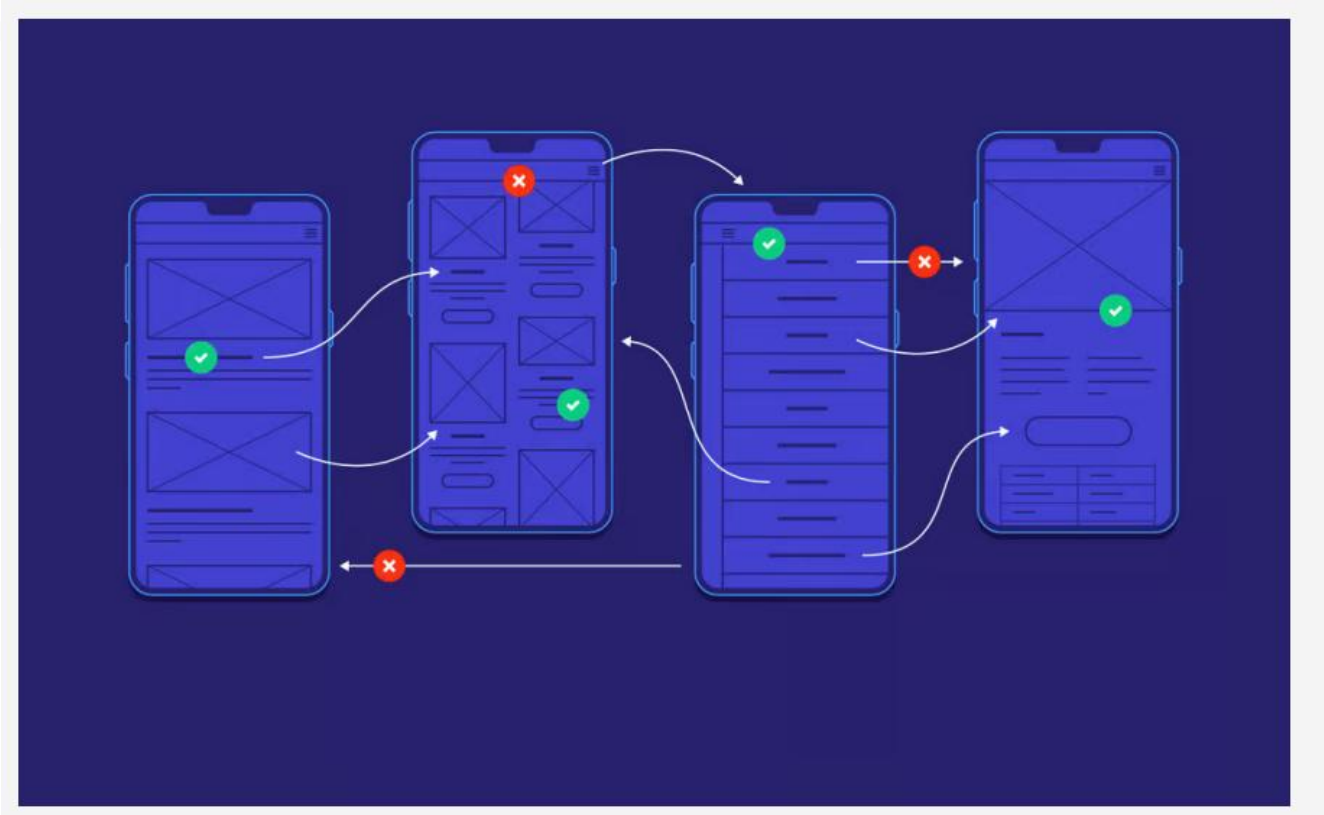
UI/UX DESIGN

Lecture 9. **Mobile UI/UX**

MOBILE USABILITY



Mobile usability isn’t just about scaling a website or app to fit various devices. It’s about understanding how people use mobile devices and that the mobile experience is as unique as the user.

