HCI and Design
Today

Design patterns and components
Material Design (Google)

Basically: How can YOU create designs that look good?
Design = Solutions

Design is about finding solutions

Unfortunately, designers often reinvent things
Hard to know *how* things were done before
*Why* things were done a certain way
*How* to reuse solutions
How can codify design knowledge?

• An effective and flexible design is difficult to get “right” the first time.

• Yet experienced designers do make good designs
  • New designers (like many of you!) are usually overwhelmed by the all the design options available.

• Experienced designers evidently know something inexperienced ones don’t, what is it?
How can codify design knowledge?

• Expert designers usually do not solve every problem from first principles, they reuse solutions that have worked for them in the past.

• When they find a good solution, they use it again and again.

• How can you reuse solutions that good designers have used again and again?
  • But still make them new/yours
  • And learn how to create awesome designs at the same time
Answer: Design patterns
Web design circa 2006
Jan 2007: The iPhone is introduced
The crisis of a tiny screen

Everyone simultaneously realizes their website is completely unusable.
But Apple’s own apps worked pretty well...
iOS DEV KIT

Guidelines for plug & play UI
Apple as the benevolent dictator

An opportunity to redesign EVERYTHING from scratch...

(for a very specific device)
The resource-rich fared best

Re-make your app 10 times!

- Web
- iPhone
- iPad
- Android
- Windows Phone
- Smart TVs
- etc...
A SOLUTION
Responsive design for any screen
Adaptability also a mobile issue...

Oh Android. You so crazy.
...eventually even for Apple

No more 320x480 pixel-perfect layouts :-(

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12.9” Retina display
9.7” Retina display
7.9” Retina display
5.5”
4.7”
4”
4”
Google responds: Material Design
Material Design

Released by Google in 2014

The main purpose of material design is to create a new visual language that combines principles of good design with technical and scientific innovation.

Develop a single underlying system that allows for a unified experience across platforms and device sizes.
Material Design
Reusable components
Different devices
Buttons

- Floating action button
- Raised button
- Flat button

Icon buttons
Navigation bar
Tabs

Default app bar and fixed tab bar

Extended app bar and fixed tab bar

Fixed tab bar pinned to top with scrolled content
Cards

Top 10 Australian beaches

Number 10
Whitehaven Beach
Whitsunday Island, Whitsunday Islands

Unlimited music now
Listen to your favorite artists and albums whenever and wherever, online and offline.
LISTEN NOW

Supermodel
Foster the People

Halcyon Days
Ellie Goulding
Dialogue

Spot the <card> and the <button>!
Any app can be reduced to these basic elements.
Let’s Practice

**Goal:** Decompose an app into design patterns / components

1. Choose any popular app or website
2. Go though it and identify the different patterns/components used
3. Make a list, take screenshots, label different components
4. (If time) Compare and critique with your neighbor

**List of components:** [https://material.io/guidelines/](https://material.io/guidelines/)

**Submit:** Upload a pdf of your work to this google folder.