**Lecture No: 1**
**Topic: Introduction to Web Design**

# Evolution of Web Design

**The first ever website**

► The first ever website was created by a scientist named Sir Tim Berners-Lee in 1990

► It was basically a text-based website with a few links.

► A copy of the original page from 1992 still exists online. It simply existed to serve and tell people what the **World Wide Web** (**WWW**) was:

► Most websites to follow were pretty much the same. There were entirely text-based with simple HTML markup:

► **<h1>** for titles

► **<p>** for paragraphs

► **<a>** for links
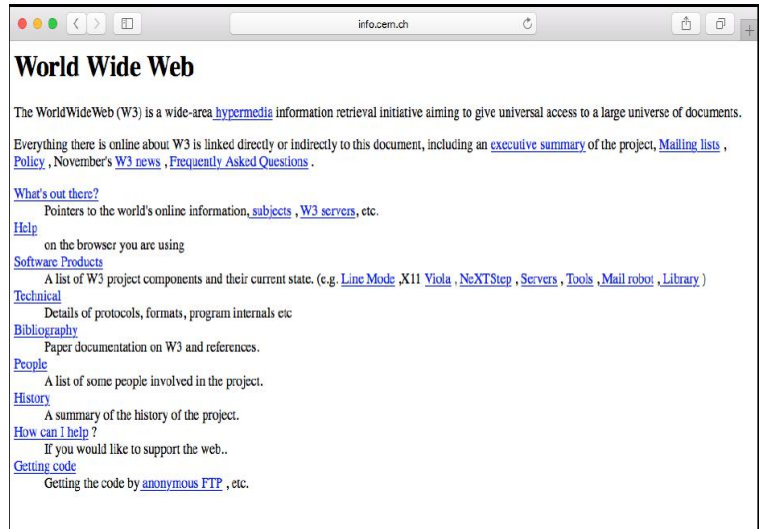
**1994 and the WWW Consortium**

► In 1994, the WWW Consortium (W3C) was formed to set and establish the standard of the web (https:/ / www. w3. org/ ).

► It was mainly to discourage and prevent private companies from building their own web language, as it would create chaos on the web.

► The W3C to this day continues to deliver standards for the open web, such as the new HTML5 or CSS3.

**Images and tables applied (90's)**

**GOOGLE WEB PAGE 1996**



**Table-based layouts**
► Web design became more interesting with the introduction of table markups in HTML.
► Sites were still text heavy, but at least they could separate the content into different columns, rows, and other navigation elements.
► The usage of spacer GIFs, introduced in David's Siegel's book **Creating Killer Sites** in 1996, allowed web designers to play with white space (basically, small transparent GIFs were placed in between the content), and by incorporating a sliced image background, users would have an illusion of a simple structure, whereas in reality there was a table layout behind it.
► Websites have visit counters, animated gifs, and so on.
► Text and images were literally dancing across websites everywhere.

**3d realms 1996**

**YAHOO WEB PAGE 2002**



**Introduction of Flash**

▶ Flash, previously Macromedia Flash and currently Adobe Flash, was created in 1996.

▶ Back then it was the killer tool to create interactive and graphics websites.

▶ Designers were able to add animation, custom fonts and shapes, 3Dbuttons, splash pages, and all in one Tool-Flash.

▶ However, it was not **Search Engine Optimization** (**SEO**)-friendly and was very heavy in terms of resources for your computer.

▶ Flash started to decline when Apple decided to stop supporting Flash in their iOS software back in 2010 (https:/ / www. apple. com/ hotnews/ thoughts- on- flash/).

▶ With the new features of HTML5/CSS3, where you are able to create animation and add multimedia content, designers and developers soon diverted from Flash, at least for web design.

**CSS – the savior**

▶ **Cascading Style Sheets (CSS)** became more popular in the 2000s with their increasing support in web browsers.



▶ CSS defines how the HTML is displayed, and this has allowed designers to separate the content and the design, making websites easier to maintain and quicker to load.

▶ You could change the entire look of a CSS-based website without touching the content.

▶ CSS really made the difference as an alternative to Flash. Recommended by the W3C as a best practice, it provides a cleaner semantic, resulting in better SEO.

**CSS DOWNSIDE**

▶ However, one downside of CSS was the lack of support from various browsers:

▶ One browser would support the newest feature, while another would not. It was a nightmare for developers.

**YAHOO WEBSITE 2009**
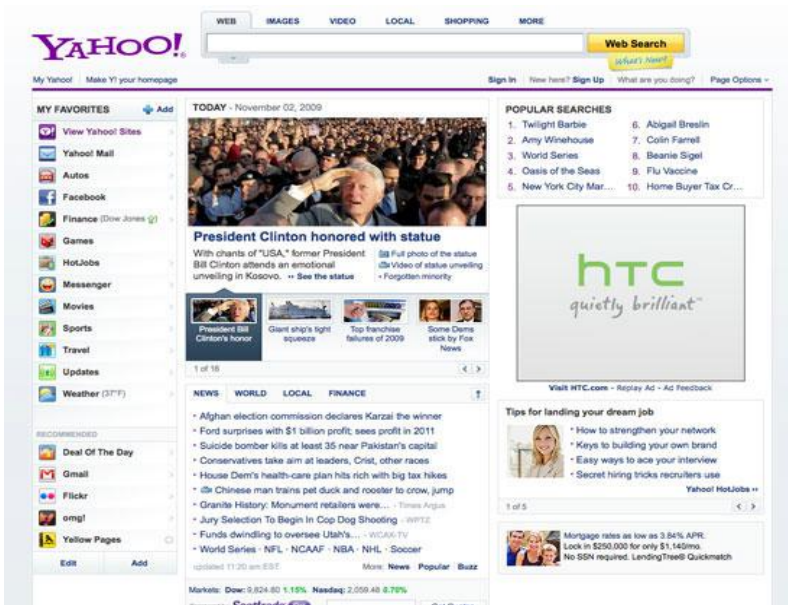
**Web 2.0. THE RISE OF JAVASCRIPT**
- ► The early 2000s saw the rise of JavaScript. This is when things really started to move towards the web we know today.
- ► JavaScript was the first means of adding intelligence to the web.
- ► Designers were able to add interaction, complex navigation, and multimedia applications to their design.
- ► User-centered with usability as the main focus.
- ► Designers were also more aware of color distribution, placements, attention to typography, and the usage of icons instead of text links.
- ► At last, the evolution of Web 2.0 also saw the growth of SEO, as content driving.
- ► These techniques, such as keyword optimization, tagging and inbound and outbound links, are still being used now
- ► The web industry really saw the importance of SEO, and this became the main focus of web design during this time.