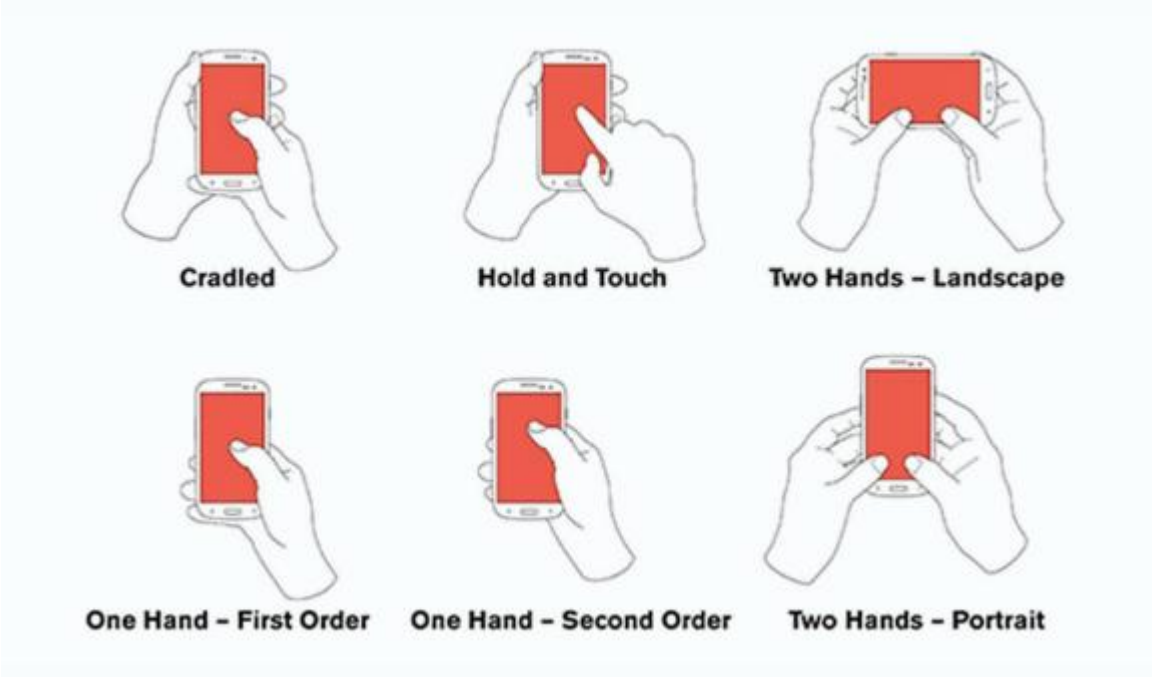
MOBILE USABILITY

Mobile design is all about tactile, it requires more than just visual design. Need to consider elements of industrial design and human factors. UX designers should have and understanding of physical experiences of an app.

Mobile UI designers should observe and understand users before creating screen designs. The literal and physical way are main ways to understand how people use their devices.

How People Use Mobile Devices?

- Steven Hoober after his mobile research in 2013, after growth of the field he updated his research data in 2017.
- In 2017, he made a three-part series to point out new key learnings, and tell designer to stop referencing his oldest work as the standard.
- For example he says illustration (shown in this slide), continues to make the round as the standard for how users hold their phones, but it is not correct as the only standard.



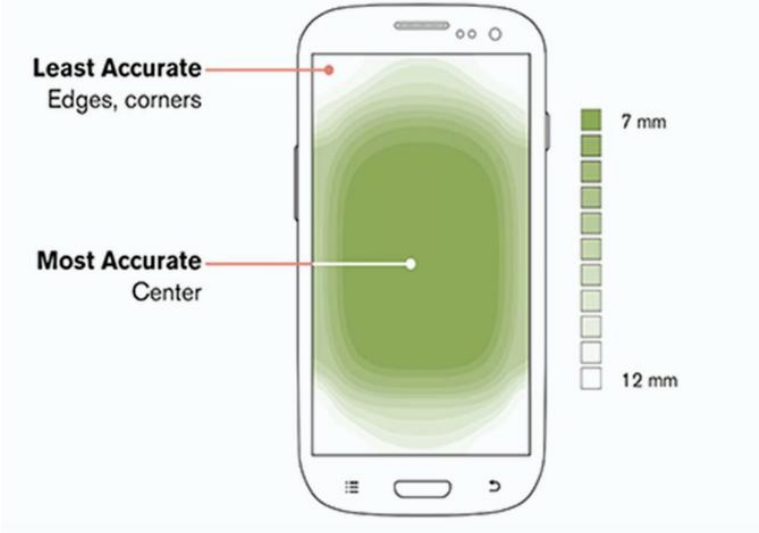
In fact, there are six distinct ways users hold their phones, with 75% using just their thumb to touch the screen and fewer than 50% holding their phone with only one hand.

F-pattern is not working?

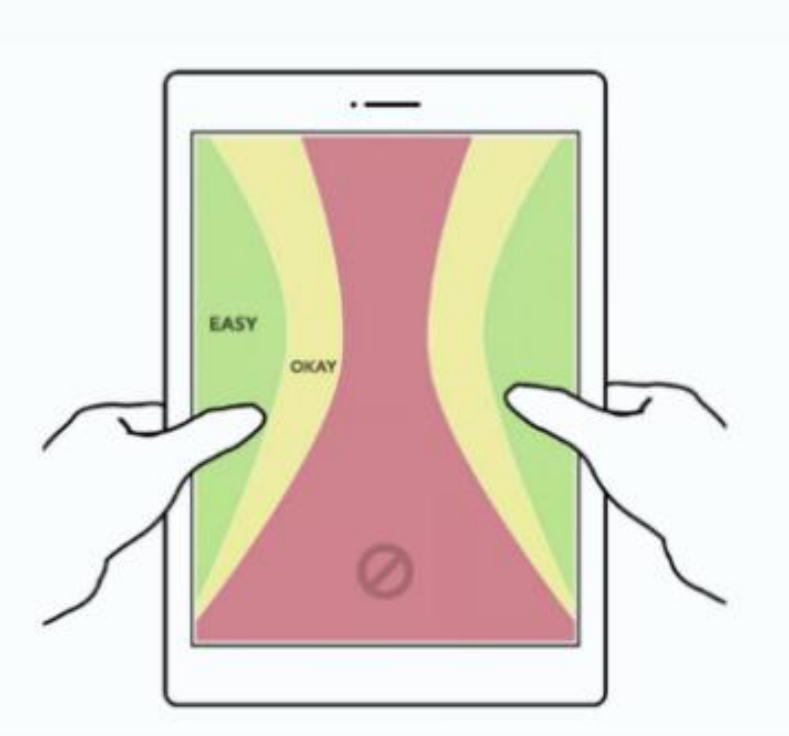
- According to findings, we can say that F-shape pattern is not in sync with mobile design.
- Avoid using hamburger menu, and hide important content for mobile design.

