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UNIVERSITY

All kinds of clever

CSE2MAD

Mobile Application Development
Lecture 3 Part 1

Updated 2020 by Marita Fitzgerald

Mobile Interaction Design : Patterns & Techniques

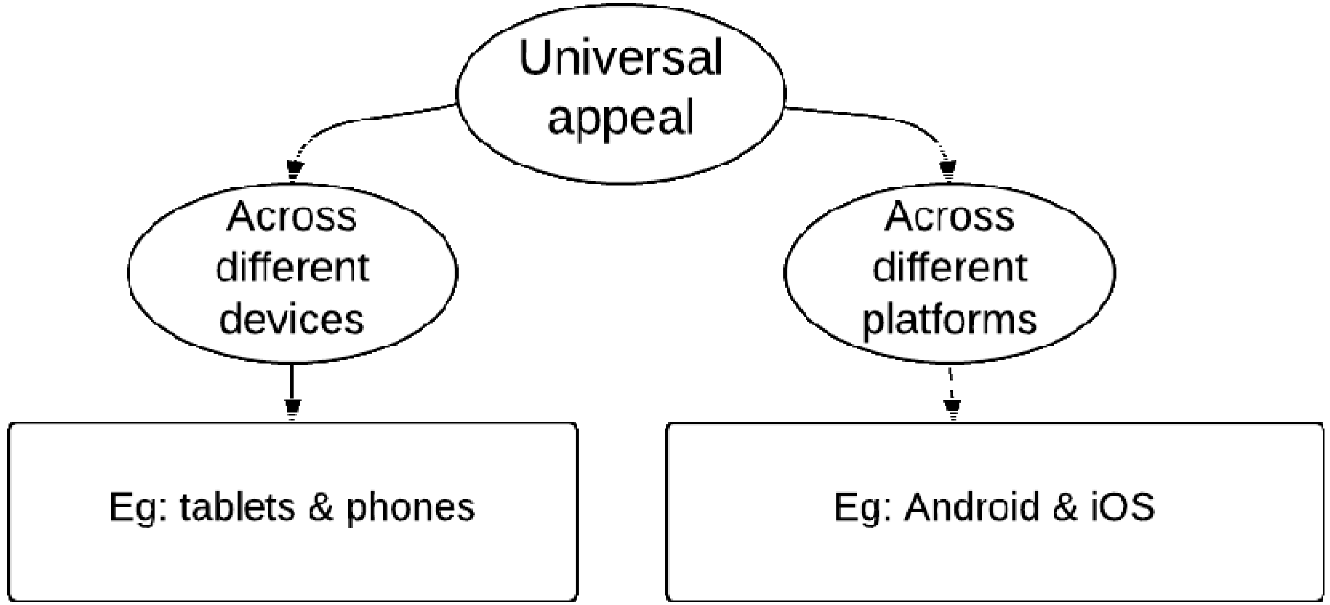
2.2 Outline

- Interaction Experiences for Multiple Platforms & Devices
- Planning Screens
- Android Navigation: Descendant & Lateral
- Android Navigation: Ancestral &Temporal
- Wireframes
- Reiteration

2.2.1 Interaction Experiences for Multiple Platforms & Devices

Some apps will need to work well on :

- Both smartphones & tablets
- Across multiple platforms



2.2.1 Interaction Experiences for Multiple Platforms & Devices contd…

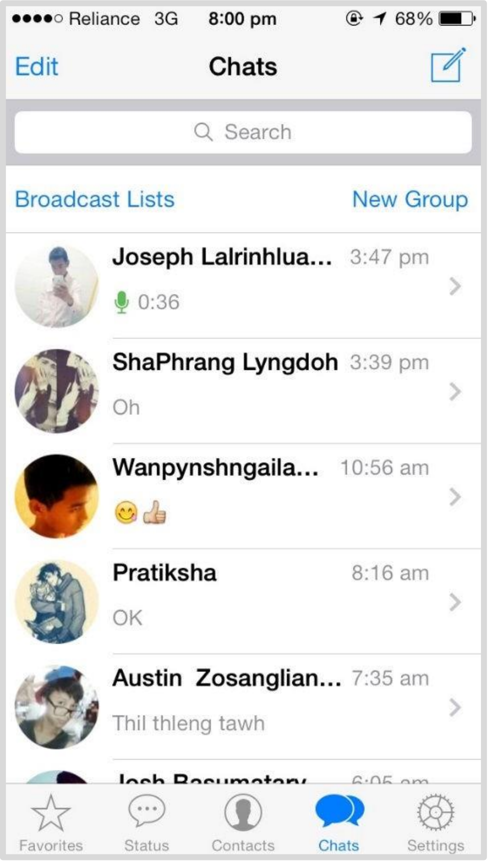
However, If an app idea has too much potential but will fundamentally change with a move from phone to tablet, consider scrapping the design conversion and instead building separate apps.

Eg: Instagram on a smartphone and a tablet

2.2.1 Interaction Experiences for Multiple Platforms & Devices contd...

Designing for multiple platforms is harder than designing for multiple devices on the same platform.

- Eg: Whatsapp on iOS and Android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ShaPhrang Lyngdoh 3:39 pm
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Wanpynshngaila... 10:56 am
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Pratiksha 8:16 am
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Austin Zosanglian... 7:35 am
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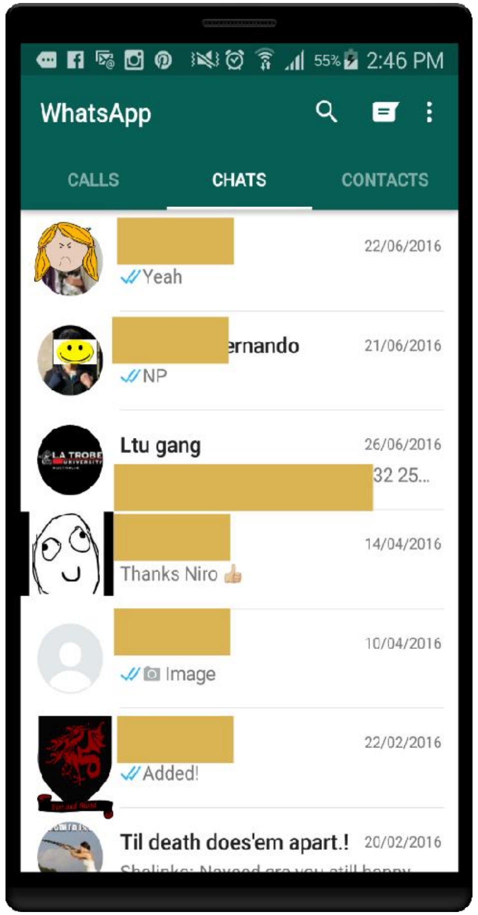
Josh Basumatary 6:05 am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[redacted]ernando 21/06/2016
✓✓NP

Ltu gang 26/06/2016
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[redacted] 14/04/2016
Thanks Niro 👍

[redacted] 10/04/2016
✓✓ Image

[redacted] 22/02/2016
✓✓Added!

Til death does'em apart.! 20/02/2016

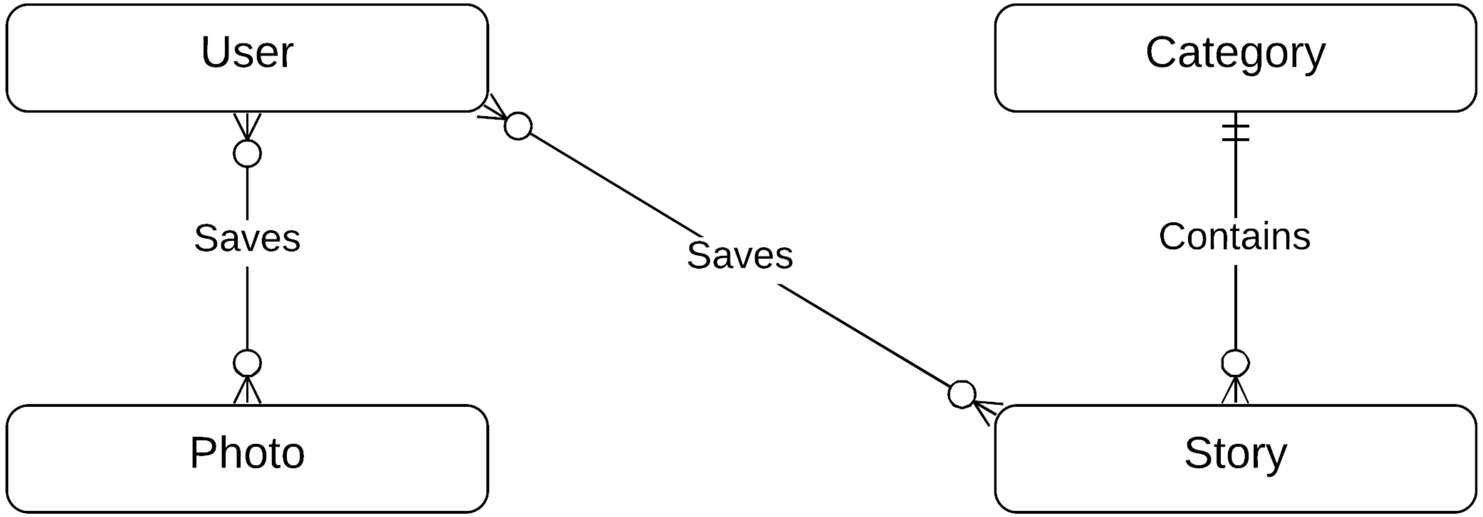
2.2.1 Interaction Experiences for Multiple Platforms & Devices contd…

- Do not force a design onto another platform.
- No universal interaction implementation that translates an app to all operating systems (there is cross-platform app development using Xamarin, which we will learn later)
- User interactions are implemented in different ways on different platforms
- App needs to be implemented in accordance with the established and defined conventions for each platform.
- Consider how your design will work on different devices and platforms before advancing to later stages.

