Extra notes - Game Design and Development

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Design mockups

A brief overview of options for designing and creating mockups and prototypes.

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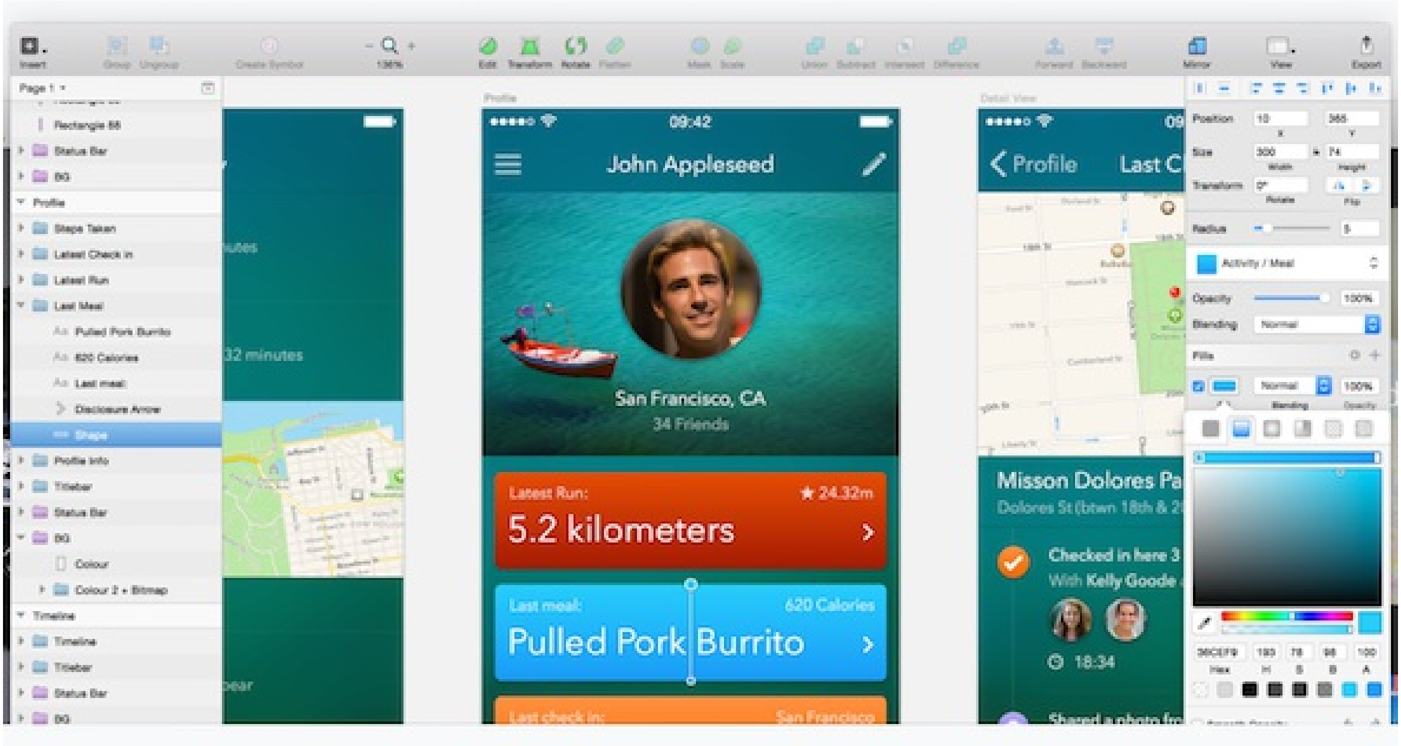
Application appearance

- 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

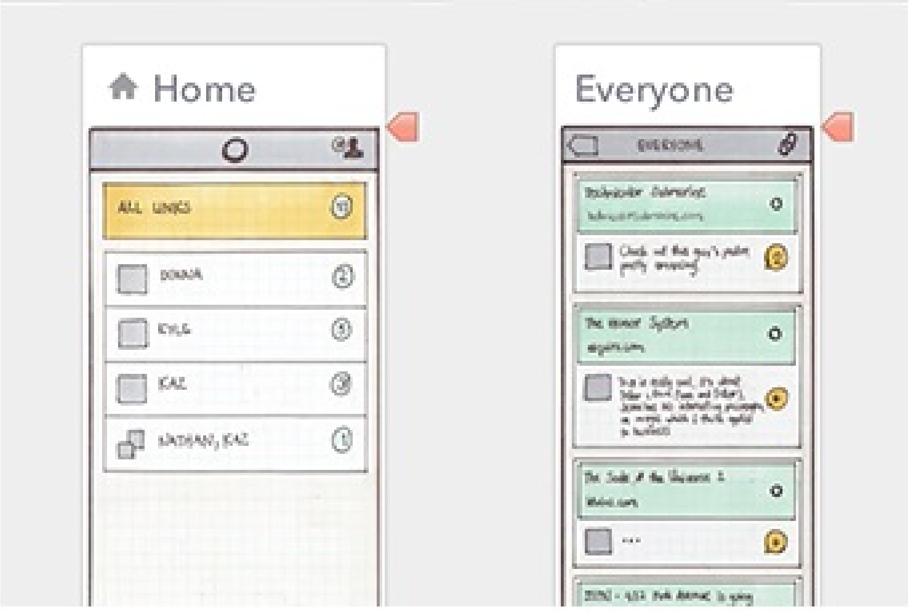
Framer

- 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