

CSC 473: Website Design

Lecture 4 - UI



Questions?

- Pin the jira, github, postman links to your project in your slack channel
- Any questions about the last lecture or HW?
- There are only a few teams using GeekBot. What's going on?
 - This is part of your Agile grade on your final project rubric!

What are some properties of websites you like?

What makes you go back to a site/app?

What makes you go delete an app?

Human Computer Interaction

Human-Computer Interaction (HCI)

Human-computer interaction studies the communication between a human and a machine

User satisfaction is paramount

HCI Factors

- Communication
 - How does the user communicate with your website? Read, write, navigate, listen, watch, etc
- Graphic design
 - Visual communication and problem-solving through the use of typography, photography, iconography and illustration
- Linguistics
 - Language form, meaning, and context.
 - Are you conveying information clearly?
- Social sciences
 - Individuals' relationship to their societies, the consequences of difference, and other aspects of human social action.
 - What's your user's relationship to your website?
- Cognitive psychology
 - Attention, language use, memory, perception, problem solving, creativity, and thinking
- Social psychology
 - How the thoughts, feelings, and behaviors of individuals are influenced by the actual, imagined, and implied presence of others

Poor Design

Are you trying to change common/ingrained behavior?

Is there a large learning curve to use your system?

Is your communication confusing? Are you clear, concise, & consistent?

Bad HCI can cause unintended consequences.

- Nuclear meltdown
- Crashing planes
- User deletes your app

UI/UX

What are they?

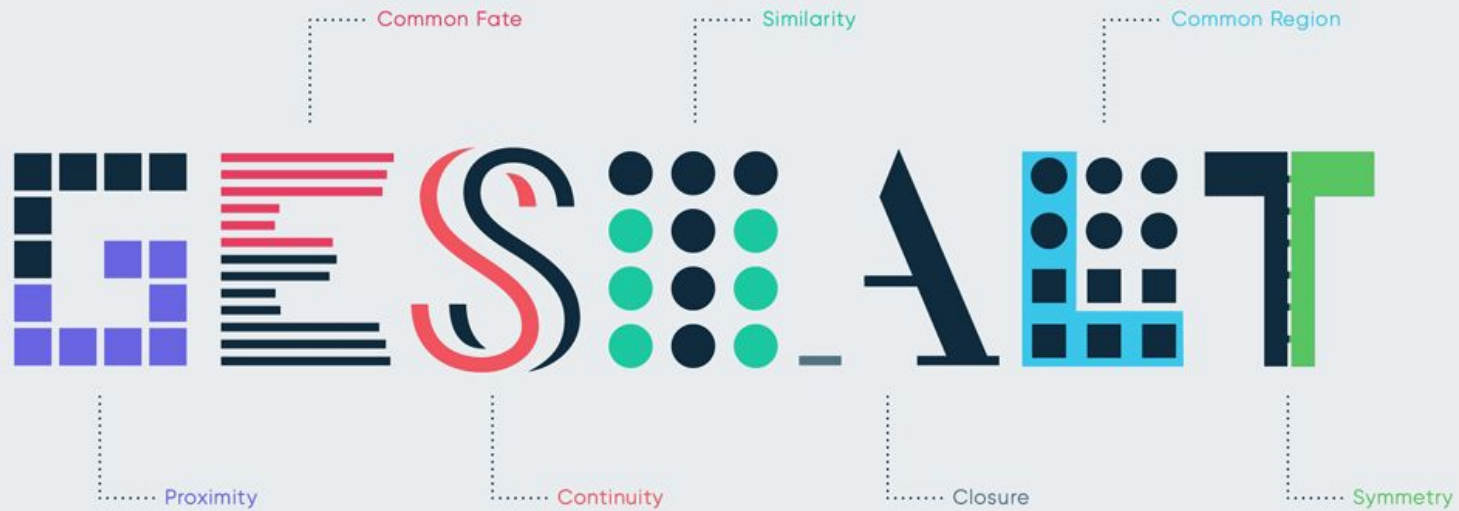
UI/UX

UI - User Interface

UX - User Experience

User Interface

Everything that the user can see and interact with. The point of human-computer interaction.



Gestalt principles - UI

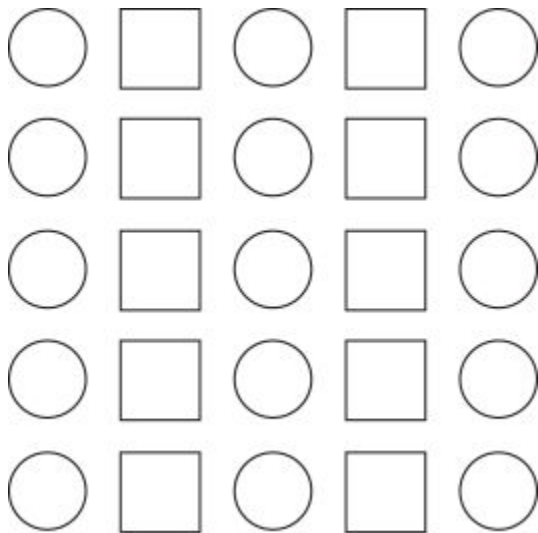
Our minds group and organize elements in predictable ways

- Proximity
 - Group elements when they are close to each other
- Similarity
 - Group elements that look like each other
- Continuity
 - Group elements that are aligned with each other
- Symmetry
 - Made up of exactly similar parts facing each other or around an axis
- Closure
 - The status of tasks. Whenever a product needs a little more time to complete a task, loaders inform us that the product is still working in the background
- Common Region
 - Group elements when they are located within the same closed region
- Common Fate
 - Objects are perceived as lines that move along the smoothest path

Similarity

What are the groups?

Shape

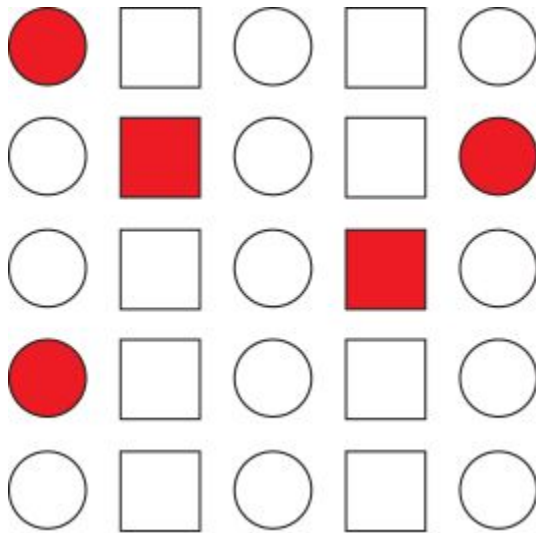


Similarity

What are the groups?

