

# Mobile App Development

for Enriched IT Class

# Mobile Computing Environment

iOS vs Android?

# An age-old debate

- Debate ever since both iOS and Android stores started accepting apps
- Where do you get more users?
- Where do you make more money?
- What is your target audience using - iOS or Android?

# For businesses

- If you are looking for a larger reach - Android is for you
- Internet traffic is much more from Android devices compared to iOS
- Android has a much wider user base compared to iOS (> 75% world market share)

# For businesses

- Metrics show iOS users spend more money
- iOS apps make almost 50% more than their Android counterparts
- If online sales is your target, definitely go with iOS

# For businesses

- Where and who is your target audience
- Age group, geography (Asia for its sheer numbers)
- Android is more popular in Asian countries than iOS. But Apple catching up

# Indie developers

- Android has its own share of problems
- Over 1600 devices
- 5 widely-used OS versions
- Multiple screen resolutions
- Device manufacturers/telecoms have own implementation of Android
- Poor backward compatibility

# Indie developers

- iOS development more simplified
- < 10 devices (with support for just 3 different resolutions)
- 2-3 OS versions
- A universal OS version available for upgrade on all devices instantly



# Indie developers

- Looking at making money through app sales and IAPs - choose iOS
- Looking at making money through impressions/ads - choose Android
- In the end, it really depends on which platform you are best positioned to develop for (skills, availability, time to market)

# Mobile App Development Life Cycle

Steps to Make an App

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# Mobile App Dev Phases

- The Discovery Phase
- The Design Phase
- The Development & Testing Phase
- Maintenance & Updates Phase

# The Discovery Phase

- Tasks
  - Requirements analysis
  - System Definition
  - Prototyping

# The Design Phase

- Tasks
  - System Design
  - Database Design
  - Business Process Integration Design

# The Development & testing Phase

- Tasks
  - Develop System
  - Business Process Integration
  - User acceptance testing
  - System and performance testing
  - Implementation / Deployment

# The Maintenance & Updates Phase

- Tasks
  - Ongoing system maintenance
  - Extend and enhance functionality



# Mobile App Design

Bring up Ideas

*Recognising the need is the primary  
condition for design*

— Charles Eames

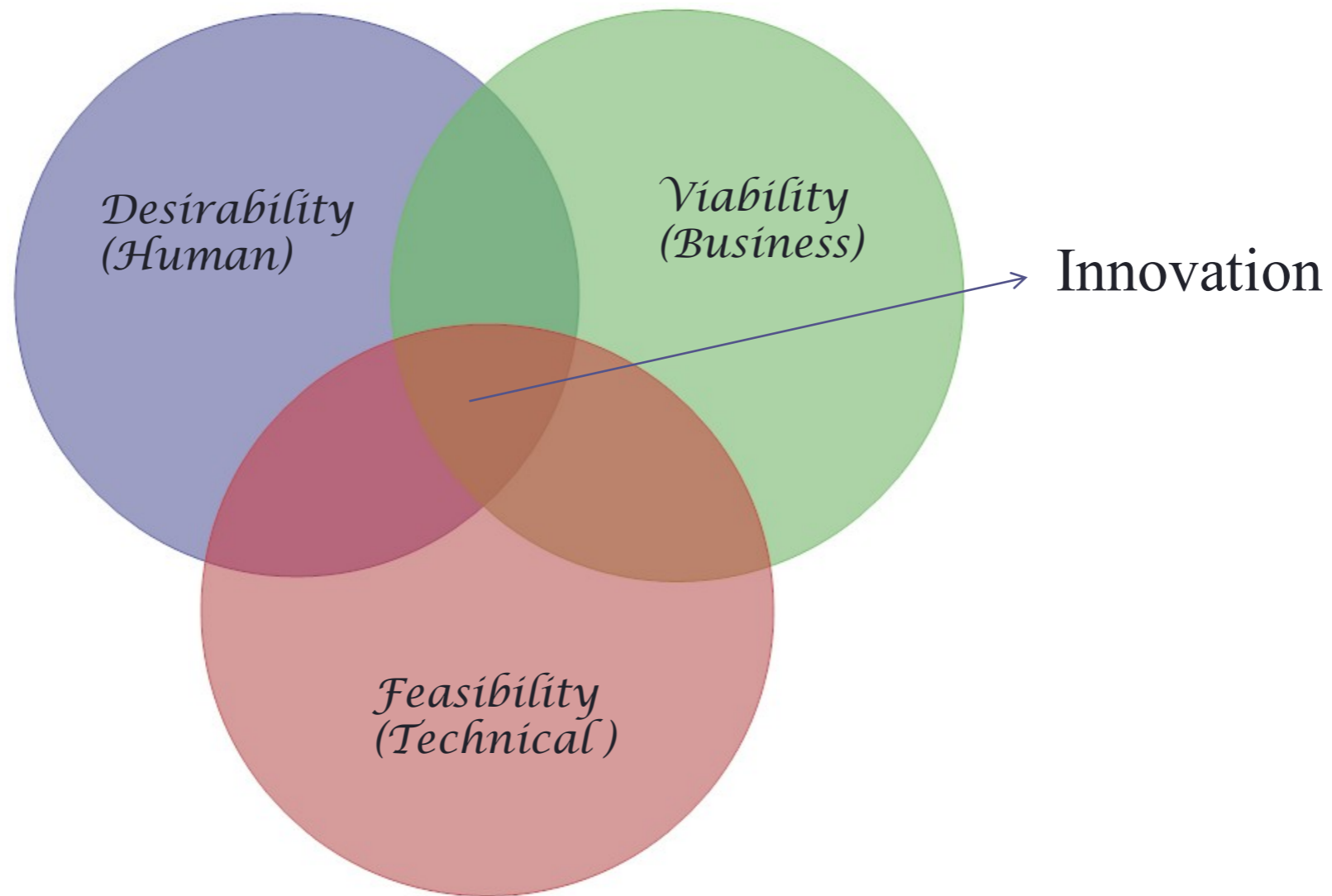
# What Mobile App?

