

Web Design and Databases WD: Class 1: Welcome

Dr Jamie Gabbay (Based on slides by Dr Helen Hastie) Dept of Computer Science Heriot-Watt University

Classes (not lectures!)



- Monday: 12.15-13.15 LT2
- Monday 13.15-14.15 in Linux Lab EM 2.50 (Jamie/Albert & Lab helpers)
- Wednesday 12.15-13.15 in EM 336
- Jamie's office hour: Tuesdays @ 12.15pm Albert's office hour: Wednesdays @ 1.15pm

Schedule



- Schedule on web/vision
- http://www.macs.hw.ac.uk/~gabbay/F27WD
- http://www.macs.hw.ac.uk/~hh117/modules/F27WD/



Attendance is key.

Most learning done through activities.

Not everything is on the slides.

Reading for Web Design





Head First Web Design by Watrall and Siarto. O'Reilly. http://headfirstlabs.com/books/hfwd/



Don't make me think: A common sense approach to Web Usability by Steve Krug. 2nd Edition http://www.sensible.com/

Reading for Database classes







Static HTML





PHP brings web pages to life



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PHP brings web pages to life



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PHP brings web pages to life



Learning outcomes



- 1. Explain fundamental **web design** concepts including usability.
- 2. Implement a simple website which satisfies current standards and uses a database with PHP.
- 3. CSS and HTML mark-up
- 4. Understand data analysis and structuring techniques.
- 5. Design database structures as a **relational data model**.
- 6. Implement and query a database structure through a web site.

Not covering: dynamic websites (e.g. javascript) or Flash.

Assessment



- Coursework 40%, Exam 60%
- Coursework: in groups of 2
 - Part 1 5%: Website Design
 - Due Fri 23rd Jan midnight Week 2 through TurnltIn
 - **Part 2 15%:** Database design and implement with simple queries.
 - Due Fri 27th March midnight Week 11 through TurnltIn
 - Part 3 20%: Process loyalty point vouchers and provide sample queries and implement part of website using HTML/CSS and PHP
 - Assessed through a demo in the Lab week 12 Mon 30th March
- See Assessment folder on Vision for details

Everyone must submit through TurnItIn- put the name of your group (e.g. jones_evans) and the name of your partner



Web Design

Previous assignments





Menus

Wine List

BOOK ONLINE Contact us

Newsletter

Opening Hours

Wednesday-Friday 12 noon- last orders 9pm

Saturday 10.00am - last orders 9pm

Sunday 10.00am- last orders 4.30pm

Mondays and Tuesdays closed

Private dining available 7 days a week



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info@trioburnside.com





	io Private Dining ur special occasion, birthday, christening gathering, the Trio II design a bespoke u reflecting your within your budget	Any Night is Steak Night Choose from a range of specially selected steaks, cooked to your liking. Includes French fries, button mushrooms, tomatoes and add a freshly prepared sauce	Sunday is Brunch Day Have a day off cooking and let us do the work instead! Enjoy brunch until noon with Specials - see chalkboard for details
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Reviewed 1 April 2013 NEW

I was recently over in Burnside in Rutherglen on business and had an hour before I had to go elsewhere, I was hungry and I spotted a little restaurant in Stonelaw road Burnside so I thought I would give it a try and I was delighted I did. The food was absolutely lovely I had a steak cooked with prunes...

....more



Previous Assignments







Why do I need to learn HTML?





What You See Is What You Get











- Good if you lack experience with posting stuff on the web.
- Good if you are used to editors like MS Word.
- Consistent with Cloud Computing. (I'm typing these slides using a cloud computing editor.)



. . .



It's a Faustian pact - feels good at first but you end up in hell later.

It scales poorly to large websites.

Brings out the worst in people - they overestimate what they can create.

But.....



- Often: What You See Isn't What You Get
- 'WYSI-NOT-WYG'
- What You See is mostly what you get, provided you're using the same version of PowerPoint/Word/whatever, saved in the same format. Probably. Usually.
- Adds a layer of complexity.
- May still be frustrating.
- I hate WYSIWYG.





Learning how to write HTML is a fun, useful, life skill.

