

MOBILE DEVELOPMENT

INTRO TO INTERFACE BUILDER AND STORYBOARDS

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STORYBOARDS

LEARNING OBJECTIVES

- Explain the principles of mobile design.
- Add multiple View Controllers to storyboard and link them together with segues.
- Use Navigation Controller to link scenes.

HOW IS MOBILE DIFFERENT?

OVERVIEW

- Less UI real estate
- Wide range of devices
- Touch gestures
- Usage context
- Network latency

HOW IS MOBILE DIFFERENT?

5

LESS REAL ESTATE



<https://www.kickstarter.com/projects/ocdesk/iphone-dock-for-imac-and-apple-displays-the-ocdock>

WIDE RANGE OF DEVICES



TOUCH GESTURES



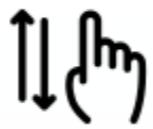
TAP



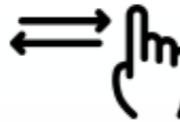
DOUBLE TAP



TOUCH & HOLD



VERTICAL SCROLL



HORIZONTAL SCROLL



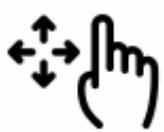
2X DRAG DOWN



2X DRAG



2X FLICK LEFT



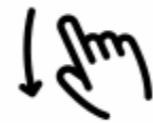
DRAG FLICK



FLICK LEFT



FLICK RIGHT



FLICK DOWN



FLICK UP



2X FLICK UP



2X ZOOM IN



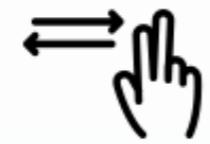
2X ZOOM OUT



2X TAP



2X DOUBLE UP