- Mobile devices are always on
- Encourages immediate response from the user
- Mobile devices are popular
- It is more personal
- Easy access

# What Challenges ?

- Small screen size
- Difficult to type
- Battery life
- On the go
- Hard to multi-task
- Data transfer for slow connections
- Partial attention while babysitting /walking

# Design Thinking



# Design Paradigm

- **Less is more**
- Include the important features
- One action or max two at a time

# Design Paradigm

- **Design of thumb**
- 75% of people use thumb to navigate

# Design Paradigm

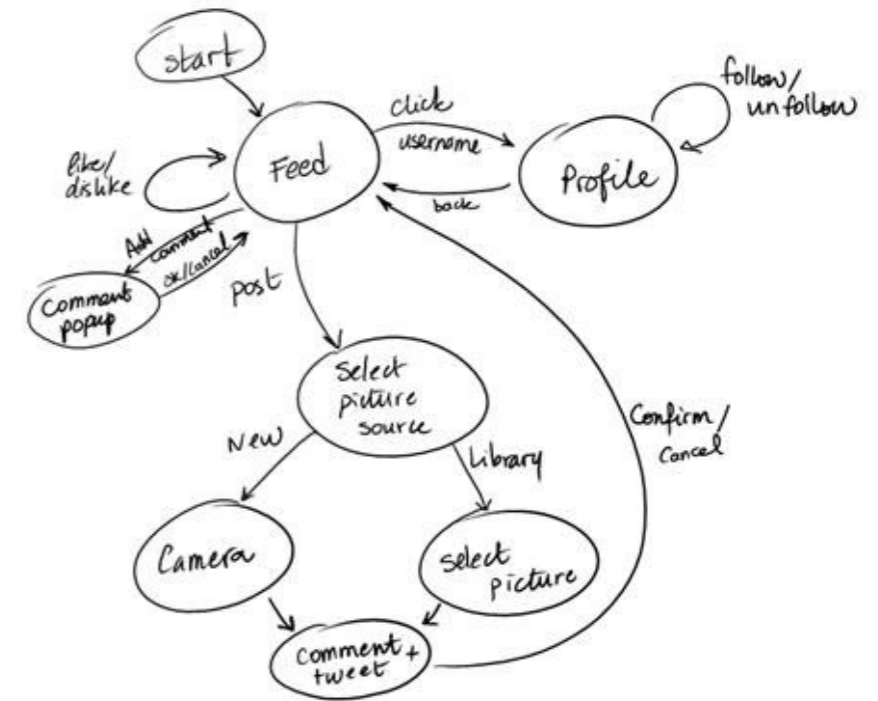
- **Clear & Focus Presentation**
- Use of icons
- Color
- Info-graph
- “How to get started” screens”