Myspace
- ► We can see the difference in terms of the design.
- ► The layout and content are more structured. With *MySpace* website, developers started to create applications for people to interact with:



**The rise of the mobile**
- ► The iPhone ultimately started the boom of mobile browsing. Nobody in the web industry saw this coming;
- ► It was clearly not user-friendly at all.
- ► Until 2016, for the first time in the world, mobile and tablet internet usage exceeded desktop usage:

**Responsive web design**
- ► Ethan Marcotte in 2011
- ► He described a new way of designing for the desktop but also for the mobile interface, basically proposing to use the same content, but a different layout for the design on each screen.
- ► The most popular versions being used were either 12 or 16 columns. It became a standard for designers to design their websites using 12 columns for desktop and downgrading progressively for mobile viewing.
- ► With the introduction of **media queries** with CSS3, it became easier for designers to design websites for mobile screens.

Media queries in a CSS3 module

▶ Media queries is a CSS3 module allowing content rendering to adapt to conditions such as screen resolution (for example, a smartphone screen compared to a computer screen).

▶ From left to right, we have the iPhone, iPad, and desktop version. This is a perfect example of a grid system and media queries.
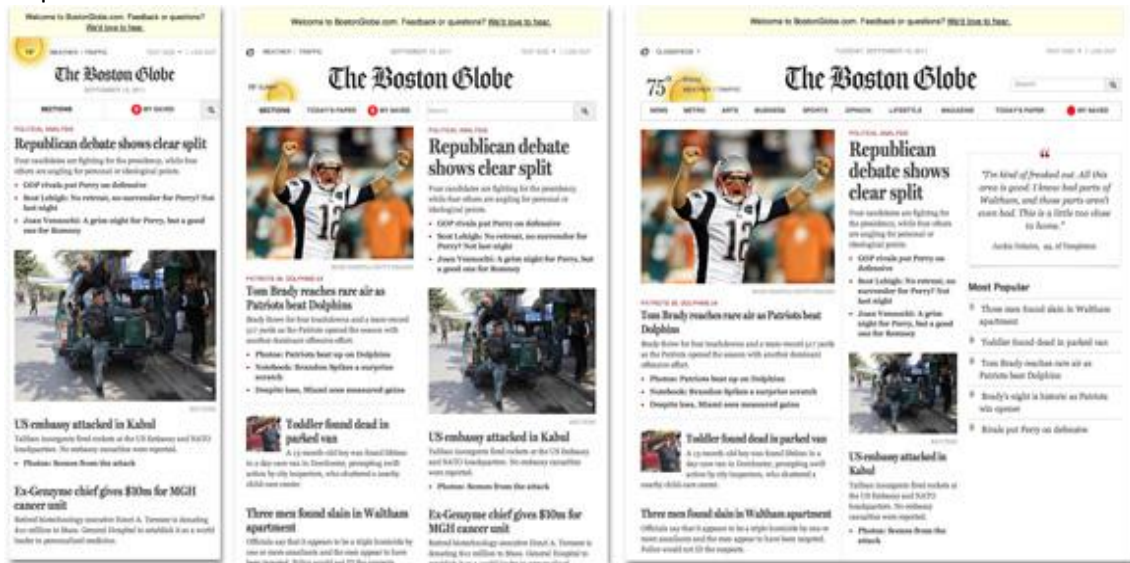


**Flat design**

▶ Flat design is the term given to the style of design in which elements **DO NOT HAVE** stylistic shapes and characters, such as gradient, drop shadows, textures, and any type of design that makes it look real and three dimensional.

▶ It's usually described as the opposite of **rich design**, which in contrast is used to make elements feel more tactile, real, and usable for users when they're navigating.

Swiss Style trend

▶ People often say that flat design originated from the Swiss Style, **Swiss Style** (also known as International Typographic Style) was the dominant design style back in the 1940-50s and started in Switzerland.

▶ It became a solid foundation for graphic design in the mid-20th century around the world.

▶ The main characteristics of this design style are the use of asymmetric layouts, grids*, sans-serif* typefaces such as **Akzidenz Grotesk**, and a clean hierarchy of content.

▶ The famous typeface Helvetica was created during this period and was used in every type of design.



▶ The main reason for this trend was mainly caused by the development of responsive design during this period, where developers and designers struggled to implement a design that heavily relied on textures, drop-shadows, and background images.

▶ Shrinking those patterns for various screen sizes and because of browser compatibility constraints was just too much for designers. They had to go back to basics and simplify their design and make it less texturized.

▶ This would result in quicker loading websites and would be more efficient and easier to design.

**What's next?**

▶ Web design trends do not derive from any particular person or company.

► Web design is a mix of visual design (influenced by print design) and the technology used on the web.
► With the advancements made in HTML5 and CSS3, we can start to see that design is becoming far more complex as compared to the original flat design.
► Technology now allows people to have more flexibility with their design and forms.

## Web Design and it's Components

### GRIDS
► Grids help a lot with Responsive design, but their use does not stop there.
► Designers have used grids since print design, for books, publications, and especially magazines.
► To simply define it, a **grid system** is a system that helps designers structure their design, content, and imagery, and make it more readable and manageable.
► Understanding grids is very important because they will help you design in **proportion**, **balancing** between the elements in your design, organizing modules, and sections.
► And more importantly, it will help the user navigate with the consistency and familiarity of your design grid.

**The Grid System**

The ultimate resource in grid systems.

" The grid system is an aid, not a guarantee. It permits a number of possible uses and each designer can look for a solution appropriate to his personal style. But one must learn how to use the grid; it is an art that requires practice. "
**Josef Müller-Brockmann**

About

**Unit Grid System**
*Tools*
February 1, 2014

An unitless, fluid, elastic, semantic, responsive, scalable, debuggable, declarative, simple to use grid system. And... HTML5 and CSS3 ready.

