Lecture 1 : Introduction

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Smartphone?

Cellphones

- Make calls, send texts, take photos, and access the internet.
- Cheaper alternative to a smartphone.
- Straightforward, simple interface.

Smartphones

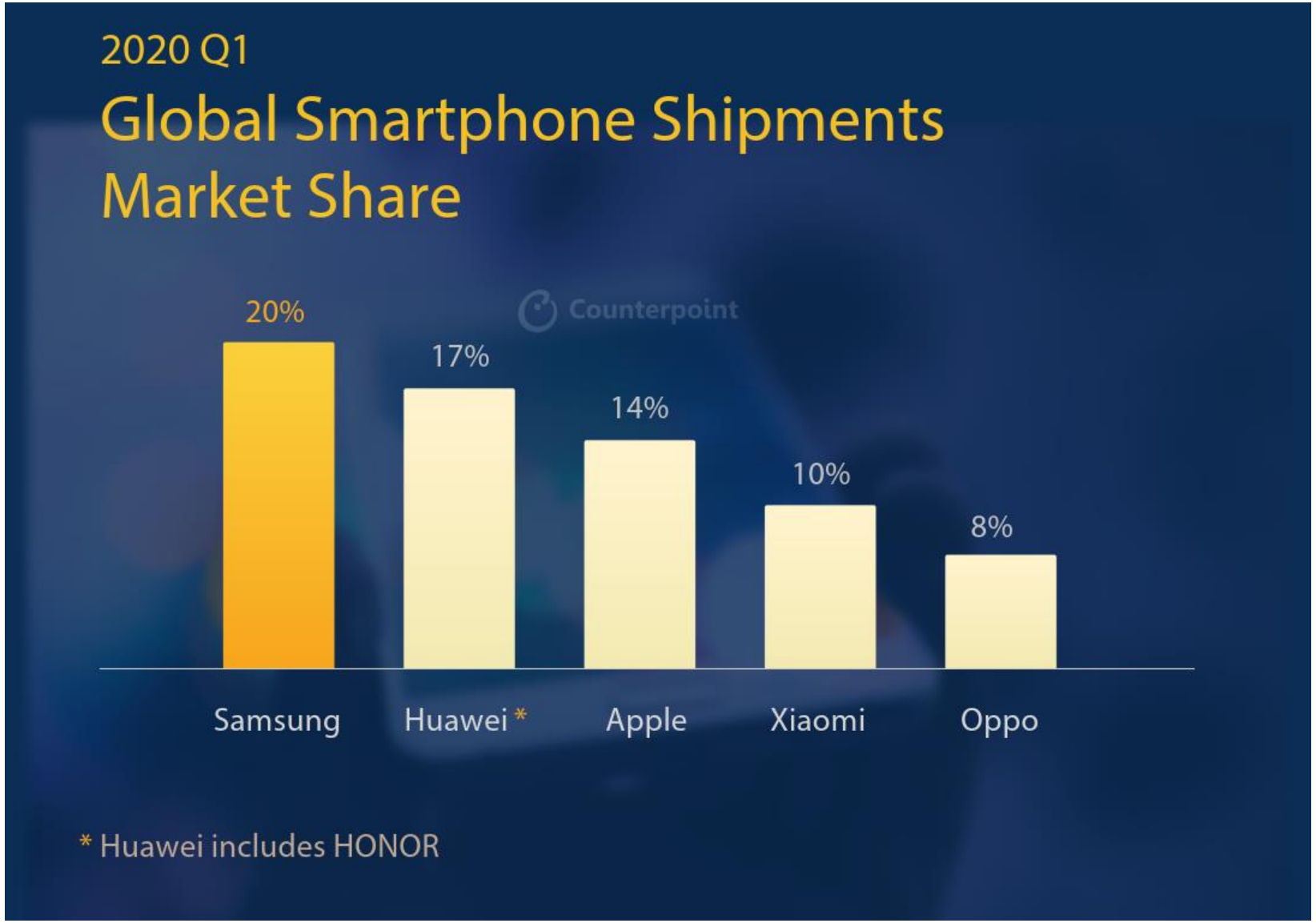
- Make calls, send texts, take photos, access the internet, play games, and use apps.
- May include a digital assistant like Siri or Google Now.
- Sophisticated operating system with customization options.