2X HORIZONTAL SCROLL



2X VERTICAL SCROLL



2X FLICK UP



3X DRAG DOWN



3X DRAG



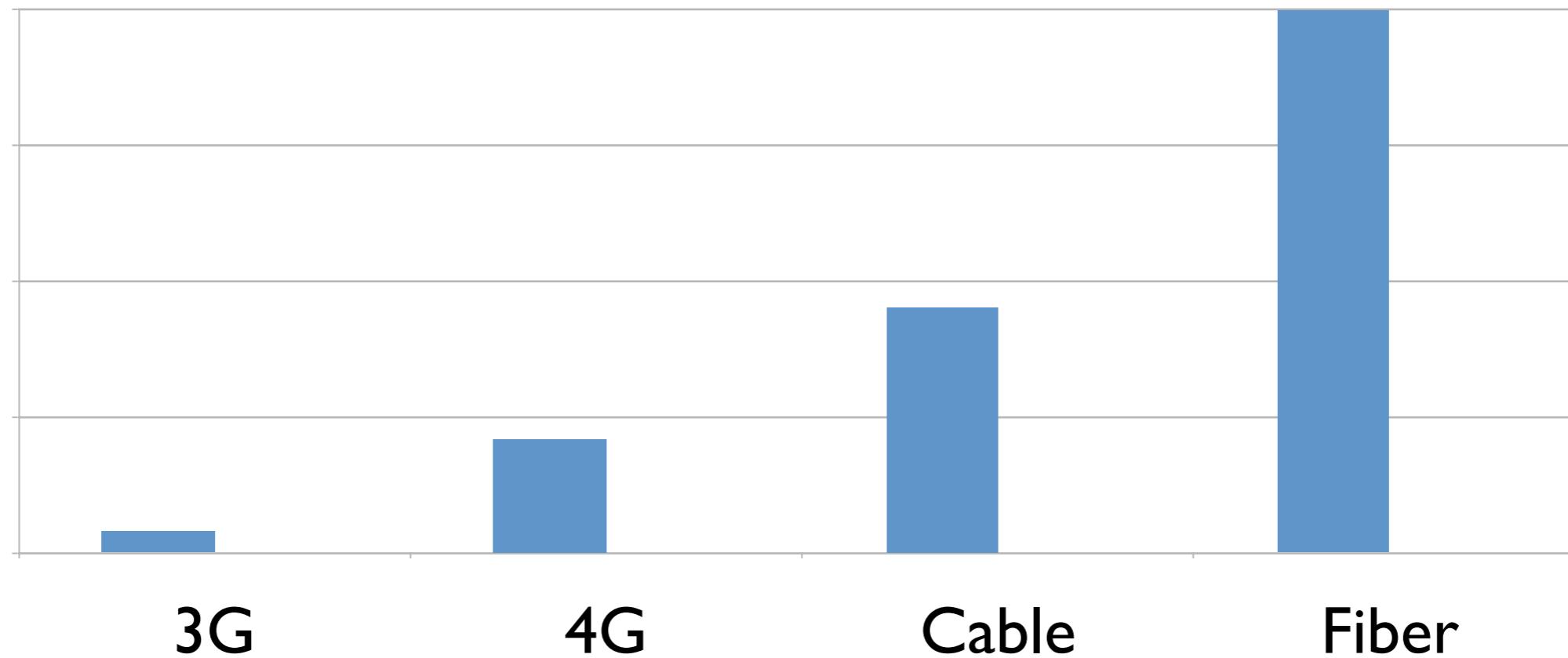
3X TAP

CONTEXT OF USE

- Especially task-driven
- More time-sensitive
- Shorter attention span
- Potentially dangerous?



NETWORK CONCERNS



GESTURAL INTERFACES

OVERVIEW

- Tap
- Swipe
- Hold
- Pinch
- Rotate
- Other

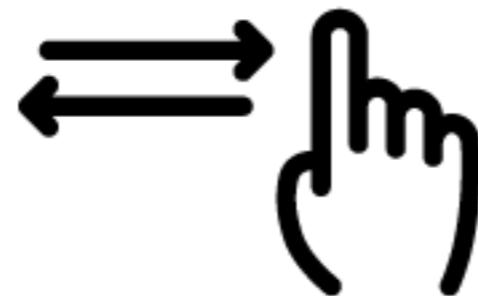
TAP



DOUBLE/TRIPLE TAP



SCROLL, SWIPE, FLICK



HOLD, DRAG



PINCH, SPREAD



ROTATE



SHAKE, BUMP, BLOW...



DEVICE-SPECIFIC GUIDELINES

OVERVIEW

- Different native platforms have different design languages
- Good designs leverage the conventions of the platform
- There's a lot to know:
 - Design principles and terminology
 - UI components
 - Design patterns
 - Gestural conventions

RESOURCES

- iOS Human Interface Guidelines:
 - <https://developer.apple.com/library/ios/documentation/userexperience/conceptual/mobilehig/MobileHIG.pdf>

MOBILE DESIGN PATTERNS

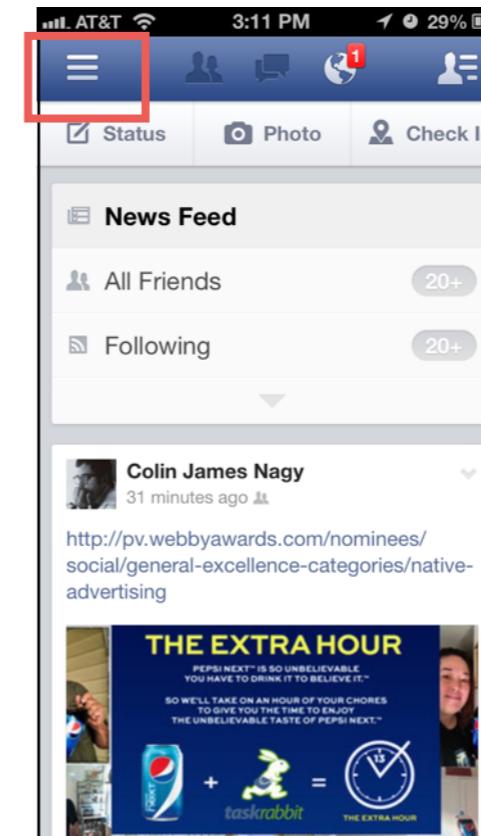
OVERVIEW

- Navigation
- Screen-level actions
- User onboarding
- Lists, filtering, and empty sets
- Dialog boxes

