

Lecture 4

Navigation, Menus and Design Guidelines: Mobile (Part II)

FIT5152 - User Interface Design and Usability



Learning objectives

This lecture's learning objectives are to understand:

- Navigation and menu types for mobile applications
- Principles and guidelines for designing effective menus for mobile platforms

Navigation based on the level of the hierarchy

1. Primary navigation
2. Secondary navigation

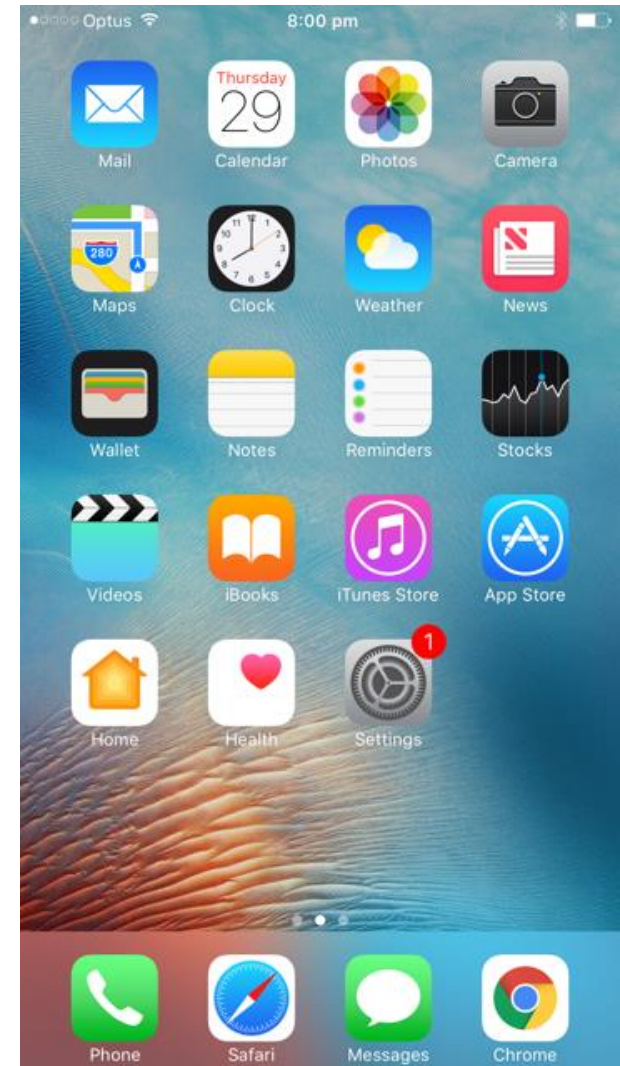
Menu types:

1. Permanent and fixed menus
2. Transient menus

Springboard

- Springboard is a permanent menu and suitable for primary navigation
- Springboard design provides a high level overview of menu options in a grid layout
- It provides good visibility of available options
- It allows showing more options than tabs
- It gives all options the same level of importance

(Neil 2014)

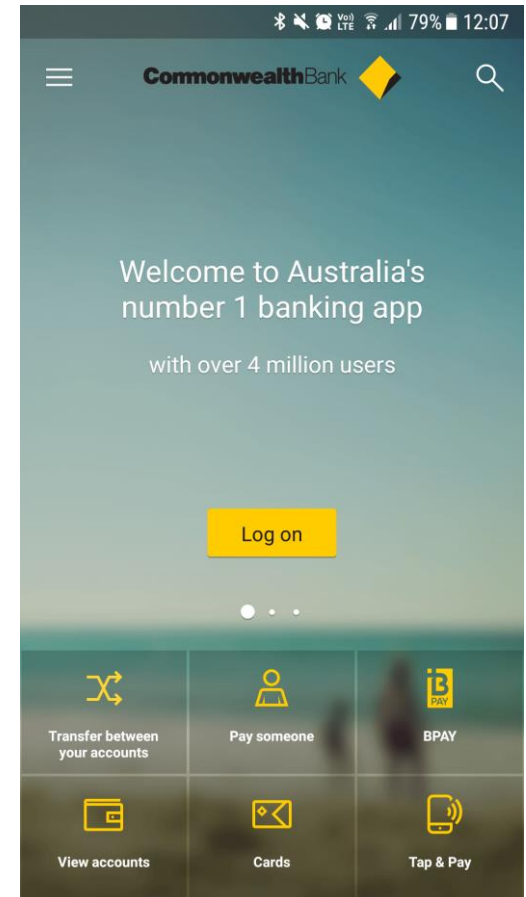


Tiles

- Tiles are a variation of the Springboard design pattern
- Tiles can be static or dynamic



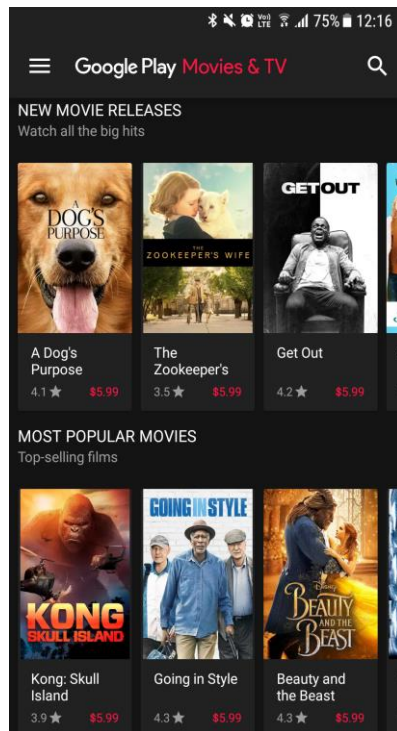
[https://msdn.microsoft.com/library/windows/apps/jj662929\(v=vs.105\).aspx](https://msdn.microsoft.com/library/windows/apps/jj662929(v=vs.105).aspx)



