COMP1710/6780

Web Development and Design

Week 2 1-5 August 2022

CECS Class Representatives

Class Student Representation is an important component of the teaching and learning quality assurance and quality improvement processes within the ANU College of Engineering and Computer Science (CECS).

The role of Class Representatives is to provide ongoing constructive feedback on behalf of the student cohort to Course Conveners and to Associate Directors (Education) for continuous improvements to the course.

Roles and responsibilities:

- Act as the official liaison between your peers and convener.
- Be creative, available and proactive in gathering feedback from your classmates.
- Attend regular meetings, and provide reports on course feedback to your course convener
- Close the feedback loop by reporting back to the class the outcomes of your meetings.

Why become a class representative?

- **Ensure students have a voice** to their course convener, lecturer, tutors, and College.
- **Develop skills sought by employers**, including interpersonal, dispute resolution, leadership and communication skills.
- **Become empowered**. Play an active role in determining the direction of your education.
- **Become more aware of issues influencing your University** and current issues in higher education.
- **Course design and delivery.** Help shape the delivery of your current courses as well as future improvements for following years.

Note: Class representatives will need to be comfortable with their contact details being made available via Wattle to all students in the class.

For more information regarding roles and responsibilities, contact:

ANUSA CECS representatives: sa.cecs@anu.edu.au

PARSA CECS representatives: parsa.cecs@anu.edu.au

Want to be a class representative? Nominate today!

Please nominate yourself to your course convener (sabrina.Caldwell@anu.edu.au) by **9 August 2022**.

You are free to nominate yourself whether you are currently on-campus or studying remotely.

We need two: One for COMP1710 and one for COMP6780

	Monday	Tuesday	Wednesday	Thursday		Friday
9am			In person: **Joey/Bill** Online: **Adi**			
10am			**Hybrid tutorial** ComA 02	In person: **Erika** Online: **Jiannan**		
11am			In person: **Joey** Online: **Rahul**	**Hybrid tutorial** ComA 05		Online: **Jiannan** Online: **Jinjian**
12pm			**Hybrid tutorial** ComA 03			ComA 09
1pm		Lecture B				Online: **Manett** Online: **Bill**
2pm				Online: **Jinjian** Online: **Erika**		
3pm		In person :**Rahul** Online: **Bill**		ComA 08		ComA 07
4pm	Lecture A	**Hybrid tutorial** ComA 01	In person: **David** Online: **Manett**		In person: **David** Online: **Zhiheng**	
5pm			**Hybrid tutorial** ComA 04	Online: **Adi** Online: **Joey**	**Hybrid tutorial** ComA 06	
6pm				(tutorial was 2-4)		
Legend	Lecture					
	Hybrid tutorial					
	Fully online tutorial					

Hybrid tutorial means that you can attend in person in N112 or online via the Zoom link (check Piazza and Wattle for Zoom links)   One tutor will be in the room and another will be on Zoom.