Similarity is particularly affected by color and can *override* other attributes

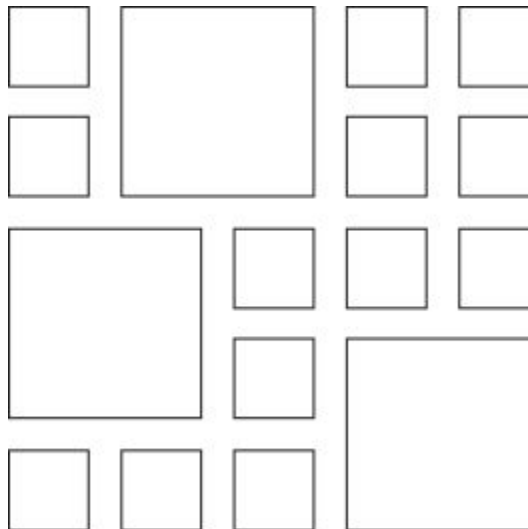
Here override the example of similarity in shape by adding color



Similarity

What are the groups?

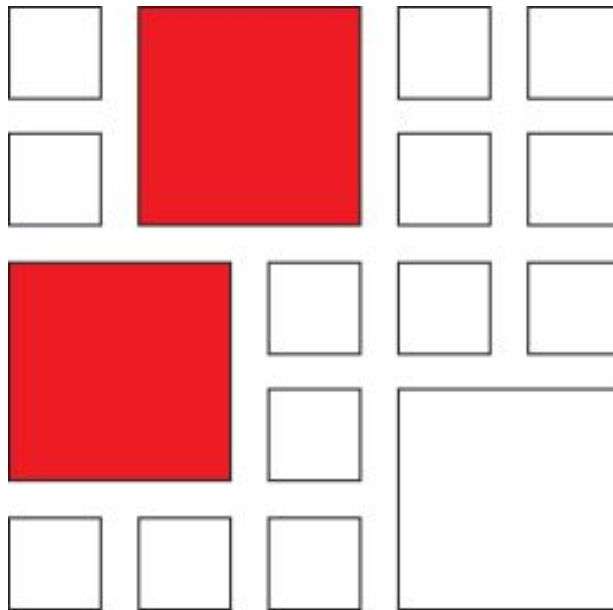
Size



Similarity

What are the groups?

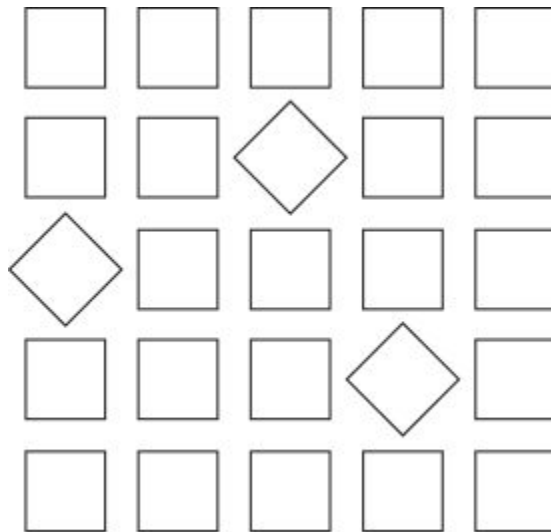
Here color overrides size



Similarity

What are the groups?

Orientation

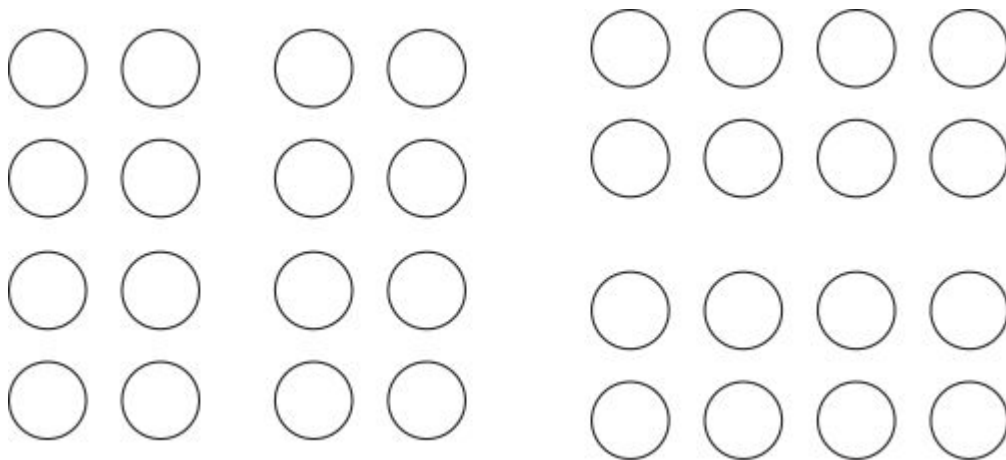


Similarity

- Color
- Shape
- Size
- Orientation

Proximity

What are the groups?



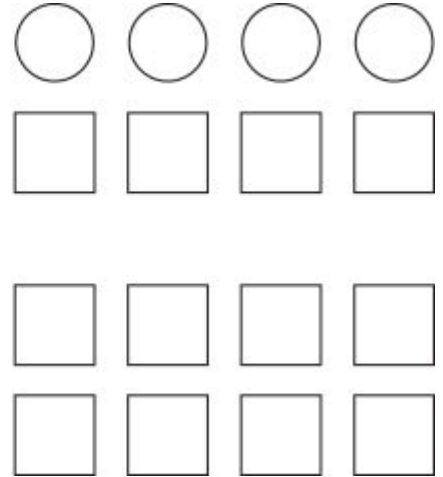
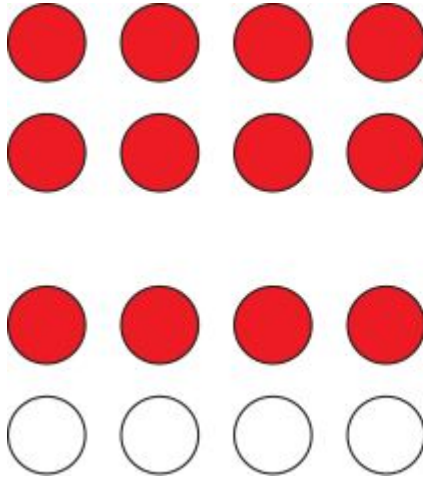
White space

Proximity

What are the groups?

Proximity overrides similarity principles
of color & shape


Each grouping is still perceived as a
separate element.