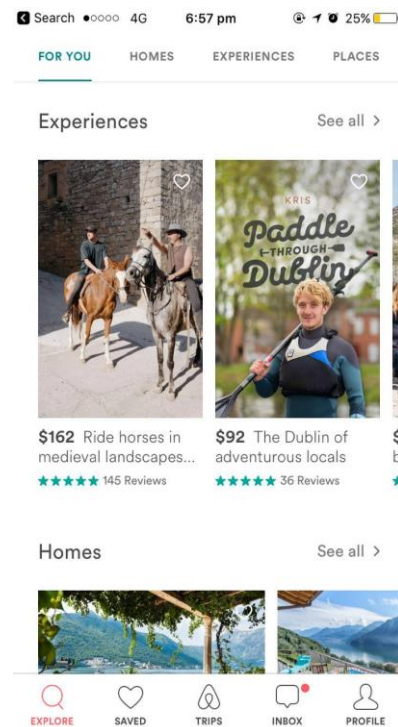
CommBank app

Galleries

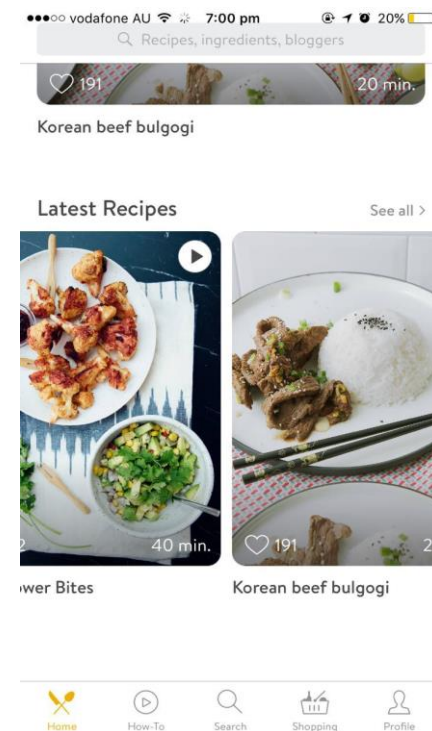
- Galleries are dynamic tiles with live contents (e.g. news, movies)



Google Play



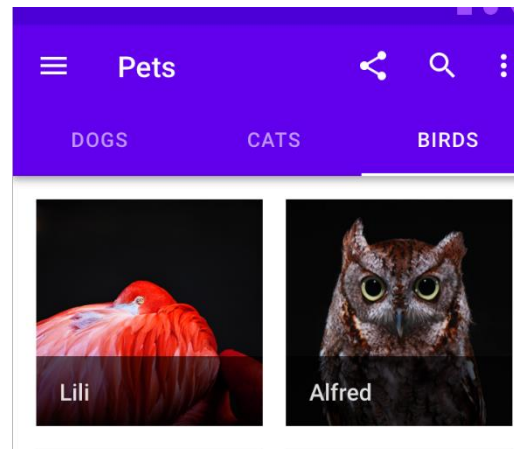
Airbnb



Kitchen Story

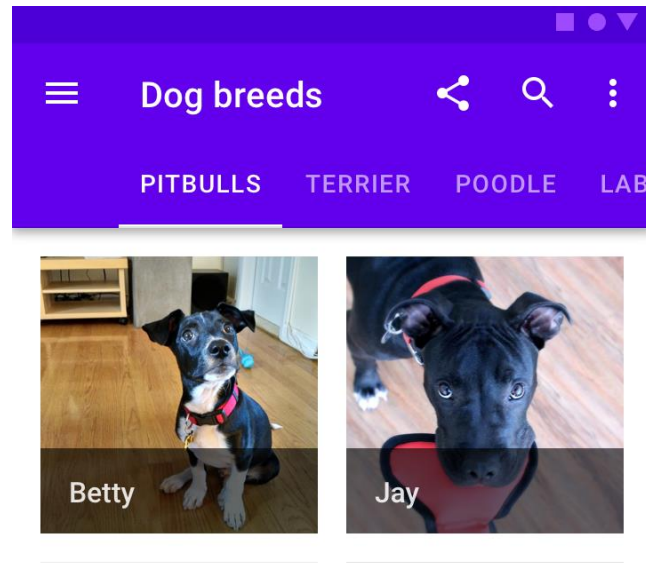
Fixed Tabs

- Fixed tabs display all the options in fixed positions
- Fixed tabs are suitable for primary navigation
- Fixed tabs are recommended:
 - If the number of options are limited (3-5)
 - If the tab items are equally important
 - If the items are viewed frequently
 - If you want the users to view all items at the same time



Scrollable Tabs

- Scrollable tabs should be used for secondary navigation
- Scrollable tabs shows a subset of tabs at a time
- Use scrolling tabs if the items are closely related
- Try to limit the number of categories to 5-7 tabs to reduce navigational effort