If Not the F-pattern, Then What?

- The main focus on the center of the screen, because it is the easiest place for them to reach.
- Touch accuracy decreases at corners of the screen.



- Mobile design contains tablets too, and situation with tablets is different.



MOBILE USABILITY PRINCIPLES

01 KNOW YOUR USERS

02 UNDERSTAND CONTEXT

03 FOLLOW THE RULE OF THUMB(S)

04 PUT CONTENT FIRST

05 STAY ON (TOUCH) TARGET

06 ECHO THE REAL WORLD WITH GESTURES

07 USE PROGRESSIVE DISCLOSURE

Know your users

For mobile design, you should know the behavior of your user.
Avoid these mistakes:

- Assume that everyone use their phone like you, or the same device as you.
- Assume that data from prior researches will be true forever.

Data from existing researches might be false to you. Observe your potential users.

Ways to know your users better:

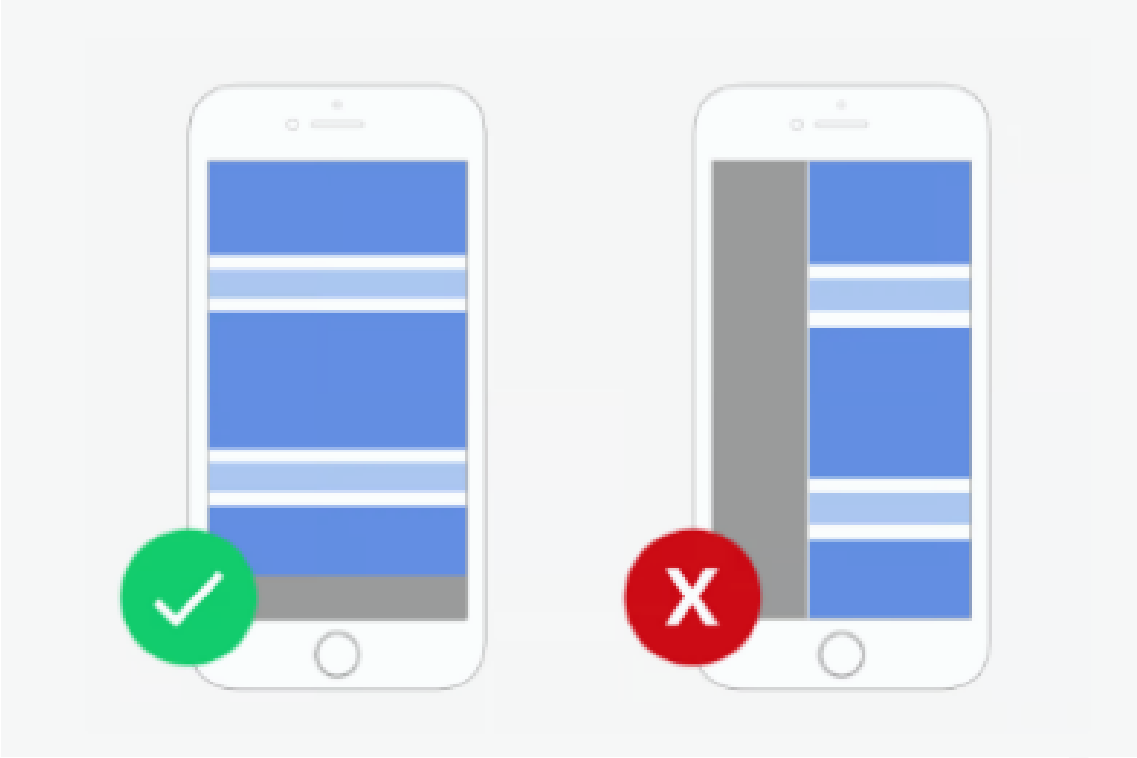
- Web analytics(if exists)
- Survey
- Observe users in the wild

Understand Context of Use

- Mobile phones actually means to “mobile”.
- Most of the users are not focusing on 100% on their mobile phone, they often doing other things.
- “Where” people use the app is important as the “how” people use the app.