Proximity

What are the groups?

SHIPPING TO: SWEDEN
STORE LOCATOR



BACK TO SHOP > SHOPPING BAG > CHECKOUT > CONFIRMATION

Checkout


SHIPPING DETAILS

Daniel Hecker
Vasagatan 16
111 20 Stockholm
Sweden


daniel@bambara.com

PAYMENT DETAILS

NAME ON CARD
Daniel Hecker


CARD NUMBER
4534 5555 5555 5555 


VALID THROUGH
06/19


CVC CODE
20 

PURCHASE \$37.00 SEK

YOUR ORDER [EDIT SHOPPING BAG](#)

 EC-GO Bag Standard 1 Week Subscription 2 179 SEK

 EC-GO Low Sugar Bag 2 Week Subscription 3 179 SEK

 EC-GO Tryout Bag 2 Week Subscription 2 179 SEK

Subtotal 537 SEK

Shipping 0 SEK

Total 537 SEK

[ADD GIFT CODE](#)

SHIPPING TO: SWEDEN
STORE LOCATOR

1



[BACK TO SHOP](#) > [SHOPPING BAG](#) > [CHECKOUT](#) > [CONFIRMATION](#)



Checkout

2

SHIPPING DETAILS

Daniel Hecker
Vasagatan 16
111 20 Stockholm
Sweden

daniel@bambora.com

3

PAYMENT DETAILS

NAME ON CARD

Daniel Hecker

CARD NUMBER

4534 5555 5555 5555

VISA

VALID THROUGH

06/19

CVC CODE

20



PURCHASE 537.00 SEK

4

YOUR ORDER [EDIT SHOPPING BAG](#)



EC-GO Bag Standard
1 Week Subscription

2

179 SEK



EC-GO Low Sugar Bag
2 Week Subscription

3

179 SEK



EC-GO Tryout Bag
2 Week Subscription

2

179 SEK

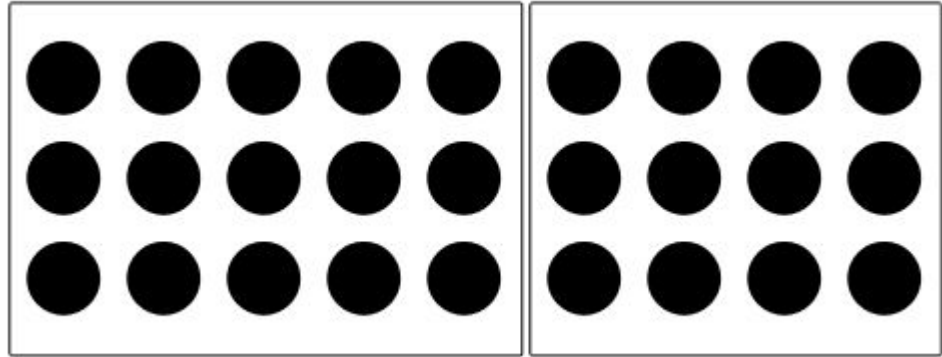
Subtotal	537 SEK
Shipping	0 SEK
Total	537 SEK

[ADD GIFT CODE](#)

Common Region

What are the groups?

Adding borders or other visible barriers creates a separation between groups of objects—even if they have the same proximity, shape, color, etc



Similarity, Proximity & Common Region

Grouping by proximity can also be combined with similarity to create stronger relationships.

Grouping by proximity and similarity in size causes us to perceive two separate groupings

Assigns more prominence to the left group

Best Sellers in Books

1. +



Go Set a Watchman: A Novel
by Harper Lee
Release Date: July 14, 2015
Hardcover
\$14.52

2. +



Humans of New York: Stories
by Brandon Stanton
Release Date: October 13, 2015
Hardcover
\$15.70

3. +



Grey: Fifty Shades of Grey
as Told by...
by E. L. James
★★★★★ (3,780)
Paperback
\$9.99
103 used & new from \$6.13

4. +



The Life-Changing Magic of
Tidying Up...
by Marie Kondo
★★★★★ (3,530)
Hardcover
\$10.60
133 used & new from \$9.41

5. +



Secret Garden: An Inky
Treasure Hunt...
by Johanna Beal
★★★★★ (1,109)
Paperback
\$10.75
66 used & new from \$9.20

6. +



All the Light We Cannot See
by Anthony Doerr
★★★★★ (14,387)
Hardcover
\$13.92
131 used & new from \$10.20

More to Explore in Books

Hot New Releases

See Top 100



Go Set a
Watchman: A
Novel
Hardcover
\$14.52



Humans of New
York: Stories
Hardcover
\$15.70



Grey: Fifty
Shades of
Grey...
Paperback
\$9.99

Best Sellers of 2015 (So Far)