Side Tabs

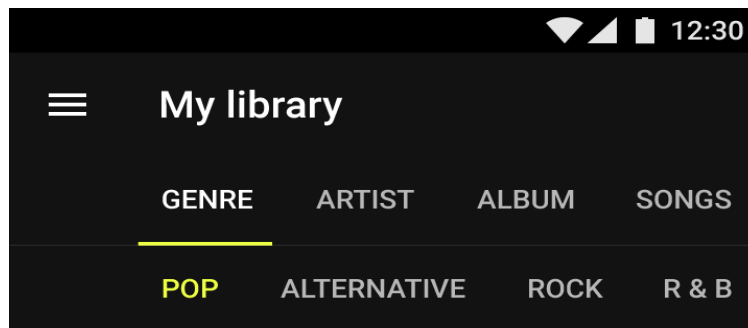
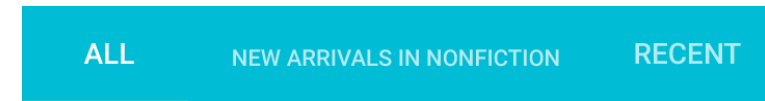
- Side tabs are usually located on the left-hand side
 - Different from side drawers that appear and disappear
- Since the phone is usually used in the portrait mode, it can occupy the horizontal real estate
- They support limited options

(Neil 2014)



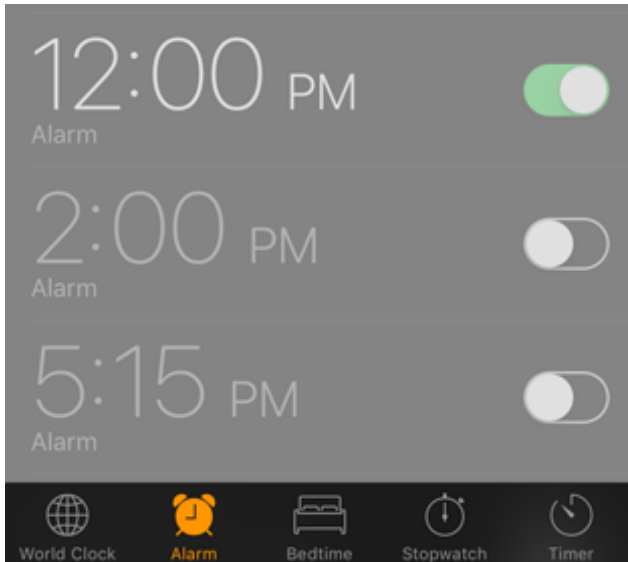
Guidelines for Tab Menu Design

- Be consistent in using (icons, text labels or both)
- Do not use long labels
- Avoid nested tabs

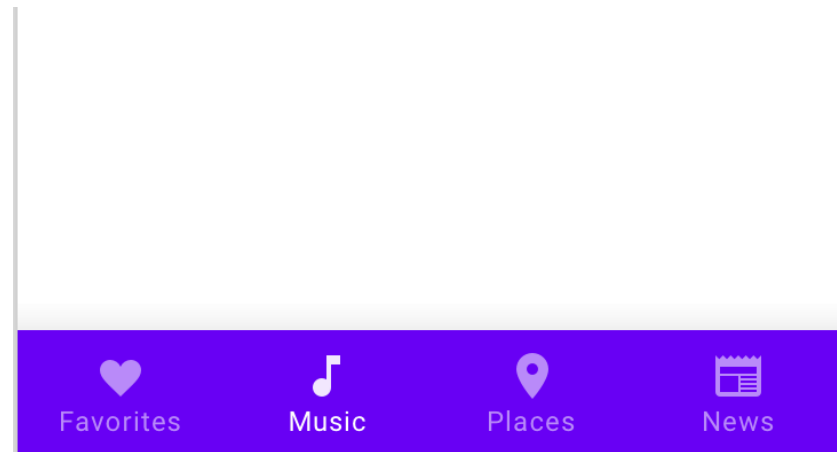


Bottom Navigation Bars

- They usually include 3-5 options at the bottom of a screen
- These options usually have the same level of importance
- Material Design: bottom navigation bar are used for primary navigation
- iOS: tab bars are used to quickly switch between different sections of an app



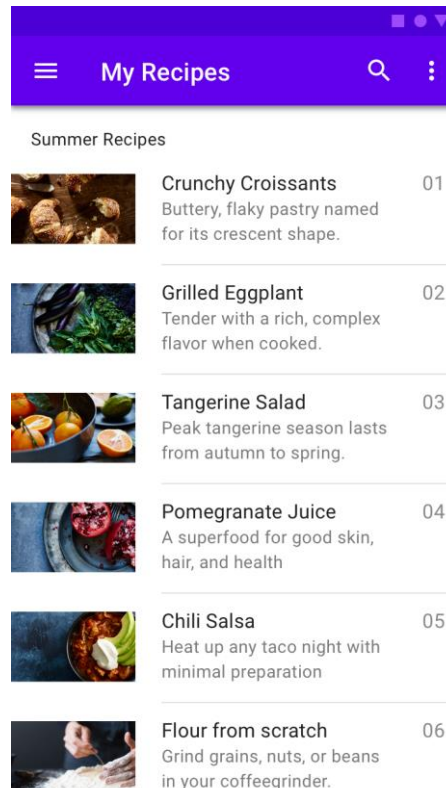
<https://developer.apple.com/ios/human-interface-guidelines/interaction/navigation/>