NAVIGATION

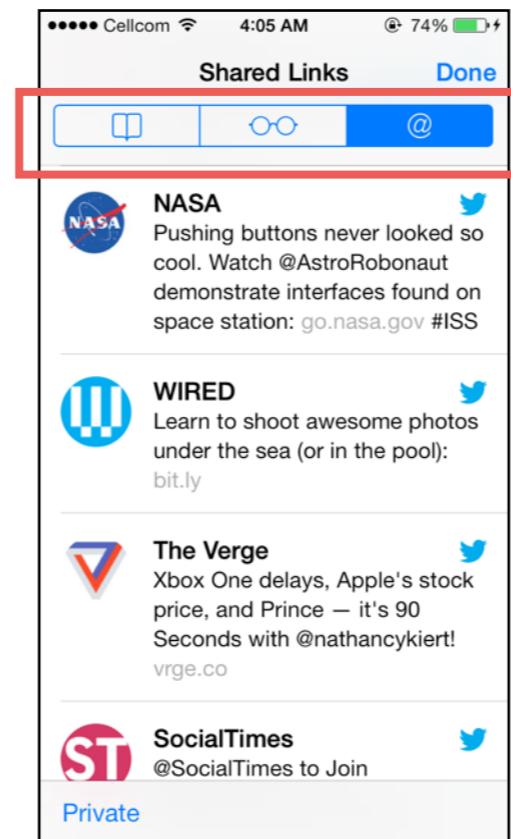


Tab Bar



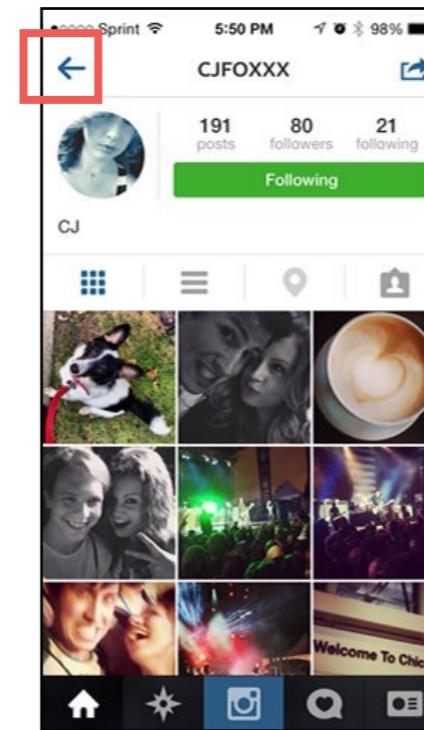
Hamburger Menu

NAVIGATION



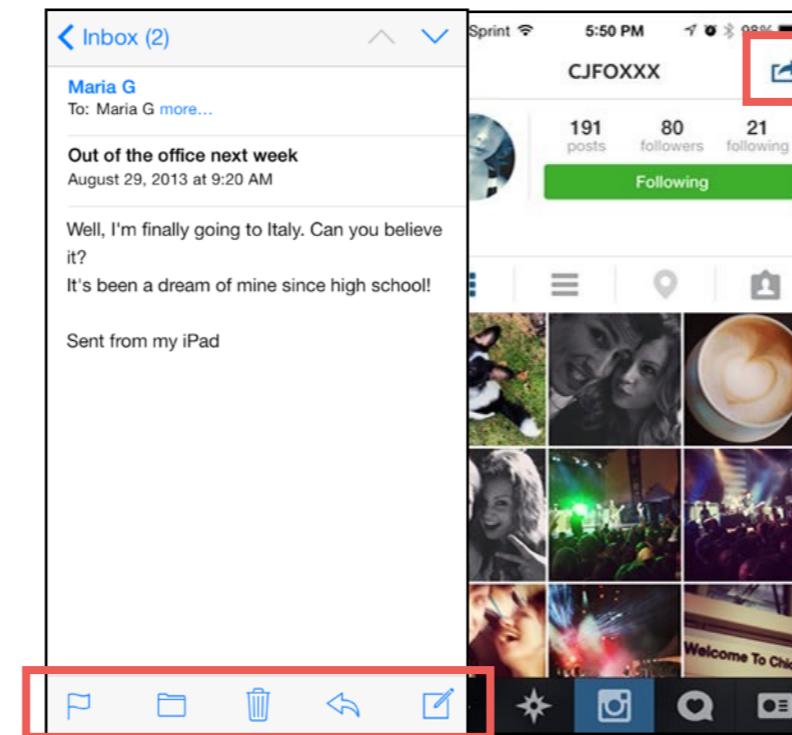
Scope Bar

NAVIGATION



Navigation Bar

SCREEN-LEVEL ACTIONS