Tags: CSS3, framework, grid system, HTML5, responsive

**Grid-Based Web Design, Simplified**
*Articles*
February 1, 2014

If you want to reap their benefits of grids on your next project but are unsure of the specifics, this article is for you.

Tags: grid system

**Marcus Gärde Grid System**
*Articles*
February 1, 2014

A new method developed by Marcus Gärde to produce grid systems based on old books and scrolls.

Tags: baseline grid, grid system

**Grids, Design Guidelines, Broken Rules, and the Streets of New York City**
*Articles*
February 1, 2014

What do the streets of New York City have to do with web and graphic design? For better or worse, the grid.

Tags: efficiency, foundation, grid system

**GuideGuide**
*Tools*
February 1, 2014

GuideGuide is a Photoshop extension that allows you to easily create grids with guides.

Tags: grid system, guides, photoshop

**Basel;ne**
*Tools*
February 1, 2014

Basel;ne is a typographic experiment focused on vertical rythm and real baseline grid for modern browsers.

Tags: baseline grid, typography, vertical rhythm

# The Grid System

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| Articles | Tools | Books | Templates | Blog |
|---|---|---|---|---|
| **Myths & Misconceptions About Grid Systems** <br> A few myths and misconceptions about grids exist in the design community that can be detrimental. <br> 29.Nov.2009 | **Slammer 1.0** <br> A new, robust version of Slammer that superimposes a customizable grid over any window. <br> 22.Nov.2009 | **Universal Principles of Design** <br> Universal Principles of Design is the first comprehensive, cross-disciplinary encyclopedia of design. <br> 04.Nov.2009 | **Photoshop 4 Column Grid** <br> A free 4 Column Photoshop grid template for a 1024x768 screen resolution by Ray Gulick. <br> 08.Jun.2009 | **Limited Edition 2010 Letterpress Calendar** <br> Grid-based limited edition letterpress calendar set in Helvetica. <br> 21.Dec.2009 |
| **Create a Grid Based Resume** <br> Use the power of grid based designs to create a structured and professional page layout in InDesign. <br> 22.Nov.2009 | **Atrise Golden Section** <br> Atrise Golden Section allows you to design using the golden section proportion visually over your preferred design software. <br> 04.Nov.2009 | **Designing for the Web** <br> A Practical Guide to Designing for the Web has written explanations of the core principles of graphic design in relation to the web. <br> 08.Oct.2009 | **InDesign 568x792 Grid System (12)** <br> By Dario Galvagno. Adobe InDesign file with a grid system for a 568pts x 792pts page that is divided into 12 columns and rows using the Golden Ratio. Includes a 12pt baseline grid. | **Basic Maths Wordpress Theme** <br> Basic Maths is an elegant grid-based Wordpress theme by Khoi Vinh and Allan Cole that features color-scheme control and supports microformats. <br> 22.Nov.2009 |

**The cons of Grids**
- ▶ They may feel the grid system can be a little restrictive and repetitive creatively.
- ▶ Totally understandable and unfortunately, it happens from time to time that you feel like it's difficult to think outside the box and it can feel like you are creating the same thing again and again.
- ▶ But keep in mind that the grid is not easy to take over and needs practice and experience to fully use it to its advantage.
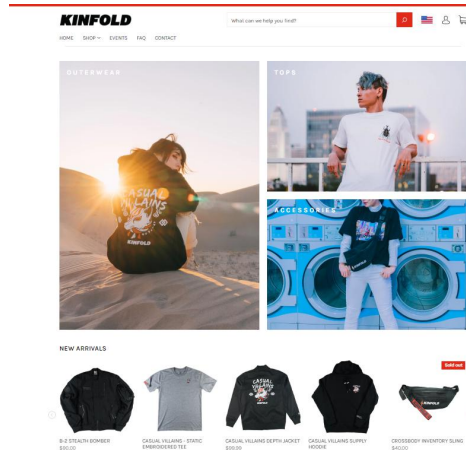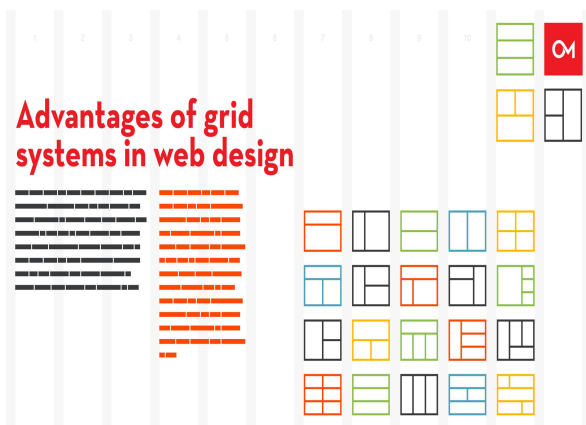
## CALL TO ACTION

▶ A **Call to Action** (**CTA**) is a marketing term to define a designed element that solicits and encourages an action from the user and which the end goal is to attempt a sale.

▶ A **call to action** is an invitation for a user to take some desired action.