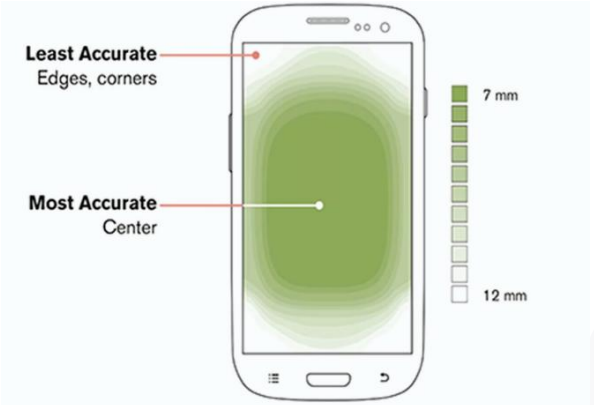
Follow the Rule of Thumb(s)

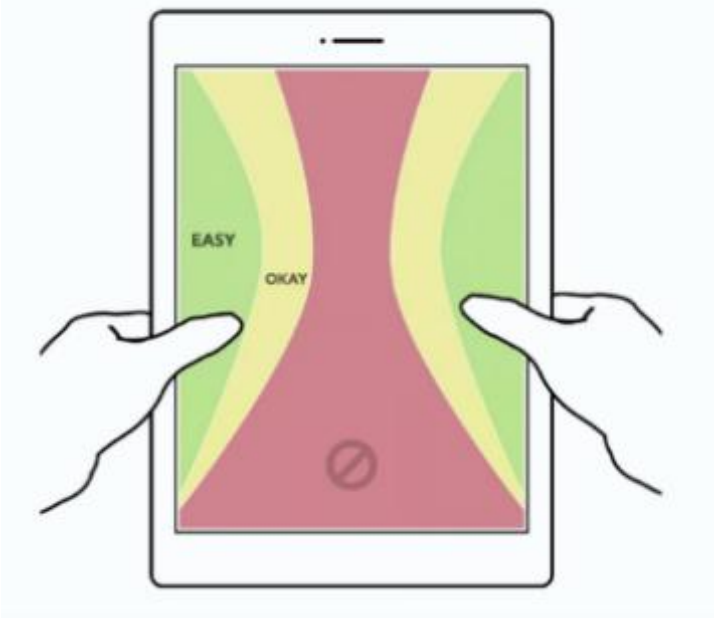
- Design for thumbs, not for mouse clicks.
- Single-column layout > Multiple-column layout.



Put Content First

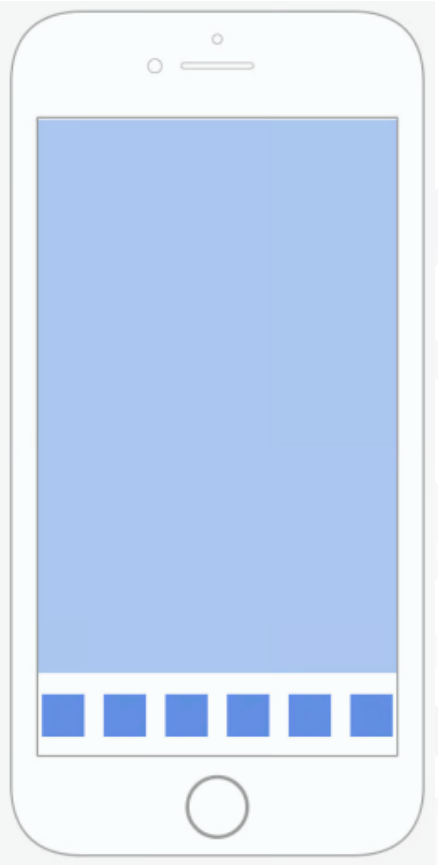
- Content should always appear above controls.
- Because of how users view and touch the screen on mobile phones, content should be in the center, controls should be at the bottom.
- On tablets slightly different, content still should be in the center, but navigation controls should be on the sides.





Stay on (Touch) Target

- Mobile devices requires design for touch. According to Josh Clark, founder of the UX agency Big Medium and author of Designing for Touch, one number really matters in mobile usability: 44.
- The optimal touch target is 7x7mm, which translated into pixels equals roughly 40. But in order to account for various viewing sizes, 44 pixels is the ideal space to cover touch zones and avoid user error.
- Making touch targets a bit bigger covers the situation when user interact with device, giving it divided attention (as in principle of Understand Context of Use)



Echo Real-world Gestures and Movement

- Swipes, flips and pinches should make sense. For example: if user swipes card on the screen, the motion of the card should be proportional to the force applied.
- Microinteractions in mobile help bring the app to life and make it feel more natural for touch.

Use Progressive Disclosure

- Give the user the right content, as well as the right amount of the content.
- Avoid bombarding the user with all the content at once, but at the same time, the most important information shouldn’t hide behind navigation.

Android vs iOS

Material design

Material design, maintained by Google, is the standard when it comes to developing Android applications.
The standard is in terms of notifications, fingerprint, launcher icons, and split screen on Android apps.