<https://material.io/design/components/bottom-navigation.html#>

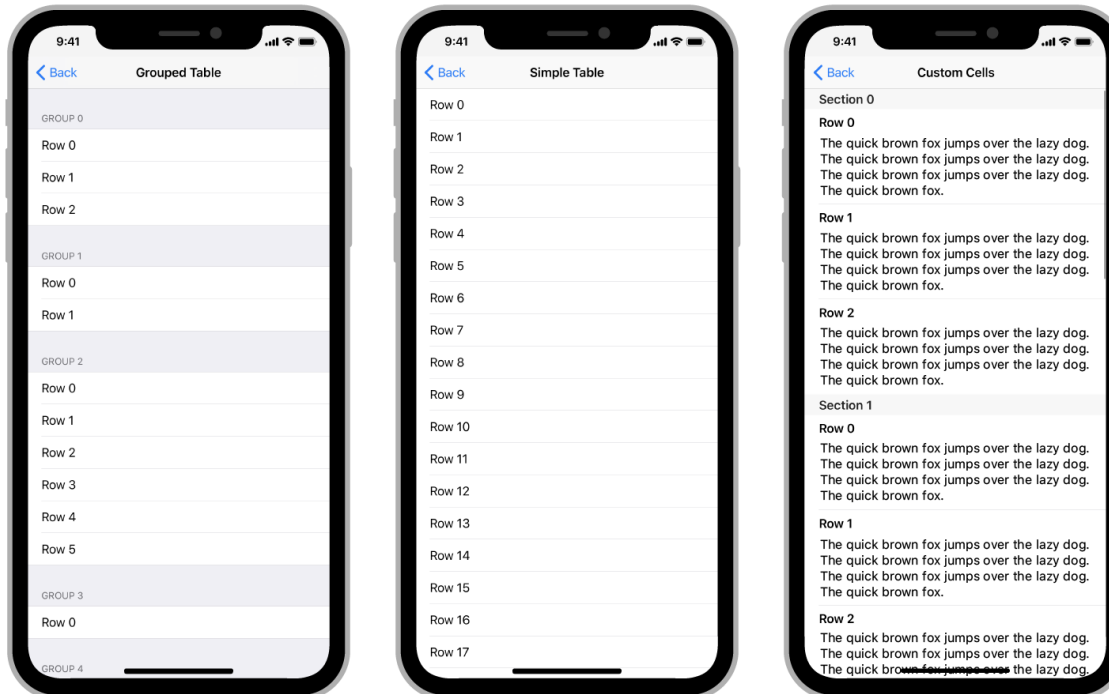
List Menu

- List menu allows the user to select an item from a list
- It can be used for both primary and secondary navigation



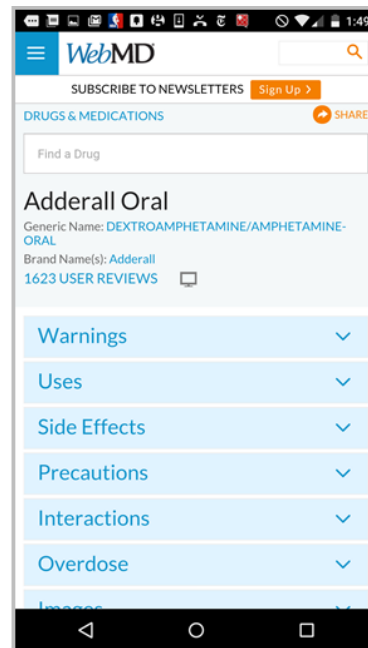
iOS Table View

- In iOS, a table view is a scrollable list menu that consists of one column and multiple rows
- The rows can be grouped
- Custom cells can be defined according to the app



Accordion

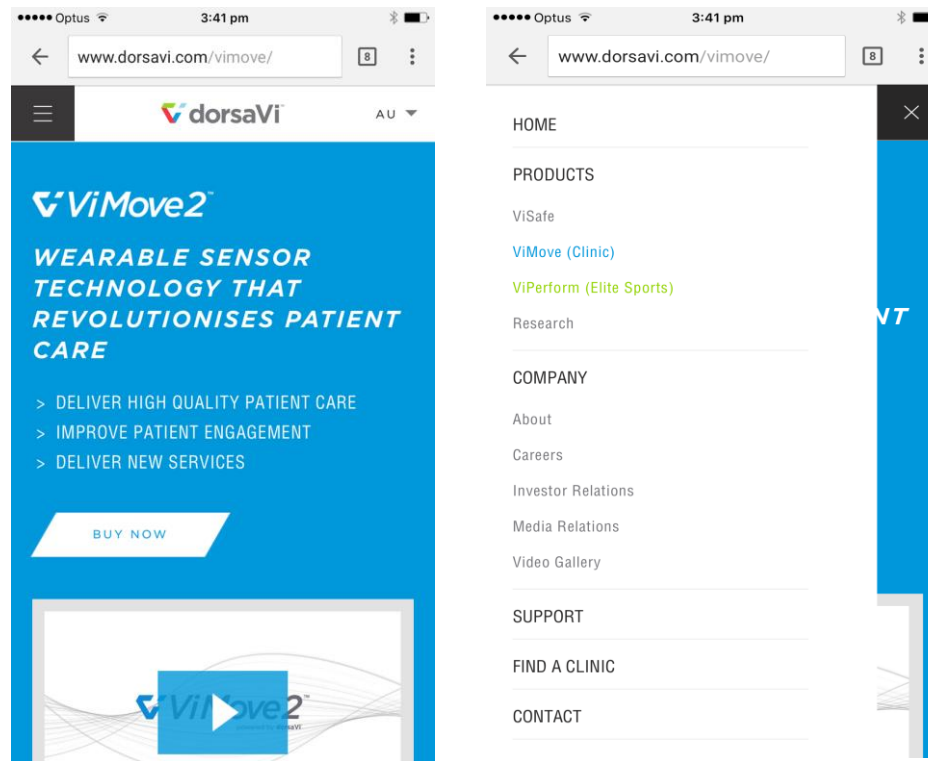
- Accordion design allows to display long lists and more content
- Accordion menus can expand and collapse to reveal more options
- But they can cause usability problems such as visibility, disorientation and difficulty with navigation



