Enterprise Mobile Applications Development

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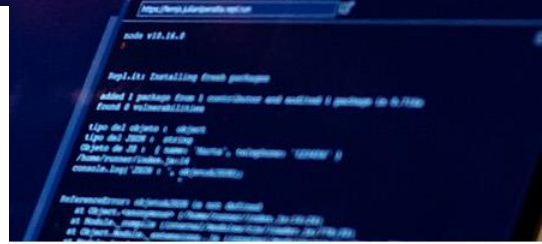
Organize
Objectives
Target
Success
Manufacture
Motivation
Teamwork
Business
Investment
Customers
Project
Innovation
Internal
Production



Arrange and Define (at least 2 words)

- Development
- Enterprise
- Applications
- Mobile

Arrange and Define

- Enterprise Applications
- Enterprise Applications Development
- Mobile Applications Development
- Applications Development
- Mobile Applications
- Enterprise Mobile Applications Development

Today's Lecture Outline

- Mobile technologies and standards:
  - Basics concepts
  - Layout
  - Multiple activities and Intents
  - Activity lifecycle
- Software development frameworks and tools
  - Applicable programming languages
  - Applicable programming language extensions

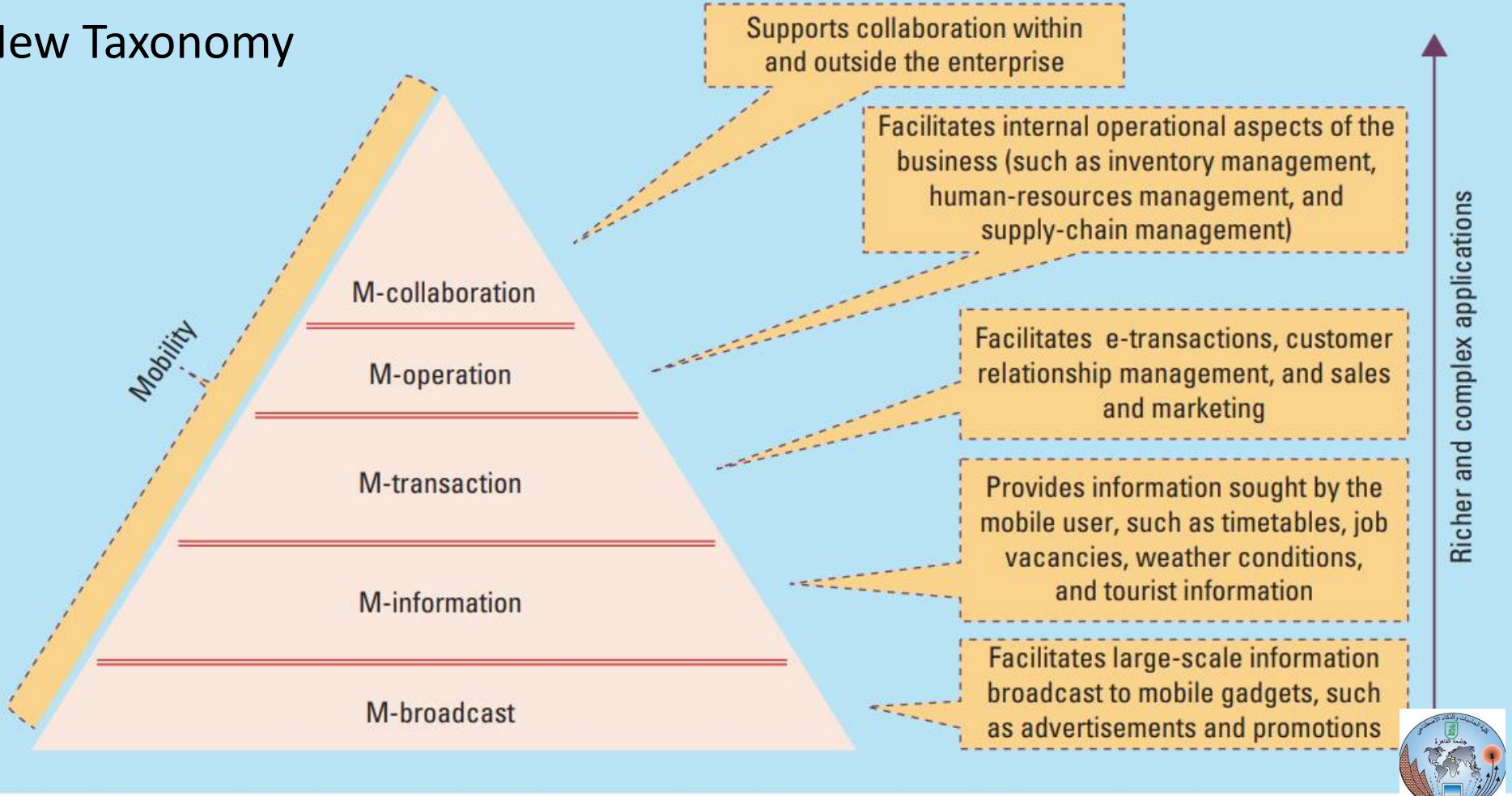
Enterprise Applications Development

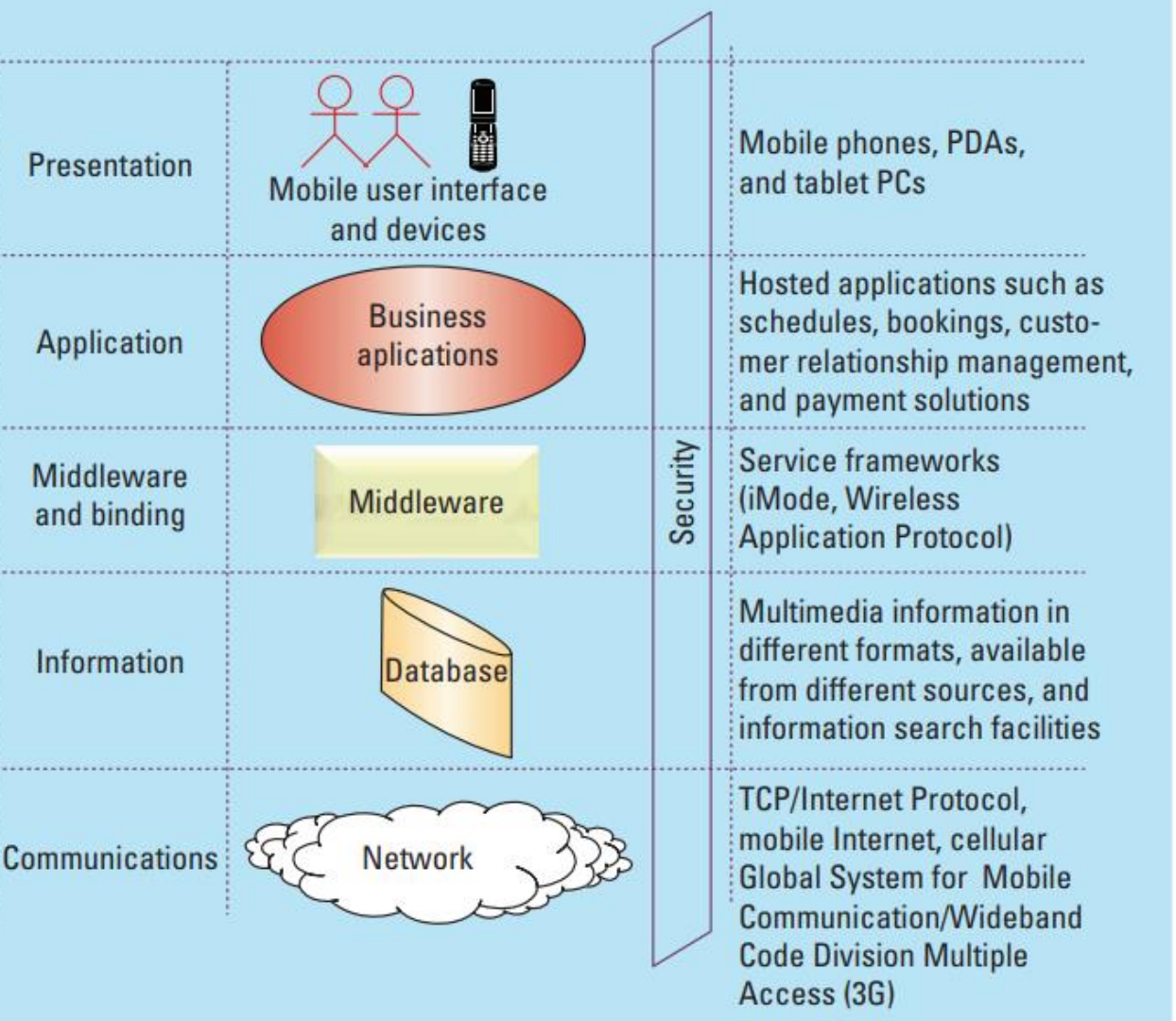
- An enterprise application (EA) is a large software system platform designed to operate in a corporate environment such as business or government. EAs are complex, scalable, component-based, distributed and mission critical. EA software consists of a group of programs with shared business applications and organizational modeling utilities designed for unparalleled functionalities. EAs are developed using enterprise architecture.
- EA software is a critical component of any computer-based information system. EA software ultimately enhances efficiency and productivity through business level support functionality.