Material Design 3 - Google's latest open source design system

Human Interface Guidelines (HIG)

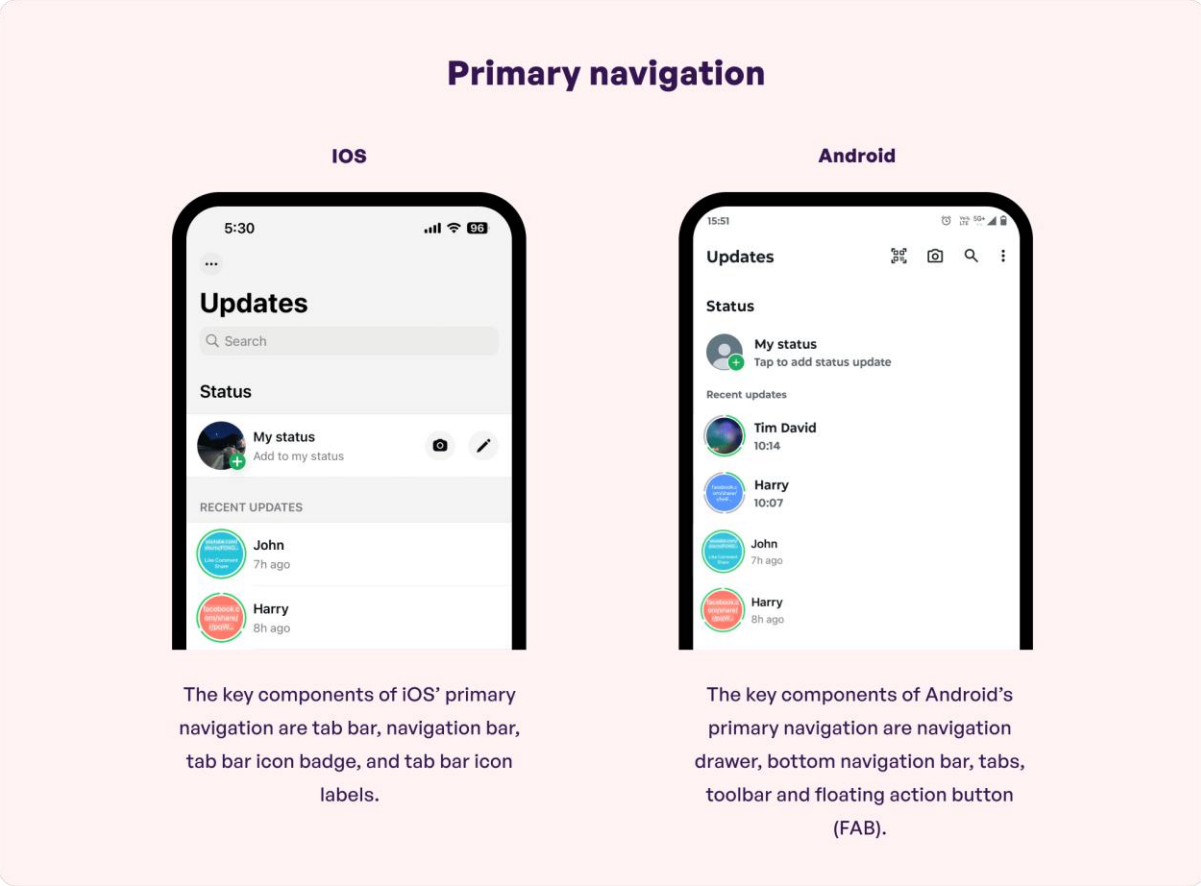
Human Interface Guidelines (HIG) , maintained by Apple, contains guidelines for iOS best practices in application development. The core rule is crisp elements with minimalism and loads of Apple technologies.

Design - Apple Developer

Android vs iOS
Navigation

Primary navigation

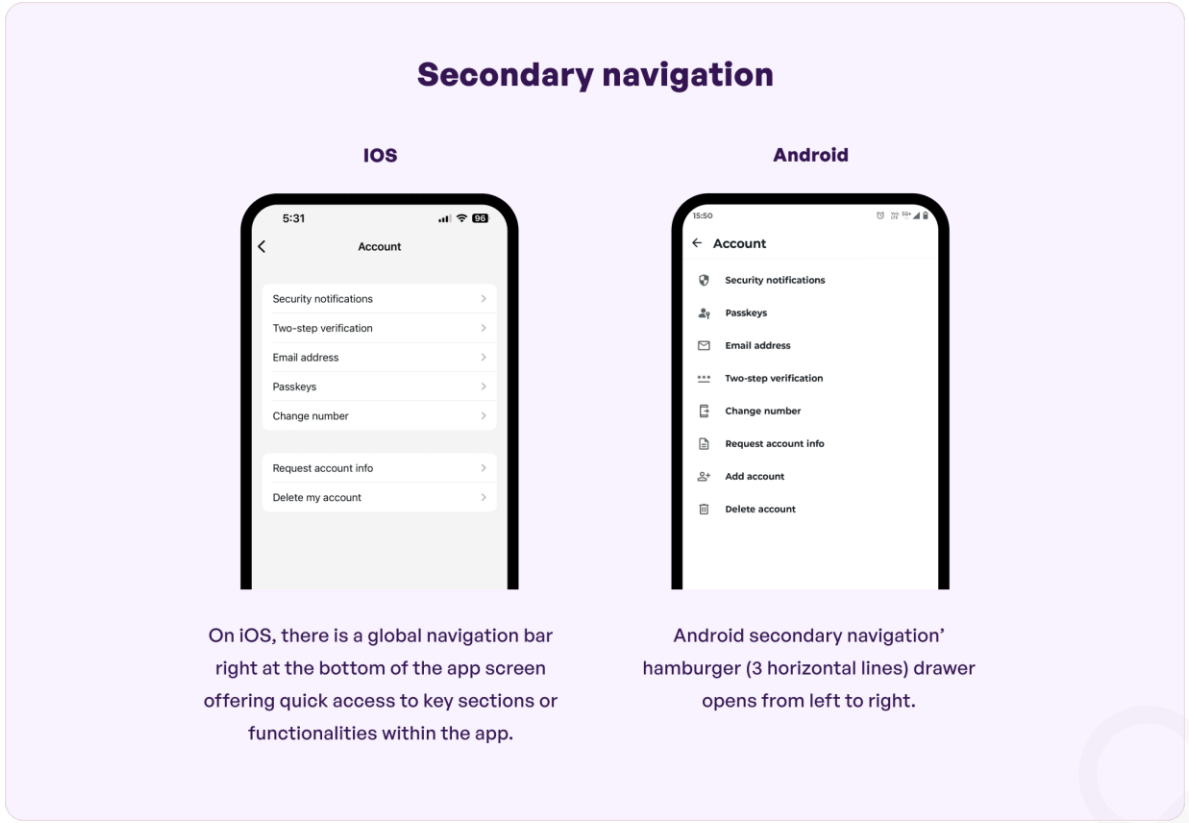
Primary navigation is the principal navigation component that offers access to all app destinations.