Transient Menu Structures

- Transient menus try to address the limitation of mobile phones in terms of screen size
- They allow displaying long lists of options
- The options can appear and disappear by a gesture

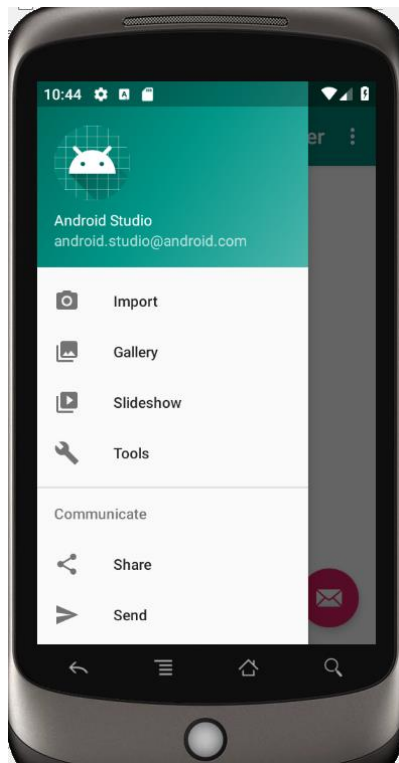
(Neil 2014; Peatt, 2014)



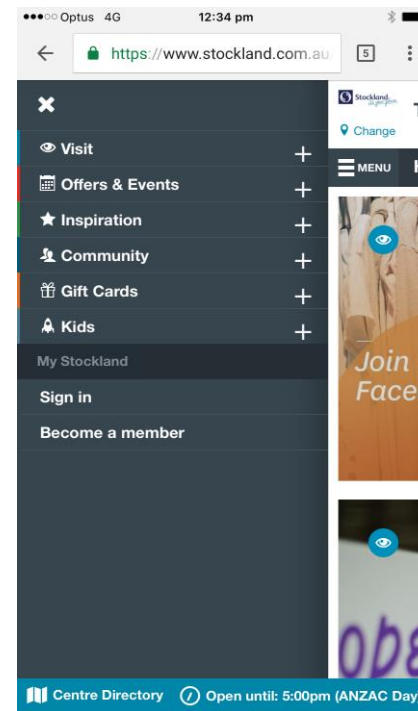
<https://www.dorsavi.com/au/en/vimove/>

Side Drawer and Navicon

- The navicon or the hamburger (triple bar) icon used with side drawers
 - **Overlay menus:** partially cover the main screen
 - **Inlay menus:** push the main screen off-canvas



Overlay side
drawer

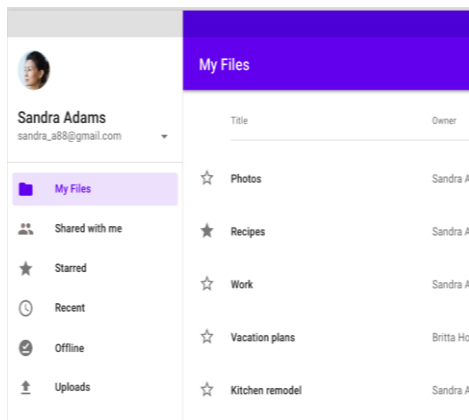


Inlay side
drawer

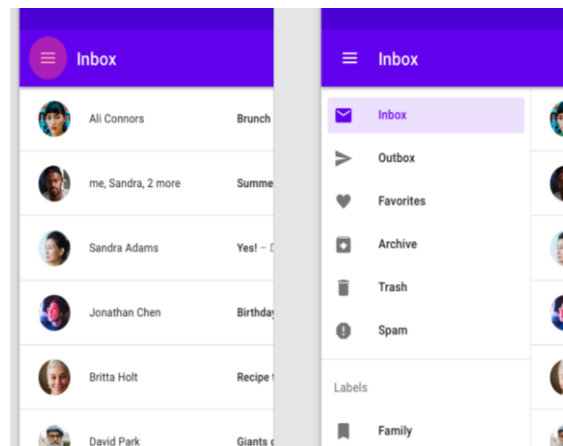
Navigation Drawer in Material Design

- A standard drawer
 - They can be permanently visible (fixed) or opened and closed (as inlay transient menu)
- A modal drawer
 - Overlay menu
- A Bottom drawer is a specialised type of the modal drawer

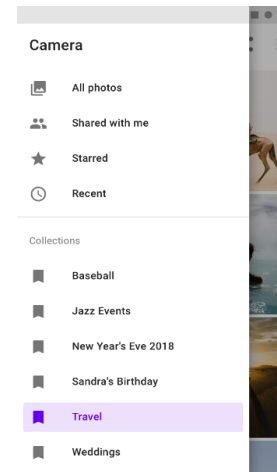
Standard (fixed menu)