See Top 100



StrengthsFinder
2.0
Hardcover
\$15.44



The Life-Changing
Magic of...
Hardcover
\$10.60



The Girl on the
Train
Hardcover
\$13.47

Movers & Shakers

See Top 100



Ravishing
America
Hardcover
\$21.99



Charles Kuralt's
America
Paperback
\$14.02



Charles Kuralt's
America
Hardcover

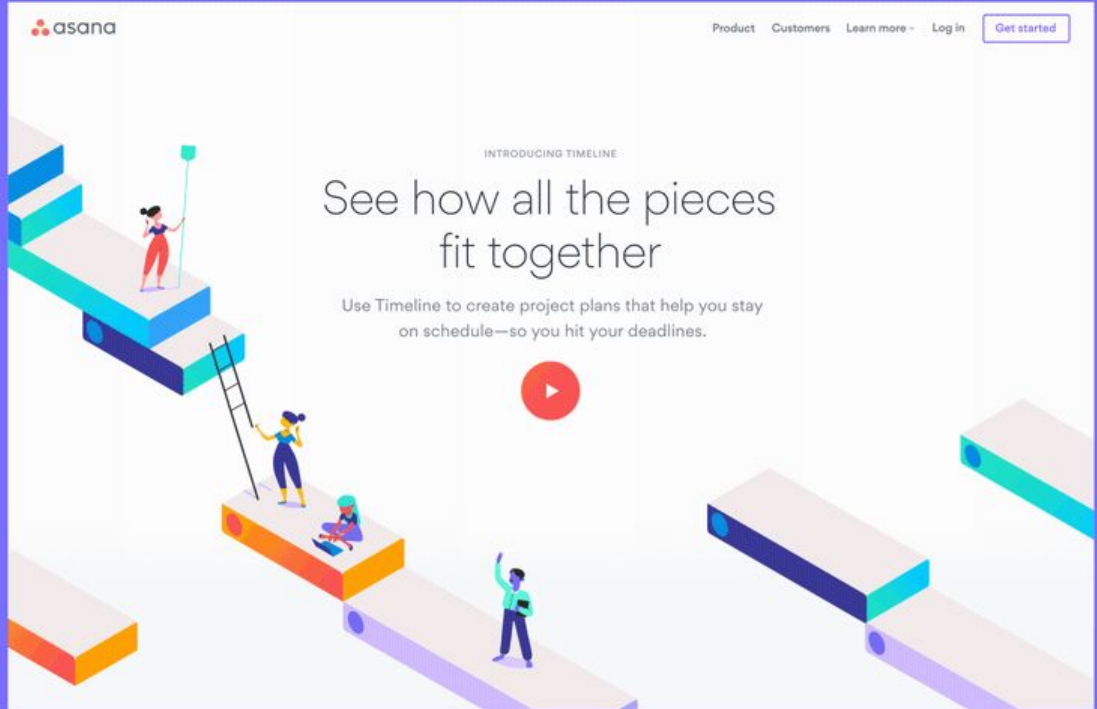
Continuity

What are the groups?

Your eyes like to travel along lines.

Our mind has a tendency to follow paths and group elements that are aligned with each other.

Elements that are arranged on a line or curve are perceived to be more related than elements not on the line or curve



Continuity

Customers Who Bought This Item Also Bought

Page 1 of 20





Crossing the Chasm, 3rd Edition: Marketing and Selling Disruptive Products
by Geoffrey A. Moore
★★★★★ 72
Paperback
\$12.35 ✓Prime



The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Build a Successful Business
by Eric Ries
★★★★★ 1,062
Hardcover
\$16.66 ✓Prime



The Innovator's Dilemma: The Revolutionary Book That Will Change the Way You Do Business
by Clayton M. Christensen
★★★★★ 209
#1 Best Seller in Industrial Management...
Paperback
\$10.06 ✓Prime



The Innovator's Solution: Creating and Sustaining Successful Growth
by Clayton M. Christensen
★★★★★ 22
Hardcover
\$18.33 ✓Prime



How Will You Measure Your Life?
by Clayton M. Christensen
★★★★★ 583
Hardcover
\$15.86 ✓Prime



Closure

Since a whole is easier to process than multiple parts, we'll fill in the gaps or connect the dots to complete implied shapes or images


The lines never really touch each other and yet we see a circle




Common Region

Example from Facebook





Comments, likes, and interactions are associated with this specific post—and not the other posts surrounding it



**Houzz**
Yesterday at 5:30am ·

11 Things You Didn't Think You Could Fit Into a Small Bedroom
<http://bit.ly/21k8NvI>








11 Things You Didn't Think You Could Fit Into a Small Bedroom
Clever designers have found ways to fit storage, murals and even chandeliers into these tight sleeping spaces
[WWW.HOUZZ.COM](http://www.houzz.com)


 Like  Comment  Share 

  157 [Top Comments](#)

33 shares




**Frankie Sez** Really great ideas for the 'minimalist' in some of us...
Like · Reply ·  2 · Yesterday at 5:42am

**Country Mountain Homes** Space for books is a must!
Like · Reply · Yesterday at 10:07am


[View 2 more comments](#)

Altogether


What are the groups?

SALON NEWS POLITICS ENTERTAINMENT LIFE TECH BUSINESS SUSTAINABILITY INNOVATION    [Sign In](#)


TOP STORIES | MOST RECENT



You cheat, you pay: How new contracts are changing love and religion forever
Love and contracts aren't strange bedfellows at all -- and sometimes it's the deals we make that keep us together
MARTHA M. ERTMAN
MONDAY, MAY 25, 2015 05:00 PM CDT
LIFE LOVE AND SEX, BOOKS, THE LAW




The right's big history lie: Reagan, Disney, Vietnam and the war to redefine America
The battle over history is the battle to define America's story. This Memorial Day, it is more important than ever
ANDREW HARTMAN
MONDAY, MAY 25, 2015 11:00 AM CDT
NEWS BOOKS, CULTURE WAR, RONALD REAGAN




The Republican campaign to destroy the poor stoops to a new low
The party of the rich is now doing everything in its power to make sure those without money live in misery
HEATHER DIGBY PARTON
MONDAY, MAY 25, 2015 06:58 AM CDT


MOST READ




Taylor Swift is not an "underdog": The real story about her 1 percent upbringing that the New York Times won't tell you
SCOTT TIMBERG




The greatest temper-tantrum ever: President Obama's reaction to this child's Red Room meltdown is priceless
SALON STAFF




Glenn Greenwald, I'm sorry: Why I changed my mind on Edward Snowden
HOOBING CARTER III




7 ways Bernie Sanders could transform America
MATTHEW ROZLA, THE DAILY DOT




7 nauseating ways Josh Duggar fans are defending his admitted sexual "sins"
RACHEL KRAMER BUSSEL



Rebel Wilson lied to us about her age and history because we asked her to
COLIN GORENSTEIN



