

CMPT 165

INTRODUCTION TO THE INTERNET AND THE WORLD WIDE WEB



Unit 6

Design Principles

Learning Objectives

In this unit you will learn the following.

- **Explain** some principles of design.
- **Apply** design principles to the creation of websites.
- **Evaluate** the design of websites and other materials.
- **Create** websites where the user can quickly navigate to the desired information.

Topics

1. General Design
2. The Proximity Principle
3. The Alignment Principle
4. The Repetition Principle
5. The Contrast

Lecture 1

-
6. Web Design Principles
 7. Conventions and Readability
 8. Page Design
 9. Other Design Considerations

Lecture 2

General Design

def. create with a specific purpose or intention in mind.

- Create a website that is usually **appealing**.
- Deliver information is **easily** found and understood.
- **Be memorable** — have them coming back
- Many website are not designed well.
- What works well for print and TV does not for web.
- You must understand the **principle of design**, but you must design for a specific *medium*.

Medium *def.* how information is communicated or expressed (**media** is plural).

Defining Good Design

- Sometimes it is easier to define good design by given examples of bad design.
- When you visit a website ask yourself:
 - What is the first thing I notice?
 - Where is my attention being focused?
 - Can I find the information that I am looking for?
 - What would make it easier to do so?
- *The Non-Designer's Design Book* by Robin Williams suggests 4 principles:

proximity, alignment, repetition, and contrast



Proximity

- “Group related items together” (p. 15).



- Elements should not be scattered randomly.
- Elements should not be grouped tightly together.

Proximity

- Related items should be placed near each other;
- Unrelated items should be separated by some space.



- Benefits:
 - realize what items are related before reading
 - easier to scan your page and find the relevant information.

Proximity

- Help your web page / document look organized
- Before you create a web page spend time thinking about
 - What information do I want on this page?
 - Can this information be broken down into smaller subjects/groups?
- These questions help organize you web page(s).
- In the example we have separated:
 - the business information from
 - the personal contact information

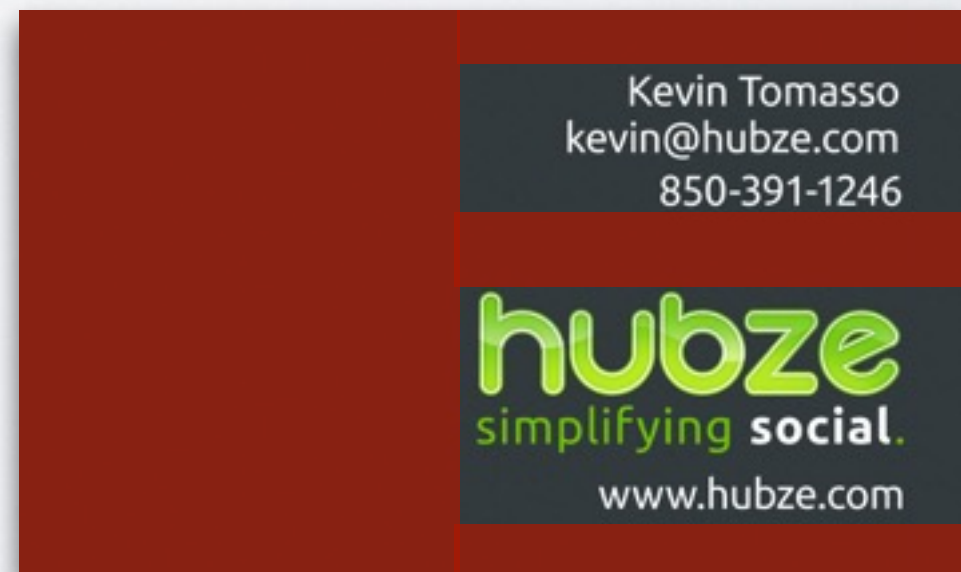


Whitespace

def. blank space where there are no foreground objects (text and images).

- Do not be afraid to use whitespace.
- Help separate different subjects/topics.

In the example
whitespace
highlighted in **red**.



Alignment

def. is the positioning of text and images on a page.

- “Nothing should be placed on the page arbitrarily. Every item should have a visual connection with something else on the page” (p. 31)



Alignment

- Text/images need to line up with other text/images.
- It creates a common line for the eye to follow.
- Centring does not always work.



- Right alignment creates a strong, clear line.