(A good personal webpage is an advantage in the competition for food, jobs, and mates.)

Also useful if you want to learn about web programming (e.g. PHP, javascript).



Weeks 1-5

- Principles of Web design
- Usability
- HTML5
- CSS3
- Designing for mobile
- Accessibility
- Social media



Today's Class: Web Design Basics

- Pre-production
- Navigation
- Layout
- Writing



Pre-production



Number 1 Rule

Think before you code





Don't design for yourself.

Design for the customer and the end user.



Site Theme: Reflects the site's purpose and content

Theme?





Theme?





Theme?











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But how do we build a theme?

Visual Metaphors



 Visual Metaphor: "The representation of a person, place, thing, or idea by way of a visual image that suggests a particular association or point of similarity."





- Visual Metaphors can be established using images...
- ...but also other *design elements* to reinforce the site's theme
- *Design elements* can be:
 - Images, icons, colours, fonts, site layout
 - Interface elements e.g. header with large image, map, navigation bar, sidebar, tabs

Visual Metaphors?





Visual Metaphors?




Visual Metaphors?







Cartoons and comic type: geared to younger audience

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Colours as a design element

- Colour palates
- Useful resources

http://www.colourlovers.com/

http://colorschemedesigner.com/







So we've talked about design elements.

How are websites structured?



...with interface elements...

Main navigation (hidden)





Head first: web design, page 49



Tap to buy. Get the Apple Store app and shop for Apple products on your iOS device. Learn more. >

Some features, applications and services are not available in all areas. See your carrier for details. Application availability and pricing are subject to change.

More iPhone	Support
iPhone 4 Tech Specs	Where Can I Buy an iPhone?
iPhone 3GS Tech Specs	Online Support
Compare iPhone models	iPhone Discussions
iOS Software Update	User Guide (PDF)
iPhone in Education	Workshops
iPhone for Students	One to One
iOS for Developers	
Accessibility	
1	
Terms of Use Privacy Policy	
Footer:	
Footer: ff, contact, twitter	
	iPhone 3GS Tech Specs Compare iPhone models iOS Software Update iPhone in Education iPhone for Students iOS for Developers

Distinctly Global www.hw.ac.uk Head first: web design, page 49



Navigation: essential to get around site. Design and placement can reinforce theme

Mac

Sub Navigation: displays content that lies under main heading

Features Built-in Apps From the App Store iOS iCloud Tech Specs

iPhone

Distinctly Global www.hw.ac.uk

Buy iPhone



Body of content:

what are people coming to see? Put it here.



Whitespace (negative space):

helps break up blocks of content, rest the user's eyes, and focus towards content

Interface Elements



Footer: legal stuff, legal stuff, contact, twitter feeds, mark-up validation

🔹 📏 iPhone

About iPhone 4S Features Built-in Apps From the App Store iOS iCloud Tech Specs More iPhone iPhone 4 Tech Specs iPhone 3C5 Tech Specs Compare iPhone models iOS Software Update iPhone in Education iPhone for Students iOS for Developers Accessibility

Support

Where Can I Buy an iPhone? Online Support iPhone Discussions User Guide (PDF) Workshops One to One

Sidebars: can hold a variety of things, e.g. links to extra body content, archive links to blogs, ancillary navigation.





Today's Class: Web Design Basics

- Pre-production
- Navigation
- Layout
- Writing



Navigation



Before we think about navigation we need to think through how our **Information** is organised

Information architecture (IA)





Information Architecture

- Analogous to a blue print for a house
- Breakdown website into chunks
- Order the chunks into a hierarchy



1272

Navigation



- Website must communicate its content
- Organising website results in good navigation
- Think carefully about the names of categories
 ambiguous navigation confuses users
- (Example: Circuit laundry system PIN/Code.)

Navigation example





Navigation example ... better





Activity 1



 Create an Information Architecture from a memo in hand-out taken from Head First Page 8.