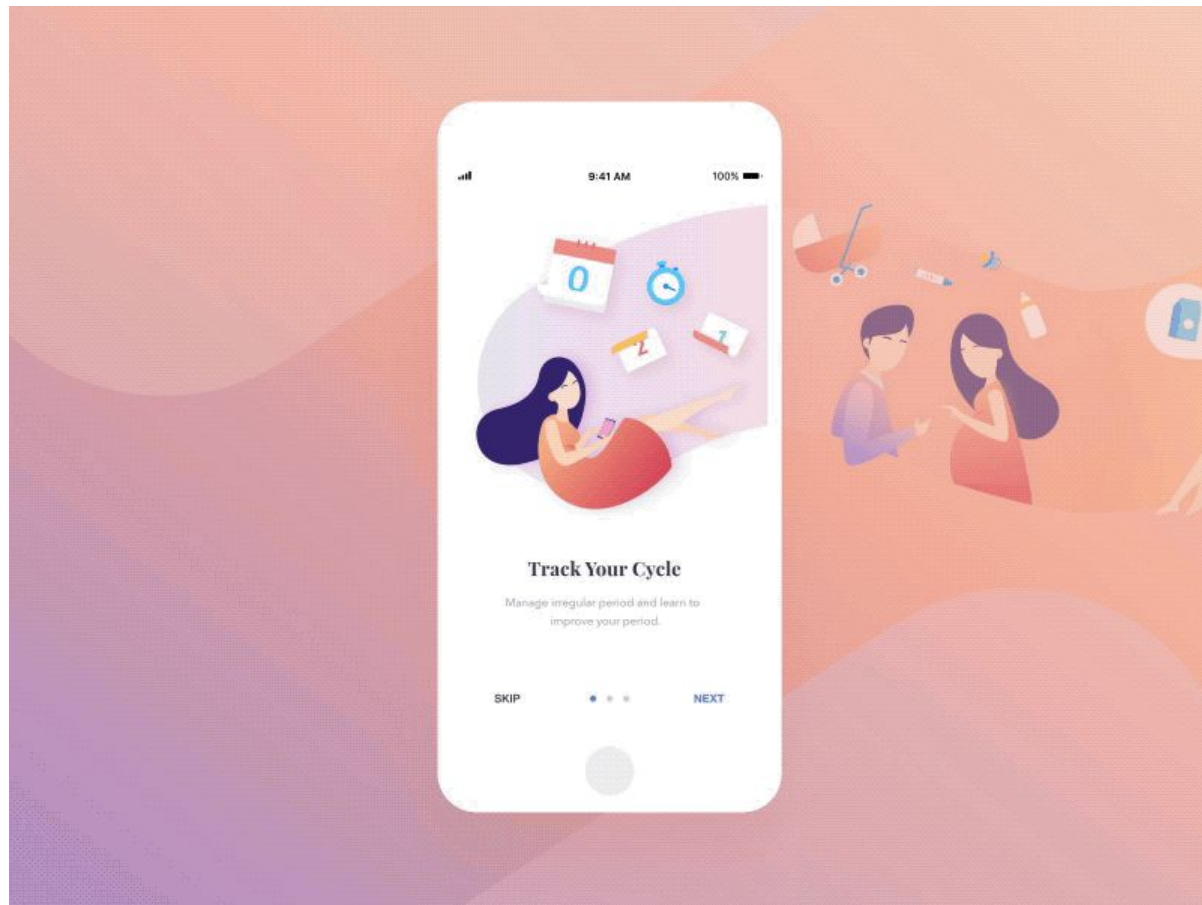
7 times women shut down sexist reporters
COLIN GORENSTEIN



AUDIO: Let's revisit what Michelle Obama said about LGBT people

Altogether

What are the groups?



UI - Keep in Mind

- Color scheme
- Typefaces
- Iconography
- Layout

Responsive UI

Responsive web design responds directly to the user's behavior and environment based on screen size, platform, and orientation





SPORTS

Search within Sports



MANCHESTER UNITED ROCKED AS REAL MADRID PREPARES BID

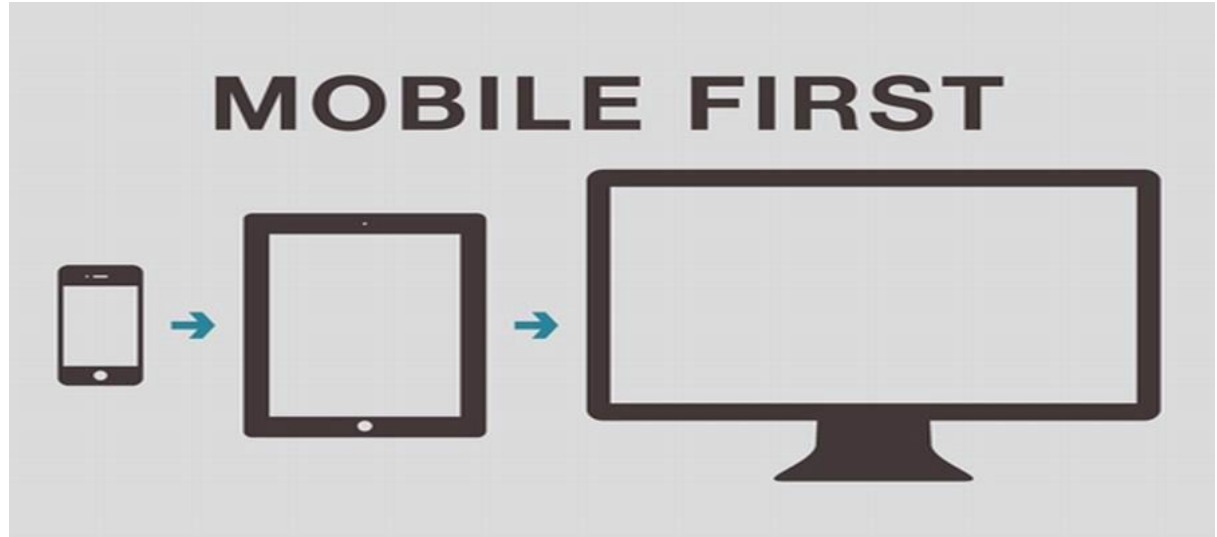
Jose Mourinho has been strengthening his squad this summer. Now, there are fears it could lose one of its star players.



Mobile First

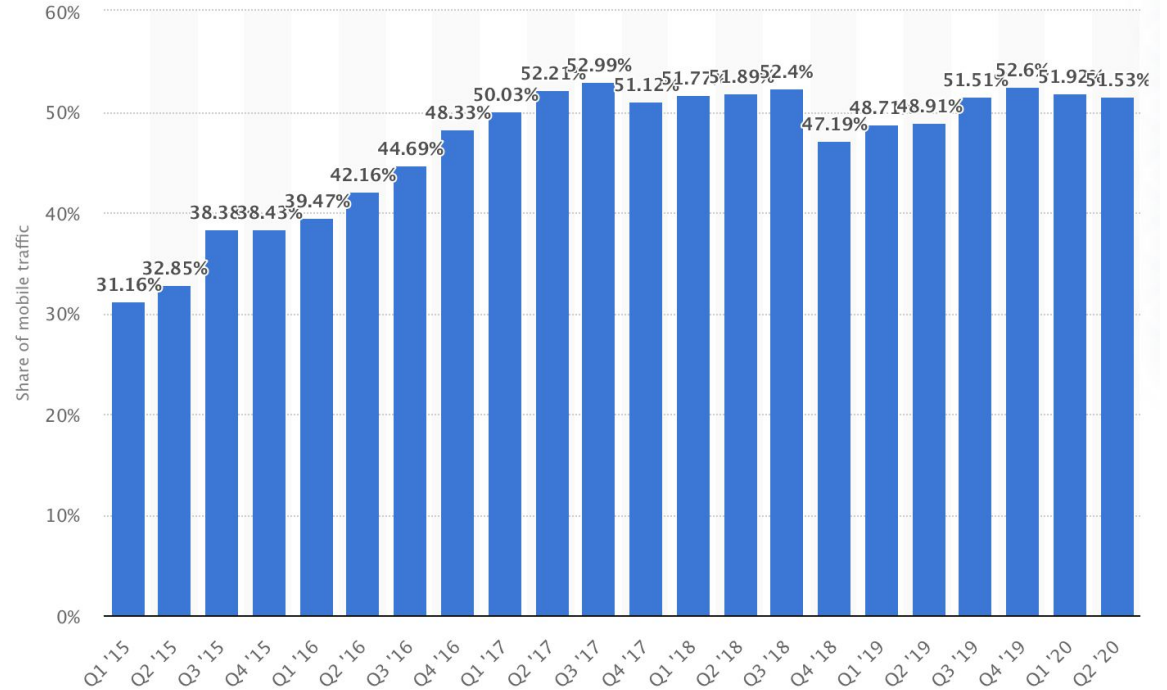
“Mobile first”, start the product design from the mobile end which has more restrictions, then expand its features to create a tablet or desktop version.