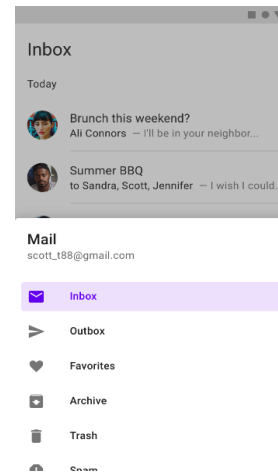
Standard (inlay menu)



Modal



Bottom drawer

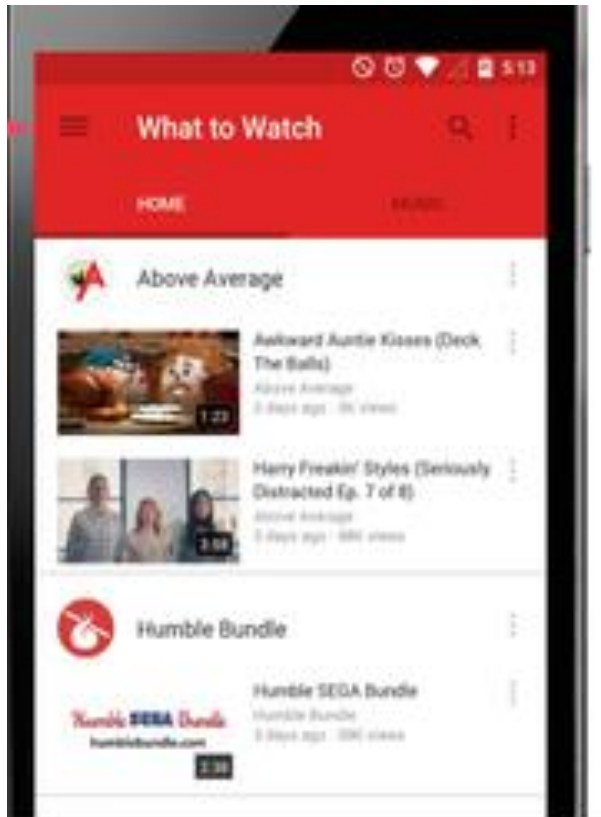


- Use side drawers for primary navigation
- Do not overload side drawers with many options
- Do not make them scrollable
- Use meaningful grouping
- Be aware of the usability issue

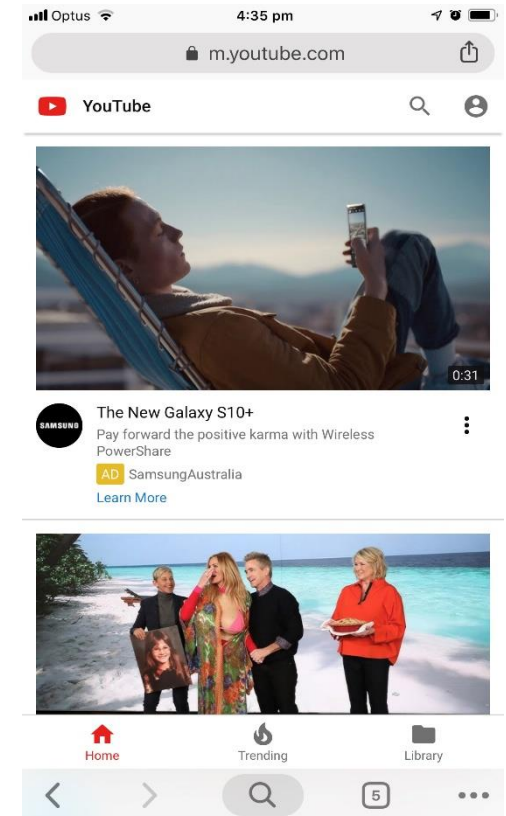
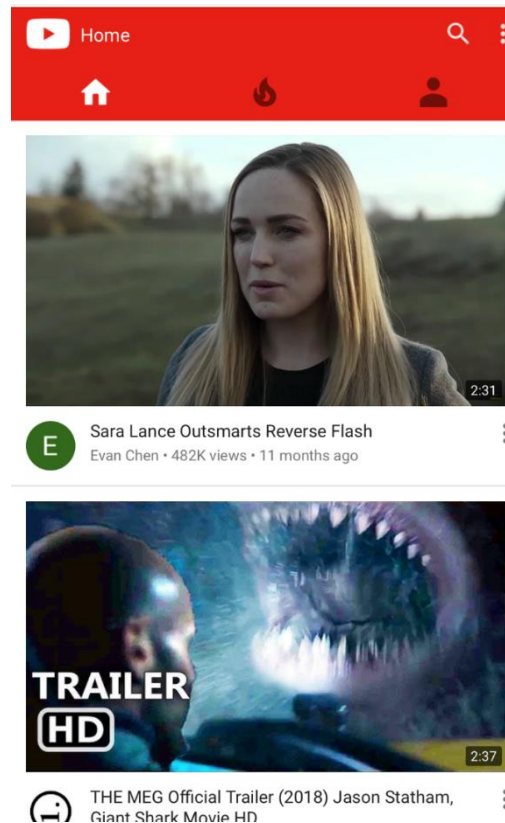
(Neil 2014)

Trends: YouTube Example

YouTube in 2014 using a side drawer menu YouTube using a fixed tab menu (2018) YouTube 2019