Android vs iOS
Navigation

Secondary navigation

Secondary navigation is typically present in complex apps and leads to additional information that might not be of primary importance.



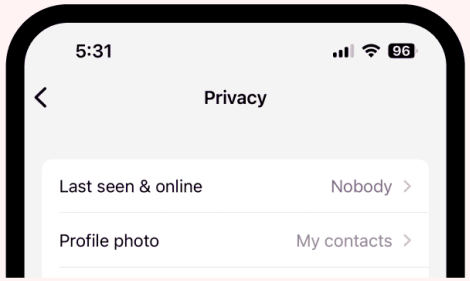
Android vs iOS
Navigation

Back navigation

Back navigation helps users move backward or in reverse chronology through screen history.

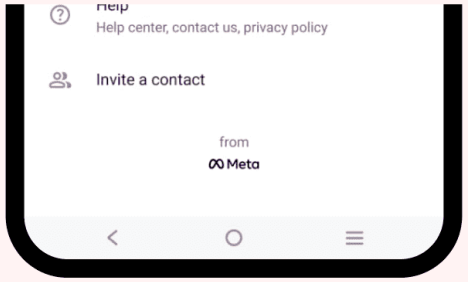
Back navigation

IOS



In iOS apps, back navigation is facilitated through a built-in back button in the navigation bar or via a swipe gesture from the left edge of the screen.

Android

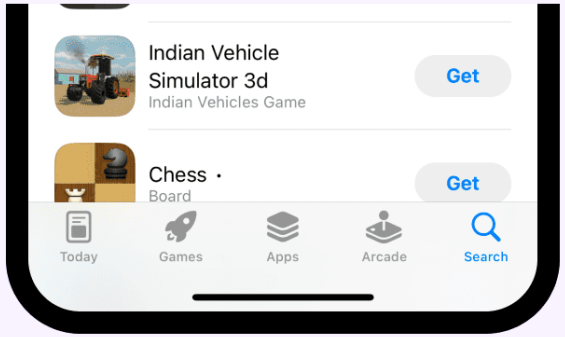


In Android, back navigation is typically managed by the system's back button or by providing a navigation up button in the app's action bar.

Android vs iOS
Tabs

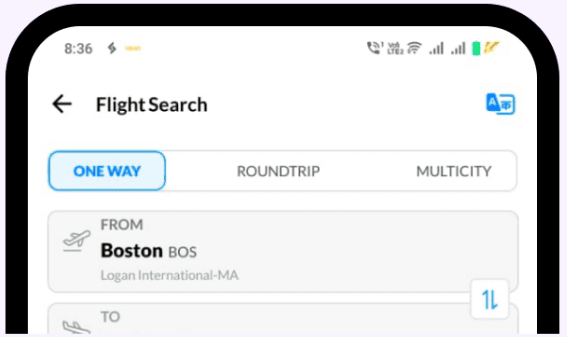
Tabs

IOS



In iOS apps, tabs are located at the bottom of the screen, depending on the app layout and are used for primary navigation between different sections.

Android



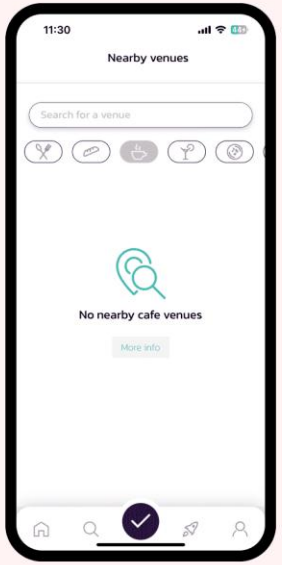
Android apps commonly place tabs at the top of the screen or use a combination of tabs and a bottom navigation bar.