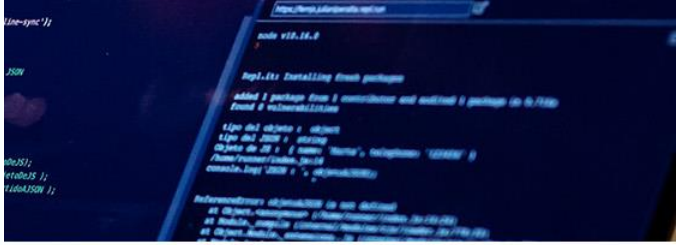
Enterprise Mobile Applications

- Enterprise mobile applications (EMAs) are enterprise software that run on mobile devices and improve the interactions between employees and business partners while improving productivity.
- EMAs support users in their core business processes.

New Taxonomy

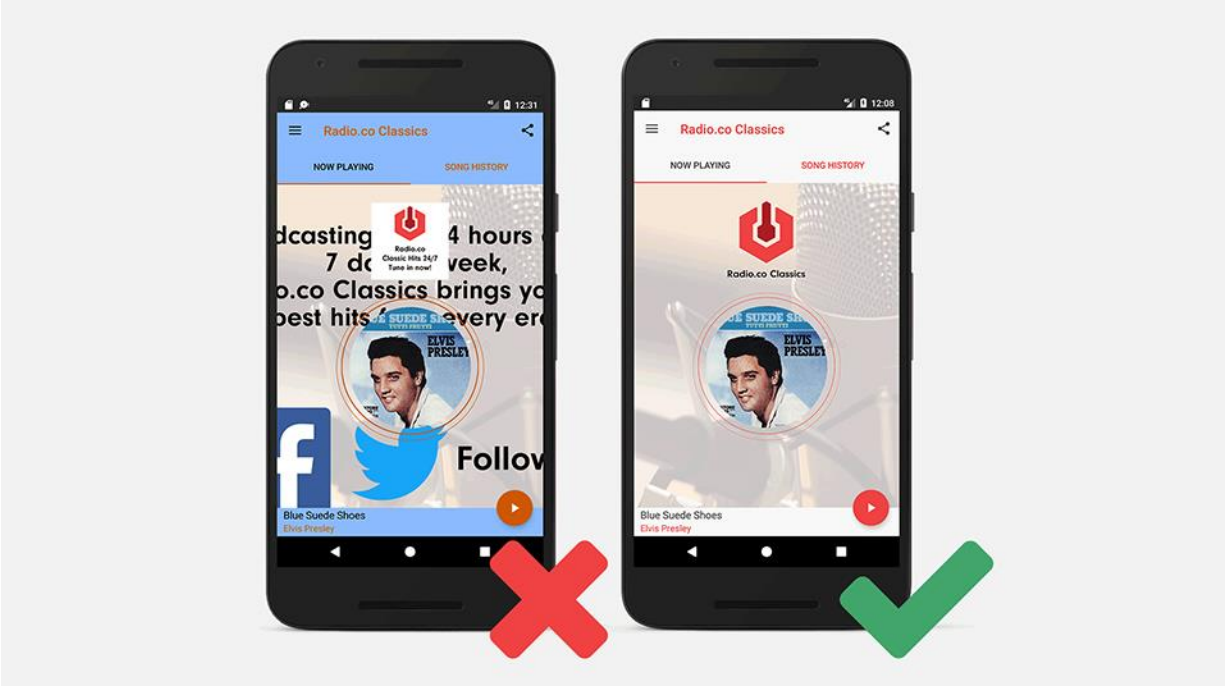




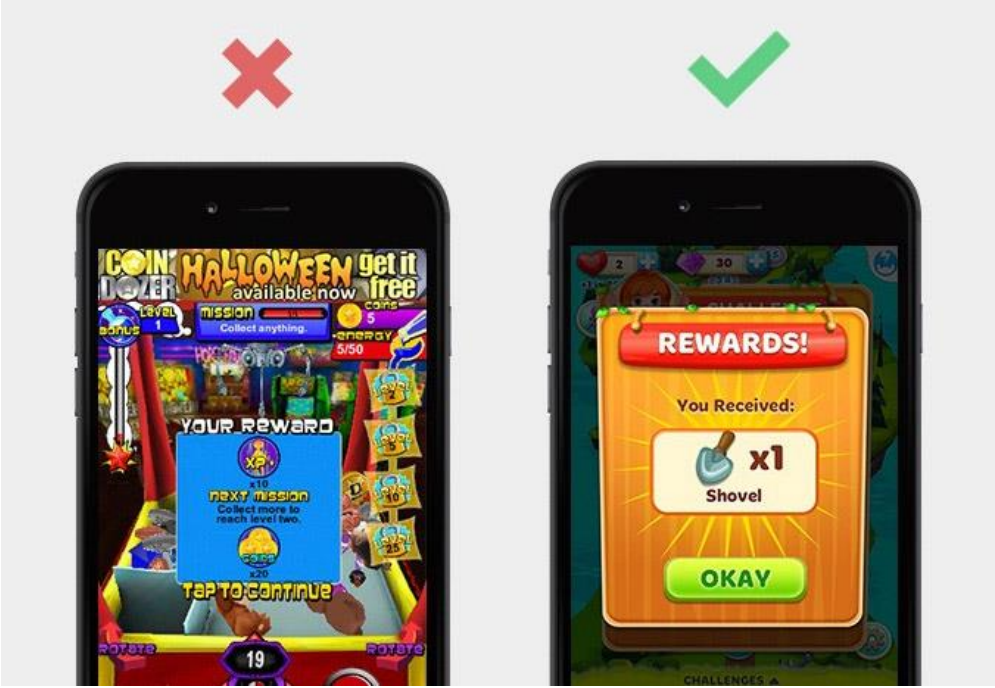


Enterprise Mobile Applications Development Framework Layers