2.2.2 Planning Screens

Let's consider an example application that allows users to browse through a set of categorized news stories and photos. One possible model for such an app is shown below in the form of an ERD.

Step 1: Express the information model of the app as an Entity-relationship diagrams (ERD).



Entity-relationship diagram for the example news application

2.2.2 Planning Screens

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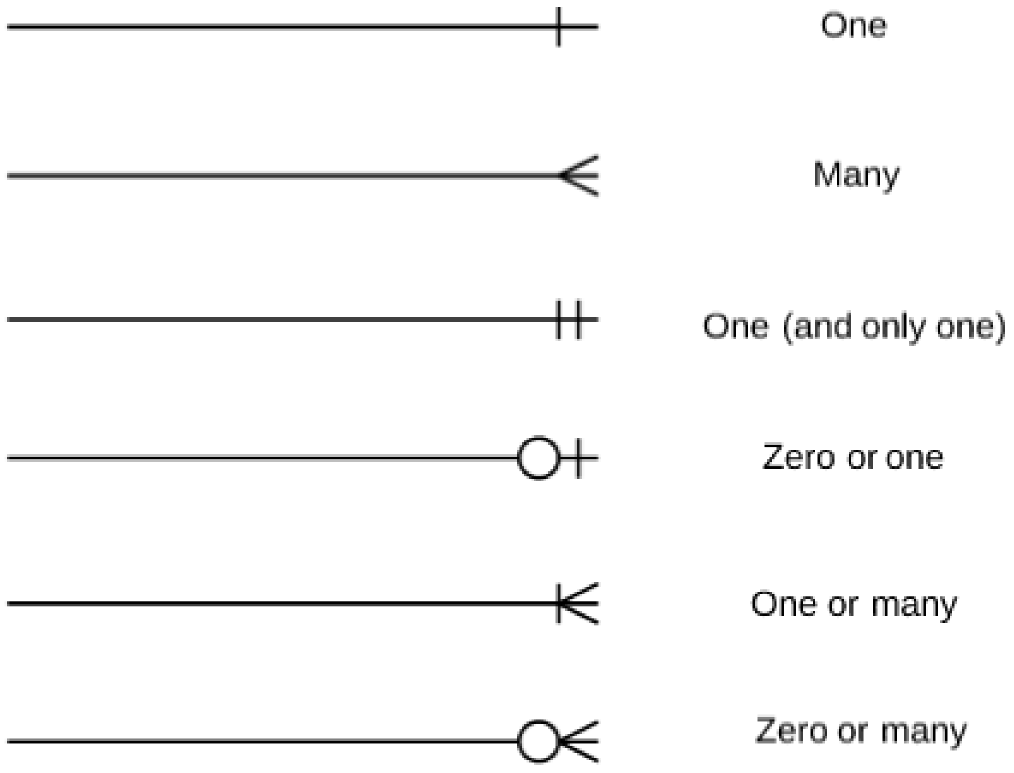
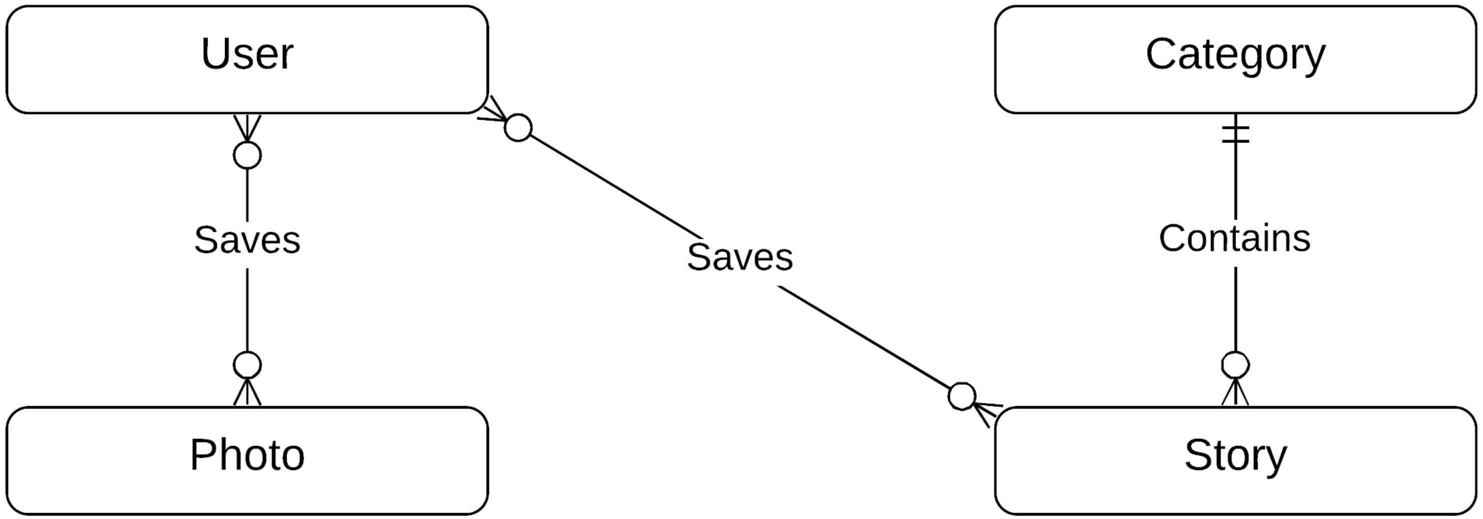




Entity-relationship diagram for the example news application

2.2.2 Planning Screens

Step 2: Create the complete set of screens needed to allow users to navigate to and interact with the data

Use cases in sample app:
enable users to **view**, **save**, & **share** *categorized* **stories** and **photos**.

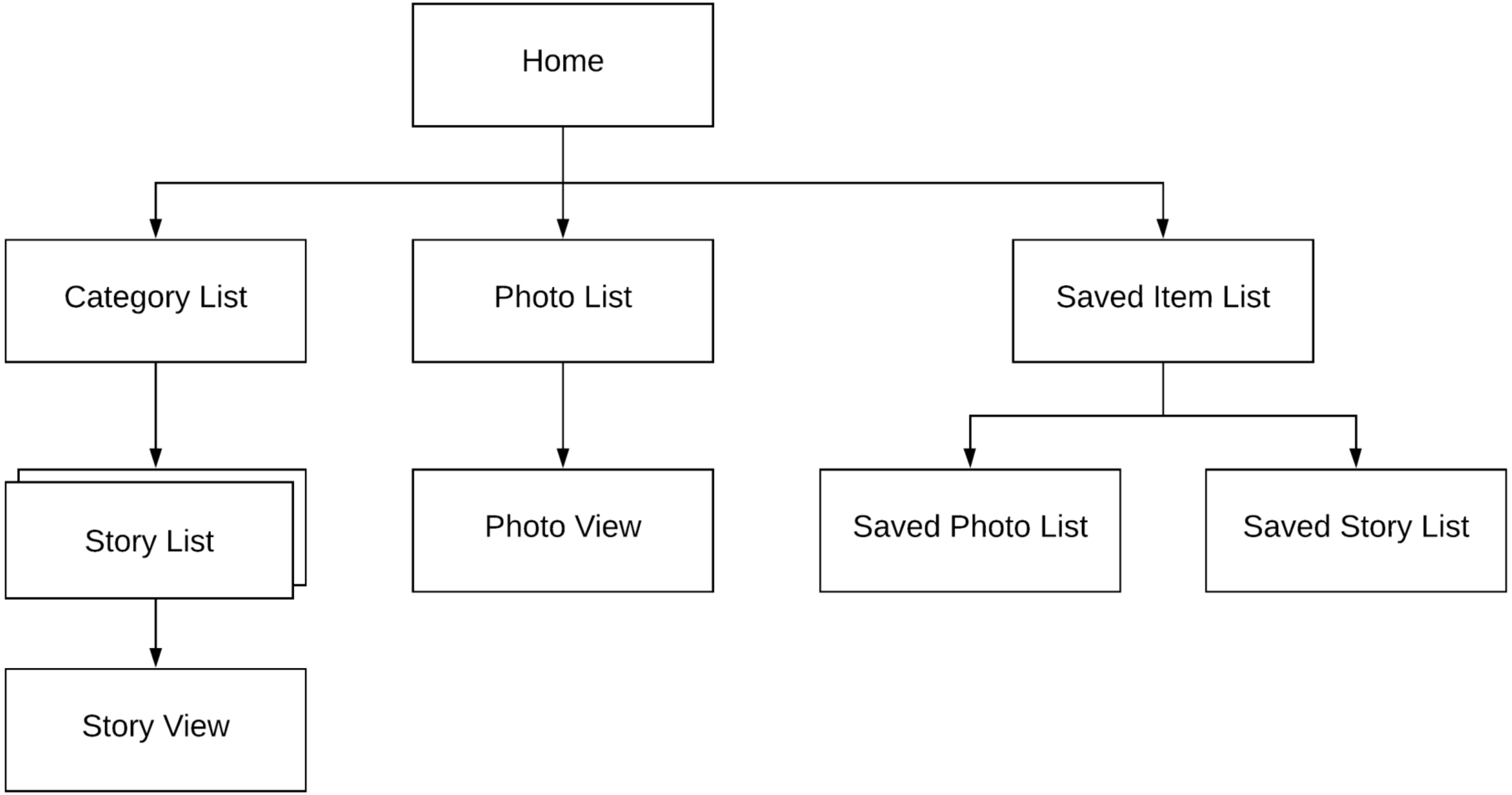
Screens for above use cases:

- Home screen for accessing stories and photos
- List of categories
- List of news stories for a given category
- Story detail view (from which we can save and share)
- List of photos, uncategorized
- Photo detail view (from which we can save and share)
- List of saved photos
- List of saved stories

2.2.2 Planning Screens contd...

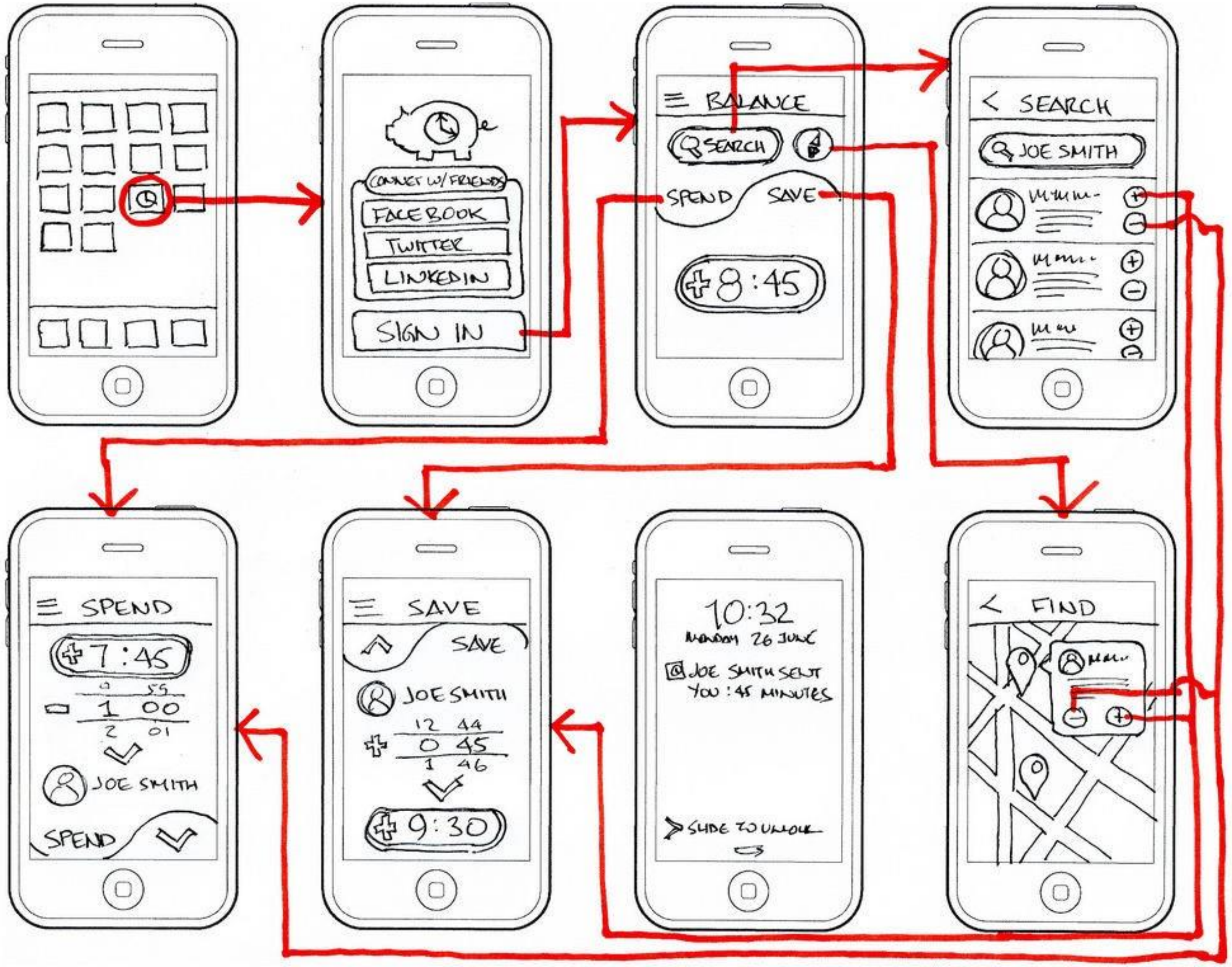
Step 3: Diagram screen relationships

- an arrow from one *screen A* to a *screen B* implies that *screen B* should be directly reachable via some user interaction in *screen A*



2.2.2 Planning Screens contd…

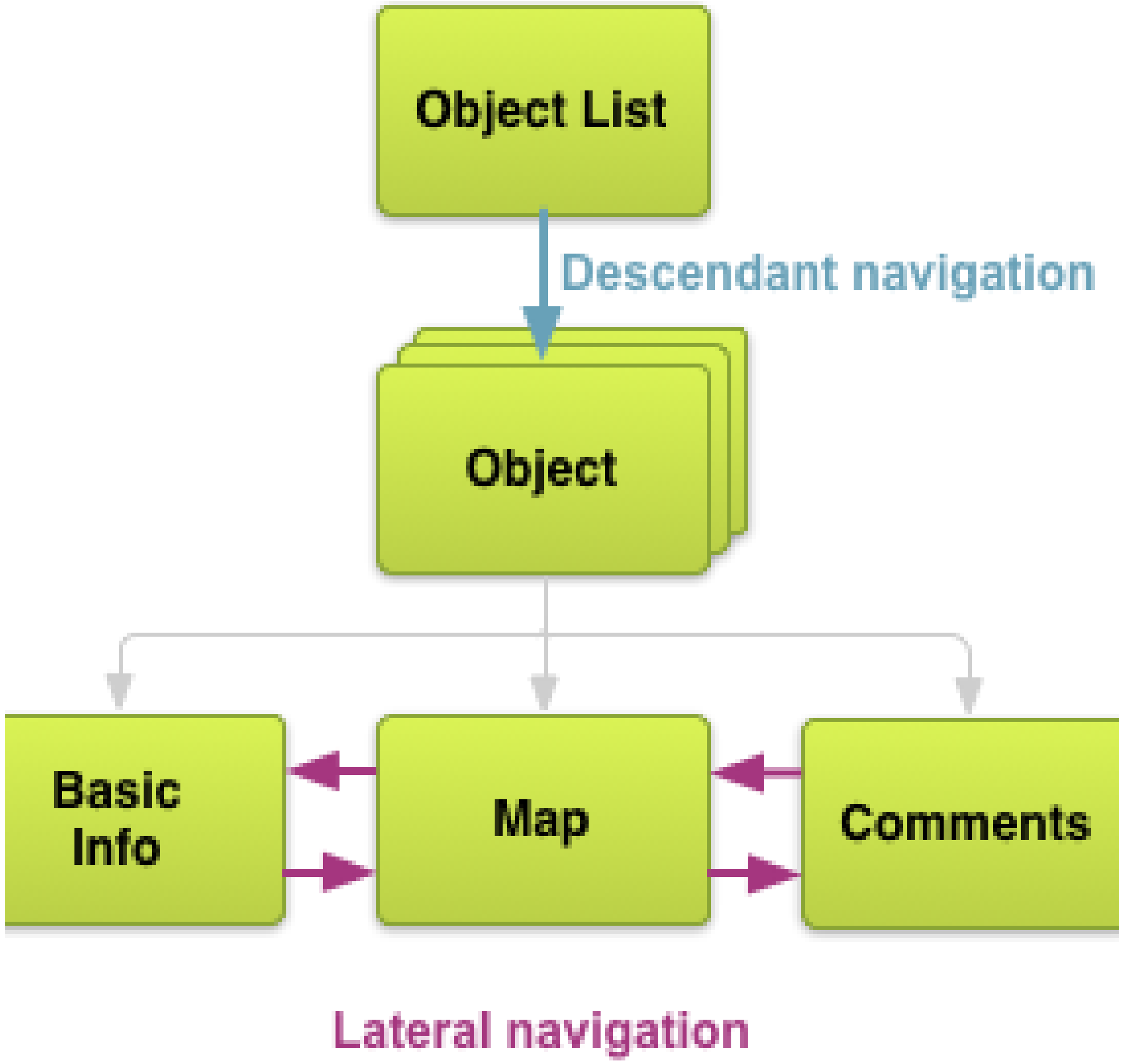
Step 4: Design the initial app with main functionalities.