Android vs iOS

Buttons

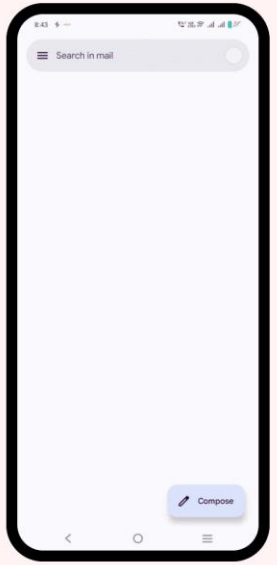
Buttons

IOS



iOS buttons support different states (normal, highlighted, disabled) to provide visual feedback to users.

Android



Android buttons offer customizable styles using attributes like background color, elevation, and ripple effects for touch feedback.

Android vs iOS

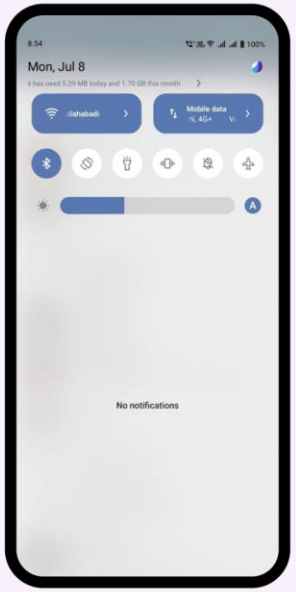
Gestures

Gestures

IOS

In iOS apps, a gesture like swiping from the left edge for back navigation is common.

Android



Android utilizes gestures such as swiping vertically for refresh or dismissing notifications, often integrating them with system-wide actions.

Android vs iOS

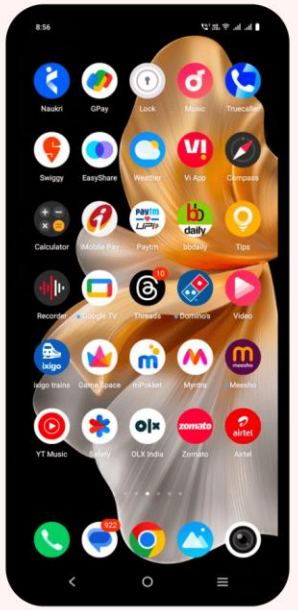
Icons

Icons

IOS

iOS icons tend to have a more uniform, consistent design language with rounded corners and subtle gradients.

Android



Android app icons often vary more in shape and style, with some adhering to material design guidelines but others allowing for greater creativity.

Android vs iOS

Typography

For IOS

San Francisco - 30

San Francisco - 25

San Francisco - 20

San Francisco - 15

For Android

Roboto - 30

Roboto - 25

Roboto - 20

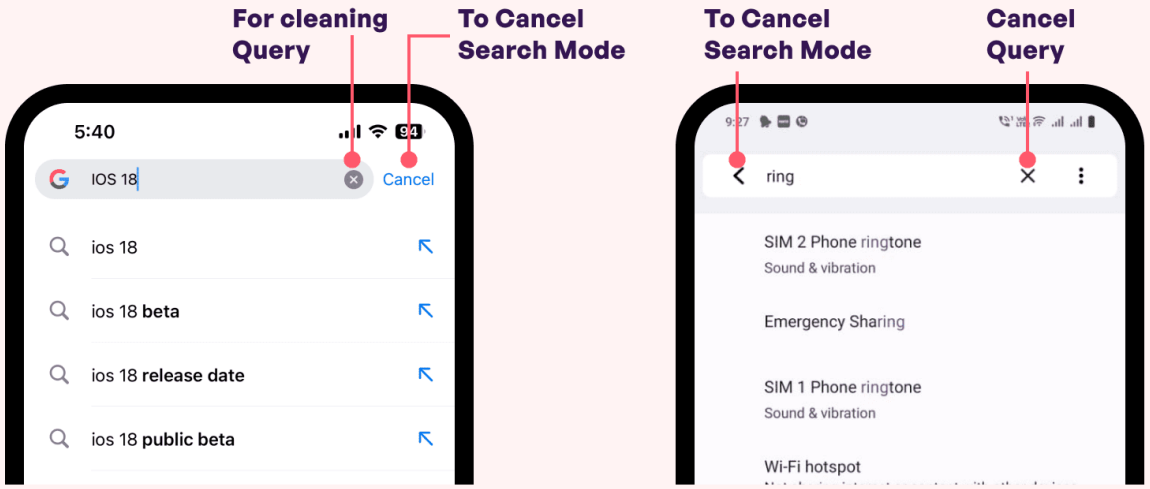
Roboto - 15

This choice affects app aesthetics and readability across platforms. Developers often ensure compatibility by specifying font families that adapt to each operating system's guidelines for consistency and user experience.

Android vs iOS

Search

Search



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Android app icons often vary more in shape and style, with some adhering to material design guidelines but others allowing for greater creativity.

Android vs iOS

Scrolling

Android uses a Scroll View option that ensures vertically scrollable views. Horizontal Scroll View can also be used that provides a child view element, more like a linear layout which is typically common for complicated UI designs.

