

# Comp 422 - Software Development for Wireless and Mobile Devices

- Semester: Fall 2016
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## Design mockups

A brief overview of options for creating mockups and prototypes.

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### Application appearance

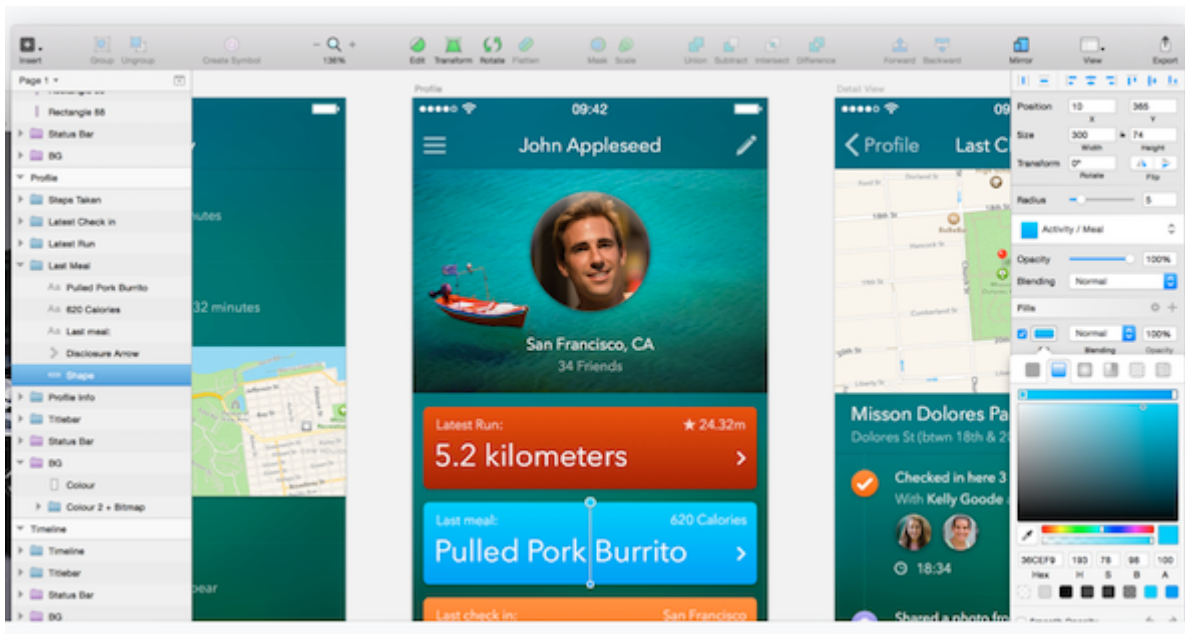
- prototype or mockup helps us plan and visualise an application's appearance and interface
  - could be high fidelity or low fidelity
  - choice often reflects state of the application and intended purpose of the mockup or prototype
    - eg: sales/funding demo vs design for development
  - perceptual difference between mockup and prototype
    - static mockups do not specify behaviour
      - rely upon additional interaction and behavioural specifications
    - prototype designed to demonstrate an application's intended behaviour
  - prototype perceived as an interactive piece of software in its own right
    - not considered fully functional, finished product
    - may only represent small components of the application
    - intended to show sample scenarios, interactions...

### Hi-Fi mockups

- intended to act as a realistic approximation of an application's design
- allows us to represent and visualise the appearance of the user interface

- often used for demonstration purposes, such as attracting funding, sales contracts...
- allows us to test colour schemes, design layouts, patterns...
- hi-fi mockups normally designed as static images with no actual interaction
- Adobe's Photoshop, Illustrator, In-Design...often popular tools for creating such mockups
  - offer detailed, relatively quick mockups to help visualise an application
- HTML, CSS...also popular options for creating quick, hi-fi mockups
  - can be used for a variety of application mockups

## Image - Hi-Fi mockup



Source - Sketch (<http://bohemiancoding.com/sketch/>)

## Hi-Fi prototypes

- prototype intended to act as an interactive application
  - not intended as fully functional application
  - a concise working simulation
- prototype intended to create a rapid, working example of functional components of an app
- code often sufficient to simulate and replicate results for a given action and scenario
  - often will not include a database or persistent data storage
  - may simply simulate and demonstrate action of saving the data
- important to create a prototype of the interface and user interaction
  - not backend logic and implementation
- prototypes normally limited in their breadth and depth of functionality
  - should not be shallow in its implementation
  - demonstrate and evaluate an app's specified details in depth