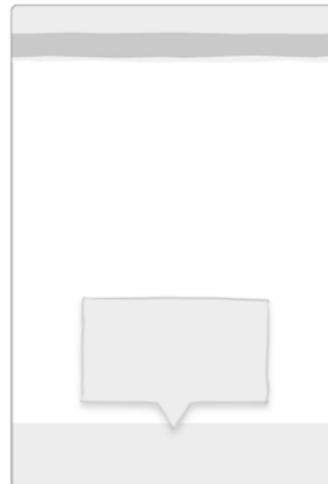
Tool Bar, Navigation Bar

ONBOARDING

Dialog



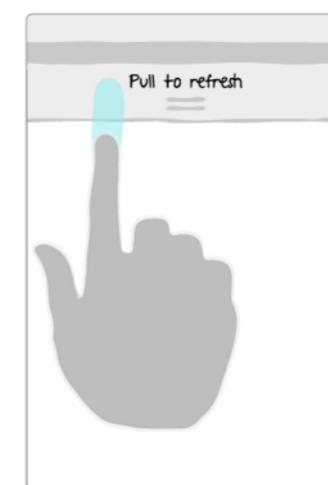
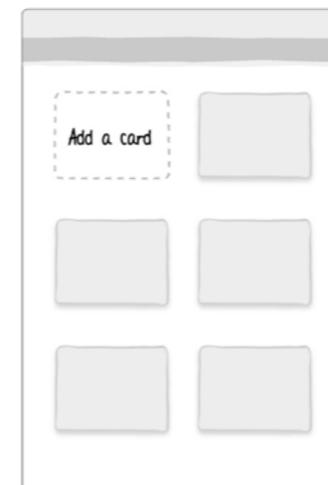
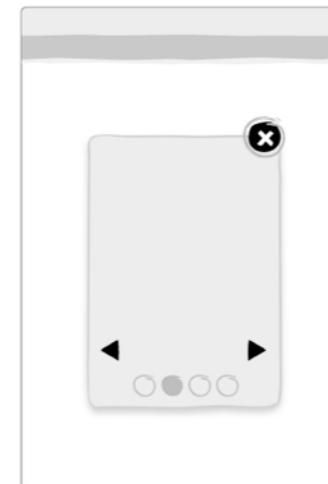
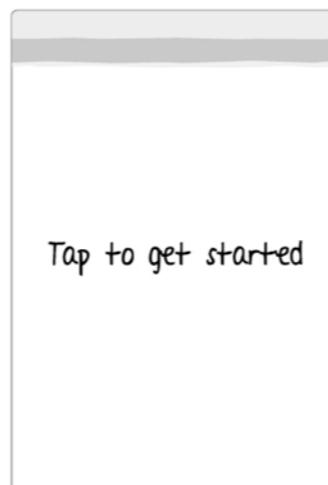
Popover Tip