Mobile OS

- An OS much like Linux, windows or MAC to control your mobile device.

- Types:
  - Android
  - IOS
  - BADA (Samsung)
  - Windows Mobile
  - Blackberry OS
  - Palm OS (PDA)
  - Symbian (Nokia)

Market Share



Why MAD?

- In 2020, mobile apps are projected to generate $188.9 billion in revenue via app stores and in-app advertising. What's more, enterprise mobility is estimated to be worth $510.39 billion by 2022.
- USA proclaimed to completely remove physical banking system and move towards mobile banking system by 2025.
- Steep incline in the usage of mobile phones in the last few years.

Mobile App Development Process

1. Strategy

In this phase, you will:

- Identify the app users
- Research the competition
- Establish the app’s goals and objectives
- Select a mobile platform for your app

2. Analysis and Planning

- Analysis and planning begin with defining use cases and capturing detailed functional requirements.
- After you have identified the requirements for your app, prepare a product roadmap.
- This includes prioritizing the mobile app requirements and grouping them into delivery milestones.
- Part of the planning phase includes identifying the skills needed for your app development initiative

3. UI / UX Design

- The purpose of an app's design is to deliver seamless and effortless user experiences with a polished look.

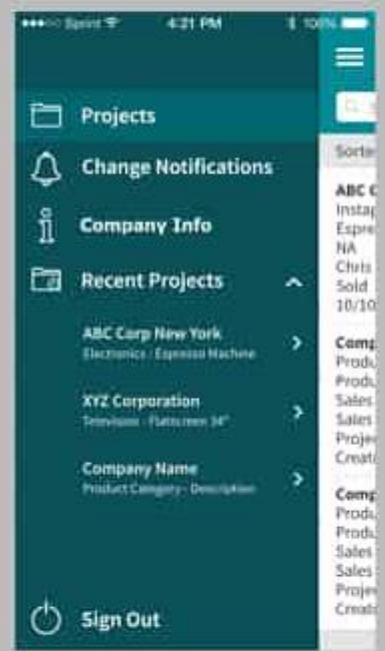
- There are many techniques used to create effective App Design
  - Information Architecture & Workflows
  - Wireframes
  - Style Guide
  - Mockups
  - Prototype


Projects
Companies
Change Notifications
My Profile
Info
Recent Projects
ABC Corp New York
Espresso Machine - XF 4567
Company Name
Product Category - Descri...
Company Name
Product Category - Descri...
Sign Out
Design Request
Product Information
Sample Supplied
Current Packaging
Product Name
Product Name
Production Rate
Production Rate
Units
Units
Production %
Production %
Shipping Mode
Shipping Mode
Other
Unit Weight
Unit Weight
Shipping Method
Shipping Method
Fragility Level
Fragility Level
Other
Accessory Items
Enter Text Here
Continue >
Multimedia
Photo
Video
Audio
Take Photo
Choose Existing Photo
Cancel
Photo
Video
Cancel

WIREFRAMES

MOBILE APP UI / UX DESIGN

MOCKUPS



INVONTO

4. App Development

- Planning remains an integral part of this phase in the mobile app development process. Before actual development/programming efforts start, you will have to:
  - define the technical architecture,
  - pick a technology stack, and
  - define the development milestones.
- A typical mobile app project is made up of three integral parts: back-end/server technology, API(s) and the mobile app front-end.