- shows careful, well-planned concept and design for each aspect of your app
- **NB:** high fidelity prototypes can be time consuming to produce correctly

## Hi-Fi prototype

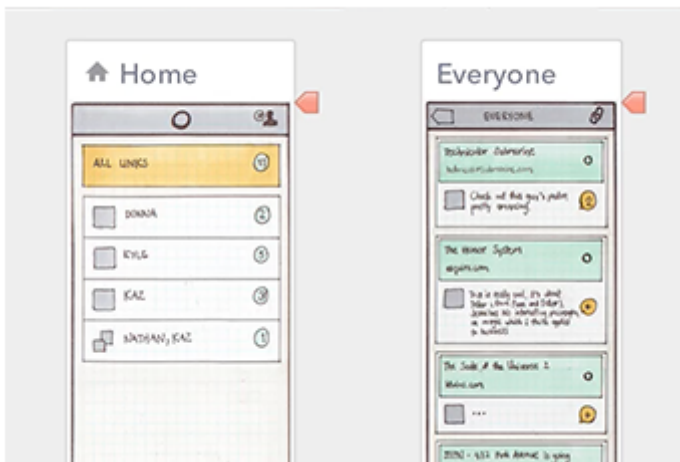
### Framer

- many examples available at the Framer website
  - OK Google (<http://framerjs.com/examples/preview/#voice-onboarding.framer>)
  - Android Lollipop (<http://share.framerjs.com/5fxd71on0mz8/>)
  - Carousel (<http://framerjs.com/examples/preview/#carousel-onboarding.framer>)
    - best demo at the moment...

## Low-Fi mockups and prototypes

- low-fi mockups often seen as a **rough sketch** or outline
- often referred to simply as **wireframes**
- their simplicity can offer an inherent utility and speed of creation
- not trying to recreate the exact look and feel of an app
- often more interested in layout of visual components and elements
  - offers a quick reference point for further development
- easily sketched on paper, or use formal tools such as
  - Adobe's Photoshop, Illustrator...
  - The Gimp - an interesting open source alternative
  - could even use a simple tool like Google Drawings
  - many mobile drawing apps as well
- inherent benefit of low-fi mockups is quick creation
  - quick to modify and update
- low-fi prototypes often seen as a series of linked low-fi mockups
  - simple interaction leads to mockup sketches
  - again, not aiming for pixel accurate representations of app

## Image - Low-Fi mockup



Source - Flinto (<https://www.flinto.com/>)

## Rapid prototyping

- provides quick examples of an application's design
  - helps promote and encourage development and iterative design
- iterative design helps encourage feedback early in the design process
  - continues throughout the design process as well
- we might consider the following as we develop our prototypes
  - consider what needs to be prototyped early and often
  - how much do we actually need to prototype at each stage?
    - consider the most common design elements and interaction
    - checking how something will work and not prototyping a full application
  - work out how different places in the app are connected
    - connection between interactions, places...
    - consider the patterns that exist within the app
    - example pathways for a user through the app to achieve a given goal
  - choose your iterations for prototypes
    - helps us avoid the temptation to prototype the whole application at once
  - different fidelity for different iterative stages
    - low-fi mockups for initial design layout and elements
    - low-fi prototypes for many initial interactions
    - hi-fi prototypes as we approach the final product

## A few example tools for mockups and prototypes

- HTML, CSS, JavaScript, Bootstrap (<http://getbootstrap.com/>)...
- Adobe Photoshop (<http://goo.gl/GsIYY0>), Illustrator (<http://goo.gl/9K8Kfw>)
- Sketch (<http://bohemiancoding.com/sketch/>)
- Proto.io (<https://proto.io/>)
- Flinto (<https://www.flinto.com/>)
- framer (<http://framerjs.com/>)

- mirror.js (<http://jimulabs.com/mirrorjs-preview/>)
  - useful for Android...
- Google Drawings (<http://goo.gl/qPRCfG>)
- XCode Interface Builder (<https://developer.apple.com/xcode/interface-builder/>)
- Apple's Keynote (<http://keynotopia.com/guides/>)
  - useful for iOS