### USING CONTRASTING COLOR
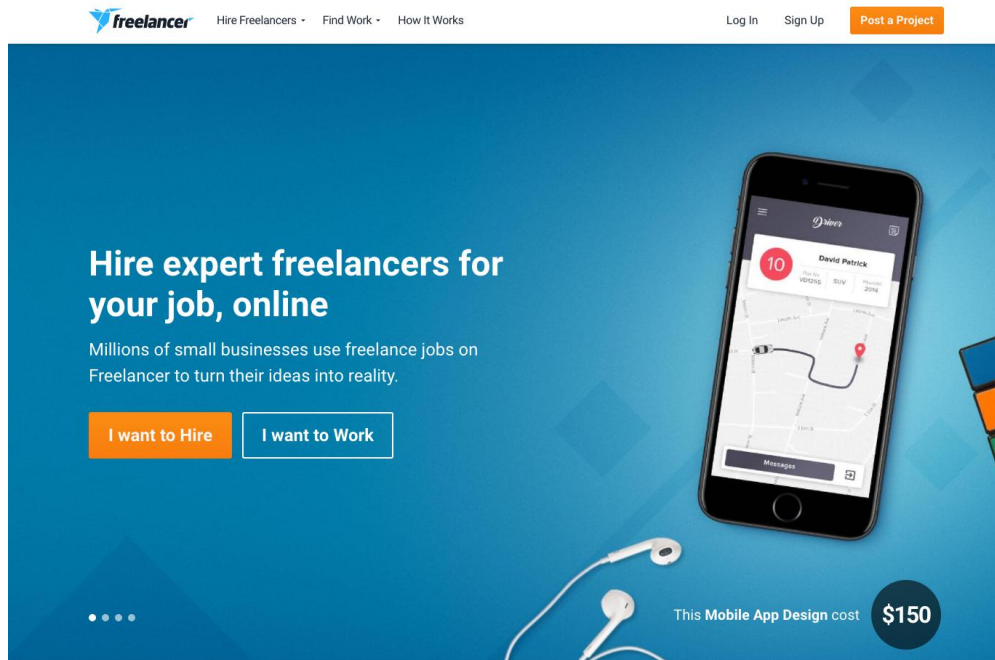


### Placement of CTA

▶ Placement is also very important, and the CTA button needs to be put where the user is going to look next.

▶  As a designer, you can anticipate and predict this behavior. You don't need to be fancy, but just logical.

## BREADCRUMB

▶ **Breadcrumb** (or breadcrumb trail) is a secondary navigation system that indicates where the user is on a site or web app.

▶ The term came from the *Hansel and Gretel* fairy-tale in which the main characters create a trail of breadcrumbs in order to track back to their house.

▶ Just like the tale, breadcrumb in web allows the user to find their way back from where they started.

▶ It's very useful for complex websites or applications, but not very for a single page website that has no logical hierarchy or grouping.

### EXAMPLE OF BREADCRUMBS
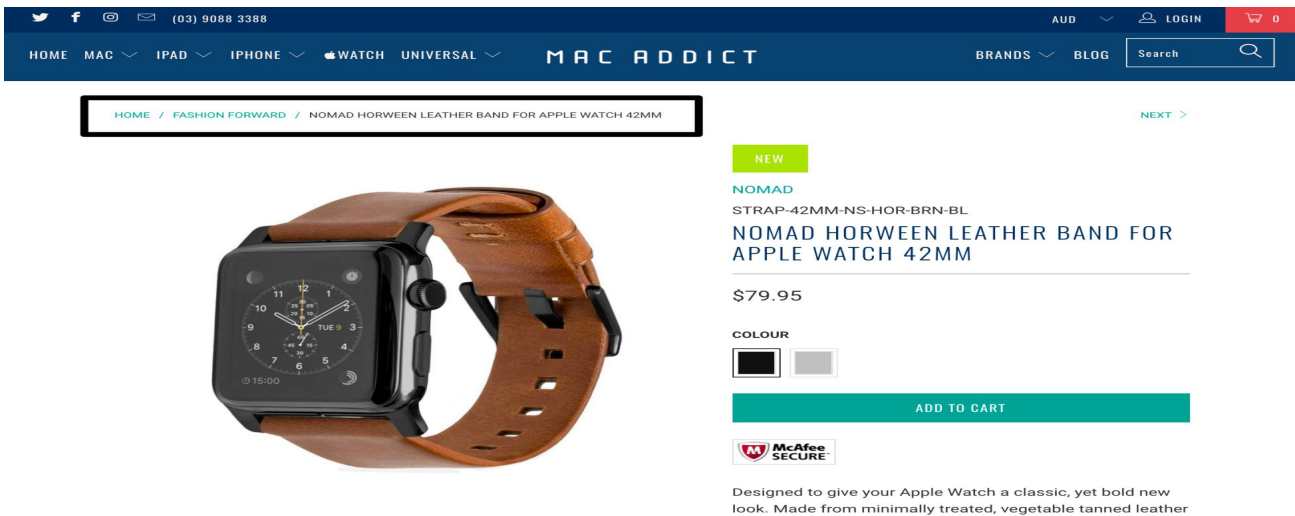
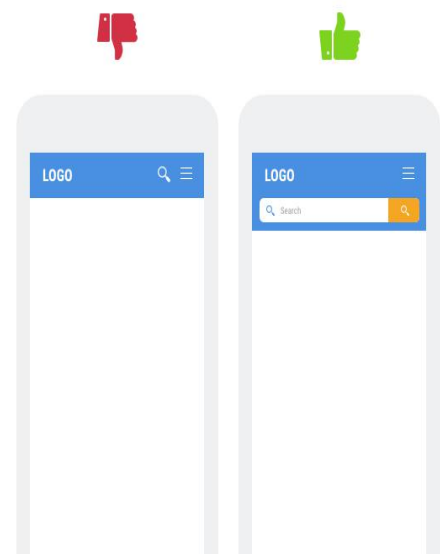## SEARCH BAR

▶ The search bar has become more crucial for heavy-content websites, such as YouTube, Facebook, and eBay.
▶ Users are now familiar with using a search bar and they're always looking for it when they are searching for something.
▶ However, not every website needs a search bar.
▶ If you have a simple and intuitive website, light in content, a search bar might be overkill.

**The submit button**
▶ Designers often criticize the submit button when designing it, but there is always a reason behind it.
▶ Even though users can press the *Enter* button, it's not valuable enough to not display it.
▶ Users need to see that there is another action to trigger.
▶ It's always better to have different possibilities for your users to achieve their end goal.

Bad and good search bar



**Making it noticeable**
▶ It's a bad approach to make the user look for the search box.
▶ The search box should always be easy to find, especially when you have a lot of content on your website.
▶ Make your search bar stand out by using contrast or color.
▶ It's also important to display a full open-text field because a search bar hidden behind an icon makes the search feature less noticeable and increases the number of clicks to access it.