Alignment Example

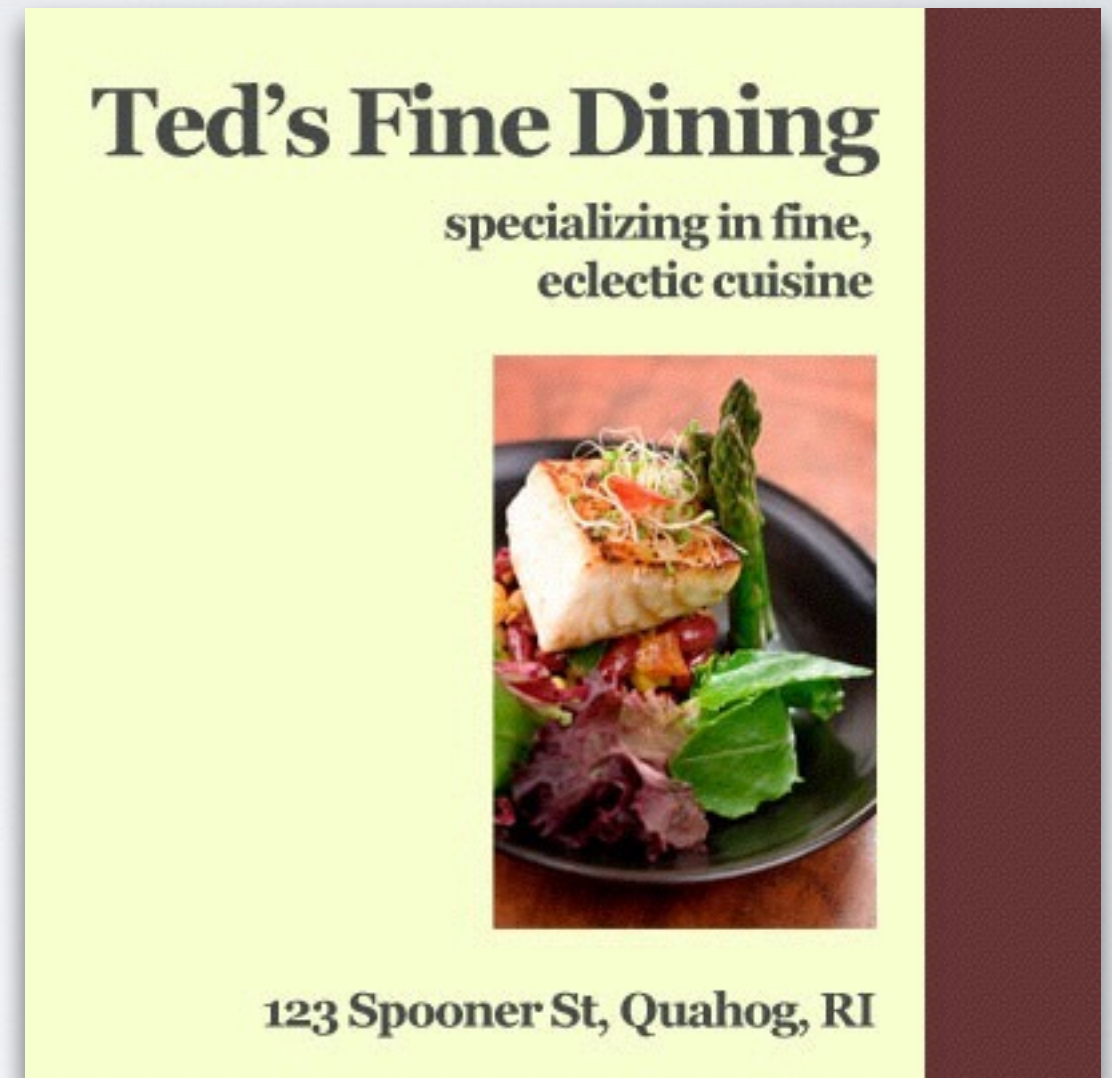
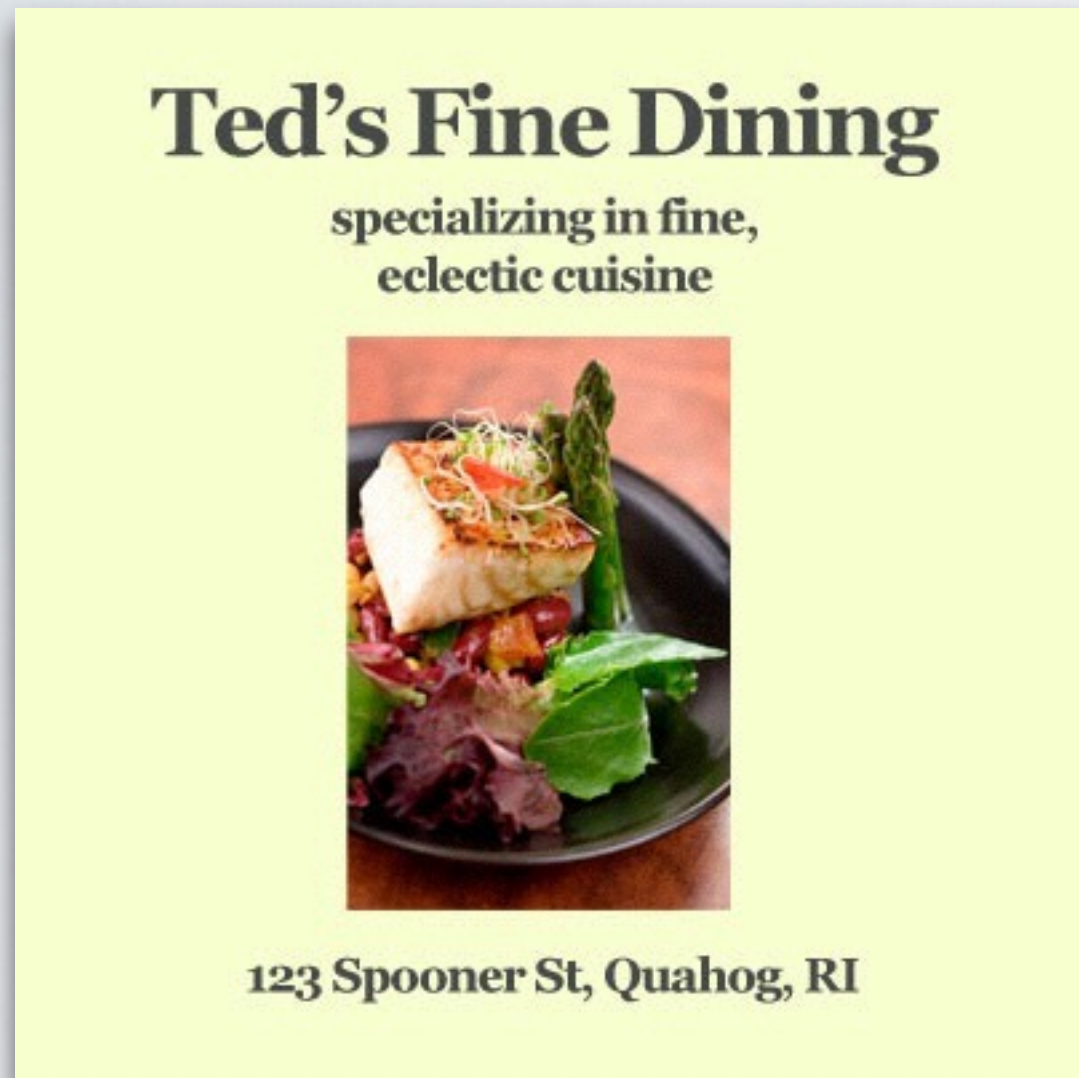
(a poster for a fine dining restaurant)



There may be nothing wrong with **centre alignment**, but it is **pretty forgetful** and **not effective**.

Alignment Example

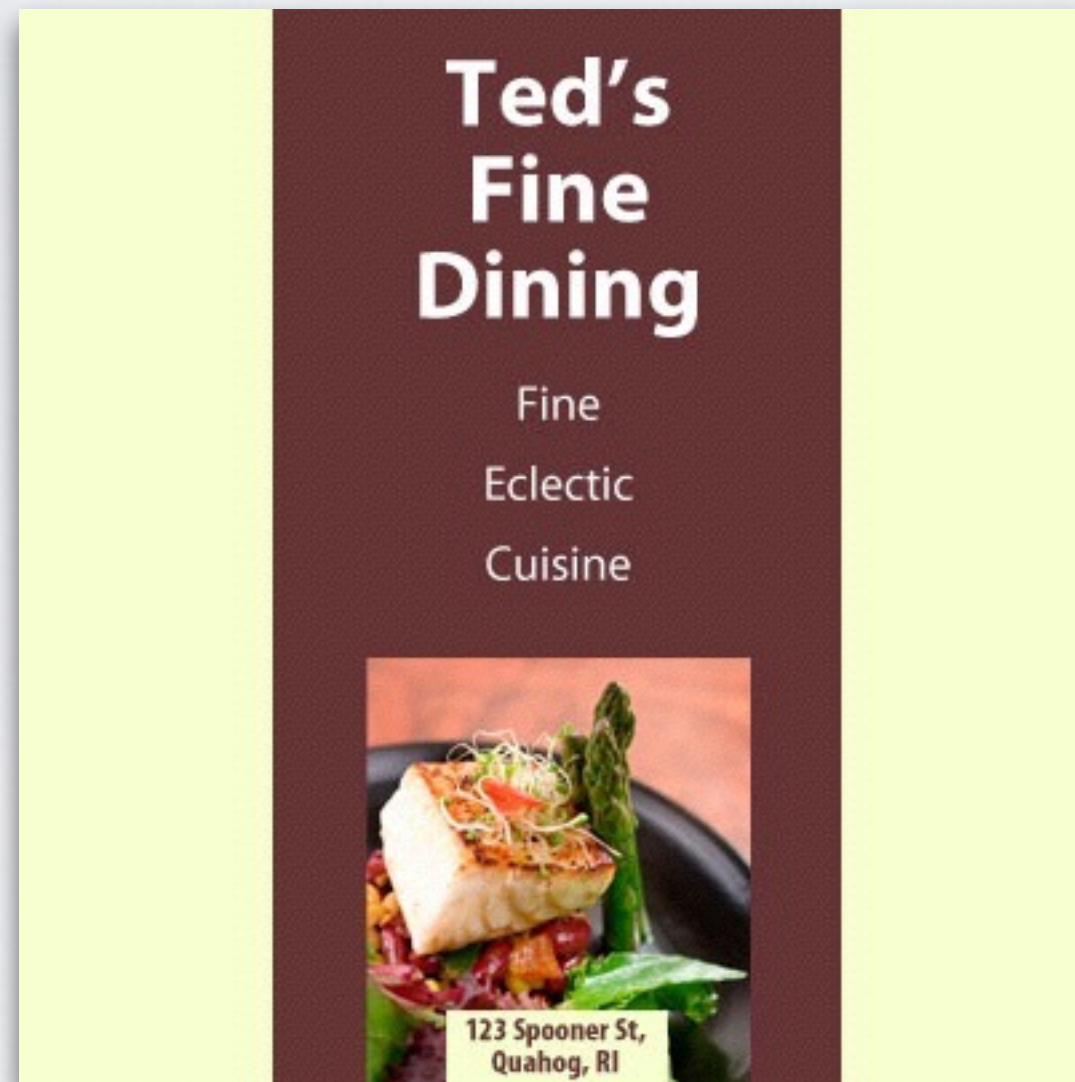
(a poster for a fine dining restaurant)