<https://uxplanet.org/perfect-menu-for-mobile-apps-39b2cb5b7377>

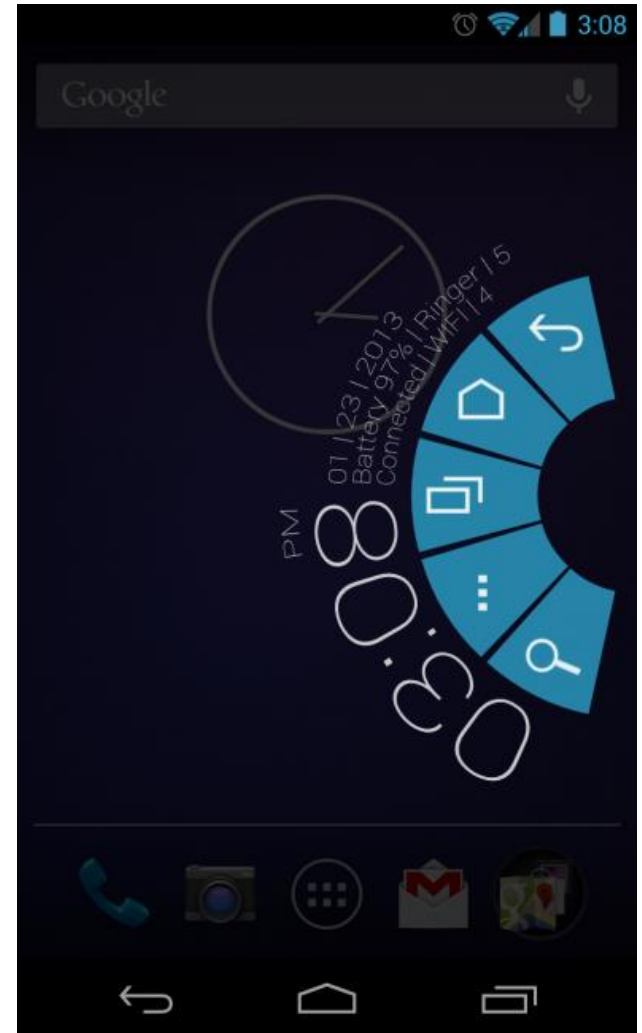


Transient Menus: Pie Menu

- Pie menus are also known as wheels, circular menus
- Popular in game design
- It can be revealed only on all four sides of the device

(Neil 2014)

- [Paranoid Android video](#)



Source <http://www.droid-life.com/tag/pie/>

Navigation in iOS

Hierarchical navigation

- Selecting one option per screen to get to the final destination (e.g. Settings)
 - For a different option you must start over

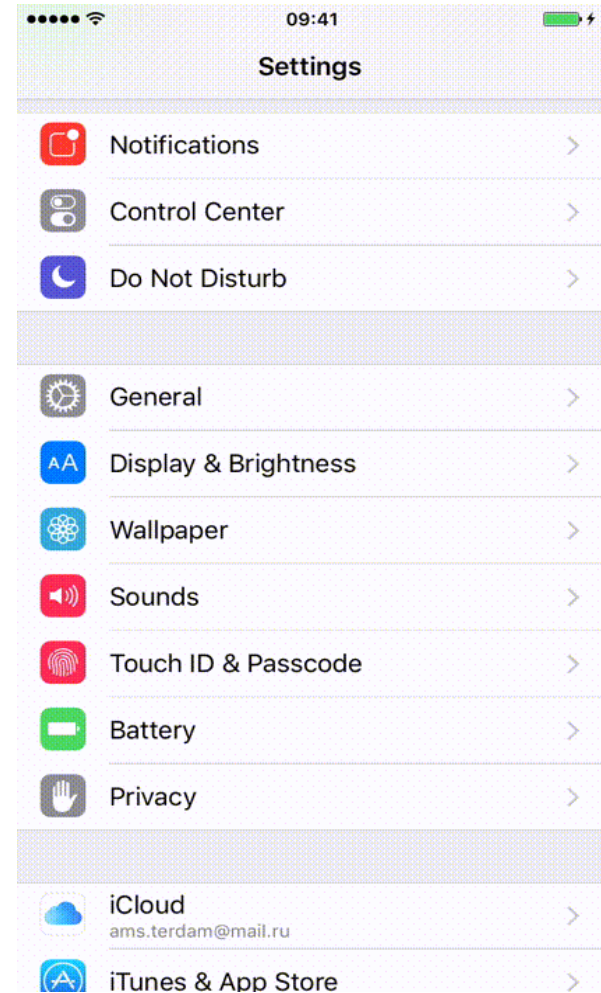
Flat navigation

- Switch between multiple options, e.g. using a tab bar

Content-Driven or Experience-Driven Navigation

- Navigating through content, e.g. in games, ebooks

<https://developer.apple.com/design/human-interface-guidelines/ios/app-architecture/navigation/>