Lab	Fully online Hybrid	Zoom link
Tuesday 3-5 pm	Hybrid	Topic: COMP1710/6780 3-5pm Tuesdays Tutorial Time: Aug 2, 2022 03:00 PM Canberra, Melbourne, Sydney Join Zoom Meeting https://anu.zoom.us/j/85172375644?pwd=ZTh2NFJncjIybU5DczR0Z1BqamtKQT09 Meeting ID: 851 7237 5644 Password: 383073
Wednesday 9-11am	Hybrid	Topic: Comp1710/6780 9-11am Wednesdays tutorials Time: Aug 3, 2022 09:00 AM Canberra, Melbourne, Sydney Join Zoom Meeting https://anu.zoom.us/j/81513338863?pwd=L1UzTW9mUW94OGpneE8vaCt2ZndLZz09 Meeting ID: 815 1333 8863 Password: 953660
Wednesday 11am–1pm	Hybrid	Topic: COMP1710/6780 11am - 1pm Wednesdays Tutorials Time: Aug 3, 2022 11:00 AM Canberra, Melbourne, Sydney Join Zoom Meeting https://anu.zoom.us/j/83130081950?pwd=U0RzOG9XalNRYk1RNG11d08zVmgxZz09 Meeting ID: 831 3008 1950 Password: 128637
Wednesday 4-6pm	Hybrid	Topic: COMP1710/6780 4-6pm Wednesdays Tutorial Time: Aug 3, 2022 04:00 PM Canberra, Melbourne, Sydney Join Zoom Meeting https://anu.zoom.us/j/81096951712?pwd=eU9Fa2RobWo3WFpUSDdEMFB0NC9vdz09 Meeting ID: 810 9695 1712 Password: 863527
Thursday 10am–12pm	Hybrid	Topic: COMP1710/6780 10am-12pm Thursdays Tutorials Time: Aug 4, 2022 10:00 AM Canberra, Melbourne, Sydney Join Zoom Meeting https://anu.zoom.us/j/82271548932?pwd=ZnhUaFhZOG1tWVo4MWcwYU15ZkZqUT09 Meeting ID: 822 7154 8932 Password: 831490
Thursday 2-4pm	Fully online	Topic: COMP1710/6780 2-4pm Thursdays tutorials Time: Aug 4, 2022 02:00 PM Canberra, Melbourne, Sydney Join Zoom Meeting https://anu.zoom.us/j/89591790852?pwd=OVliZHY0MTdsNkQxTlVpTDJHWjlnZz09 Meeting ID: 895 9179 0852 Password: 486083
Thursday 4-6pm	Hybrid	Topic: COMP1710/6780 4-6pm Thursdays tutorials Time: Aug 4, 2022 04:00 PM Canberra, Melbourne, Sydney Join Zoom Meeting https://anu.zoom.us/j/86847152111?pwd=T1VKRnhaYm5Tb3Z0OEEzZC9QUUFyZz09 Meeting ID: 868 4715 2111 Password: 944570
Thursday 5-7pm	Fully online	Topic: COMP1710/6780 5-7 Thursdays tutorials Time: Aug 4, 2022 05:00 PM Canberra, Melbourne, Sydney Join Zoom Meeting https://anu.zoom.us/j/86144613112?pwd=cHRYbFI2Uy9HOEw4eGU0b2FUc1VUQT09 Meeting ID: 861 4461 3112 Password: 082773
Friday 11am-1pm	Fully online	Topic: COMP1710/6780 11am-1pm Fridays tutorials Time: Aug 5, 2022 11:00 AM Canberra, Melbourne, Sydney Join Zoom Meeting https://anu.zoom.us/j/88082873635?pwd=UXlYVTAxMWJxRnJrL09UYmdIcVhqZz09 Meeting ID: 880 8287 3635 Password: 126878
Friday 1pm–3pm	Fully online	Topic: COMP1710/6780 1pm - 3pm Fridays tutorials Time: Aug 5, 2022 01:00 PM Canberra, Melbourne, Sydney Join Zoom Meeting https://anu.zoom.us/j/89663990950?pwd=Y2tWS1VmVDRtUkNseUtWSUo4eGNDdz09 Meeting ID: 896 6399 0950 Password: 626662

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What to expect in the lab (generally speaking)

Online means that the lab will take place on Zoom. Both tutors will be on the Zoom with you.

Hybrid lab means that you can attend in person in N112 or online via the Zoom link (check Piazza and Wattle for Zoom links)   One tutor will be in the room and another will be on Zoom.

Tutors will walk you through your learning for the week, and help you individually with your particular web development and design questions and issues.

For those of you attending in person

The lab machines are Linux, which for some of you will be completely familiar and for others not. If you aren't familiar with Linux (you use Windows or Mac) you will find it very easy to use and intuitive, so don't worry.

But you can also bring your own laptop if you want.

You might like to bring your headphones, earbuds or other personal listening devices for the times when you want to listen to the MOOC video materials.

What to expect in the lab (this week)

The MOOC online learning for week 1 is still open this week.

MOOC online learning for week 2 is now open.

Don't forget to do the quizlets! They are due Sunday, 7th August by 11:55pm

In addition, you will be:

- learning about how to load your files to the web server we use in this course: Partch.