Overlay



Embedded



Tour

Demo

Persistent

Discoverable

LISTS

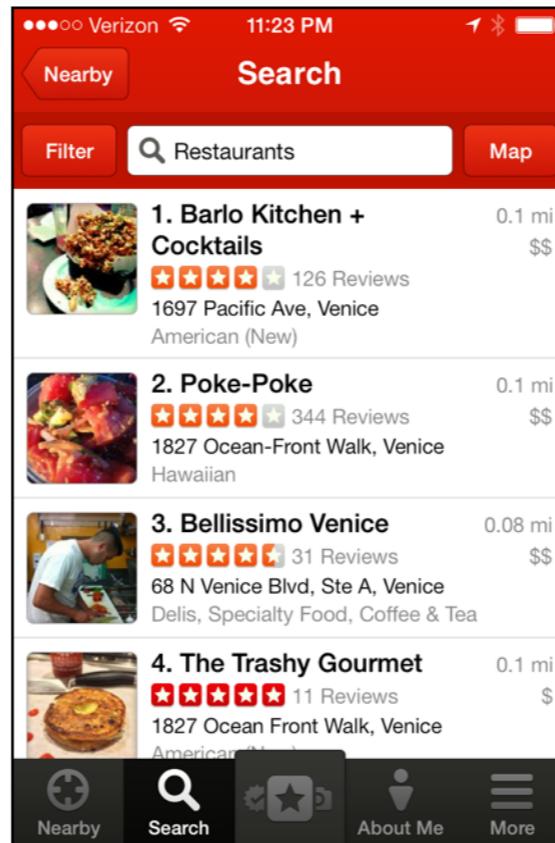
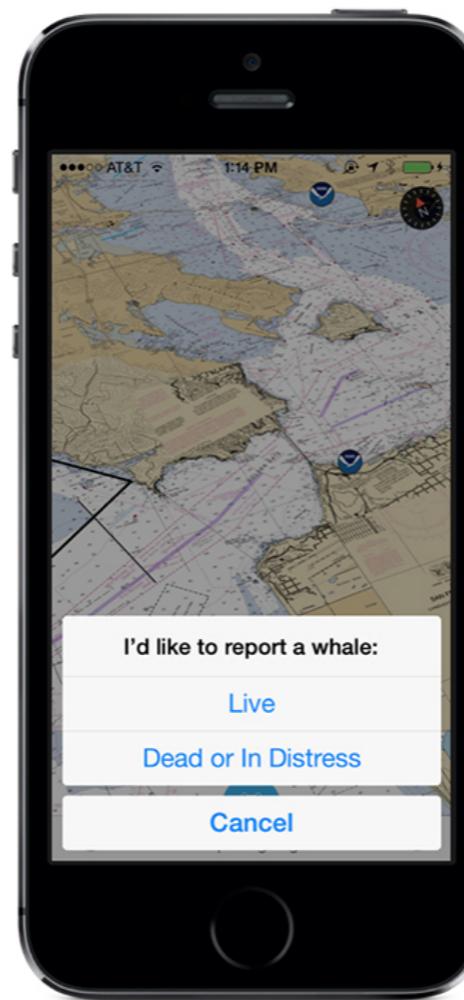
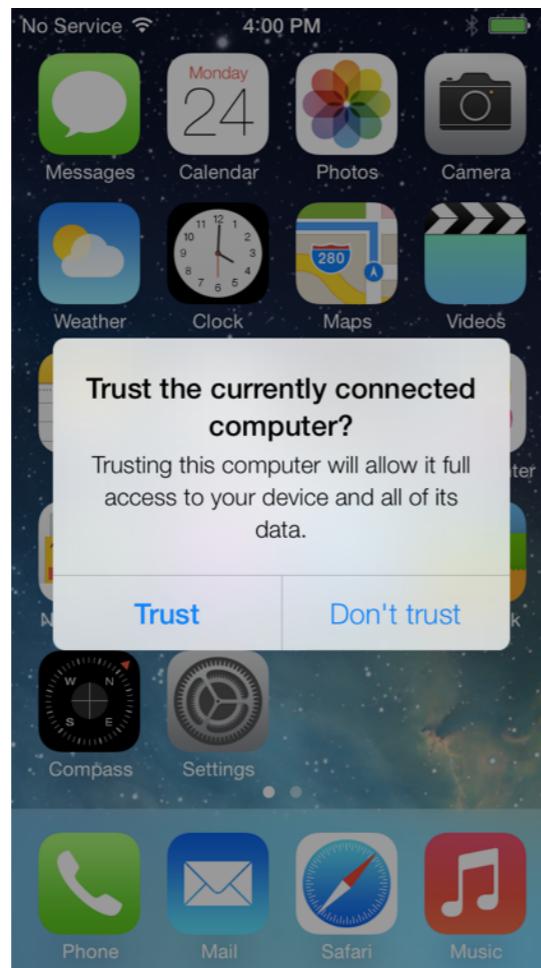
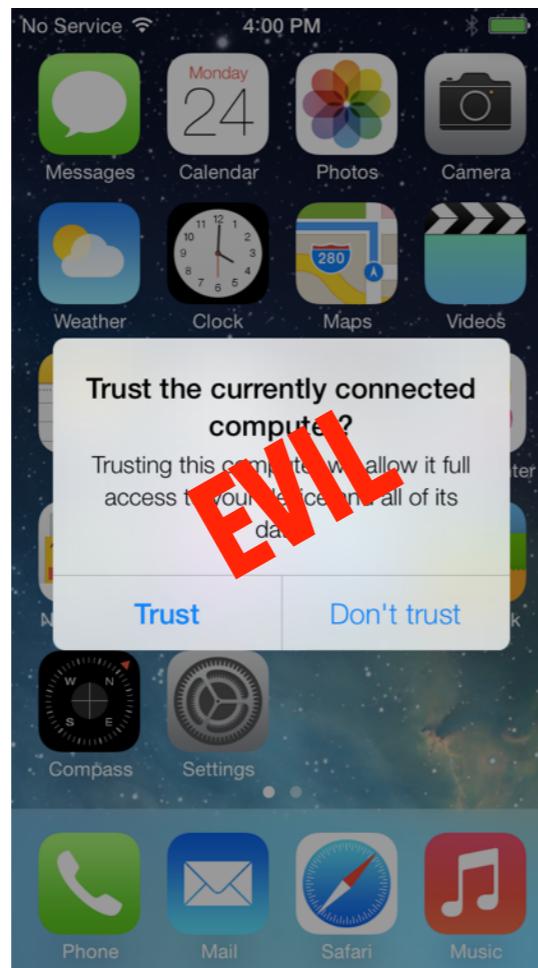