<https://anvileight.com/blog/2016/05/18/ios-human-interface-guide/>

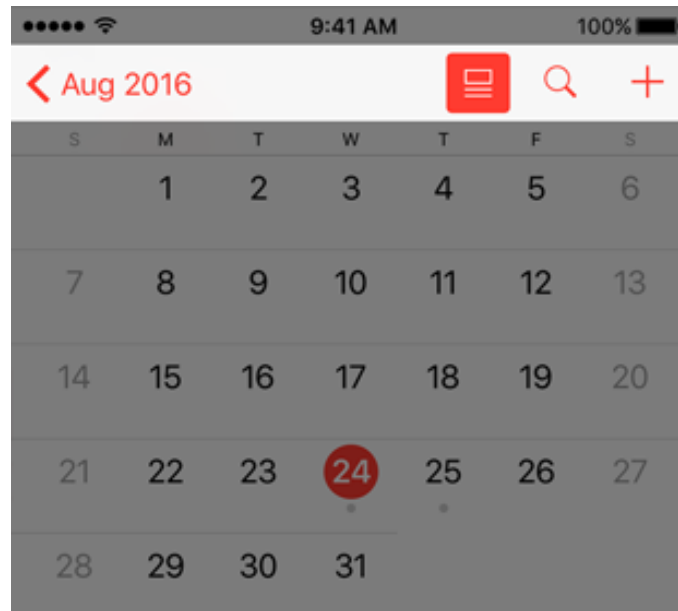
iOS Navigation Guidelines

- Always provide a clear path
 - Let the user know:
 - Where they are
 - What tasks are available
 - How to get to the next destination
- Use a page control when you have multiple pages of the same type of content



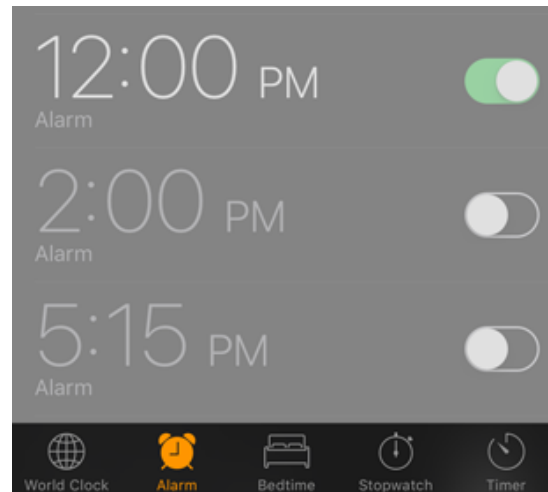
iOS Navigation Guidelines (cont'd)

- Use a navigation bar to traverse a hierarchy of data
 - The navigation bar's title shows the current position in the hierarchy, and the back button to return to the previous location



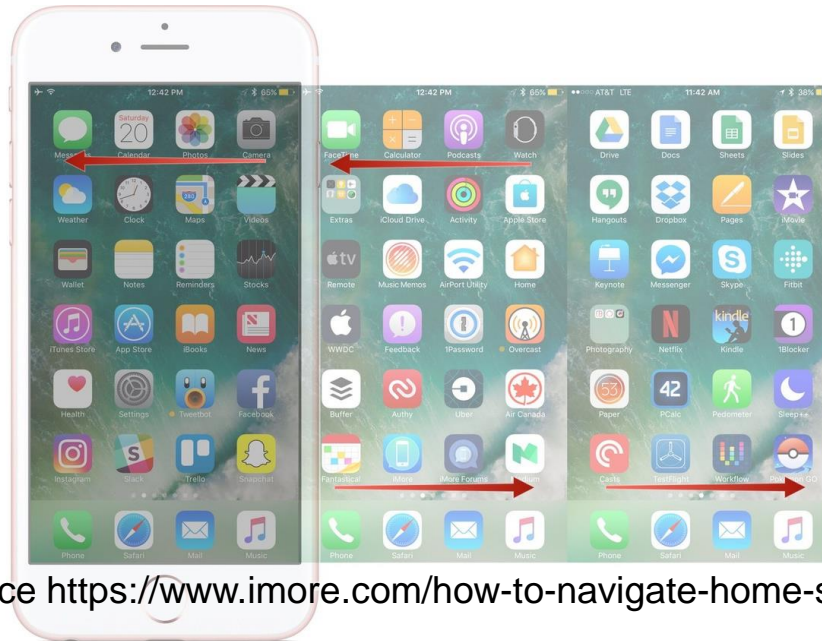
iOS Navigation Guidelines (cont'd)

- Use standard navigation components (e.g. page controls, tab bars, table views)
- Use a tab bar to present peer categories of content or functionality



iOS Navigation Guidelines (cont'd)

- Design an information structure that makes it fast and easy to get to content
 - Use a minimum number of taps, swipes, and screens
- Use touch gestures to create fluidity
 - Make it easy to move through the interface



Source <https://www.imore.com/how-to-navigate-home-screen-iphone-ipad>

“Good navigation, like good design, is invisible. Applications with good navigation just feel simple and make it easy to accomplish any task, from browsing through pictures to applying for a car loan.”

(Theresa Neil, 2014, pg 2)

References

- Theresa Neil, 2014, Mobile Design Pattern Gallery: UI Patterns for Smartphone Apps, O'Reilly Media; 2 edition
- Luke Wroblewski 2013, Design for Thumb flow
<https://www.lukew.com/ff/entry.asp?1734>
- <http://www.oracle.com/webfolder/ux/applications/fusiongps/mobile/content/designpatterns/navigation/springboard/index.htm#>
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- Tile design guidelines for Windows Phone
[https://msdn.microsoft.com/library/windows/apps/jj662929\(v=vs.105\).aspx](https://msdn.microsoft.com/library/windows/apps/jj662929(v=vs.105).aspx)
- iOS developer <https://developer.apple.com/ios/human-interface-guidelines/interaction/navigation/>
- Adapting UI to iOS 7: The Side Menu
<http://uxmag.com/articles/adapting-ui-to-ios-7-the-side-menu>