5. Testing


MOBILE APP DEVELOPMENT
Testing Process
• User Experience Testing
• Functional Testing
• Performance Testing
• Security Testing
• Device & Platform Testing
INVONTO

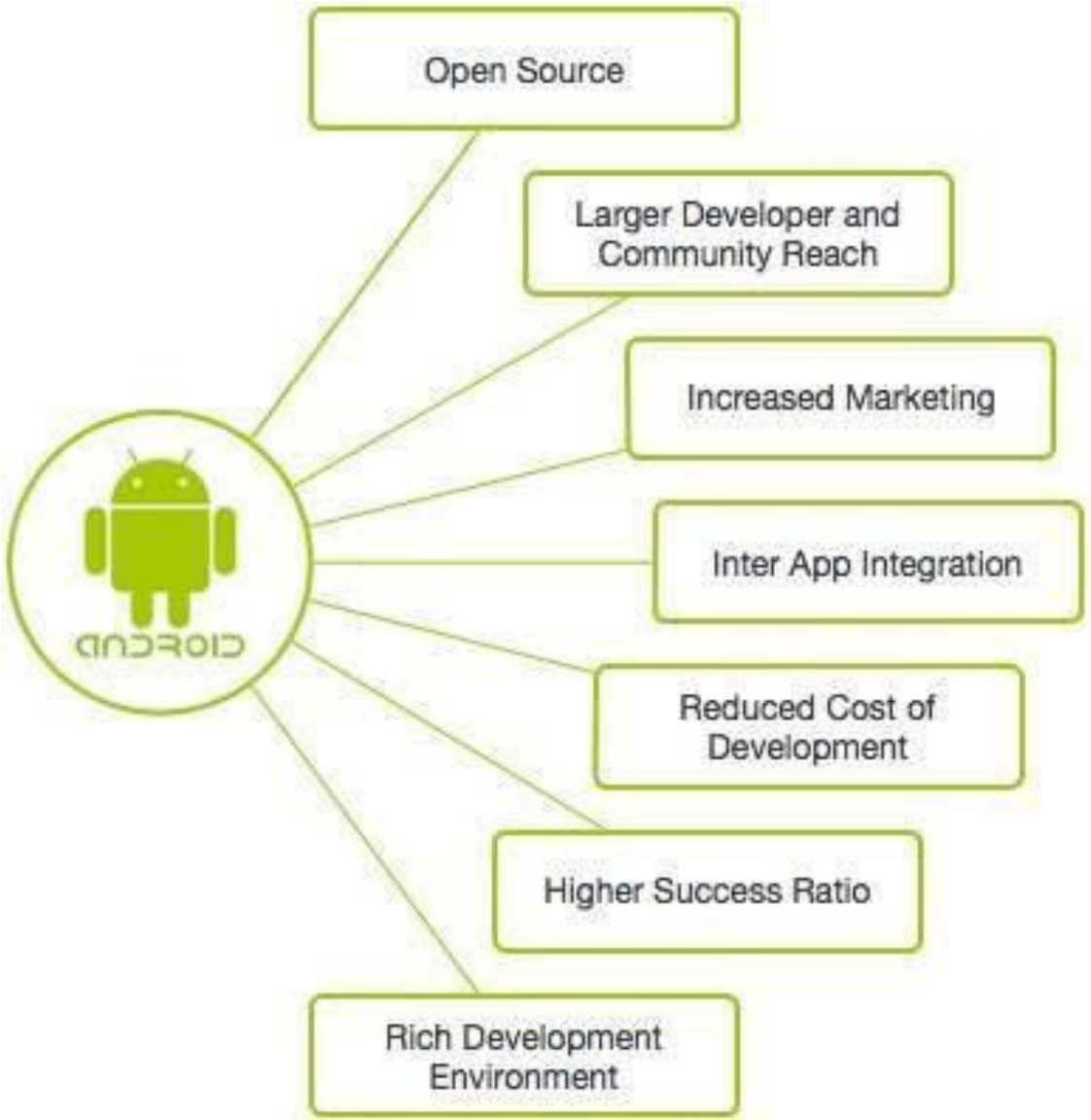
6. Deployment & Support

- An app’s release in the app store requires preparing metadata including:
  - Your app’s title
  - Description
  - Category
  - Keywords
  - Launch icon
  - App store screenshots

Why Android?