- getting going participating on Piazza

- working with digital images

- using a Chrome browser to read WWW resources

- producing some art

+ hosting

+ previous years students' websites

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			Experiment Participation – Attend experiments totalling 2 hours offered by SONA or us. →					Continuous Improvement – Attend a continuous improvement meeting							

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, Assignpt2 assistance labs, also continuous improvement
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 (pre-recorded as I will be unavailable)

We cover most of the topics requested.
Will consider if we can include others and advise

Just a quick note about web development as a career…

According to Randstad Australia (global employment company):

- One of the most popular and growing professions in Australia
- Median average annual salary $90,000; entry-level $75,000 to experienced $125,000
- Various types of web developer including: frontend developer, backend developer, Wordpress developer, mobile web developer, web security developer

Web development refers in general to the **tasks associated with developing websites for hosting** via intranet or internet. The web development process includes **web design, web content development, client-side/server-side scripting** and **network security configuration**, among other tasks.

In a broader sense, web development encompasses all the actions, updates, and operations required to build, maintain and manage a website to ensure its performance, user experience, and speed are optimal.

It might also, but not necessarily, include all those strategic actions needed to ensure its proper ranking on search engine results. Usually, those tasks pertain to a different specialization, namely search engine optimization (SEO)

Web development is also known as website development, while the professionals that maintain a website are called web developers or (more commonly) web devs.

HTML ⟷ CSS

Hypertext Markup Language

At it's most basic, a website doesn't need anything but HTML! (But it will be very basic!

Cascading Style Sheets

Cascading style sheets define how your content is presented on the user's browser.

Front end ⟷ Back end

What your website visitors see on their desktop or device

What goes on behind the scenes, especially data management

The most beautiful, interactive, well-designed website in the world will not be visited by anyone if there is no interesting, necessary, or otherwise valuable content!

Who first said, "Content is King?"

The saying, "Content is King" was first coined by a man named Sumner Redstone in the mid 1990s.

What Sumner meant when he said that "content is king" is that the distribution channels change, but the need for content remains.

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Did you know…

Let's talk about Web design

Web design is about how your content is presented. It is about the 'look and feel', which is created by your design choices: colour palette, fonts, backgrounds, etc. It also about how your visitor can interact with your website, and their WIFM (What's in it for me?)

Gates N Fences website
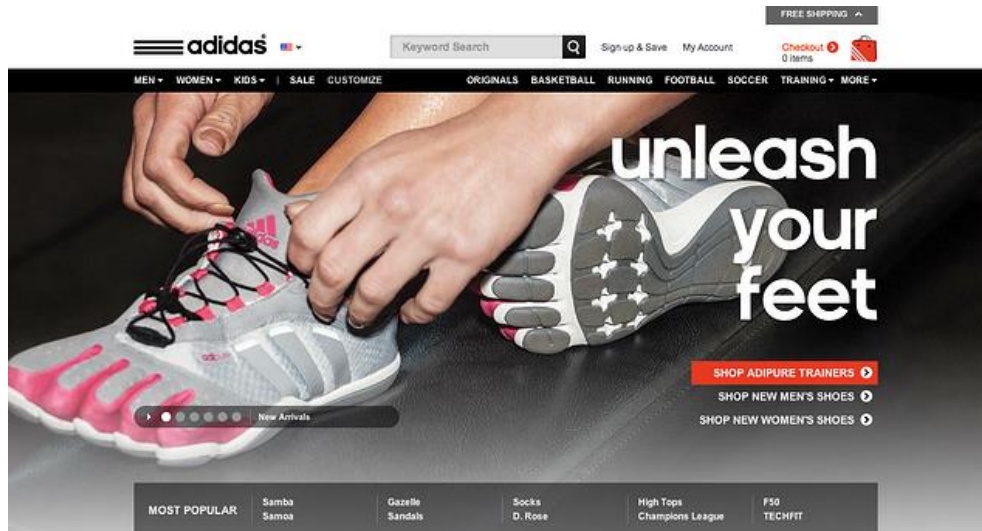
Adidas– instantly recognisable in both brand and product
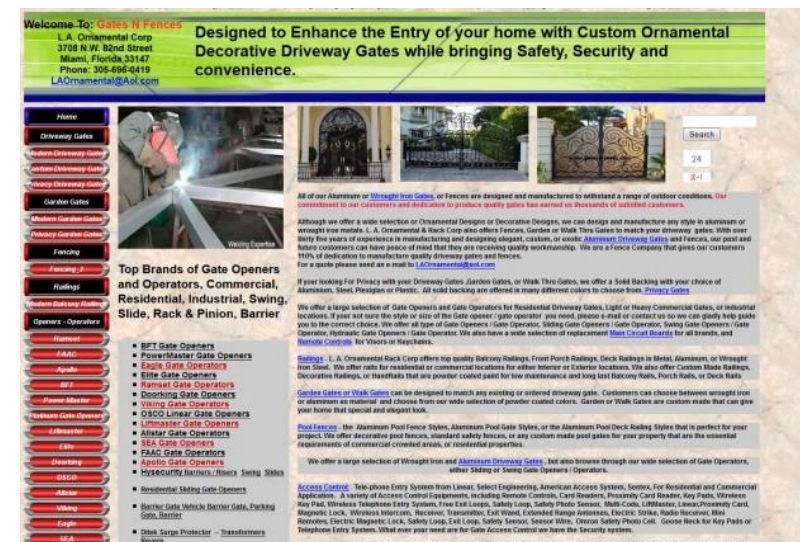
How long would you spend on this website?