Table View

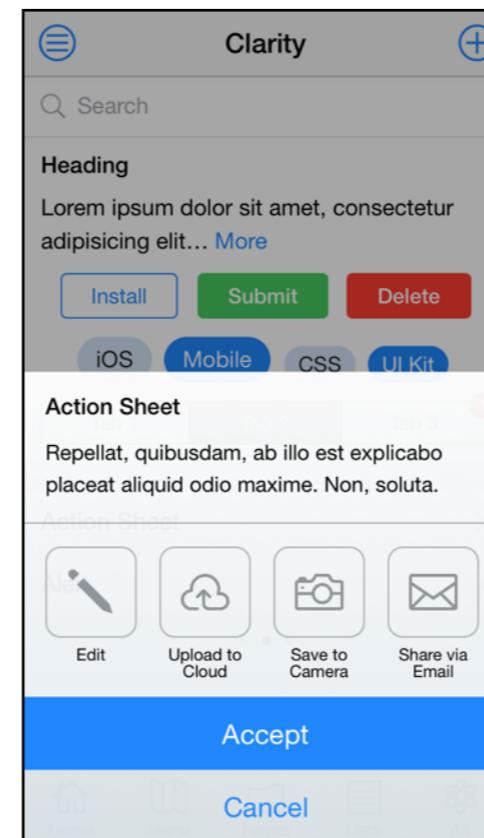
DIALOG BOXES: ALERTS



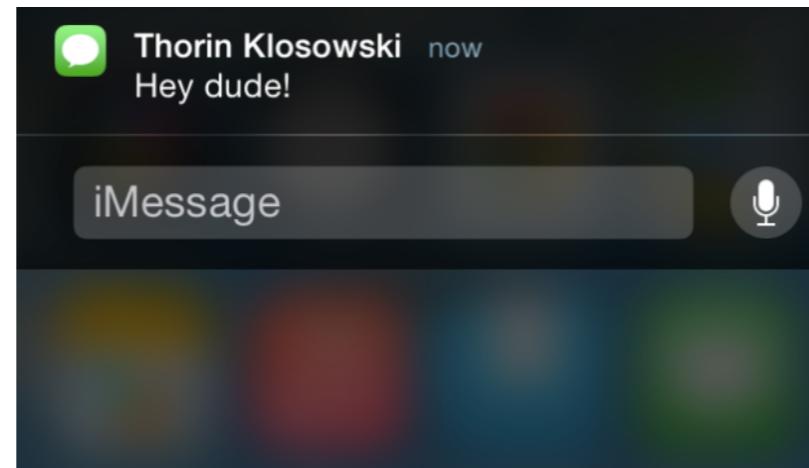
DIALOG BOXES: ALERTS



DIALOG BOXES: ACTION SHEET



NOTIFICATIONS (INTERACTIVE AND PASSIVE)



