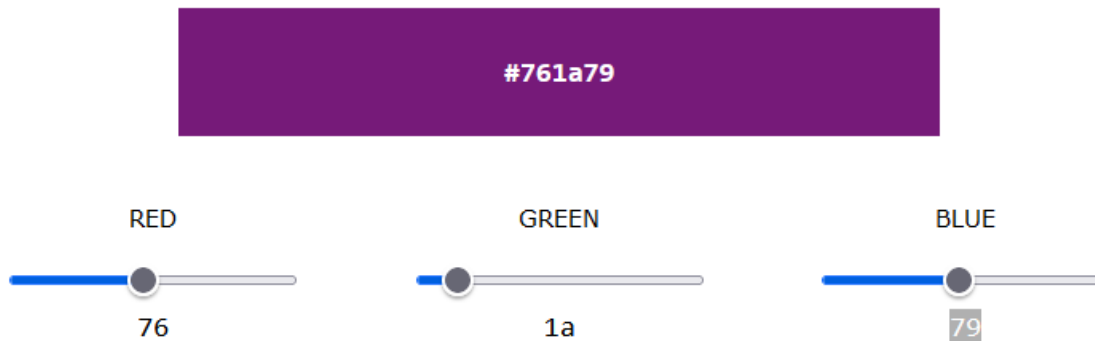
HTML
color: #f751A80;

But of course usually you'll use CSS, and rgb colour is a bit more intuitive + alpha
CSS
rgb(red, green, blue) OR
rgba(*red, green*, *blue, alpha*)

#761a79

You might like to try this W3 Schools tool

RED	GREEN	BLUE
76	1a	79

(This hex code closest W3 tool allows to 751A80)

https://www.w3schools.com/css/css_colors_hex.asp

There are many issues to be considered in accessibility!

Coding web apps, auditing web pages for accessibility, designing interfaces to meet the needs of people with disabilities, convincing and reporting to website owners, advocating for accessibility.

BTW, you can do a free online course (and get a certificate) in accessibility 16-20 hours at https://www.w3.org/WAI/courses/foundations-course/ but we'll just touch on a few accessibility issues today.

https://www.w3.org/WAI/media/av/users-orgs/

Hearing

Vision

Cognitive
processing

Manual
dexterity

Deaf and hard-of-hearing

Textual alternatives are needed – captioning of videos, transcripts for audio content

Text simplification to overcome language deprivation

Visual representations of audio material – graphs, figures

Image demonstrating how to wear masks and hearing aid

430 million people worldwide have disabling hearing problems

https://www.who.int/en/news-room/fact-sheets/detail/deafness-and-hearing-loss

Australian National University

Red-green colour blindness affects up to 8% of males (0.4% females)

Normal vision vs. protanopia

Other vision conditions: blindness, low-level vision

How to assist in your webdev practices:

Provide alternative text for any important visual elements (including images)

e.g. src=https://imagesite/imageofsurfboards.png alt="Image of surfboards lined up on a sidewalk in full colour and altered colour to show how a person with red-green blindness might see them."

Understand screenreaders (some built in screen readers are *VoiceOver* for Macs, *Narrator* for Windows, *TalkBack* for Android but there are many others)

Your visitors may also use screen magnifiers, which may reduce their coverage of your content, especially around the edges

WHO estimates that 285 million people worldwide are estimated to be blind or have low vision.
https://www.who.int/en/news-room/fact-sheets/detail/blindness-and-visual-impairment

Cognitive impairments

Intellectual disabilities, age-related thinking and remembering
Mental health problems including depression
Dyslexia
ADHD
…and more

Cognitive accessibility

- Multiple modes of delivering content: text-to-speech, video
- Plain language text
- Prioritising content
- Minimise distractions
- Use mainstream interaction conventions like double-click to open, changing link colour when already visited etc.
- Give extra attention to website authentication
- Make forms easy to use
- Error capture and management

Manual dexterity problems

Some people can have temporary or permanent manual dexterity disabilities: arthritis, amputation, broken hands/wrists, tremors, etc.

Keyboard functions are important for this group (but be careful of shortcut keys to avoid conflicts with assistive device shortcuts)

Logical tab orders in forms will help people using speech to text

Accessibility should be **built into the design from the start**, not something to do when you get to it.

This is particularly true if your content targets these audiences!!!

You may find yourself working on a website (especially corporate and government websites) that is legally required to meet accessibility regulations.

A commonly used standard is WCAG 2.0 AA

Remember   As W3C notes,
              "Accessible media is **essential for people with disabilities**, and is **useful for everyone**."