Comp 441 - Human-Computer Interface Design

Spring Semester 2016 - Week 12 Extra

Dr Nick Hayward

Human-Computer Interface Design - Mockups

A brief overview of options for creating mockups and prototypes.

Contents

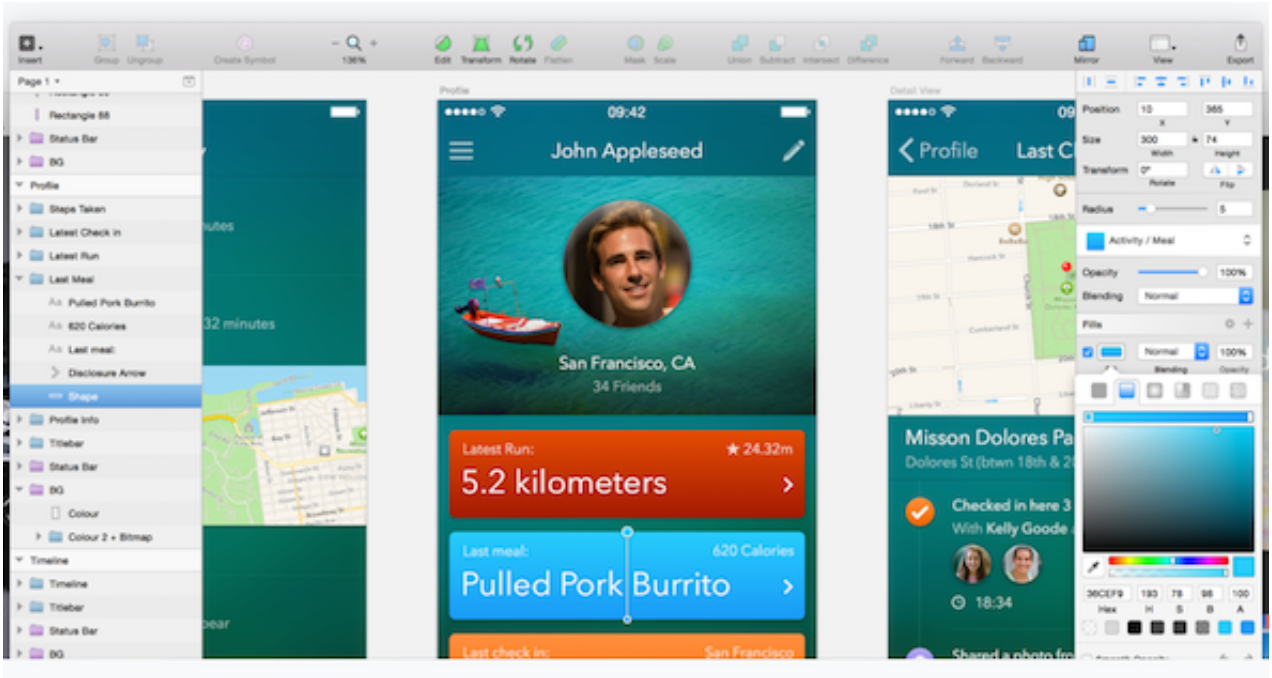
Application appearance

- 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*

Hi-Fi mockup



Source - 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*
  - *Android Lollipop*
  - *Carousel*

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*

Low-Fi mockup

Source - Flinto

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...
- Adobe Photoshop, Illustrator
- Sketch3
- Proto.io
- Flinto
- framer
- mirror.js (useful for Android)
- Google Drawings
- XCode Interface Builder