...AND MANY MORE

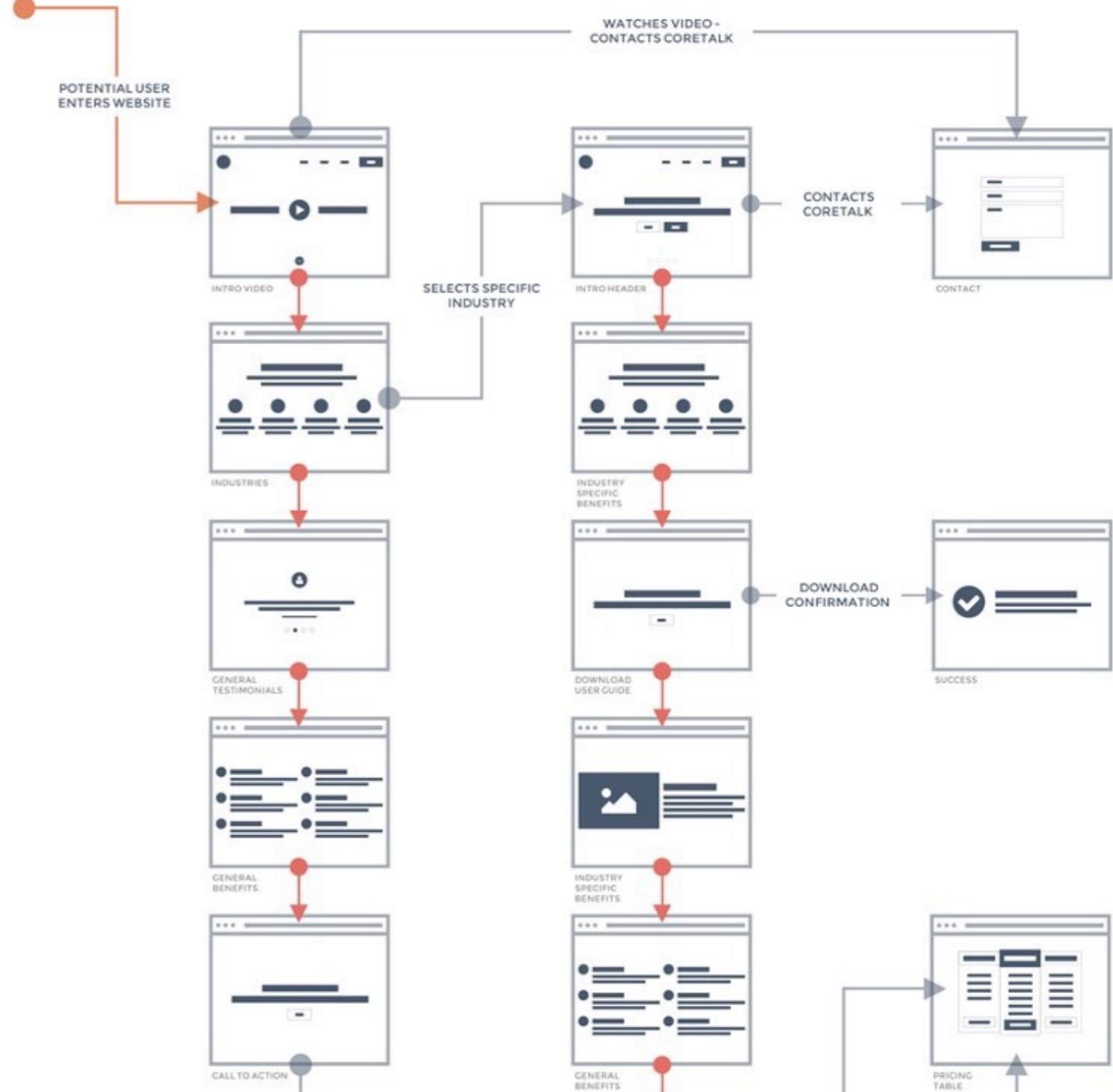
- mobile-patterns.com
- pttrns.com
- inspired-ui.com
- appreciateui.com
- mobiledesignpatterngallery.com/mobile-patterns.php

STORYBOARDS

WHAT ARE STORYBOARDS?

STORYBOARDS

WEBSITE SITEMAPS



STORYBOARDS

DRAW A SITEMAP

STORYBOARDS

WHAT IS COCOA TOUCH?



STORYBOARDS

VIEWS

- A view is a UI element, with a size, drawn at some location.
- Views can contain other views (**Subview**).

STORYBOARDS

VIEW CONTROLLERS

- Each screen of our app is made up of at least one **view controller** and at least one view.
- A view controller “manages” a set of views.
- View controllers can contain other view controllers (**child view controllers**).

STORYBOARDS

NAVIGATION CONTROLLERS

- Navigation controllers “manage” several view controllers.
- They are also view controllers themselves! They just have special powers...
- One view is presented at a time.
- Organizes the view controllers in a browser-history-like fashion (think forward and back buttons).
- Comes with a conveniently built-in navigation bar.