2.2.3 Android Navigation: Descendant & Lateral

Descendant navigation: allowing users to descend 'down' a screen hierarchy into a child screen

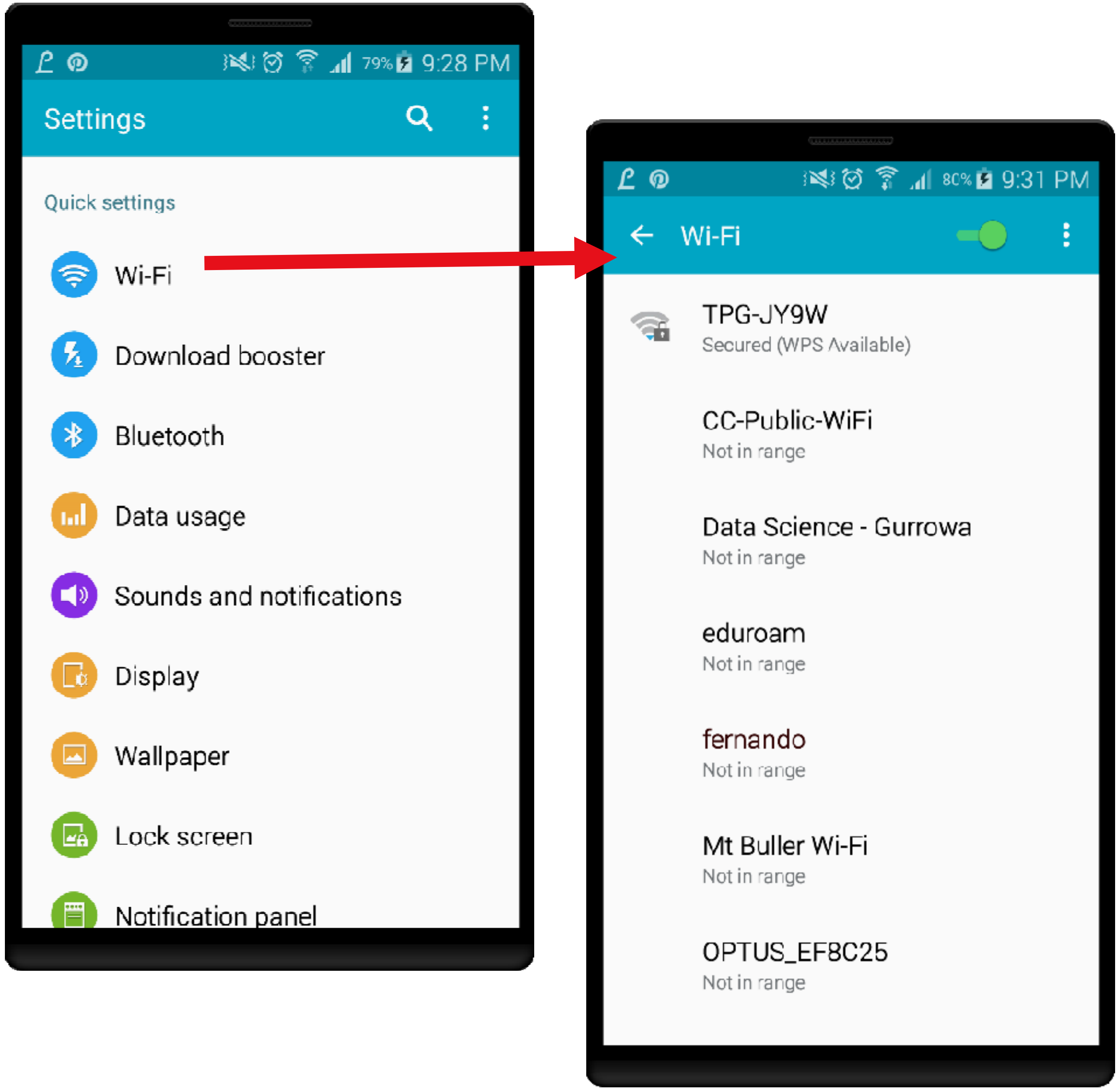
Lateral navigation: allowing users to access sibling screens.



https://developer.android.com/design/patterns/navigation.html

2.2.3 Android Navigation: Descendant & Lateral

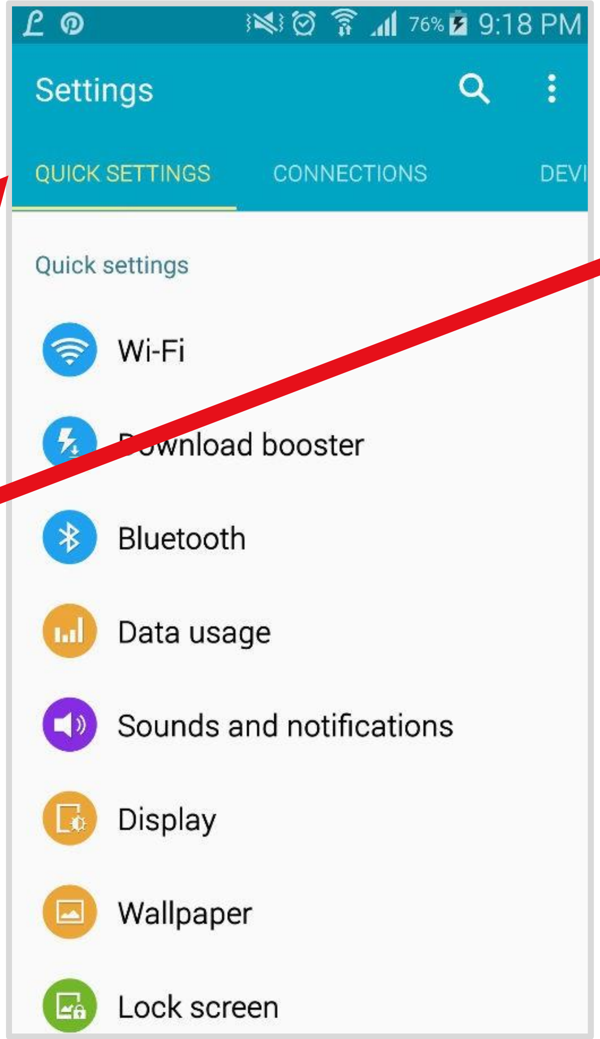
Example for descendant navigation:
Android settings (List view)

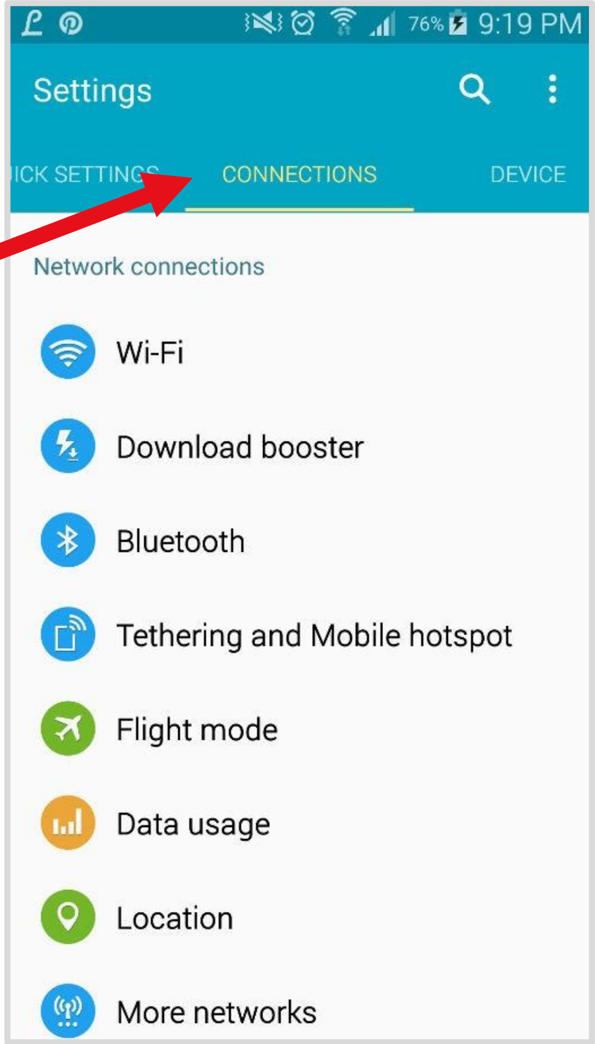


2.2.3 Android Navigation: Descendant & Lateral

Example for lateral navigation:

Android settings tabs

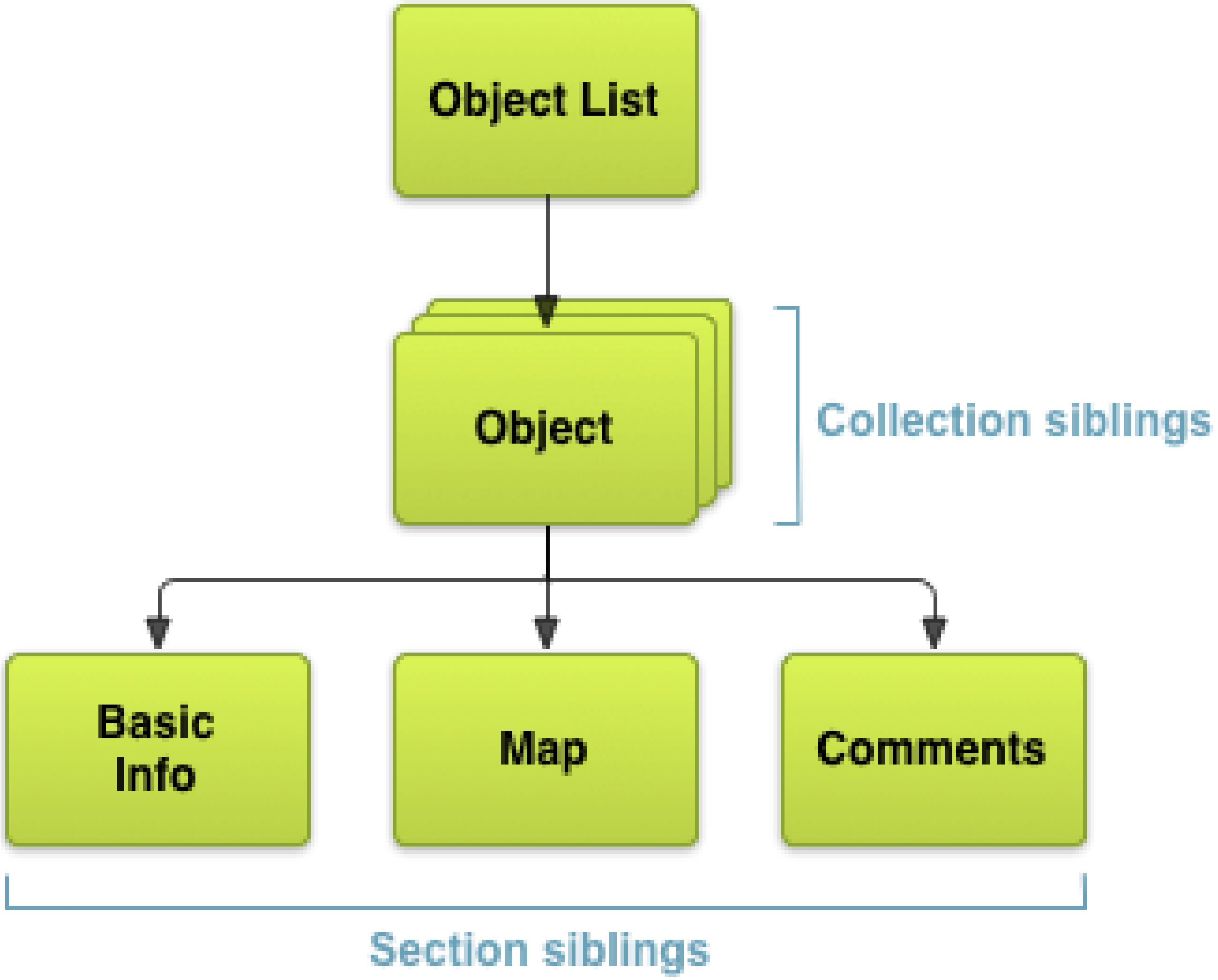




2.2.3 Android Navigation: Descendant & Lateral

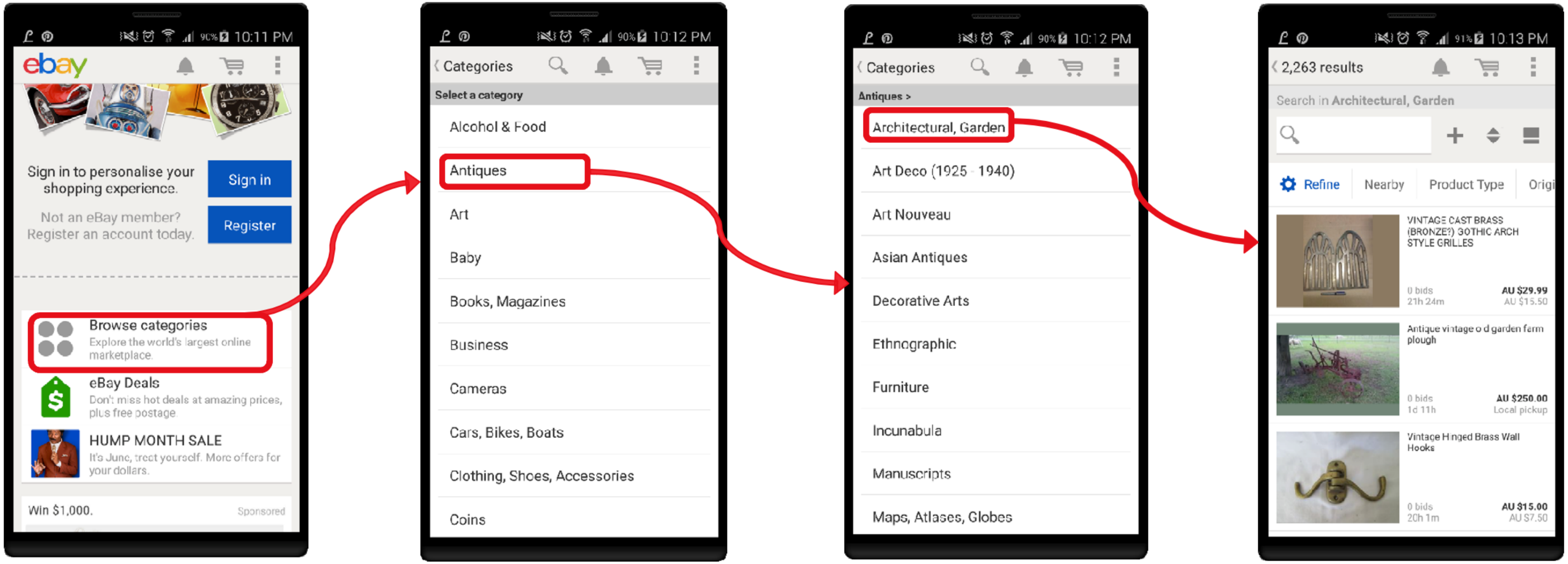
There are two types of sibling screens: collection-related and section-related screens.

- *Collection-related* screens represent individual items in the collection represented by the parent.
- *Section-related* screens represent different sections of information about the parent.



https://developer.android.com/design/patterns/navigation.html

Example for collection-related screens : ebay app's categories



10:11 PM

ebay

Sign in to personalise your shopping experience. Sign in

Not an eBay member? Register an account today. Register

Browse categories
Explore the world's largest online marketplace

eBay Deals
Don't miss hot deals at amazing prices, plus free postage

HUMP MONTH SALE
It's June, treat yourself. More offers for your dollars.