**Placing the search bar correctly**
▶ A search bar needs to stand out, but also needs to be well placed.

▶ A study conducted by *A. Dawn Shaikh* and *Keisi Lenz* (*Where's the Search? Re-examining User Expectations of Web Objects*) with 142 participants showed that the most convenient spot for users would be located on the top center or top right of every page on your site.
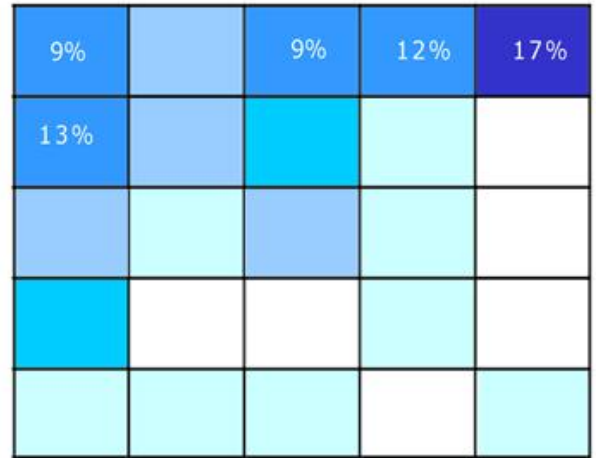
### ICONS

▶ Icons are everywhere now, you can find them on road signs, keyboards, interfaces, and so on.
▶ Icons help us to better understand and interpret information.
▶ It serves as an important visual aid in any graphical communication. As a designer, knowing where and when to use icons to serve your design is really important and crucial.

### Describing in a nutshell

▶ It's interesting how icons can quickly summarize what your text is about. Web users have become more proficient at scanning pages for content that is relevant and interesting to them.
▶ So by just looking at the icons, they will quickly jump into the information they want.

### Drawing attention of the users

▶ A website without icons can be quite boring.
▶ Imagine a magazine without images, how boring would it be? It's the same logic for icons within websites.
▶ Furthermore, with beautiful icons, you are adding more aesthetics to your website, while your users will appreciate you for the convenience:

### PAYPAL WEBSITE WITHOUT ICONS

# Why PayPal?

**Safer**

We keep your financial information securely encrypted so you can pay online with confidence, even if you don't know the seller.

**Security**

**Flexible**

Link all your cards and bank accounts and choose which one to use at checkout. You don't need money in your PayPal account and you'll keep earning reward points.*

**Manage your account**

**Convenient**

Pay with PayPal on millions sites on your computer or mobile, and in apps. Activate One Touch™ to check out in one click.

**One Touch™**

**Protected**

You can be refunded with Buyer Protection if something goes wrong. We can also refund your return shipping costs if you need to send something back.

**Buyer Protection**
**Refunded Returns**

**PAYPAL WEBSITE WITH ICONS**



**Directional**
- ▶ Use icons is to show the direction to users.
- ▶ Instead of showing *previous* or *next*, showing arrows tends to be even more efficient as users are now used to it:

**MODAL**
- ▶ Modal boxes are generally pop-up windows that appear on the screen rather than opening a new tab/window.
- ▶ They usually darken the background to bring attention to the popup.
- ▶ In short, modal boxes are used to show information to the user on the same page without reloading the page and by that, improving the usability.



Five common usages of modal box
- ▶ **Error**: To alert users of an error
- ▶ **Warning:** To warn users of potentially harmful situations
- ▶ **Collect information:** To collect information from users
- ▶ **Confirm or Prompt:** To ask users to confirm an action
- ▶ **Helper:** To help users when using the interface
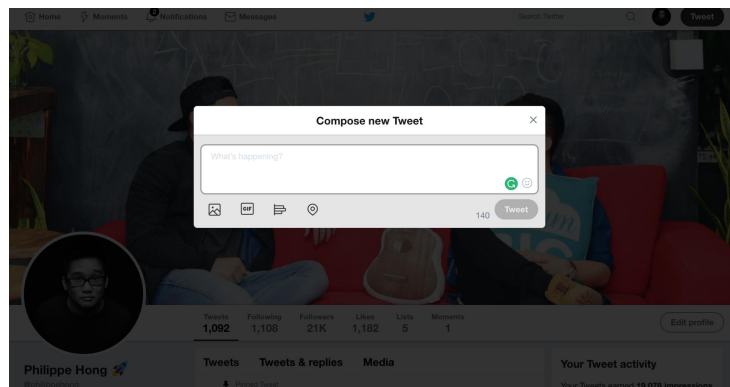
**TYPOGRAPHY**
- ▶ Typography is very important in design; it can alter the perception of your visitors.
- ▶ Using a serif and sans-serif font can literally change the feeling of a website.

**Choosing a font that connects your brand**
- ▶ The typography you choose will give the user an idea of who and what your brand is about. There are essentially three different categories of typefaces: serif, sans-serif, and script.

- ▶ **Serif fonts.** A serif typeface is easily recognizable by the little lines or strokes that extend from letters.
- ▶ The mood associated with serif typefaces is often classic, romantic, elegant, formal, and established.
- ▶ Some famous serif typefaces include Times New Roman, Baskerville, Georgia, and Garamond.

**Sans-serif**
- ▶ Sans serif typefaces are often considered more modern than serif typefaces.
- ▶ The mood associated with Sans serif typefaces are more clean, friendly, minimal, or modern. Some of the most famous sans serif typefaces are Arial, Helvetica, Futura, or Gotham.
- ▶ Gotham Typeface was very popular in the late 2000s.

**Casual scripts**
- ▶ These typefaces are designed to suggest informality as if they were written quickly.
- ▶ Many times they appear to have been drawn with a brush.
- ▶ They can represent emotion, speed, and familiarity. They are not great for body content but can act as a very good headline to sell an emotion.