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New Media design principles – are they all that new?
"Form ever follows function"

"It is the pervading law of all things organic and inorganic, of all things physical and metaphysical, of all things human, and all things super-human, of all true manifestations of the head, of the heart, of the soul, that the life is recognizable in its expression, that form ever follows function. *This is the law."* (italics in original)
Lewis Sullivan (1856-1924) Architect

Rawsthorn, Alice (2009) NY Times https://www.nytimes.com/2009/06/01/arts/01iht-DESIGN1.html

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."

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

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Design thinking…

"Design thinking is a human-centred approach to innovation that draws from the designer's toolkit to integrate the needs of people, the possibilities of technology, and the requirements for business success."

Tim Brown, president and CEO, IDEO

Some elements of Design for New Media

How the Information is presented / organized

- What buttons and functions are available to the user and when they are available to be used

- What the underlying behaviour of the system is

- What information and controls are available to other users, such as the admin. staff, super-users, supervisors, executive overview, editorial correspondent etc

Some elements of Design for New Media

How the Information is presented/organized (user side/internal organisation)

Don't forget hardcopies!

The content and layout of standard printouts available from the system

The printed material accompanying the system (e.g. printed website, printable eBooks, CD covers)

Why bother with careful, creative design?

Because common sense is not always shared and because it saves money.

In Production

- It is good to know your client to satisfy their need
  - (NB. at least some of them!)
- Detailed Requirement Specification phase: so you know what you have to do
- Adaptation to future development

Why bother with careful, creative design?

Because common sense is not always shared and because it saves money.

In Marketing

- Quicker Adoption by users (e.g. Shareware)
- Source of differentiation from competitors

https://blog.hubspot.com/blog/tabid/6307/bid/33367/10-brands-with-website-designs-that-nail-both-form-and-function.aspx
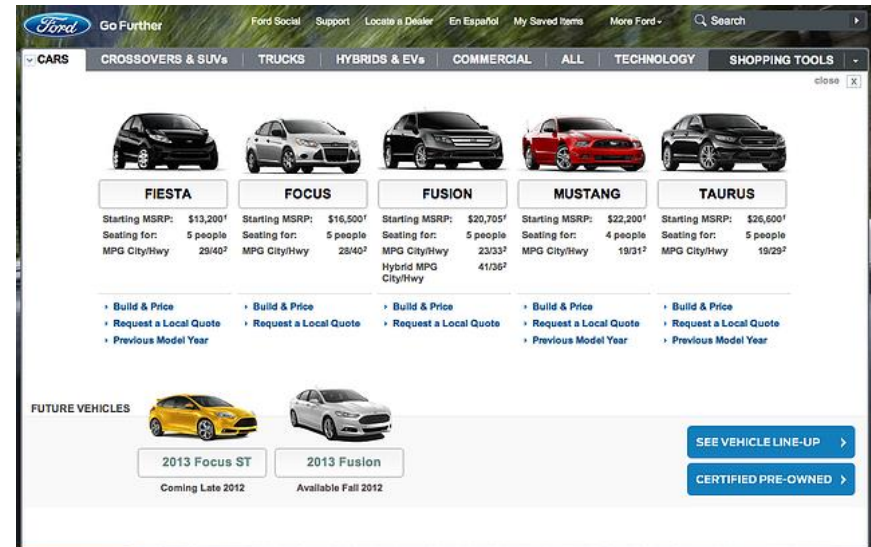
Why bother with careful, creative design?