The idea is Progressive Enhancement



Mobile First

50% of internet traffic are mobile users



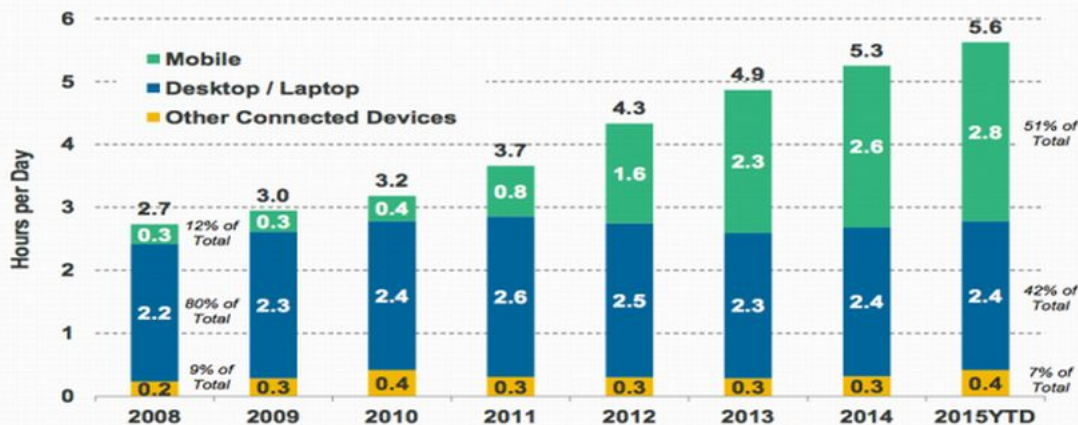
Mobile First

Mobile users spend more time on the internet

Smartphone sales have overtaken PC sales

Internet Usage (Engagement) Growth Solid
+11% Y/Y = Mobile @ 3 Hours / Day per User vs. <1 Five Years Ago, USA

Time Spent per Adult User per Day with Digital Media, USA,
2008 – 2015YTD



Wireframes

Visual guide. Represents the skeletal of a website. Mockup of a web-page or component.

Low-Fidelity: Rough sketch

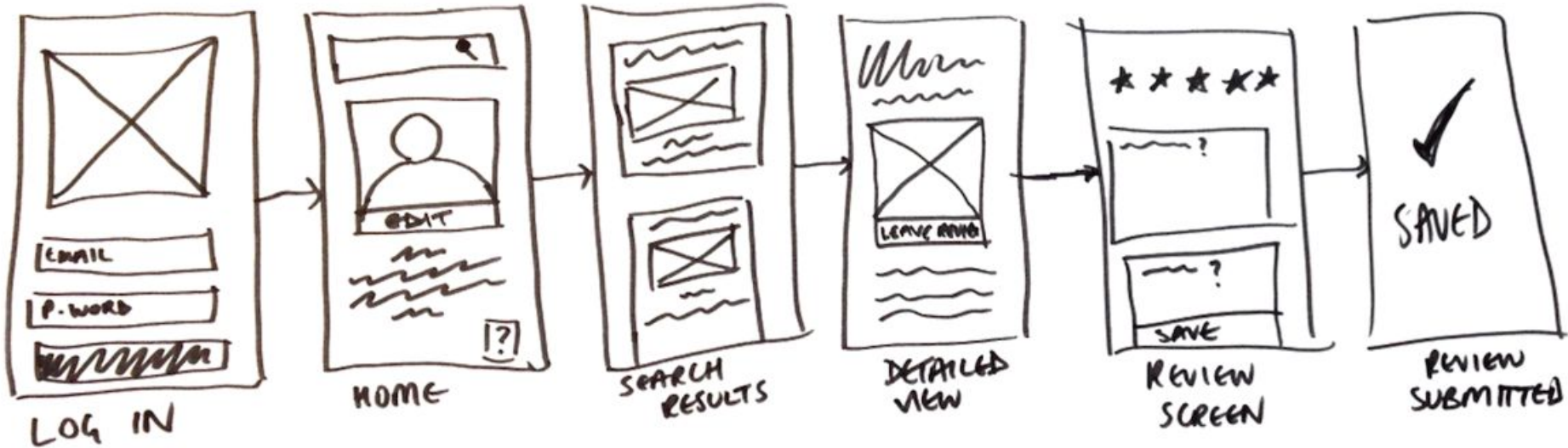
Mid-Fidelity: Between low & high

High-Fidelity: Polished image of the site

Low Fidelity Wireframe

Help a team communicate ideas and collaborate.