**Don't use too much typeface**
- ▶ Recommend using one to three different typefaces, but no more.
- ▶ Playing with a Serif as a headline and a Sans serif as a body of text is a good pairing.
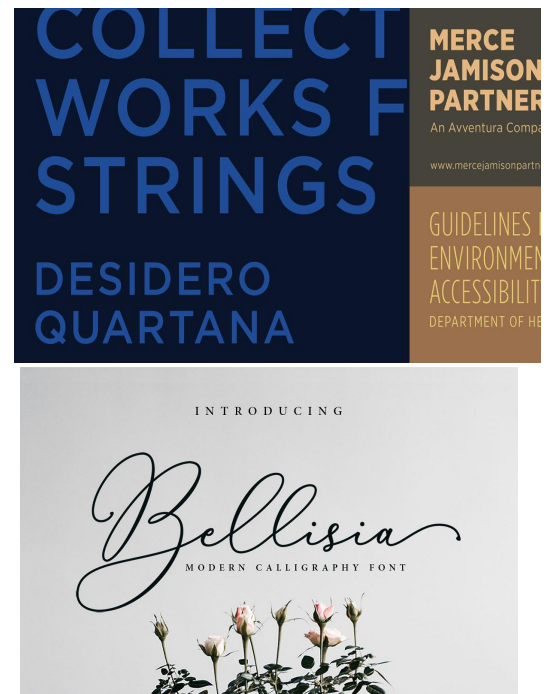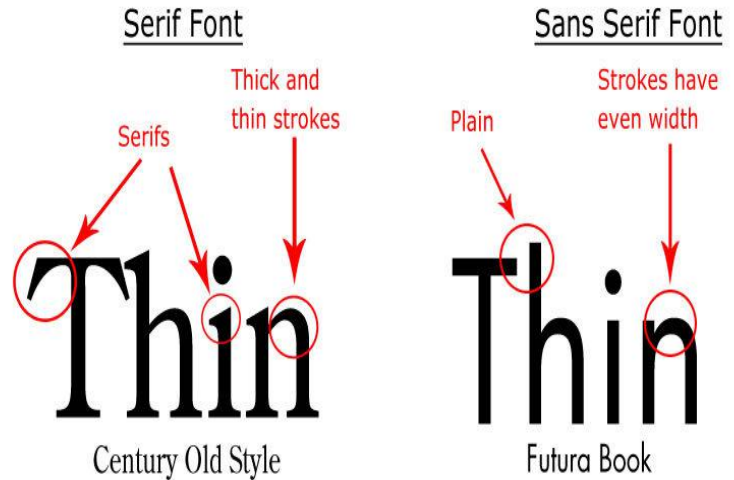
GOOD COMBINATION
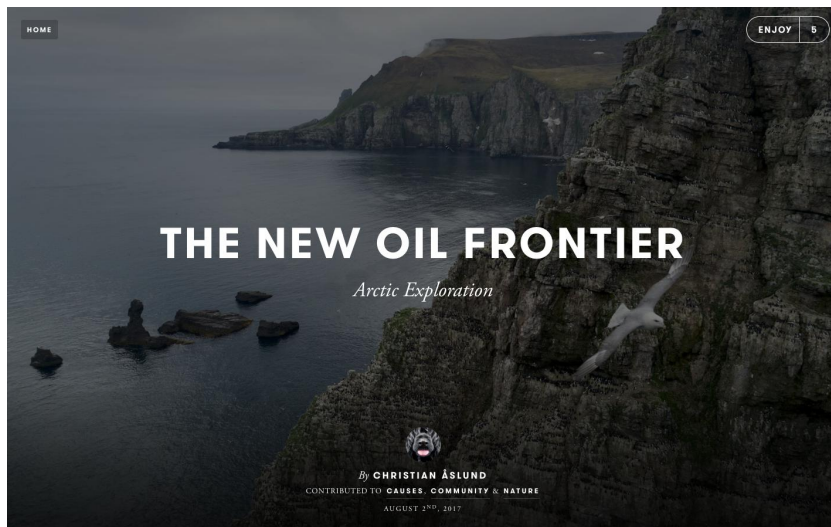
Different ways to add fonts to your website

- ▶ You can either use your own font and use a font generator to generate fonts that are compatible with your browsers. Recommend https:// www. fontsquirrel.com/ .
- ▶ You can also use Google fonts, which are free to use: https:// fonts. google.com/

**COLORS**

- ▶ Colors have an enormous importance in web design.
- ▶ According to Kissmetrics, when you view a color, your eyes communicate with a region of the brain known as the hypothalamus, then, in turn, it will send a signal to the pituitary gland and finally to the thyroid gland.
- ▶ This signals the release of hormones that cause fluctuation in mood, emotion, and resulting in behavior
- ▶ Also from Kissmetrics, research has shown that it takes just 90 seconds for a site visitor to form a judgment or opinion.
- ▶ Further to that, 62-90% of that interaction is determined by the color of a product alone.
- ▶ You should now understand why colors are extremely important and why it's crucial to choose them in the right way, at the right time, with the right audience, and with the right purpose.
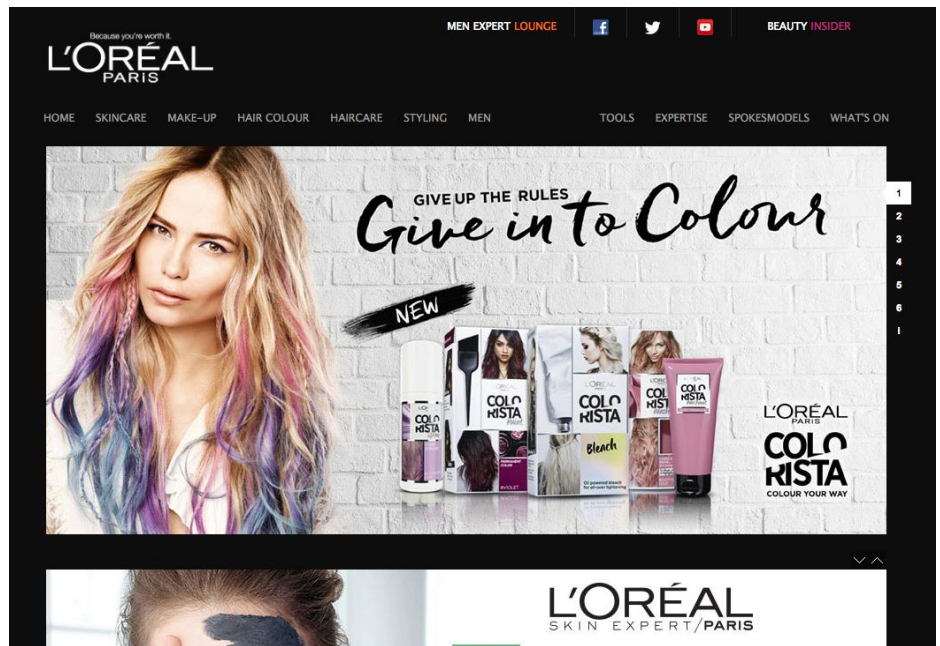
**What colors mean**