Activity 1



 Create an Information Architecture from a memo in hand-out taken from Head First Page 8





Card Sorting

 Simple technique to learn how people perceive content groups (Nielson recommends 5)



Web Directions South Information architecture: A 'how-to'

Card Sorting



- Content items are written on index cards
 - Too granular and you may end up with too many cards
 - Too broad and you may lead the exercise too much
 - You do not have to do the whole site at once
- People group the cards in a way that makes sense for them



Card sorting isn't everything



- Business requirements
- Strategic directions
- Technical goals and limitations
- Usability guidelines
- Card sorting isn't an evaluation technique

Card sorting: Advantages



- Simple
- Cheap
- Quick to execute
- Established (the technique has been used for over 10 years, by many designers)
- Involves users
- Provides a good foundation

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Card sorting: Disadvantages



- Does not consider users' tasks
- Results may vary
- Analysis can be time consuming
- May capture "surface" characteristics only

Card sorting: Advantages



- Simple : Card sorts are easy for the organizer and the participants.
- **Cheap**: Typically the cost is a stack of 3×5 index cards, sticky notes, a pen or printing labels, and your time.
- **Quick to execute**: You can perform several sorts in a short period of time, which provides you with a significant amount of data.
- Established: The technique has been used for over 10 years, by many designers
- **Involves users:** Because the information structure suggested by a card sort is based on real user input, not the gut feeling or strong opinions of a designer, information architect, or key stakeholder, it should be easier to use.
- **Provides a good foundation –** It's not a silver bullet, but it does provide a good foundation for the structure of a site or product.

Card sorting: Disadvantages



- Does not consider users' tasks: Card sorting is an inherently content-centric technique. If used without considering users' tasks, it may lead to an information structure that is not usable when users are attempting real tasks. An information needs analysis or task analysis is necessary to ensure that the content being sorted meets user needs and that the resulting information structure allows users to achieve tasks.
- **Results may vary:** The card sort may provide fairly consistent results between participants, or may vary widely.
- Analysis can be time consuming: The sorting is quick, but the analysis of the data can be difficult and time consuming, particularly if there is little consistency between participants.
- May capture "surface" characteristics only: Participants may not consider what the content is about or how they would use it to complete a task and may just sort it by surface characteristics such as document types.

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Activity 2: using card sorting create an IA



Starting the application

Picking up the phone

Navigating

Finding a talking points location

team

blog

Get involved

contact

technology

In the news

One Solution





Further reading





Five Simple Steps

A Practical Guide te

Information Architecture

by Donna Spencer

A Practical Guide to Information Architecture. A book by Donna Spencer, published by <u>Five Simple Steps</u>, available in PDF, ePub and Paperback from £12.



If you're a website designer, intranet manager or someone without much information Architecture experience, this book answers all those questions you were afraid to ask.

Drawing on her many years experience of practising and teaching Information Architecture, Donna Spencer guides you through some simple steps to better IA and leaves you feeling empowered and able to run your own IA projects. Whether it's organising content, providing clear descriptions or ways for people to get to them, this book is armed with practical advice and examples.



Latest blog posts

About Donna?



Homework

- Find 2-3 websites with clear themes/metaphors
- Discuss these themes, metaphors and use of colour.
- Put links to them on the vision discussion board by Sunday 8pm



This Week

- 1. Balsamiq: activate account by clicking on link in email.
- 2. Watch the 3 minute video <u>http://www.balsamiq.com/</u>
- 3. Make sure you have a MySQL account
 - mysql -u username -D username -h mysql-server-1 -p
 - mysql -u mf41 -D mf41 -h mysql-server-1 –p
 - If unsure email <u>help@macs.hw.ac.uk</u> or go to EM1.33
- 4. Reading for this week: Head First Chapters 1-2
- 5. Start working on your Part 1 Assignment it's due soon!

Today's lab



- Have a go at using a WYSIWYG
- Start on Part 1 of your assignment
 - 1. Work in groups of 2. Give your group a name
 - 2. Decide on a Theme for the Game Lab website.
 - 3. Sketch on paper the IA from the memo in the handout. Use cards if you wish
 - 4. Decide on types of visual elements.
- Take inspiration from other websites- but come up with something original
- Look at http://colorschemedesigner.com/





- Work on your IA during the week for the Part 1 assignment and bring it to the lab for next week.
- IA and a good theme aren't enough.
 - Need to look at layout.
 - Writing for websites.