No content change, right alignment and bar creates a more professional feel. **Which one conveys fine dining?**

Alignment Example

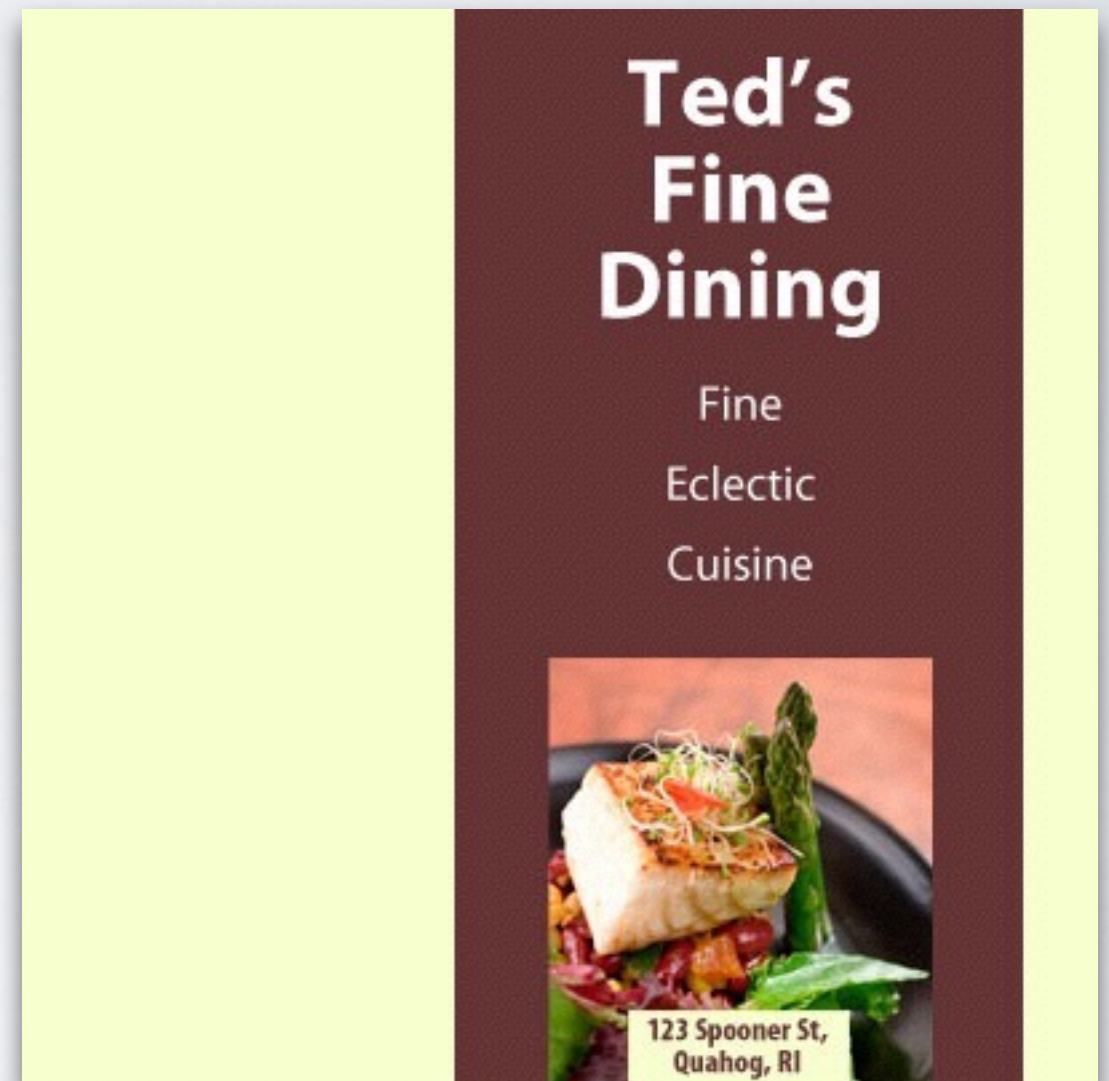
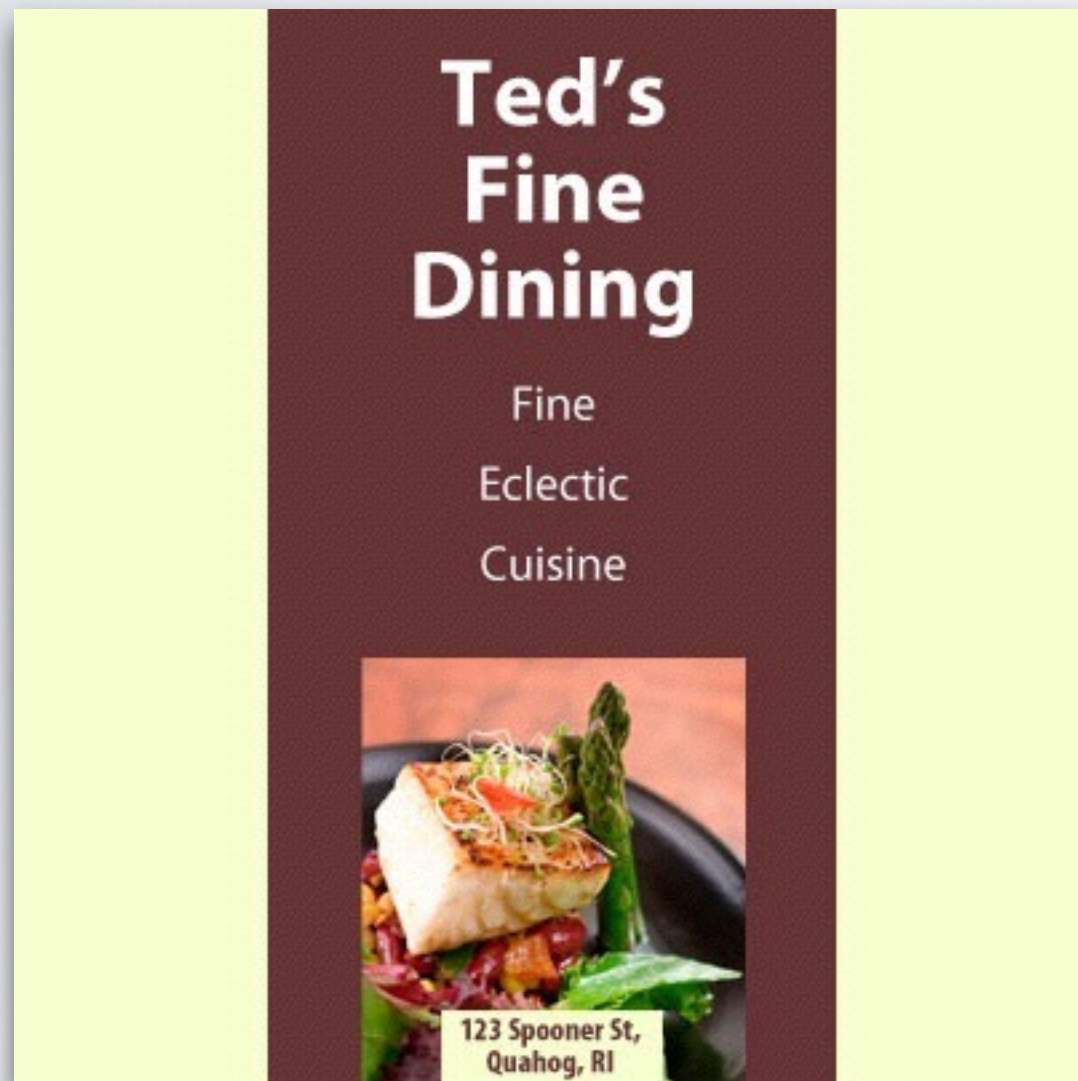
(a poster for a fine dining restaurant)