- ▶ **Yellow:**
  - ▶ In-your-face yellow should be used with caution
  - ▶ Men find it distasteful
  - ▶ Kids love it
- ▶ **Orange:**
  - ▶ The new red, warm without danger
  - ▶ Associated with energy (drinks, sports, fitness)
  - ▶ Kids love it too
- ▶ **Red:**
  - ▶ Prompts action, increases breathing, and pulse
  - ▶ Symbolizes passion and is ideal for fashion/makeup brand, dating, and food.
- ▶ **Purple:**
  - ▶ Luxury, elegance, and femininity
  - ▶ Spans a large female demographic and has no negative associations
- ▶ **Black:**
  - ▶ Classy, conventional, corporate
  - ▶ Excellence and formality
- ▶ **Green:**
  - ▶ Mature, green promotes well-being
  - ▶ Ideal for health products, ethical campaigns
  - ▶ Lighter greens denote innovation and fresh ideas
- ▶ **Blue:**
  - ▶ Popular blue suggests intelligence and serenity
  - ▶ Darker blues are associated with luxury products
  - ▶ Lighter blues are for refreshing products and ideas
  - ▶ Suppresses appetite, so not good for food
- ▶ **Pink:**

- ▶ Good old stereotypical pink
- ▶ Often over-used to attract the attention of female users
- ▶ Anything girly and baby-related
- ▶ It's also known to stimulate the sweet tooth
- ▶ **White:**
  - ▶ Pure, cool, calm, and modern
- ▶ **Brown:**
  - ▶ Most people avoid this color
  - ▶ Disliked by men
  - ▶ Evokes nature
  - ▶ Denotes dependability

## USABILITY
- ▶ Usability is simply the attribute that defines how easy the user interface is to use. It's generally measured with five components:
- ▶ **Learnability**: How easy is it for the user to achieve basic tasks when landing on the website?
- ▶ **Efficiency:** After learning, how efficient is it for the user to redo the tasks or achieve other tasks?
- ▶ **Memorability:** How easy is it for the user, after not using the website for a while, to return, and use the website again at proficiency?
- ▶ **Error-tolerant:** How easy is it for the user to recover from errors?
- ▶ **Satisfaction:** How pleasant and satisfying is it to use the design?

## Simplicity
- ▶ Adding unnecessary elements that don't serve any functional purposes will inevitably affect the visitors.
- ▶ The famous quote of the architect:
- ▶ *"Less is more"-Ludwig Mies van der Rohe* is quite accurate to some point.

## Navigability
- ▶ On the continuity of simplicity, having an intuitive navigation is crucial for a good user experience.
- ▶ Don't make the user think. Try to put yourself as the end user and make the navigation as pain-free as possible.
- ▶ Doing some testing with your friends or family is always a good idea.

**Here are some quick tips for a good navigation:**
- ▶ Keep the main navigation simple, somewhere on the top is good.
- ▶ Don't forget a navigation in the footer for large websites (people use the footer navigation a lot).
- ▶ Include a search box (we discussed earlier as to why).
- ▶ Don't make your navigation too complex. Categorize items, but don't go too deep.
- ▶ Links should be obvious, underlined, in bold, or in a different color, but they should always stand out from the content.

## Accessibility
- ▶ If your website takes more than three seconds to load, you need to look at optimizing your website.
- ▶ Users nowadays are lazy and impatient. With a world of internet, where everything is fast and easy to access, you need to make your website as accessible as possible.

**Here are a few of the basics of availability and accessibility:**
- ▶ **Uptime**: Make sure that your website is not down or have any errors when loading it. Invest in a good hosting.
- ▶ **Broken links**: Make sure that there are no dead links. Users shouldn't land to a 404 page. A good practice is to redirect the user to a new page if the link is unreachable.

▶ **Website responsiveness**: Make your website available for every screen and support different layouts according to the resolution.