Abstract, using rectangles and labeling to represent content



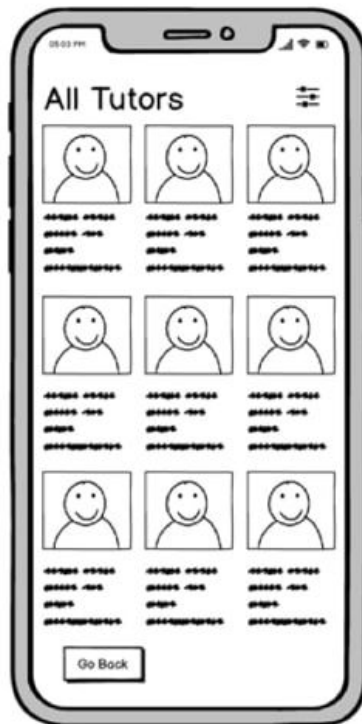
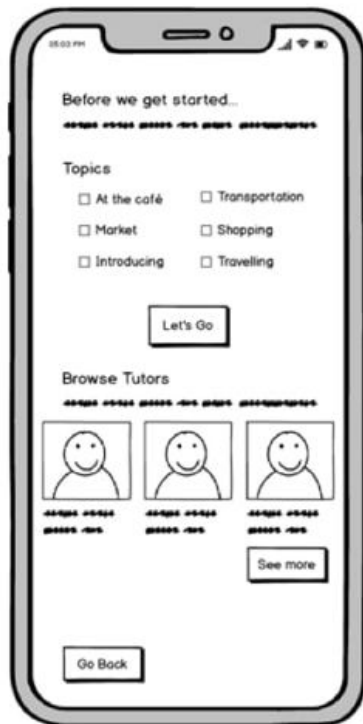
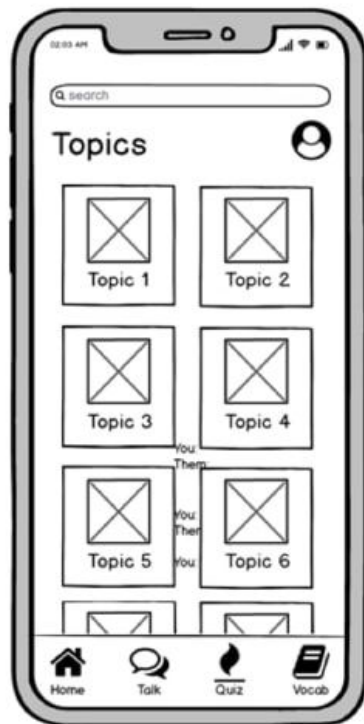
Low Fidelity Wireframe

- Fast & easy to make
- Try different ideas (layouts, etc)
- Help a team communicate ideas and collaborate.
- Abstract. Uses rectangles and labeling to represent content
- Avoid distractions such as images or typography

Mid Fidelity Wireframe

Most commonly used wireframe. Mid-fidelity wireframes feature more accurate representations of the layout

- Avoid distractions such as images or typography
- More detail is assigned to specific components
- Features are clearly differentiated from each other

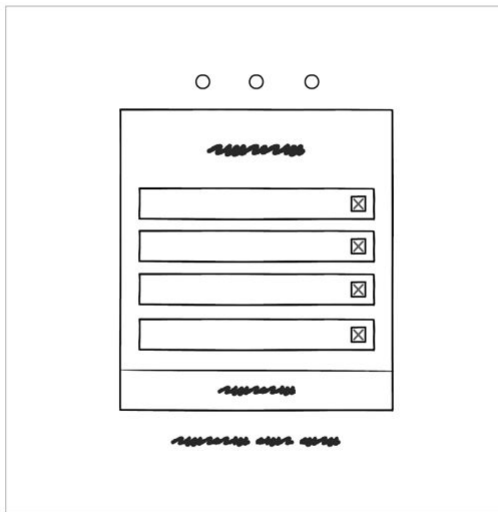


High Fidelity Wireframe

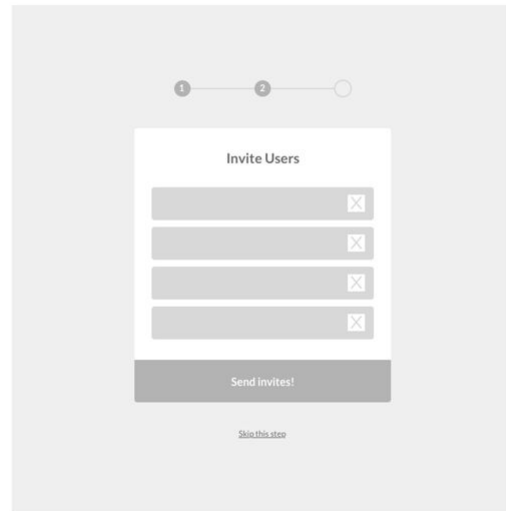
Pixel exact replica

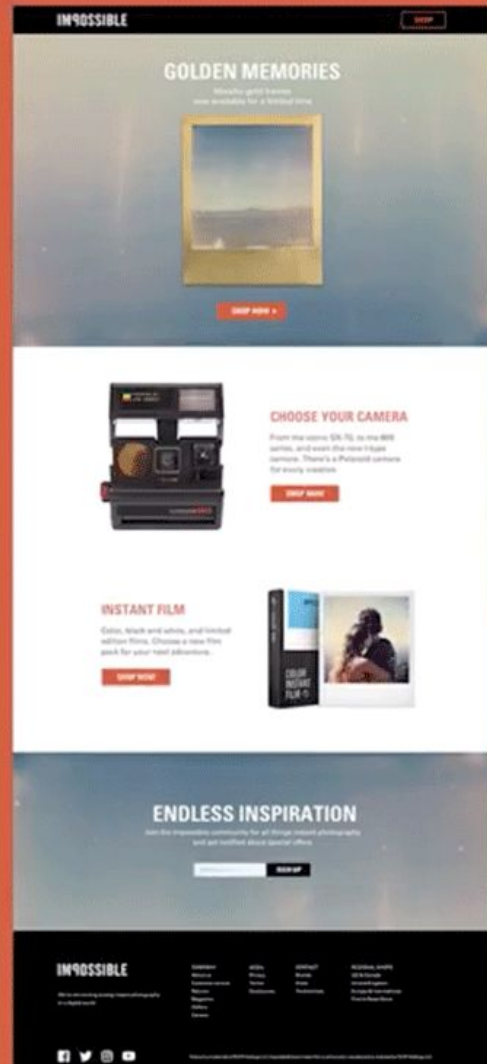
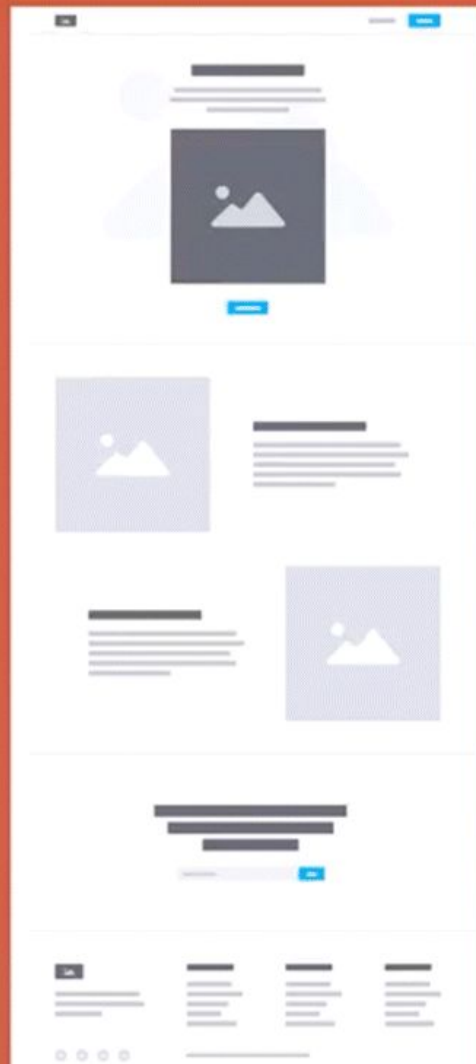
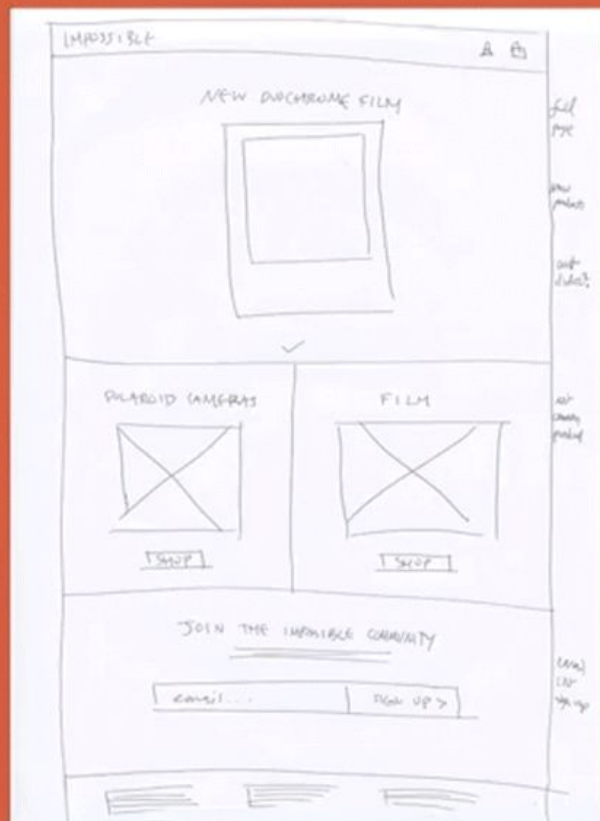
Real content, specific typography choices, and information on image dimensions