Centring can be made to look more effective.

Alignment Example

(a poster for a fine dining restaurant)



But having a inner centred element off-centre is less boring and creates a bit of excitement.

Alignment Example

(a poster for a fine dining restaurant)

Which looks better, more professional?

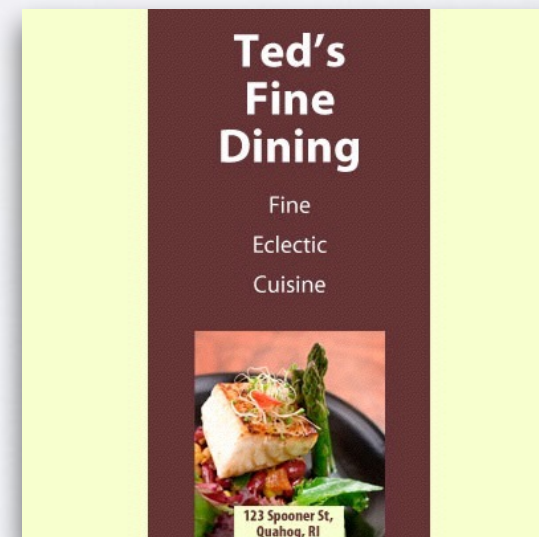
Which speaks fine dining to you: A, B, C, or D?



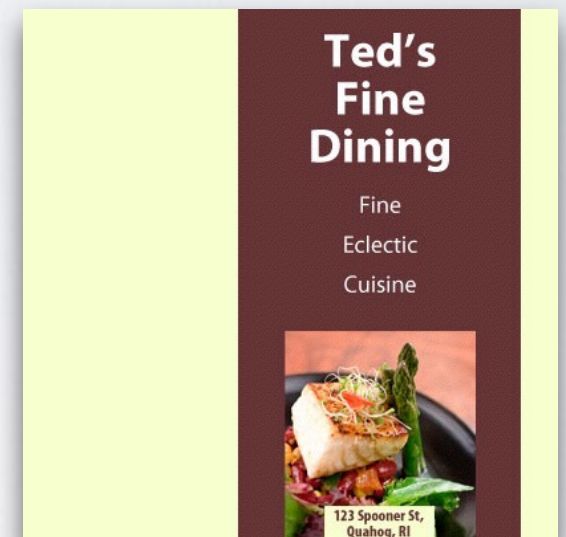
Sample A



Sample B



Sample C



Sample D

Text Justification

Which looks better, more professional, left or right?

Sed virtute nominavi dissentiunt et. Ei has malis accumsan mediocrem, elit oratio luptatum ei mea. Sit atqui utroque nusquam eu. Eum graeco probatus et, sit id intellegam persequeris, primis lucilius suavitate te eam. Tamquam nostrud ornatus at usu, usu verterem urbanitas an. Te feugiat scaevola intellegat est, pertinax salutandi erroribus vis at, sed in soluta postea iudicabit. Ne nec duis assum nusquam. Malis dicam fabellas ea pri, no sea choro utroque detracto. Diceret mediocrem ad duo, sint mutat usu in. His nonumy omittam efficiendi ei, augue invenire expetendis pro ut. Te suas pertinacia suscipiantur nam, putant delenit facilisis ad usu. Ignota dictas vim at, alii dicant laoreet duo ei, ut erat noster vim. Usu eligendi signiferumque ne. Odio albucius eu vix, nibh eros efficiendi in duo. Veri interesset contentiones eos ne, regione iuvaret neglegentur in his, dicunt adversarium est ex. Lorem ipsum dolor sit amet, te melius integre assentior est. Sea cu ornatus mentitum offendit, in ius clita forensibus, per soleat ridens ad. Quas commune eleifend ut sed, ex quo libris blandit referrentur, ex duo partem fierent. An nam facer summo. Ut sonet solet iracundia sed, ei etiam clita disputando vix. Cum ne iuvaret urbanitas definiebas. No soleat iisque pro. Dicta vivendo ius ne, pro cu option offendit accommodare. Te mei probo mediocrem sententiae, sit ne feugiat elaboraret, his timeam docendi assentior cu. In dignissim forensibus quo, enim oportere est te.



Figure 1: Some museum somewhere in London, UK

Sed virtute nominavi dissentiunt et. Ei has malis accumsan mediocrem, elit oratio luptatum ei mea. Sit atqui utroque nusquam eu. Eum graeco probatus et, sit id intellegam persequeris, primis lucilius suavitate te eam. Tamquam nostrud ornatus at usu, usu verterem urbanitas an. Te feugiat scaevola intellegat est, pertinax salutandi erroribus vis at, sed in soluta postea iudicabit. Ne nec duis assum nusquam. Malis dicam fabellas ea pri, no sea choro utroque detracto. Diceret mediocrem ad duo, sint mutat usu in. His nonumy omittam efficiendi ei, augue invenire expetendis pro ut. Te suas pertinacia suscipiantur nam, putant delenit facilisis ad usu. Ignota dictas vim at, alii dicant laoreet duo ei, ut erat noster vim. Usu eligendi signiferumque ne. Odio albucius eu vix, nibh eros efficiendi in duo. Veri interesset contentiones eos ne, regione iuvaret neglegentur in his, dicunt adversarium est ex. Lorem ipsum dolor sit amet, te melius integre assentior est. Sea cu ornatus mentitum offendit, in ius clita forensibus, per soleat ridens ad. Quas commune eleifend ut sed, ex quo libris blandit referrentur, ex duo partem fierent. An nam facer summo. Ut sonet solet iracundia sed, ei etiam clita disputando vix. Cum ne iuvaret urbanitas definiebas. No soleat iisque pro. Dicta vivendo ius ne, pro cu option offendit accommodare. Te mei probo mediocrem sententiae, sit ne feugiat elaboraret, his timeam docendi assentior cu. In dignissim forensibus quo, enim oportere est te.



Figure 1: Some museum somewhere in London, UK

Repetition

def. “repeat[ing] some aspect of the design throughout the entire piece” (p. 49).

- Use the same font, rule, bullet for the entire page.
- Use a consistent colour from your colour scheme for the same tag/element.