AMAZON

▶ A good example of good accessibility is Amazon. Their website is accessible from anywhere and they have no downtime whatsoever, mainly because they are a hosting company as well.
▶ But if you look more closely, their website is responsive in both desktop and tablet, which adapts when resizing.
▶ And for mobile, they have an Adaptive website, with a different and cleaner layout, more adapted to a small resolution.
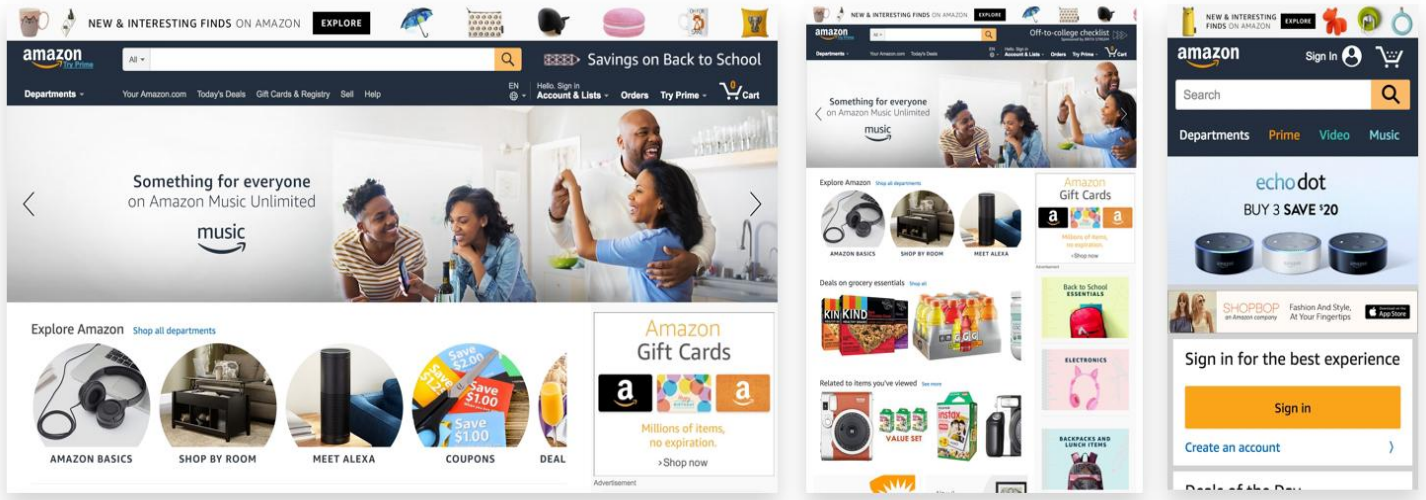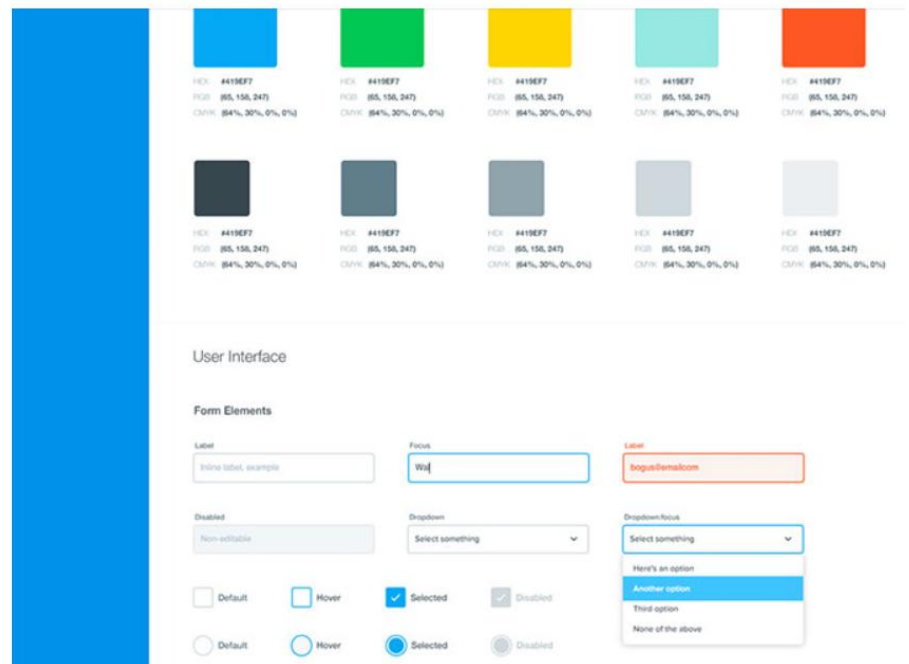


**Consistency**

▶ Consistency is by far one of the key components of a good website.
▶ It will bring the last piece of your puzzle for a great website or application. Consider an example of when you want to find your keys, but you know they are always in the same place, you don't have to think.
▶ But if you don't find it, you'll start to stress out trying to find it. Websites are the same for users. You don't want them to learn each time they come to your website.
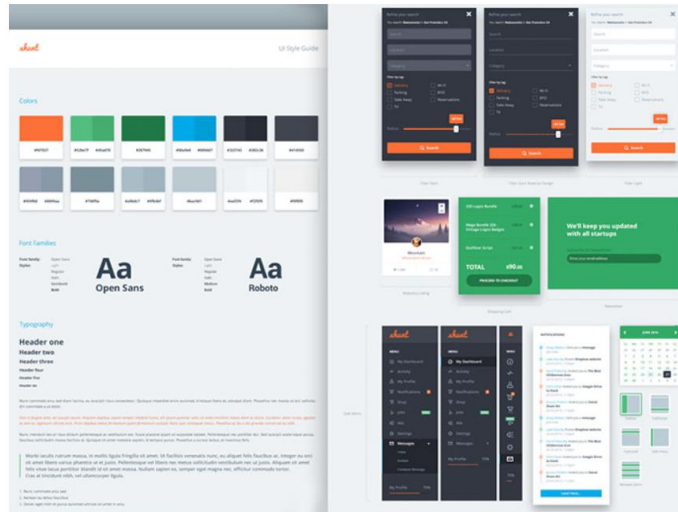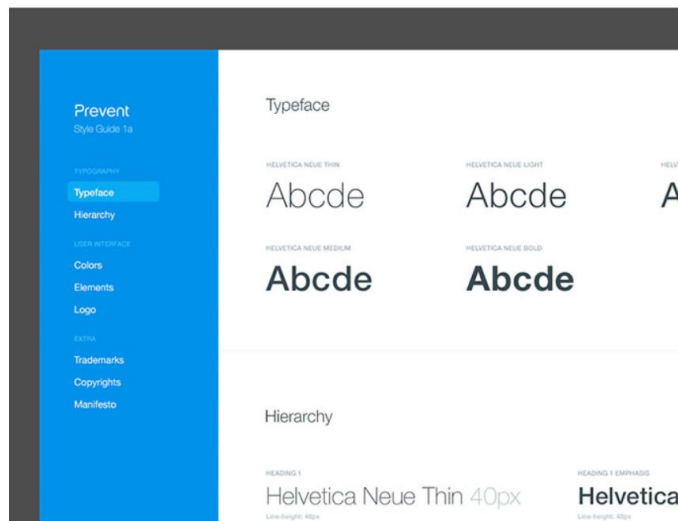
**So, how can we be consistent?**

▶ **Design.**
▶ Your design should be consistent, which means that every element you create such as links, buttons, inputs, or titles should follow a design identity of your own.
▶ Users remember the details whether consciously or not, so they will recognize a link because of its specific colors or shapes.



15

UI Style Guide



Typeface and hierarchy



▶ **Content**
▶ Not only does the visual aspect have to follow consistency, but so does the content. The mood and tone used on the website have to reflect the brand. If you are a corporate website selling to businesses, your website content should both look and feel very professional.
▶ **Interactions**
▶ interaction has to be consistent throughout the website. How the website is responding to a user's interaction should always be consistent and remain the same.
▶ For example, when opening a file on Dropbox, the back button is always situated in the top-left position so that the user doesn't have to look for it again and re-learn your interface.

Reference:
▶ The content of this lecture was prepared by Prof. Mary Grace G. Ventura
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