1. *Wider Pool of Customers*
2. *Greater Innovative Potential*
3. *Easier Installation*
4. *Easier Entry to Market*
5. *Compatible with More Devices*
6. *Easier to Learn (For Developers)*
7. *Lower Development Cost (OS Perspective)*

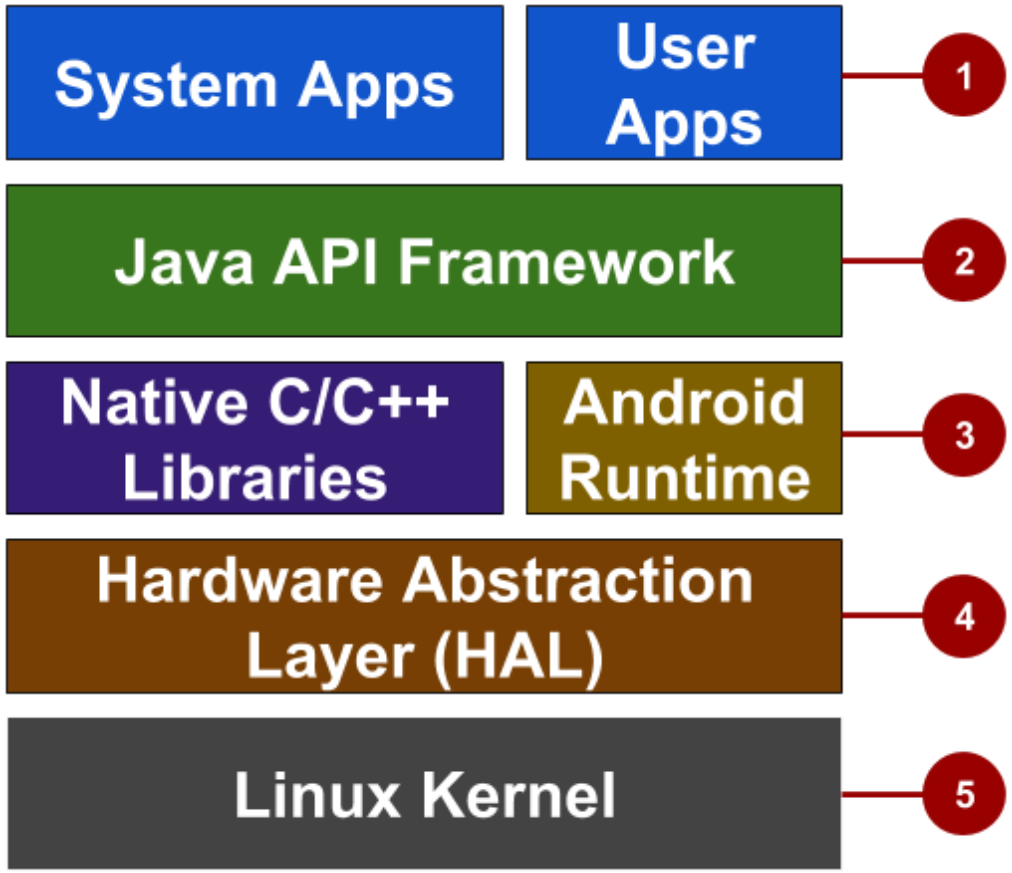
Android


Open Source
Larger Developer and Community Reach
Increased Marketing
Inter App Integration
Reduced Cost of Development
Higher Success Ratio
Rich Development Environment
android

Introduction

- Android is an open source and Linux-based **Operating System** for mobile devices such as smartphones and tablet computers. Android was developed by the *Open Handset Alliance*, led by Google, and other companies
- Android was developed by the **Open Handset Alliance** (OHA) in 2007, which is led by Google. The **Open Handset Alliance** (OHA) is a consortium of multiple companies like Samsung, Sony, Intel and many more to provide services and deploy handsets using the android platform.

Android Architecture



The challenges of Android app development

- While the Android platform provides rich functionality for app development, there are still a number of challenges you need to address, such as:
  - Building for a multiscreen world
  - Getting performance right
  - Keeping your code and your users more secure
  - Making sure your app is compatible with older platform versions
  - Understanding the market and the user

Android Version History