Win $1,000. Sponsored

10:12 PM

Categories

Select a category

- Alcohol & Food
- Antiques
- Art
- Baby
- Books, Magazines
- Business
- Cameras
- Cars, Bikes, Boats
- Clothing, Shoes, Accessories
- Coins

10:12 PM

Categories

Antiques >

- Architectural, Garden
- Art Deco (1925 - 1940)
- Art Nouveau
- Asian Antiques
- Decorative Arts
- Ethnographic
- Furniture
- Incunabula
- Manuscripts
- Maps, Atlases, Globes

10:13 PM

2,263 results

Search in Architectural, Garden

Refine | Nearby | Product Type | Origi

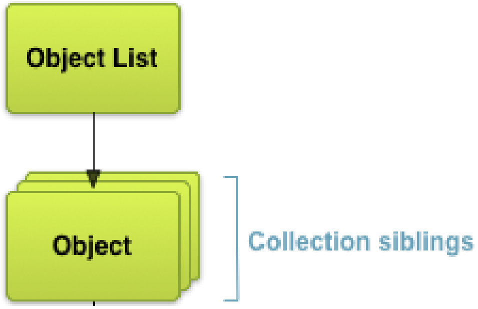
VINTAGE CAST BRASS (BRONZE?) GOTHIC ARCH STYLE GRILLES
0 bids 21h 24m — AU $29.99 AU $15.50

Antique vintage old garden farm plough
0 bids 1d 11h — AU $250.00 Local pickup

Vintage Hinged Brass Wall Hooks
0 bids 20h 1m — AU $15.00 AU $7.50

2.2.3 Android Navigation

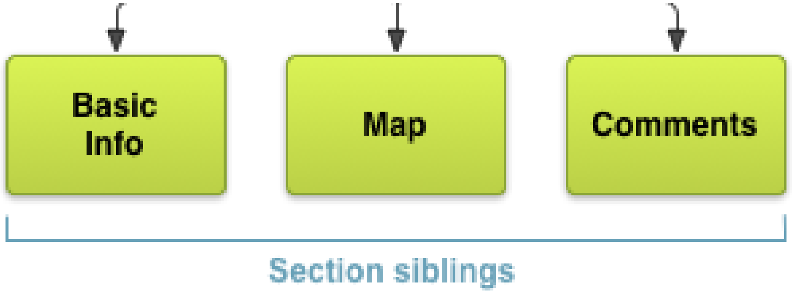
- **Collection-related sibling screens:** Architectural Garden, Art Deco …
- **Collection-related sibling screens:** Alcohol & food, Antiques, Art, Baby,…

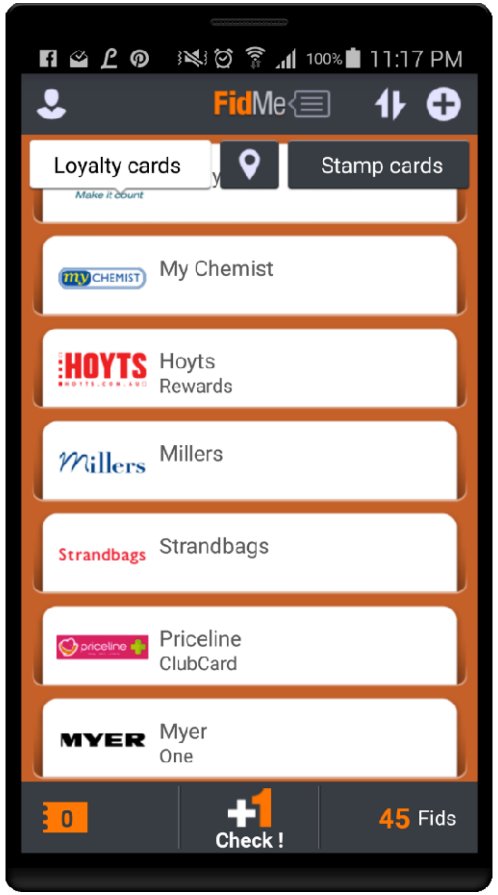


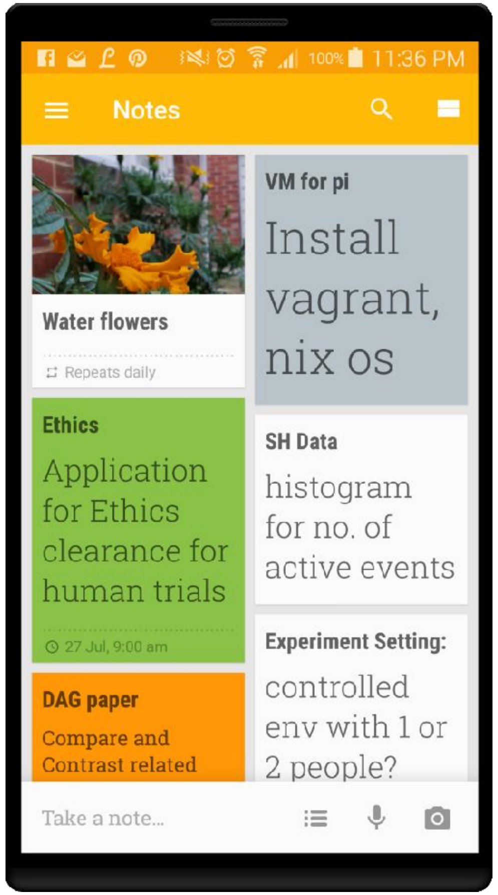
https://developer.android.com/design/patterns/navigation.html

2.2.3 Android Navigation

Example for section-related screens:
simple buttons & dashboard



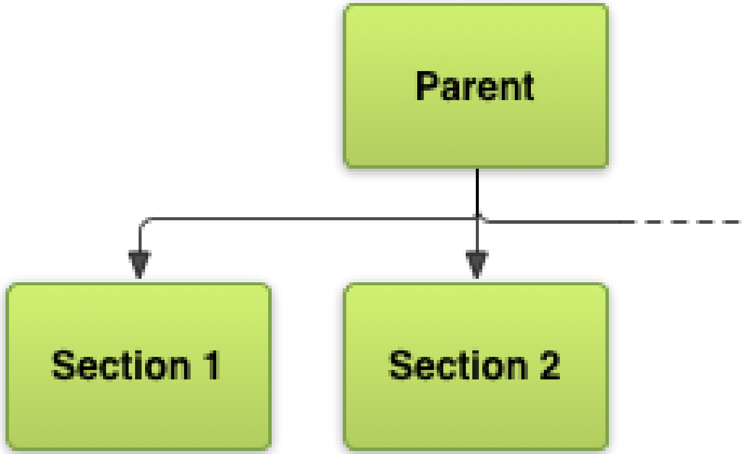


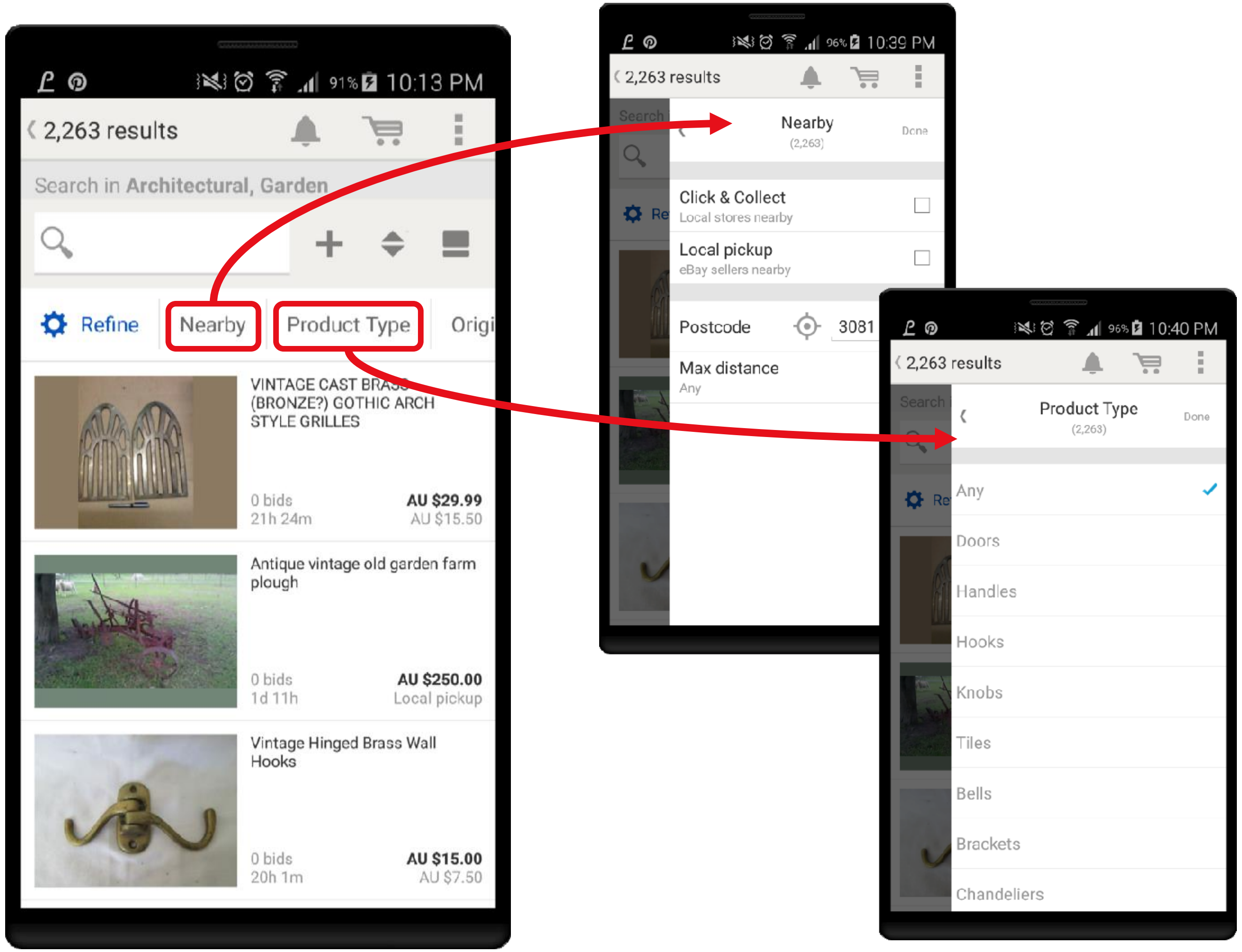

11:36 PM
Notes
Water flowers
Repeats daily
VM for pi
Install vagrant, nix os
Ethics
Application for Ethics clearance for human trials
27 Jul, 9:00 am
SH Data
histogram for no. of active events
DAG paper
Compare and Contrast related
Experiment Setting:
controlled env with 1 or 2 people?
Take a note...