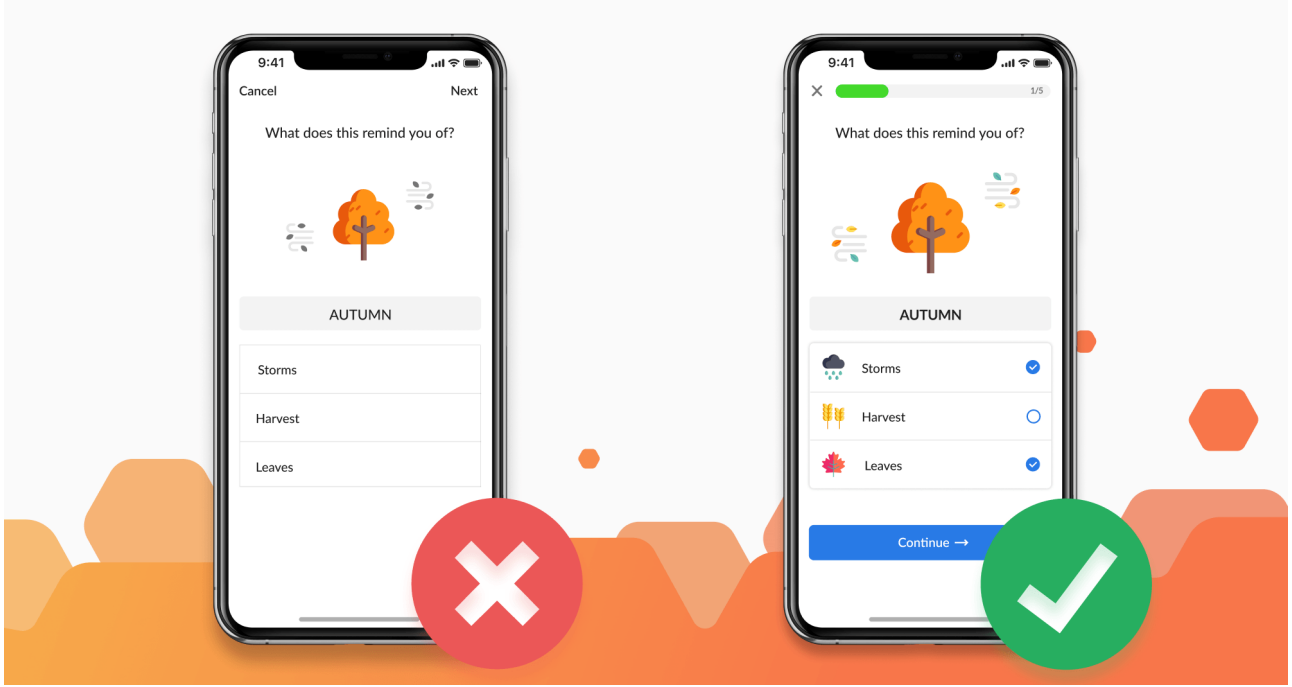
Mobile Application Layout



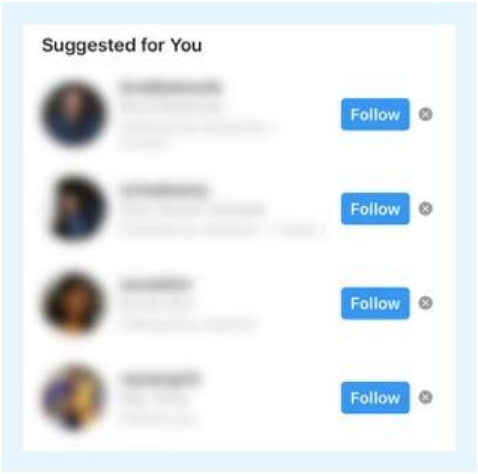
Mobile Application Layout

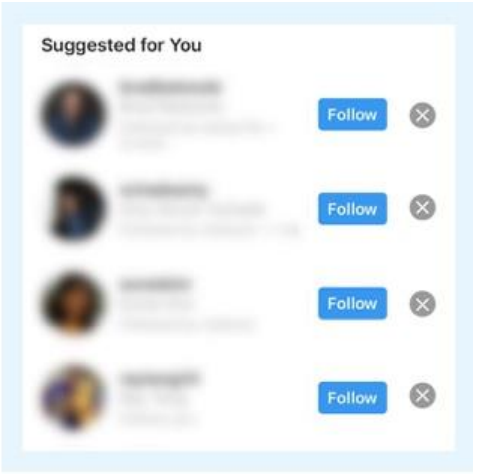


Mobile Application Layout



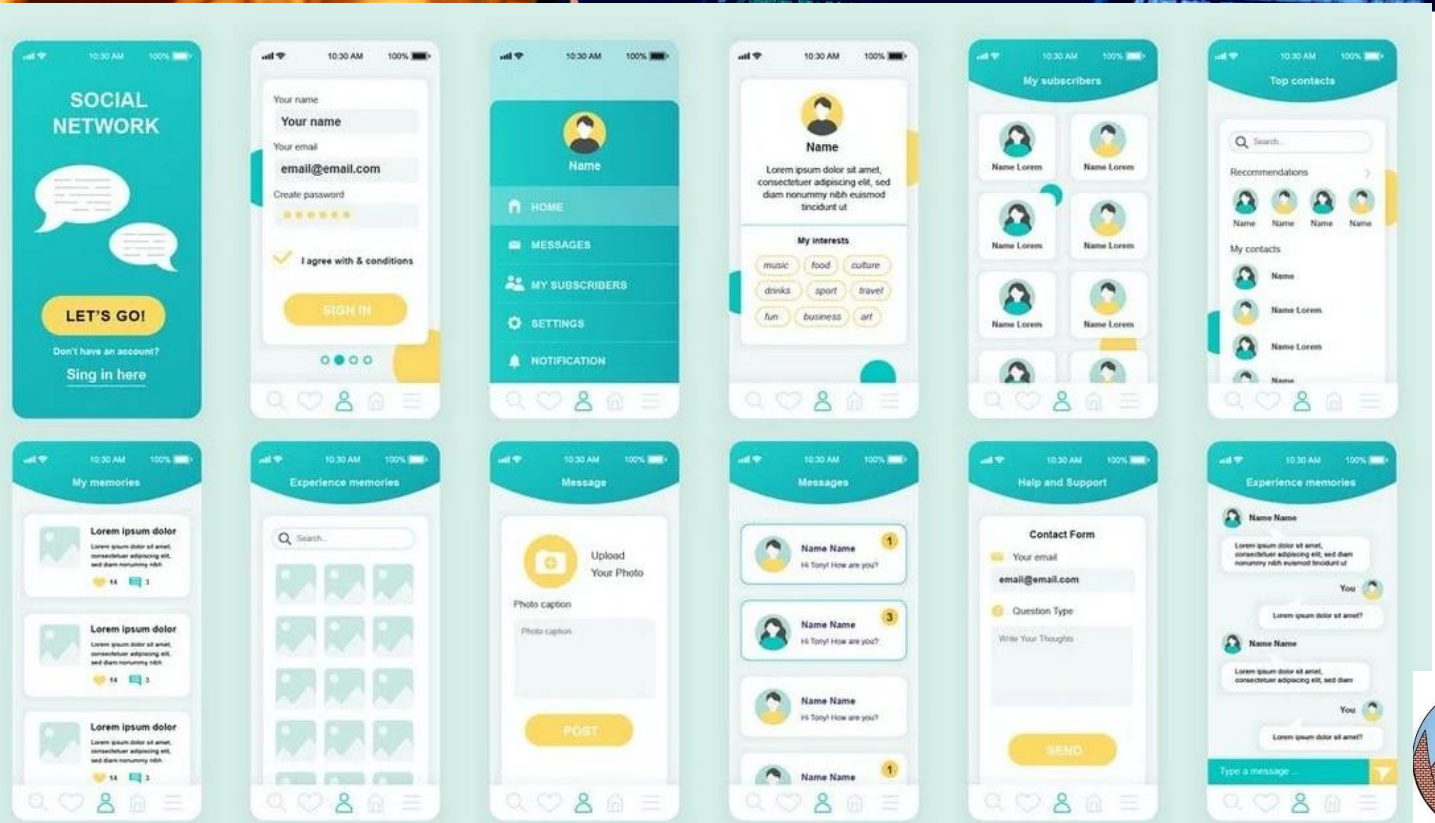
Mobile Application Layout





Mobile Application Layout

Mobile Application Layout



Get One Comprehensive Message from the text

- Mobile application is a written source code in various programming languages and designed for smartphones to operate on Mobile OS platforms (e.g. Android, iOS).
- The mobile application is to enhance user's daily life throughout (online banking transactions and emails) or for entertainments like (social media and gaming).
- The novel of mobile app is designed for the user to input data from touch screen and expected output results efficiently and effectively regardless of the application's development knowledge.

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Get One Comprehensive Message from the text

- Native Application is developed specifically for a particular platform or device. The main component is located on the mobile phone.
- A native app is compiled to the machine code and executed by the platform directly.
- Native apps can take advantage of device-specific hardware and software.
- Native apps can be tied to specific platforms and limited by the mobile constraints.
- Developing native apps requires good programming skills; they are costly and time consuming.