For iOS, the navigation bar continues to shrink in width as you continue to scroll and slowly the Toolbar vanishes.

Can Android apps be designed to look like iOS and vice versa?

Yes, it is possible despite the difference between Android and iOS app designs. The process is called repurposing or cloning and has plenty of benefits.

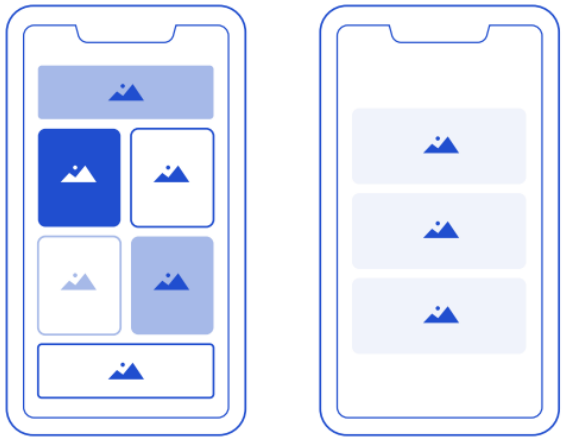
For instance:

- time-efficient and less-tedious process
- target different user segments with unique versions
- saves capital investment and resources
- massive customization scopes for elevated experience

Information Architecture Principles for Mobile

The Principle of Objects

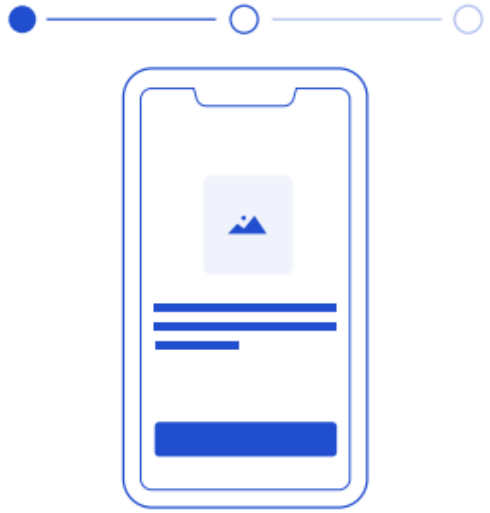
Treat mobile content as a living entity. Different content types have their own properties, interactions, and behaviors that must be considered.



The Principle of Choices

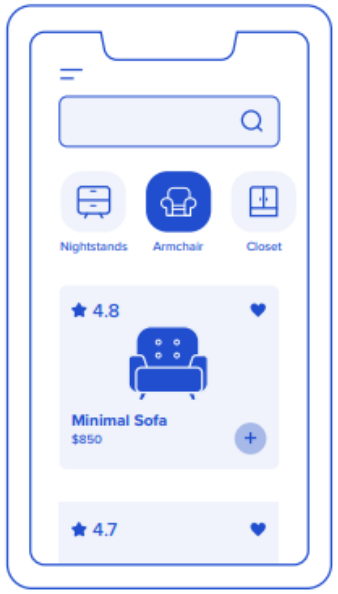
Design screens that present users with choices that help them advance toward their goals. The more choices, the more effort users must exert.

Information Architecture Principles for Mobile



The Principle of Disclosure

Humans aren't good at digesting huge chunks of information all at once. Present content to users in layers, revealing information gradually.



The Principle of Exemplars

Provide examples (images, lists, icons) that illustrate the content contained within different categories. Show and tell.

Information Architecture Principles for Mobile

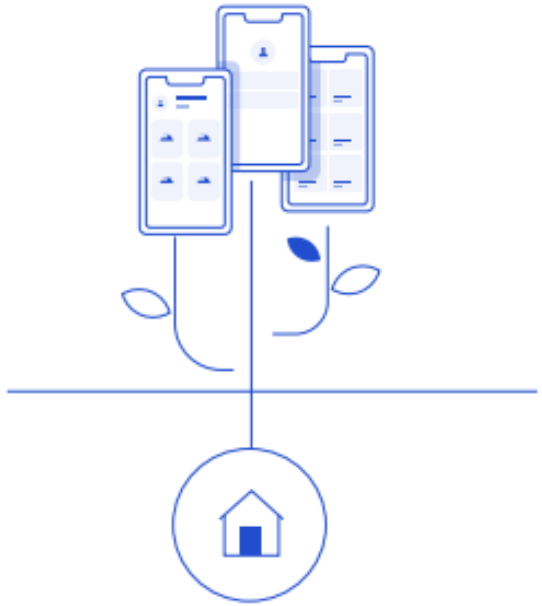
The Principle of Front Doors

For mobile sites (not native apps), expect nearly half of all traffic to arrive at a screen that isn't the home screen.

Classification

Provide multiple ways to navigate through content because individual users have different motives and look for information in varied ways.

Information Architecture Principles for Mobile



The Principle of Focused Navigation

Define navigation mechanisms by their functionality, not their location. For example, switch from Sidebar Navigation to Topic Navigation.

The Principle of Growth

Plan for scale. Remember that digital content is alive. It grows with time and has the potential to cause issues—like not knowing where to add new content or categories.

THANK YOU!