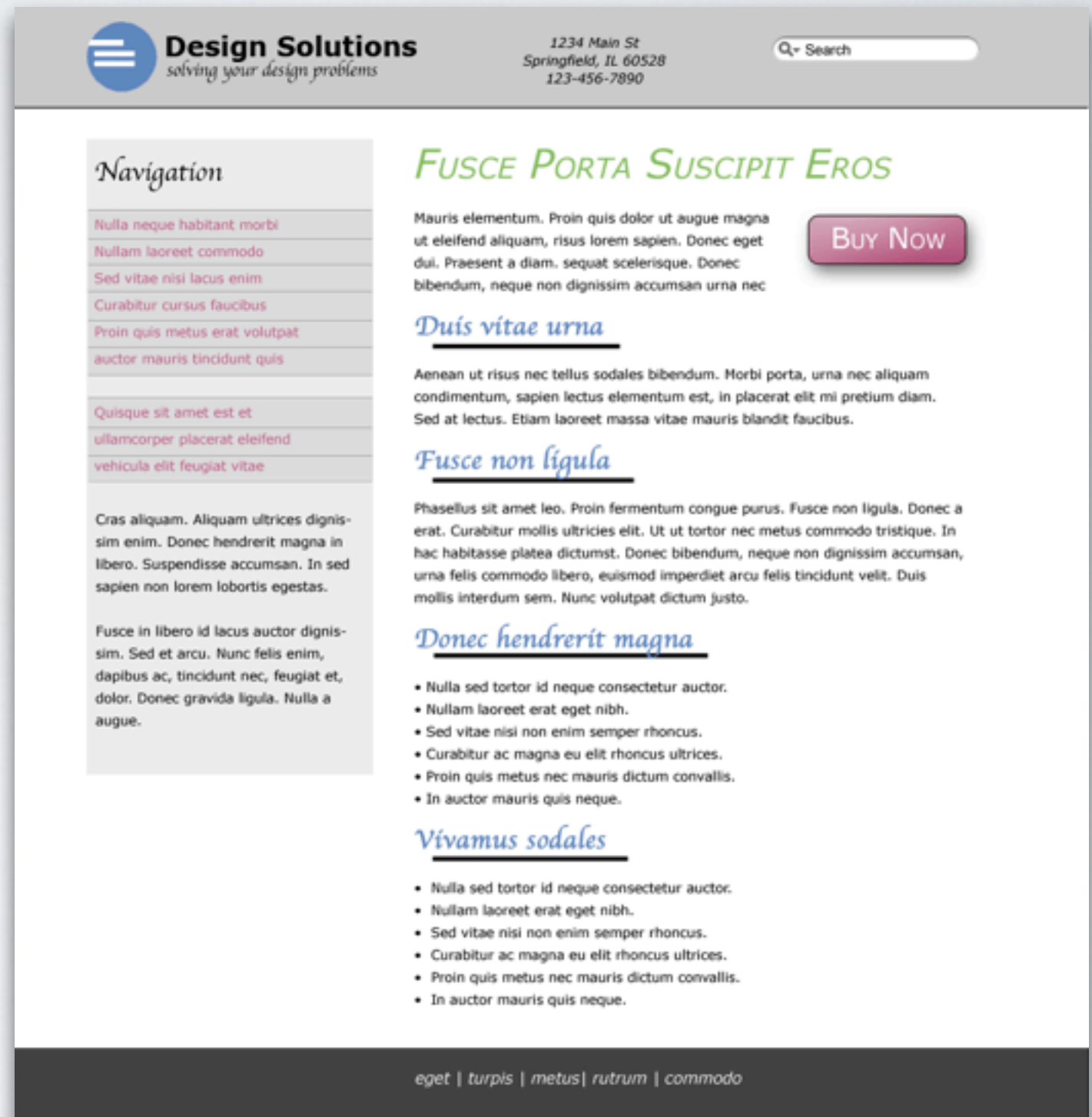
Repetition

- Alignment and repetition create a unify presentation.
- A repeated element gives the user something to hang on to and gives the presentation a consistent feel.



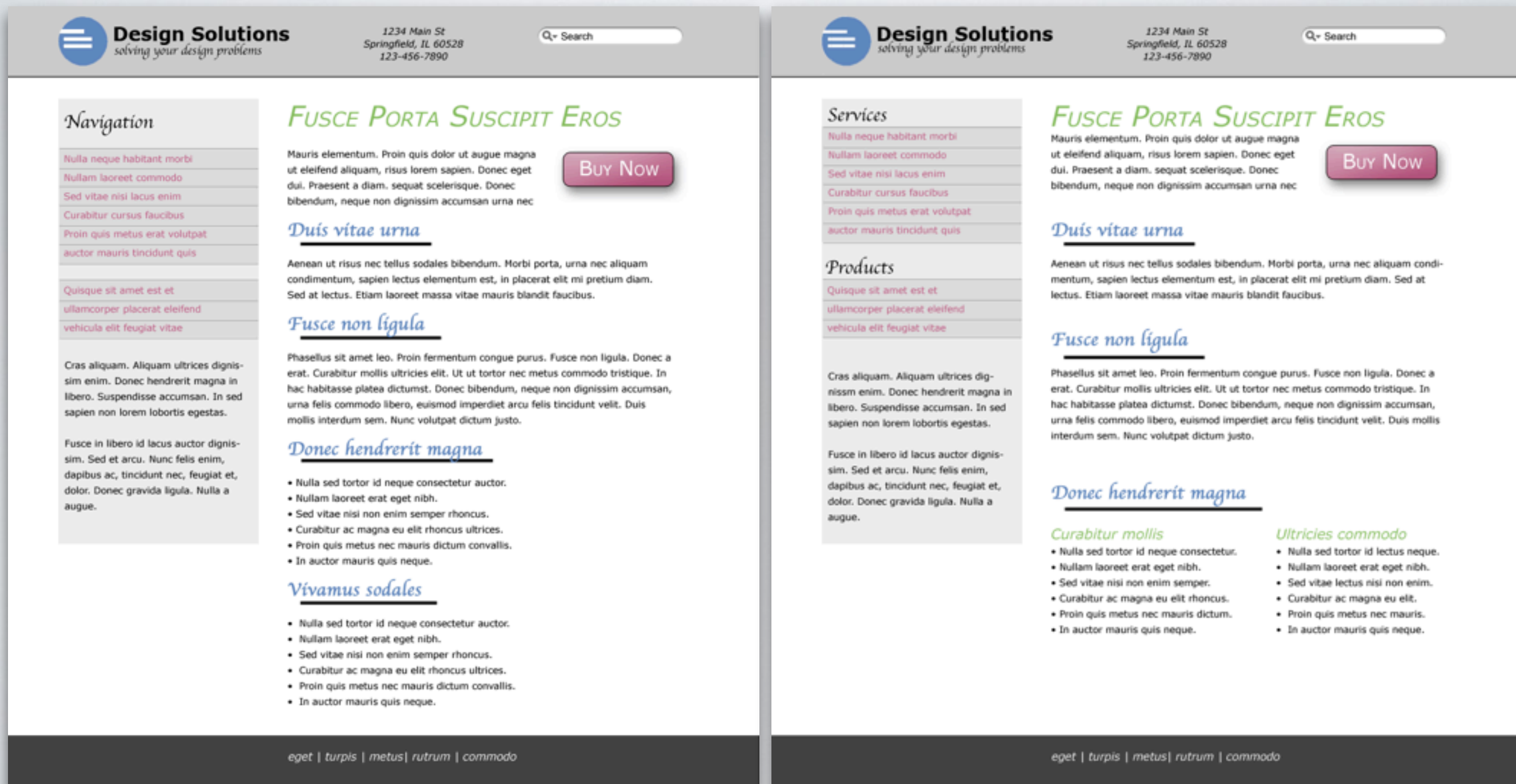
Repetition

- On the other hand, you shouldn't repeat too much.
- Everything in your presentation shouldn't look the same.