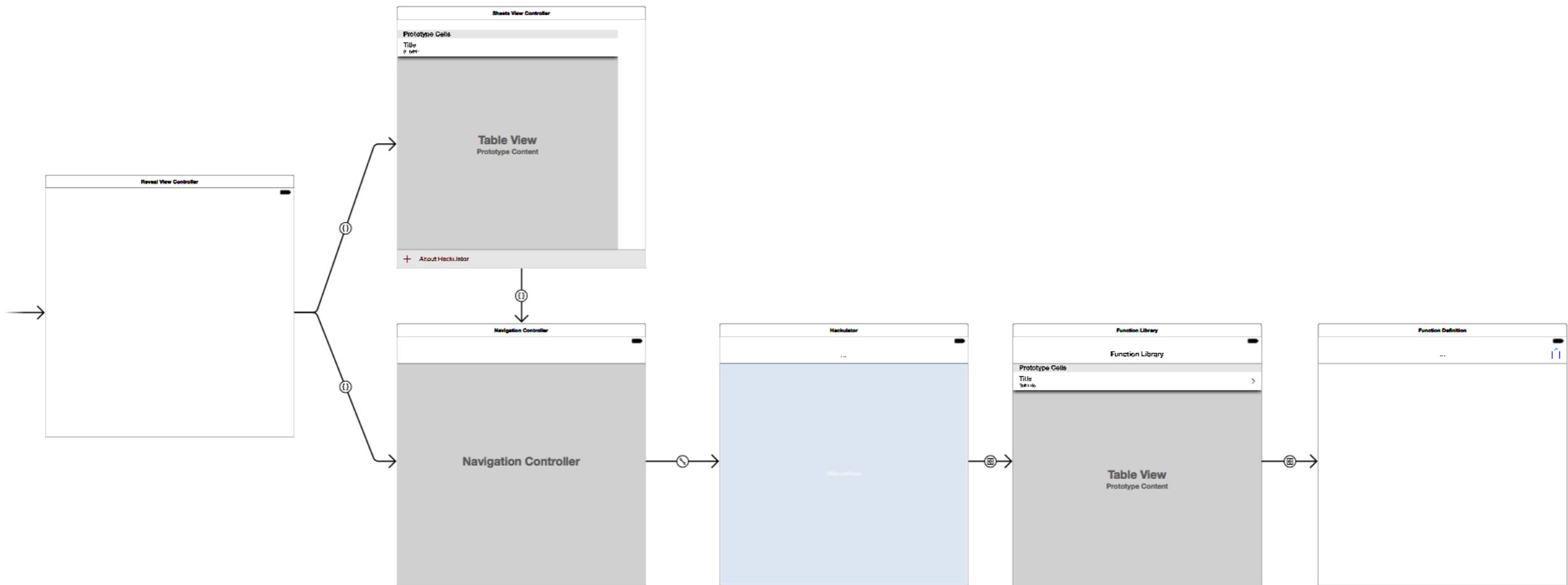
GETTING STARTED

STORYBOARDS

- Link multiple scenes together using a navigation controller.
- Transition between scenes. These transitions are represented by “segues”.

GETTING STARTED

HACKULATOR'S STORYBOARD



Name	Interface Builder Symbol	Description
Show		Present the content in the detail or master area depending on the content of the screen. If the app is displaying a master and detail view, the content is pushed onto the detail area. If the app is only displaying the master or the detail, the content is pushed on top of the current view controller stack.
Show Detail		Present the content in the detail area. If the app is displaying a master and detail view, the new content replaces the current detail. If the app is only displaying the master or the detail, the content replaces the top of the current view controller stack.
Present Modally		Present the content modally. There are options to choose a presentation style (<code>UIModalPresentationStyle</code>) and a transition style (<code>UIModalTransitionStyle</code>).
Present as Popover		Present the content as a popover anchored to an existing view. There is an option to specify the possible directions of the arrow shown on one edge of the popover view (<code>UIPopoverArrowDirection</code>). There is also an option to specify the anchor view.
Custom		A custom segue enabling you to write your own behaviors.
Push (Deprecated)		Present the content by pushing it onto the current stack of view controllers.
Modal (Deprecated)		Present the content modally on top of the existing screen. The options are the same as Present Modally.
Popover (Deprecated)		Present the content as a popover. The options are the same as Present as Popover.

STORYBOARDS

XCODE DEMO: CREATING SEGUES

WATCH ME!

STORYBOARDS

NOW YOU TRY: CREATING SEGUES

GETTING STARTED



KEY OBJECTIVE(S)

Link multiple scenes together.

TIMING

15 min 1. Work in pairs (someone you haven't worked with before)

5 min 2. Debrief

DELIVERABLE

- Pair up and build an app with four scenes linking to each other in the form of book pages.
- Add UI Elements and appropriately link them to other slides.

GETTING STARTED

Q&A