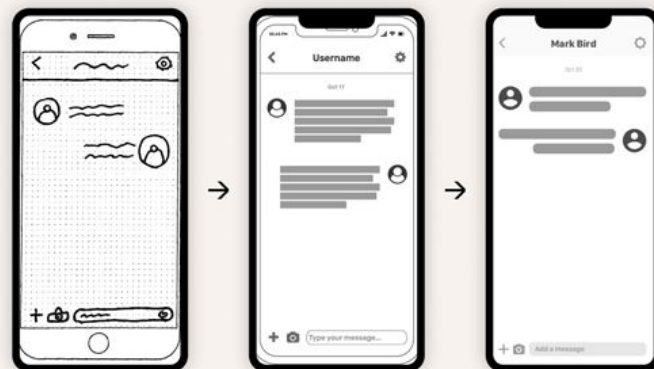
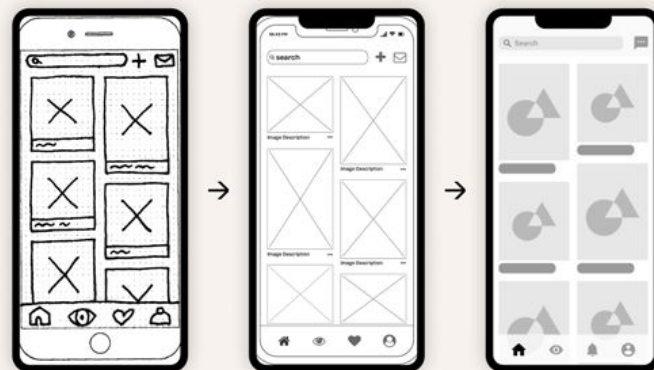
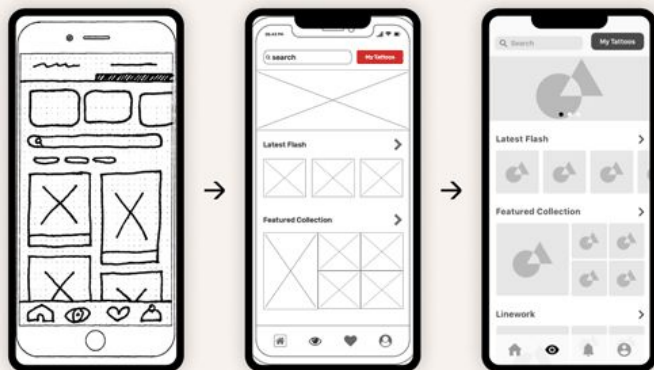
Mid-Fidelity Wireframe



High-Fidelity Wireframe







User Satisfaction

- First impressions mean everything
 - In about 50 milliseconds (0.05 seconds) users form an opinion about a website. Determines whether they like it or not, whether they'll stay or leave
 - First impressions are 94% design-related
 - In 2.6 seconds a user's eyes to land on an area of a website that most influences their first impression
 - 75% of users admit to judging a company's credibility based on their website design
- Mobile first
 - 57% of internet users say they won't recommend a business with a poorly designed mobile website
 - 85% of adults think a company's mobile website should be as good or better than its desktop version
 - 63% of all retail website visits in Q2 2018 were smartphone users

HW - Reading

[HTML/CSS/JavaScript](#) If you want to learn or practice something specific. These are very basic tutorials.

- [Intro to CSS & HTML](#) (articles), [CSS Crash Course Tutorial](#) (video)
- [Bootstrap Grid System](#)
- [A re-introduction to JavaScript \(JS tutorial\)](#)

[Bootstrap](#), [Intro to React - Tutorial](#)

HW Pt1 (Individual)

Build a checkout form. See this link as an [example](#). You should have a billing address section, shipping address section, payment section, and a cart section.

If the checkbox “Shipping address is the same as my billing address” is clicked, then the shipping address section shouldn’t appear.

Add null/empty validation to each input. Your validation can happen after users type in or on submit click.

Push your code to git (any repo) and submit the link in your HW. This should not be 1 huge commit. Commit & push small updates as you work. I will also require the code in Gradescope. It has a plagiarism detection feature.

I should be able to simply clone your repo & open your HTML file in my browser to run it. Meaning, you can use bootstrap, sass, etc, but no dependencies on webpack, node, etc.

HW Pt2 (Group Submission)

Create the wireframes for each screen of your website. I will let you choose whether you do low, mid, or high fidelity.

[Figma](#) is a great tool to create your wireframes. Here's a [learning guide](#) if you want to use it.

Submission:

Add each wireframe to your HW submission.

If you use figma, please submit the link with your HW.