Repetition

Which looks better, more professional, left or right?



Contrast

def. having text/images stand out from one another, and from the background.

- “If two items are not exactly the same, then make them different. Really different” (p. 63).



Contrast

Reader should be able to tell at a glance what parts of the page serve the same purpose.



- the person
- contact information
- the company

Create contrast by using different typefaces, font size, foreground/background colour with **obvious** difference.

Vary Typefaces

Vary typefaces between headings and paragraph text.

THE MUSEUM

Lorem ipsum dolor sit amet, te melius integre assentior est. Sea cu ornatus mentitum offendit, in ius clita forensibus, per soleat ridens ad. Quas commune eleifend ut sed, ex quo libris blandit referrentur, ex duo partem fierent. An nam facer summo. Ut sonet solet iracundia sed, ei etiam clita disputando vix. Cum ne iuvaret urbanitas definiebas. No soleat iisque pro. Dicta vivendo ius ne, pro cu option offendit accommodare. Te mei probo mediocrem sententiae, sit ne feugiat elaboraret, his timeam docendi assentior cu. In dignissim forensibus quo, enim oportere est te.

Sample A

THE MUSEUM

Lorem ipsum dolor sit amet, te melius integre assentior est. Sea cu ornatus mentitum offendit, in ius clita forensibus, per soleat ridens ad. Quas commune eleifend ut sed, ex quo libris blandit referrentur, ex duo partem fierent. An nam facer summo. Ut sonet solet iracundia sed, ei etiam clita disputando vix. Cum ne iuvaret urbanitas definiebas. No soleat iisque pro. Dicta vivendo ius ne, pro cu option offendit accommodare. Te mei probo mediocrem sententiae, sit ne feugiat elaboraret, his timeam docendi assentior cu. In dignissim forensibus quo, enim oportere est te.

Sample B

Vary Typefaces

Vary typefaces between headings and paragraph text.

THE MUSEUM

Lorem ipsum dolor sit amet, te melius integre assentior est. Sea cu ornatus mentitum offendit, in ius clita forensibus, per soleat ridens ad. Quas commune eleifend ut sed, ex quo libris blandit referrentur, ex duo partem fierent. An nam facer summo. Ut sonet solet iracundia sed, ei etiam clita disputando vix. Cum ne iuvaret urbanitas definiebas. No soleat iisque pro. Dicta vivendo ius ne, pro cu option offendit accommodare. Te mei probo mediocrem sententiae, sit ne feugiat elaboraret, his timeam docendi assentior cu. In dignissim forensibus quo, enim oportere est te.

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Sample B



Vary Font Size

Vary font sizes between headings and paragraph text.

THE MUSEUM

Lorem ipsum dolor sit amet, te melius integre assentior est. Sea cu ornatus mentitum offendit, in ius clita forensibus, per soleat ridens ad. Quas commune eleifend ut sed, ex quo libris blandit referrentur, ex duo partem fierent. An nam facer summo. Ut sonet solet iracundia sed, ei etiam clita disputando vix. Cum ne iuvaret urbanitas definiebas. No soleat iisque pro. Dicta vivendo ius ne, pro cu option offendit accommodare. Te mei probo mediocrem sententiae, sit ne feugiat elaboraret, his timeam docendi assentior cu. In dignissim forensibus quo, enim oportere est te.

Sample A

THE MUSEUM

Lorem ipsum dolor sit amet, te melius integre assentior est. Sea cu ornatus mentitum offendit, in ius clita forensibus, per soleat ridens ad. Quas commune eleifend ut sed, ex quo libris blandit referrentur, ex duo partem fierent. An nam facer summo. Ut sonet solet iracundia sed, ei etiam clita disputando vix. Cum ne iuvaret urbanitas definiebas. No soleat iisque pro. Dicta vivendo ius ne, pro cu option offendit accommodare. Te mei probo mediocrem sententiae, sit ne feugiat elaboraret, his timeam docendi assentior cu. In dignissim forensibus quo, enim oportere est te.

Sample B

Vary Font Size

Vary font sizes between headings and paragraph text.

THE MUSEUM

Lorem ipsum dolor sit amet, te melius integre assentior est. Sea cu ornatus mentitum offendit, in ius clita forensibus, per soleat ridens ad. Quas commune eleifend ut sed, ex quo libris blandit referrentur, ex duo partem fierent. An nam facer summo. Ut sonet solet iracundia sed, ei etiam clita disputando vix. Cum ne iuvaret urbanitas definiebas. No soleat iisque pro. Dicta vivendo ius ne, pro cu option offendit accommodare. Te mei probo mediocrem sententiae, sit ne feugiat elaboraret, his timeam docendi assentior cu. In dignissim forensibus quo, enim oportere est te.

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Sample B



Contrast

- Don't be afraid to play around and try new ideas.
- Remember too much is not good either.
- If the result is ugly, then refine, tweak it, make small changes.
- Use a your pre-defined colour scheme to highlight and separate subjects/topics.





IMPORTANT

to remember, are these 4 principles

CRAP Design

Easy to remember as kevintomasso.com writes:

CRAP is the acronym for the four basic principles of design.

Contrast

Repetition

Alignment

Proximity



QUESTIONS?

Website Design

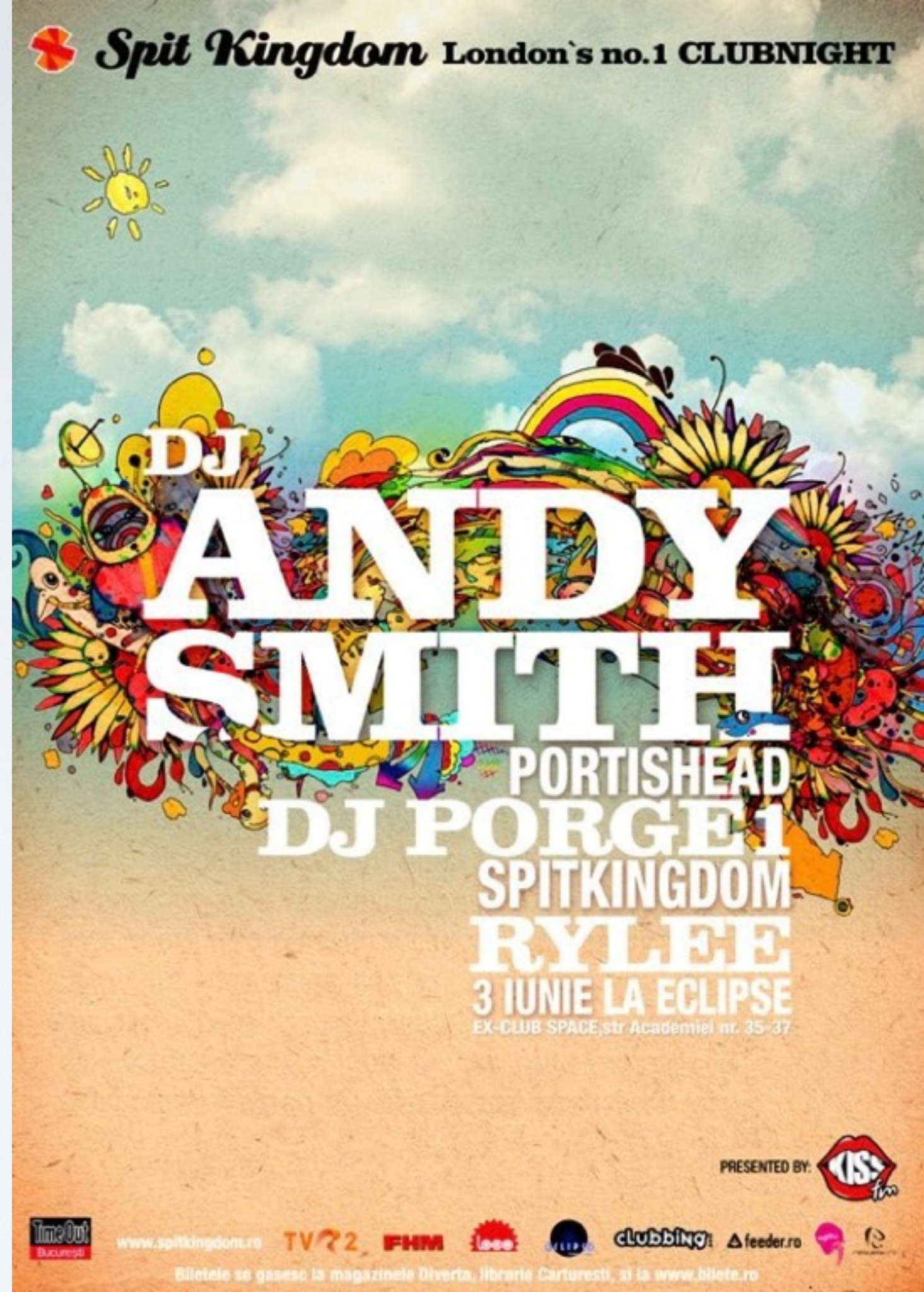
As with any form of media:

- We use Contrast, Repetition, Alignment, and Proximity.
- **But** how we use these 4 principles will be different.
- Cannot use the visual layout of a poster for a web page.
 - A poster can be **any** shape or size
 - The creator chooses.
 - A website is **limited by the screen size** of the view's computer
 - The creator **has no choice!**
 - On a web page you would need to **scroll**.

A Poster

Notice:

- We can appreciate the entire poster at a glance
- We can focus on specific aspects and information
- The poster info is both specific and subtle:
 - Specific through text
 - Subtle information through art



The Poster as a Web Page



The Poster as a Web Page



The Poster as a Web Page



The Poster as a Web Page

As we can see it is **very hard** to experience the entirety of the poster when we have to scroll down.

Subtle information is lost. The mood, the particular feeling the poster is trying to portray is not fully realized when **scrolling**

We are only given a small window from which to view what could be a masterpiece.



The course reader says:

“You cannot include a hyperlink on a poster” (page 108)

Is this correct?

The course reader says:


“You cannot include a hyperlink on a poster” (page 108)


Is this correct?

NO


(well, sort of)


Where is
the
hyperlink?






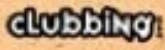
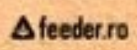


 **Spit Kingdom** London's no.1 CLUBNIGHT



DJ ANDY SMITH
PORTISHEAD
DJ PORGE1
SPITKINGDOM
RYLEE
3 Iunie LA ECLIPSE
EX-CLUB SPACE, str Academiei nr. 35-37



PRESENTED BY: 

 www.spitkingdom.ro        

Biletele se gasesc la magazinele Diverta, libreria Carturesti, si la www.bilete.ro

QR Codes

def. acronym for Quick Response Code

- Scan with your mobile and you are:
 - Taken to a website or specific URL with media
 - e.g. YouTube video, Dropbox files, map, iTunes, etc.
 - Give contact information, or email address
 - Given event details for you calendar
 - Given a plain text, SMS, or email message
 - Use for wi-fi login, a Skype call
- See [Wikipedia](#) for an in-depth article
- Goto [QRStuff](#) to create your own!





CRAP Web Design

- The graphics design options used in a poster is limitless.
- Using XHTML 1.0 and CSS 1 is very limiting.
- We can still apply the design principles of:

Contrast

Repetition

Alignment

Proximity

- We just need to be smart and creative about it.
- Use tags and styles effectively to create the design we want.

CRAP Web Design

C is for Contrast

To achieve contrast on a web page you need to:

- Make sure your headings are really different then other elements (e.g. paragraphs and lists):
 - Use **font-family** to vary the typeface.
 - Use **font-size** to vary the size of the font.
- Separate different sections with borders and/or different background colour or image.
- Have the foreground elements distinguishable from the background style.
- Make sure hyperlink as easy to spot and click on.

CRAP Web Design

R is for Repetition

To achieve repetition on a web page you need to:

- Use CSS style selectors:
 - tag selectors to apply the same style to all tags.
 - class to apply the same style to elements of that label.
- Use style properties **list-style-type** and **list-style-image** to create a consistent list.
- Style hyperlinks, borders, headings consistently.
- Use the same font for paragraphs and lists.
- Use the same (but different) font for headings.

CRAP Web Design

A is for Alignment

Web pages use strong left alignment.


To achieve good alignment on a web page you need to:

- Use CSS style properties:
 - **text-align** to:
 - centre, right justify inline elements and content
 - full-text justification for paragraphs
 - **float** to:
 - align block elements and images left or right

CRAP Web Design

P is for Proximity

To achieve proximity on a web page you need to:

- Think about how the text and images of your message fit together.
- **Separate** your message into sub-topics.
- **Separate** these sub-topics using:
 - HTML headings, lists, etc.
 - CSS style properties: margin, padding, border, etc.
- If there is **too much information** for each sub-topic
 - **use multiple pages.** 

Web Conventions

def. an assumed way a of appearing, operating, responding, and/or doing.

When we visit a web page we make certain assumptions:

- If I click on a hyperlink it takes me somewhere
- A list of links on the left or right, or top ribbon
 - is a most likely a site menu.
- Larger text is for titles and headings.
- The title of a web page is at or near the top.
- There are lots of others...

Using Conventions

- Use these conventions to your advantage:
 - allows the visitor to easily use your website.
 - visitor can concentrate on reading your message.
 - **not** figuring out how to navigate your website.
- Most conventions are *de facto* because they are commonly used amongst all websites.
- People visit other websites more often than yours.
- Having a website that does not use conventions will cause **frustration** and **confusion**.

Web Readability

def. how well a visitor can read/understand your message.

- Most do not read a website from top to bottom
- They scan quickly trying to find the information they want.

A Heat Map: tracked the eye movements of a person visiting a website.

It clearly shows that the web page is scanned for information on read from top to bottom.

Notice an “F” pattern?



Readable Design

- **Design with scanning in mind.**
- Make it easy for a person to scan and find the information they want.
 - Divide pages using `<h2>`, `<h3>`, (so on); and style.
 - Keep your pages short and your text concise.
 - With contrast, create obvious parts:
 - page title, site menu, hyperlinks
 - Follow common web conventions.
 - Create clear links and avoid rollovers.

Writing for the Web

Writing for a book or magazine:

Nebraska is filled with internationally recognized attractions that draw large crowds of people every year, without fail. In 1996, some of the most popular places were Fort Robinson State Park (355,000 visitors), Scotts Bluff National Monument (132,166), Arbor Lodge State Historical Park & Museum (100,000), Carhenge (86,598), Stuhr Museum of the Prairie Pioneer (60,002), and Buffalo Bill Ranch State Historical Park (28,446).