# Design Paradigm

- **Gestures are quicker**
- Pinch swipe
- Max use of hand
- hand zoom in/out

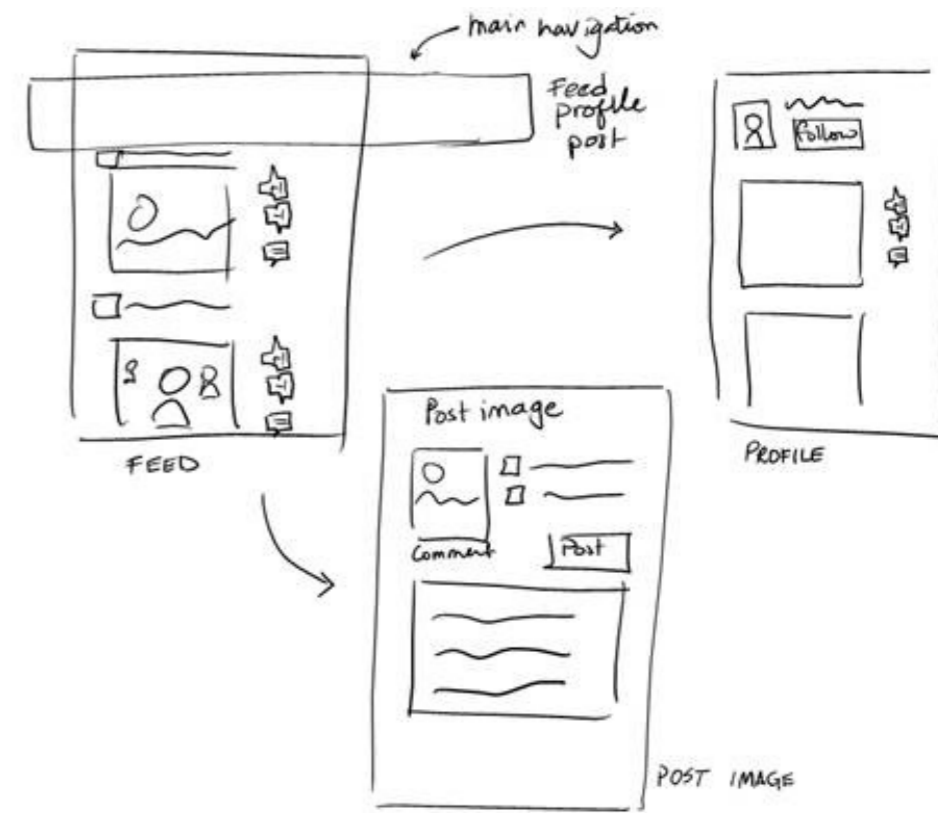
# Step 1



- **Plan it**

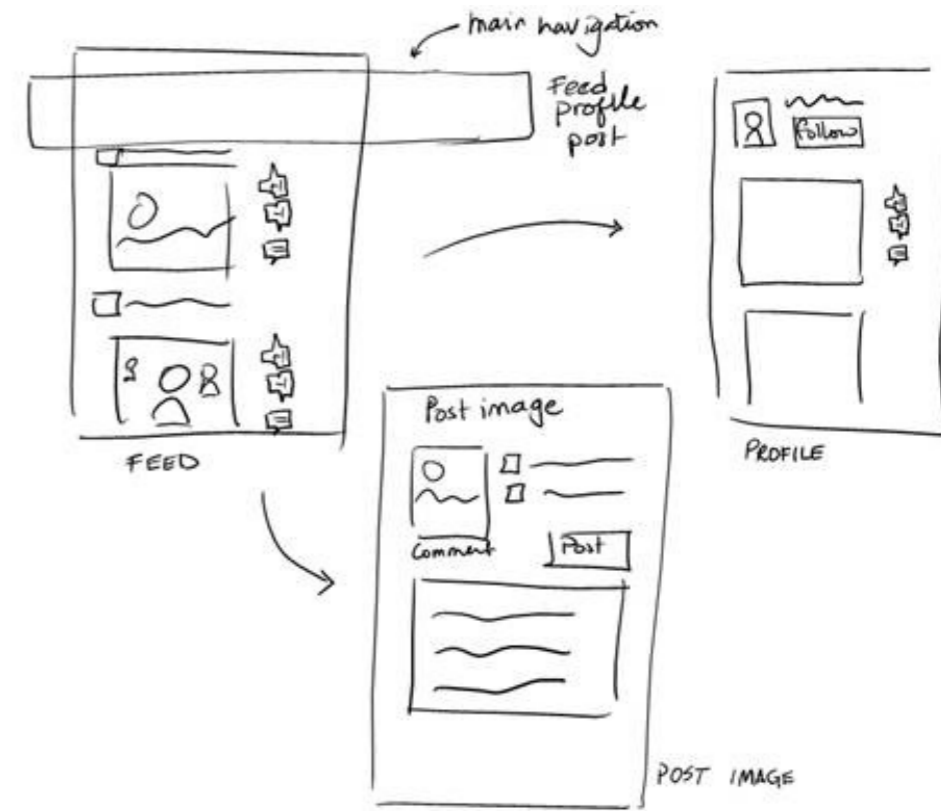
- One of the simplest ways to plan an interface is to visualize it as a user flow diagram with states as interface screens, and links between states corresponding to user interaction. For example, here is the flow diagram for the image sharing app (created using Windows Journal on a Tablet PC)

# Step 2



- **Sketch It**
- The next step is to create rough sketches for each screen. These sketches provide the high level direction for creating the wireframes in PowerPoint, so don't worry about putting too much detail there.

# Step 3



- **Prototype it**
- Interactive app/web without function for:
  - User testing,
  - reusable backbone of the interface