https://developer.android.com/design/patterns/navigation.html

2.2.3 Android Navigation

Example for section-related screens :
ebay app's results





2,263 results

Search in Architectural, Garden

Refine | Nearby | Product Type | Origi

VINTAGE CAST BRASS (BRONZE?) GOTHIC ARCH STYLE GRILLES
0 bids 21h 24m — AU $29.99 AU $15.50

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Vintage Hinged Brass Wall Hooks
0 bids 20h 1m — AU $15.00 AU $7.50

Nearby (2,263) Done

Click & Collect — Local stores nearby □

Local pickup — eBay sellers nearby □

Postcode 3081

Max distance — Any

Product Type (2,263) Done

Any ✓

Doors

Handles

Hooks

Knobs

Tiles

Bells

Brackets

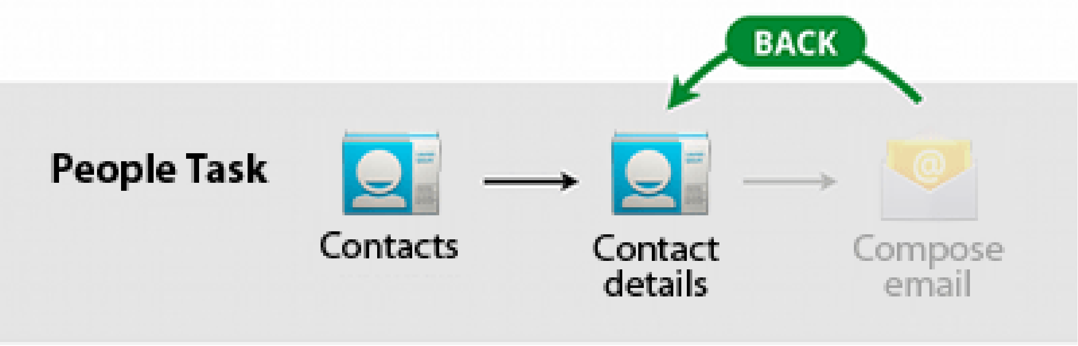
Chandeliers

https://developer.android.com/design/patterns/navigation.html

2.2.4 Android Navigation: Ancestral and Temporal

Temporal Navigation: Back

- Android's *Back* button takes you to the previous screen, regardless of other state. Pressing *Back* enough times should land you back at the Launcher, after which the *Back* button will do nothing.

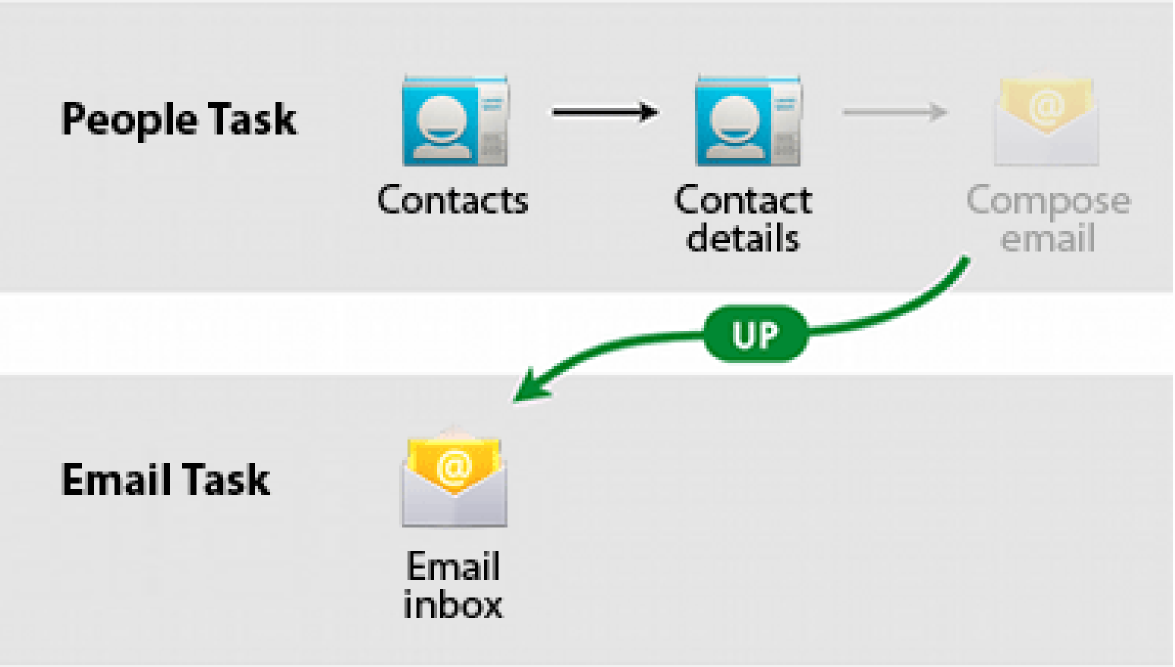


https://developer.android.com/design/patterns/navigation.html

2.2.4 Android Navigation: Ancestral and Temporal

Ancestral Navigation: Up and Home

- Android’s Home key gives direct access to the application's home screen, which can give the user a sense of comfort and security. This Up step is usually the same as Back, but this is not universally the case.

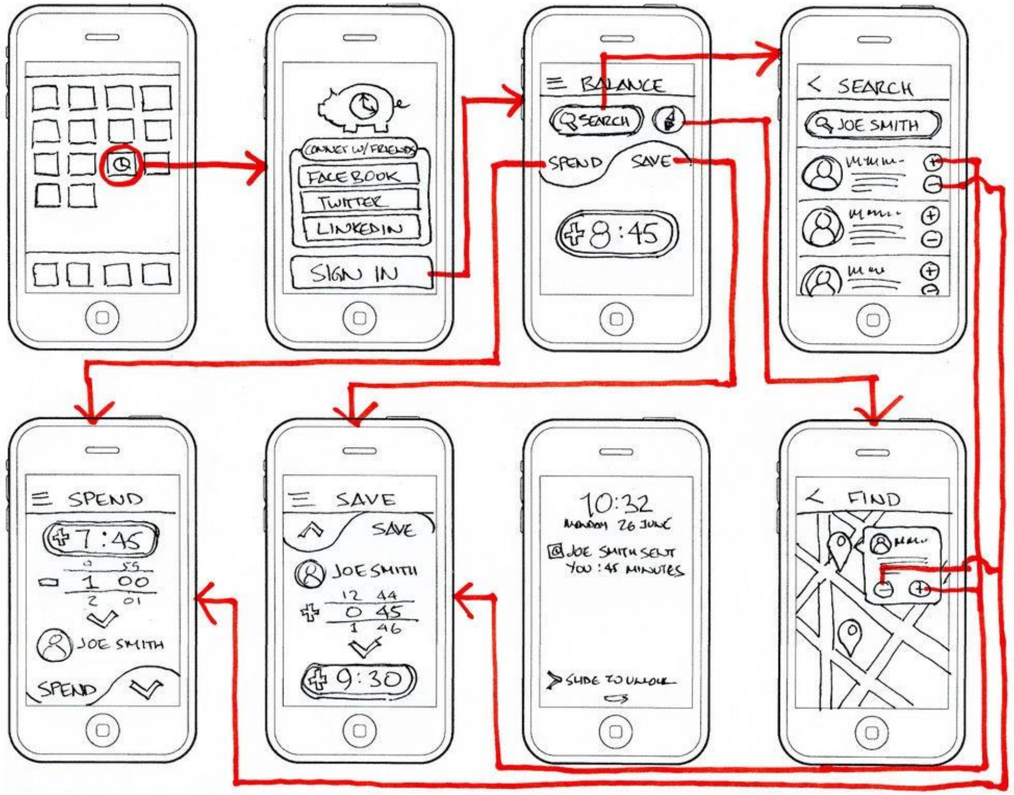


https://developer.android.com/design/patterns/navigation.html

2.2.5 Wireframes

A wireframe is a blueprint of an application (or a website), showing the app’s functionalities and user interactions.