Adidas– instantly recognisable in both brand and product
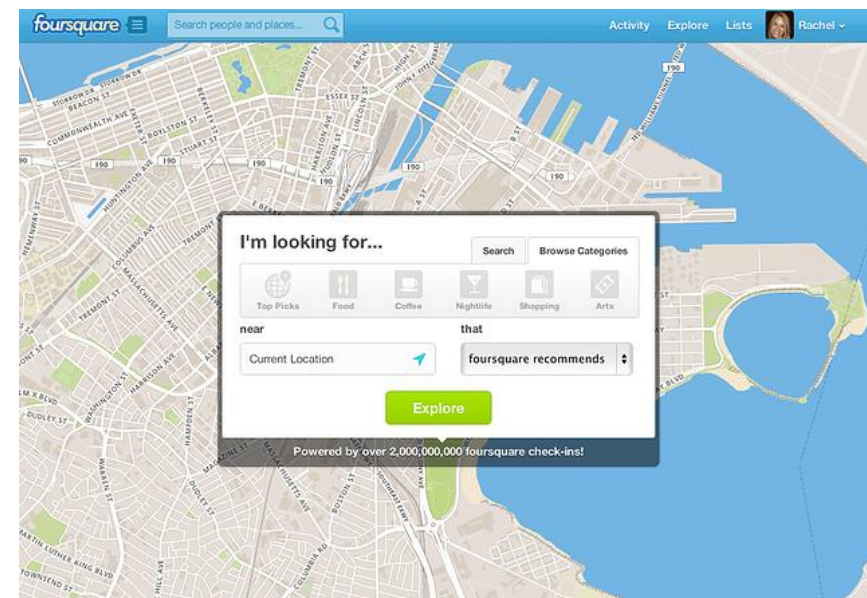
Foursquare - NOT instantly recognisable, but function is obvious

Why bother with careful, creative design?

Because common sense is not always shared and because it saves money.

In Use

- Less support (Courses, Help Desks, etc)
  - N.B.: some companies make money from support / Real cost of a system
- More efficiency
- Fewer errors or undo-able interaction
- Improved Safety (submitting mail, booking plane)
- Make them return
  - Sticky web sites: users stay longer and return more frequently (!)

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The well designed website

1. **Lets the users accomplish their goals**
2. **Makes its purpose clear**
3. **Follows conventions**
4. **Loads and updates quickly**
5. **Displays well in different environments**
6. **Has some style**

Text readability

A Matrix look and feel: green text on black background.

Where does that come from?

From monochrome displays: green, orange, and sometime white on black background

One of my colleagues says a lecturer (in Maths) used to explain to his students that after years of marking exams, he realised that statistically, exams written in black on a yellow background get better scores:-)

- Most readable color:
  - black text on white background
- Overall, there is a stronger preference for any combination containing black
- In every color combination surveyed, the darker text on a lighter background was rated more readable than its inverse

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Design and usability by Jacob Nielsen

- "Jakob's Law of the Internet User Experience: users spend most of their time on other websites."

- "users left websites after 1 minute and 49 seconds on average, concluding in that time that the website didn't fulfill their needs."

Mr Bottles website →

A useless (?) website: http://www.superbad.com/

Gates N Fences website

Penny Juice website

https://edit.co.uk/blog/top-10-worst-websites/

Candidate for a Pullet Surprise by Jerrold H. Zar, Northern Illinois University

I have a spelling checker,
It came with my PC.
It plane lee marks four my revue
Miss steaks aye can knot sea.

Eye ran this poem threw it,
Your sure reel glad two no.
Its vary polished in it's weigh.
My checker tolled me sew.

A checker is a bless sing,
It freeze yew lodes of thyme.
It helps me right awl stiles
   two reed,
And aides me when eye rime.

Each frays come posed up on
   my screen
Eye trussed too bee a joule.
The checker pours o'er every word
To cheque sum spelling rule.