Writing for a website:

In 1996, six of the most-visited places in Nebraska were:

- Fort Robinson State Park
- Scotts Bluff National Monument
- Arbor Lodge State Historical Park & Museum
- Carhenge
- Stuhr Museum of the Prairie Pioneer
- Buffalo Bill Ranch State Historical Park

Clear Readable Links

The old way:

```
<a href="xyz.html">Click here</a>  
for more information about XYZ.
```

[Click here](#) for more information about XYZ.

The new, more better way:

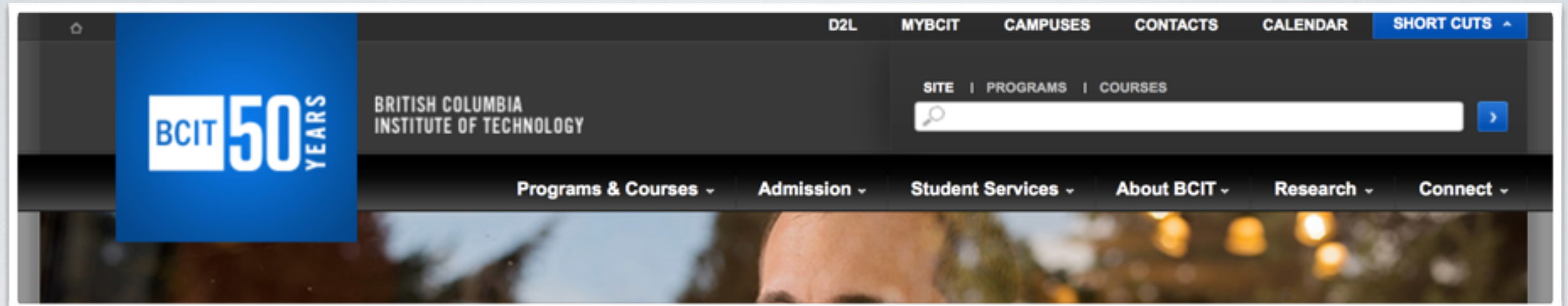
```
We also have <a href="xyz.html">more  
information about XYZ</a>.
```

We also have [more information about XYZ](#).

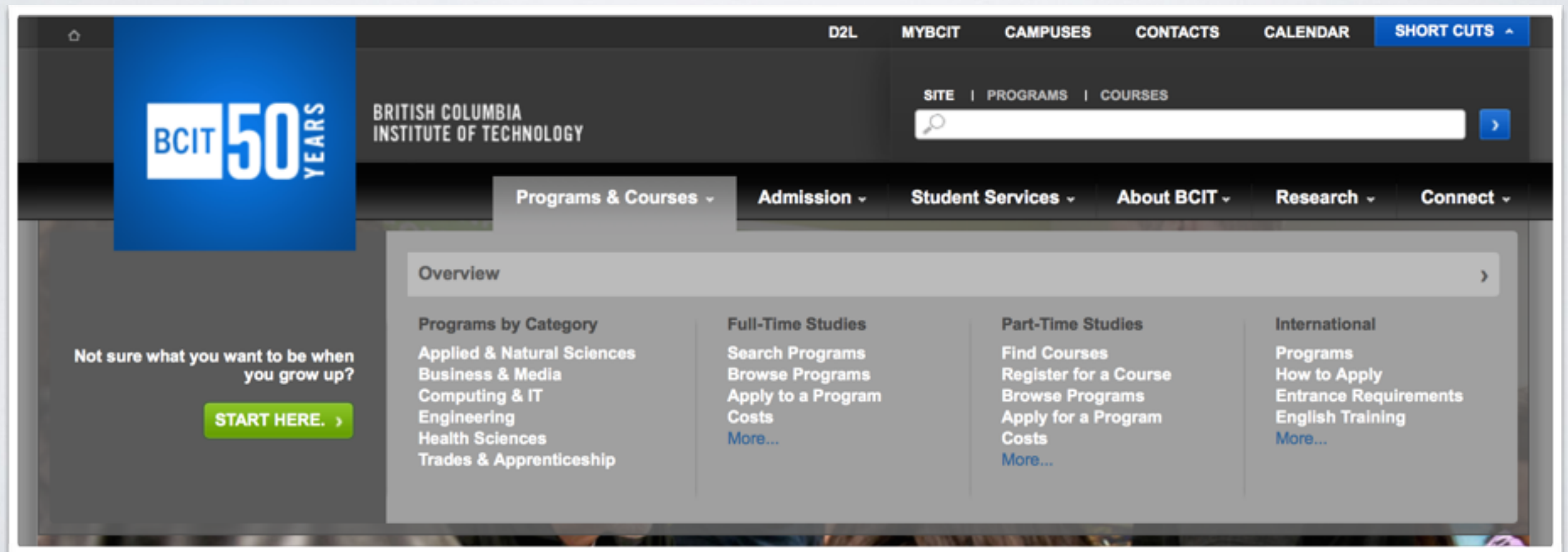
Search Engine
Friendly



Avoid Rollovers (if possible)



peek-a-boo? 🙄



Page Design

- There are many ways to get to your web page:
 - emailed link
 - business card
 - google search
 - another site (e.g. twitter, blog)
- If you have multiple web pages, visitor may not land on your front page — *no guarantee!*
- If they do not land on your front page, will get the information they need? Or, will they be lost, confused?

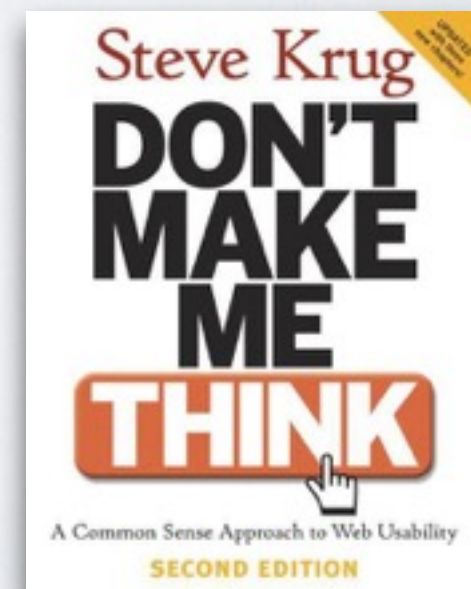
Page Design

- Each page must (to some degree) **stand on its own**.
- Have a **meaningful** web page with a title and headings.
 - e.g. a products page should discuss products.
- Make it easy for the visitor to **navigate** to other parts of your site. Make it easy to find home.
- Have an **about page** to let them know who you are, the purpose of your site.
- Make sure you do not have any **broken links**.
- If file names change **redirect** old name to the new one.

Krug's Usability

Krug's three facts of life:

1. We don't read pages, we scan them.
2. We don't make optimal choices, we satisfy.
3. We don't figure out how things work, we muddle through.



ShortieDesigns Top 10

1. Each page should have a purpose.
2. Communicate clearly and concisely.
3. Use the right font typeface and size.
4. Create a colour palette and stick to it.
5. Use images, the right image for the right message.
6. Make it easy to navigate around your website.
7. Use grid-based layouts, no randomness.
8. Use “F” pattern design for pages.
9. Web pages should load fast, optimize image size.
10. Make you site mobile device friendly.

Summary

- Learnt about general design principles.
- Looked at how to apply these to web pages.
- Discussed the ideas of conventions and readability.
- Provide a basis for use with assignments — practice.
- Looked at other design considerations.

Next Unit: an introduction to programming.



QUESTIONS?