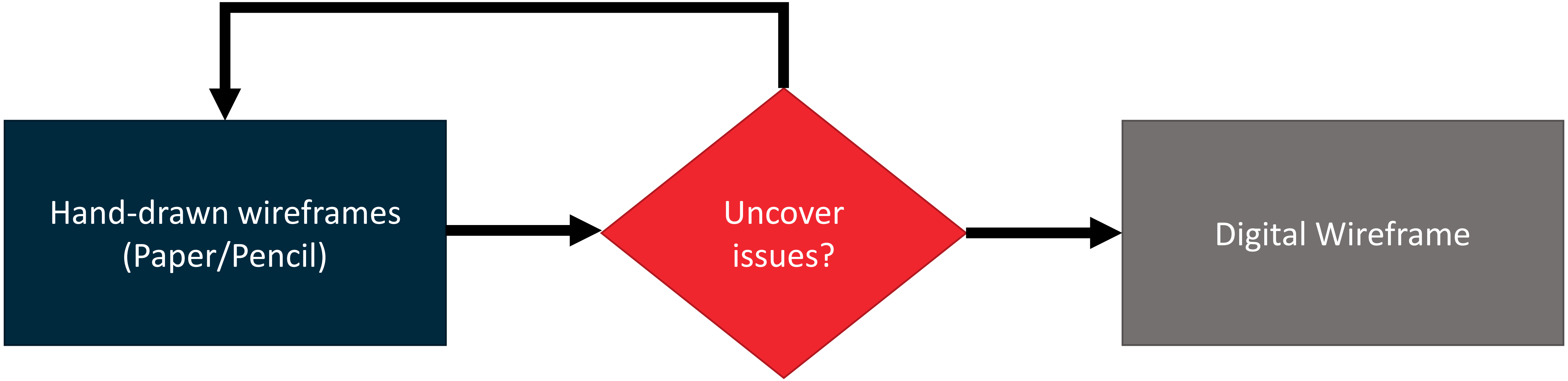
Last step (step 4), where all the previous steps (ERD, screen list, screen relationships) come together.



2.2.5 Wireframes

Hand-drawn (pencil & paper) wireframes can be the easiest way at the initial stage.

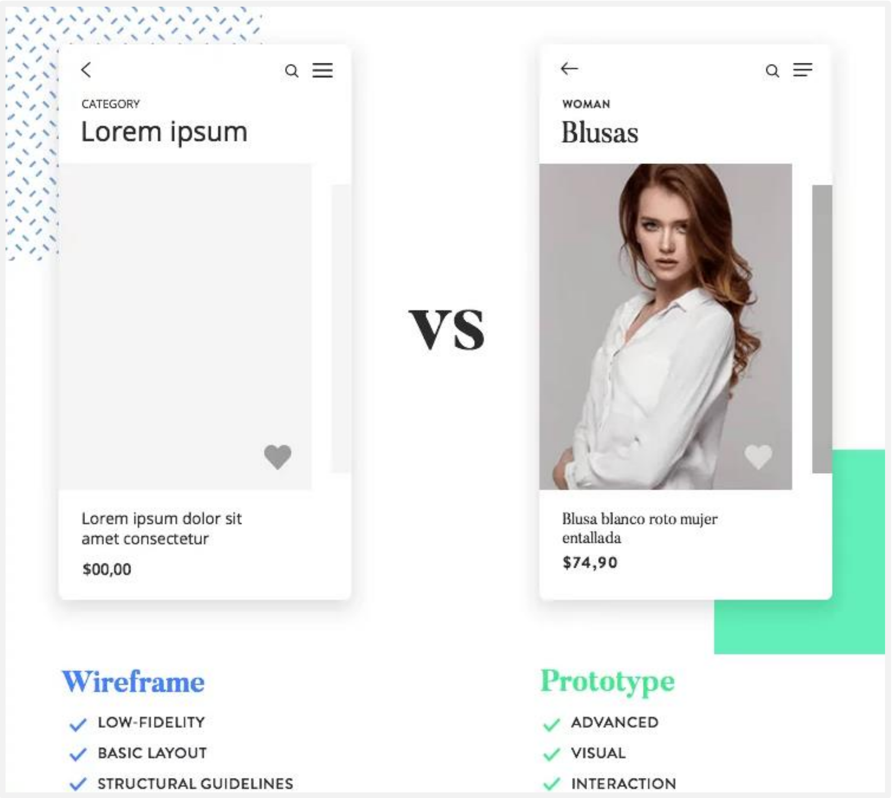
Can move on to digital wireframes for the later stages.



2.2.5 Wireframes v’s Prototypes

A wireframe is a static, low-fidelity representation of your product, and in the world of web and mobile design, a basic guideline of your website or app – the skeletal framework – for both designers and developers to follow.

A prototype is a mid-to-high-fidelity design model of the final UI of your website or mobile product. As well as offering a more detailed look at the visual attributes of your design, prototypes usually include the first user interaction.



2.2.6 Reiteration

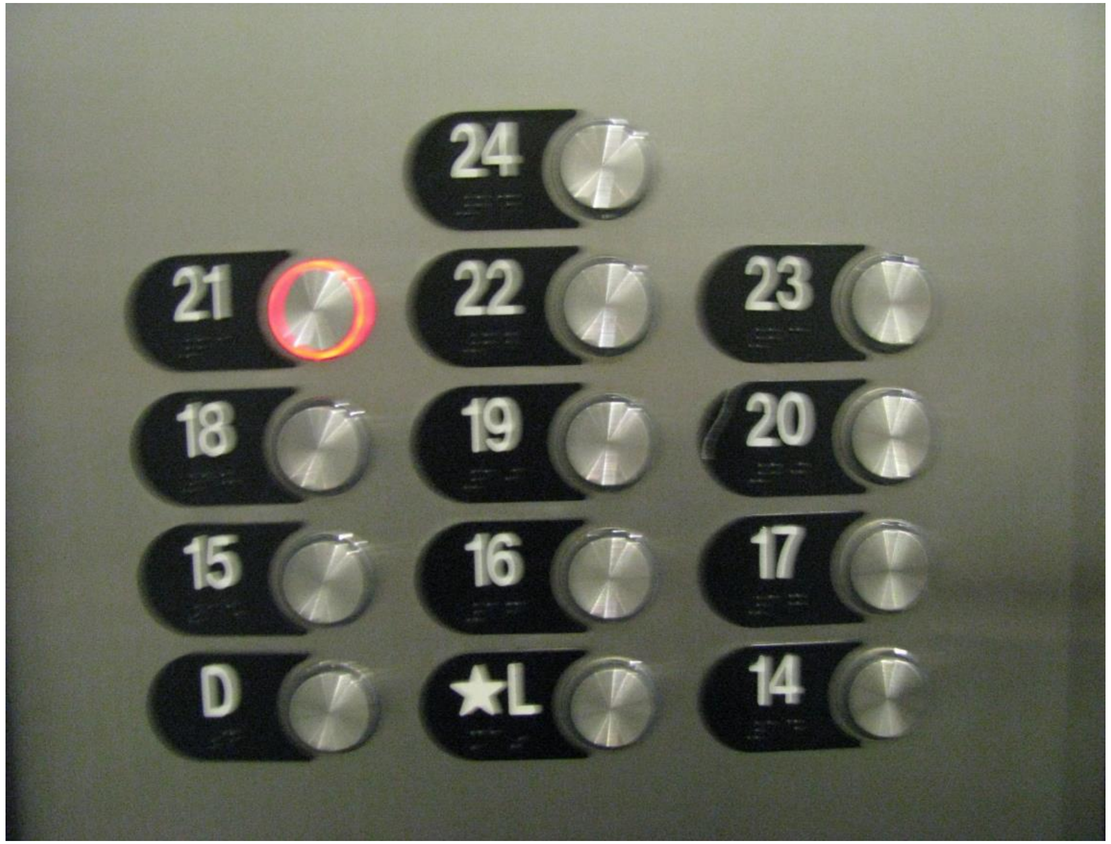
Sit down and review your design work with all stakeholders in the project.

Consider:

- Does the app look like it will fit in with the platform?
- Will users be able to use the application with no guidance?
- Can the programmer implement the design with art assets and design documentation only?
- Will the design age gracefully?
- Does the design meet future project goals?

“Reiterating Before It’s Too Late”, Chapter 4, Essential Mobile Interaction Design Apps by Cameron Banga & Josh Weinhold:

….Think about….



http://www.ombailamos.com/ombailamos/2013/01/bad-design.html

Today we discussed good design.

What about bad design?

Can you think of some badly designed apps?

Why?