Bee fore a veiling checker's
Hour spelling mite decline,
And if we're lacks oar have a laps,
We wood bee maid too wine.

Butt now bee cause my spelling
Is checked with such grate flare,
Their are know fault's with in my cite,
Of nun eye am a wear.

Now spelling does knot phase me,
It does knot bring a tier.
My pay purrs awl due glad den
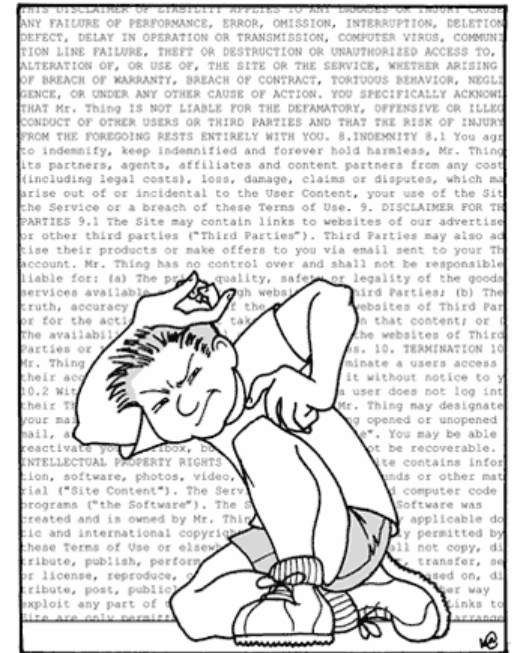With wrapped word's fare as hear.

To rite with care is quite a feet
Of witch won should bee proud,
And wee mussed dew the best
   wee can,
Sew flaw's are knot aloud.

Sow ewe can sea why aye dew prays
Such soft wear four pea seas,
And why eye brake in two averse
Buy righting want too pleas.

Usability Mistakes - Text

… and can your visitors spell?

Common online writing mistakes:

Unless your website is an essay site, consider this:

Don't write walls of text
Use appropriately sized fonts
Use headings and sub-headings
Highlight key words
Tease out quotes
Write succinctly and clearly
Consider using downloadable pdf files for tomes

https://www.nngroup.com/articles/top-10-mistakes-web-design/

710K

Make your images work for you:

Use relevant images that highlight your message(s)

Use active, colourful images

Consider your user's download time/quotas and resize your images to display just well enough

Consider people who can't see images (or can't see them well) and use the Alt attribute

Don't start up your site with splash page that takes a long time to load then just says 'Enter site'

77K

Bad file names for this image:

picture1.jpg
DSCN00423

glasses&watch.jpg

collection of things.jpg

https://designshack.net/articles/graphics/8-image-mistakes-to-avoid-on-your-website/

Good file name for this image:

glasses-and-watch-and-plant.jpg

https://designshack.net/articles/graphics/8-image-mistakes-to-avoid-on-your-website/

Horizontally stretched

Vertically stretched

Original

Things to think about when using video on your website:

Is your video integrated into your site?

Are your most important messages 'buried' in your video?

Is your video entertaining/informative?

Is your video embedded in your site or else linked to a reputable video repository?

Is your video too long?

Do you have a 'call to action'?

Web Design Mistakes

- Original Top Ten Mistakes in Web Design (96)

- "Top Ten Mistakes" Revisited Three Years Later (99)

- The Top Ten New Mistakes of Web Design (99)

- Top Ten Guidelines for Homepage Usability

- Top Ten Web-Design Mistakes of 2002

- Top Ten Web Design Mistakes of 2003

- Top Ten Web Design Mistakes of 2005

- Top Ten Web Design Mistakes of 2007

- Top Ten Web Design Mistakes – updated 2011

- Top 10 Enduring Web-Design Mistakes of 2016

- Variations on Practiced Patterns Cause Mistakes (Dec 2017)

Lecture tomorrow (also in Kambri T2) will be reviewing the life cycle of a website.

Labs get underway

Be sure to do the quizlets associated with the MOOC learning materials. And do the MOOC learning materials!

If you haven't decided on and submitted your topic (so far only 78 of 304), please consider doing so this week. The sooner you decide, the sooner you can get going on your Assignment part 1.