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Get One Comprehensive Message from the text

HTML5 App

HTML
CSS3
JavaScript
App Framework

Hybrid App

HTML
CSS3
JavaScript
App Framework

Device API

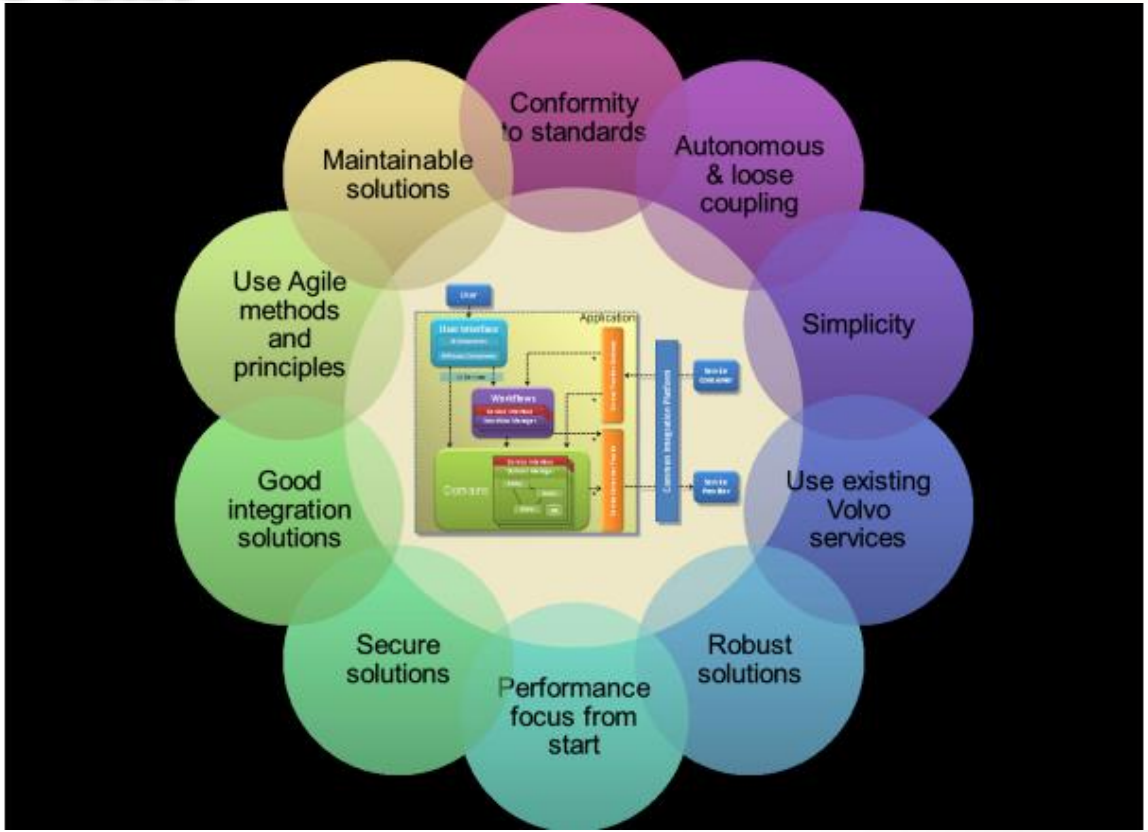
Plugins

Native App

Native Code

Device API

Get One Comprehensive Message from the text



Architecture Services

Cloud Solutions

Production Development & Maintenance

Full-stack Development

RIA & Mobile Apps

Application Modernization & Migration

Hire a Technical Expert

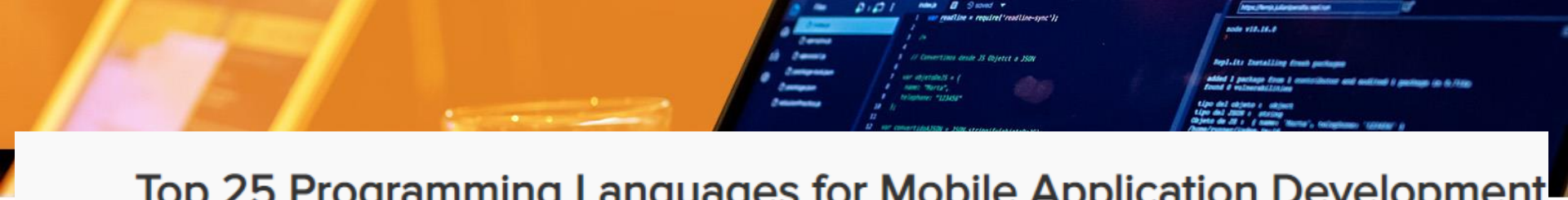
System Integration

ENTERPRISE APPLICATION DEVELOPMENT

RIA: Rich Internet Applications

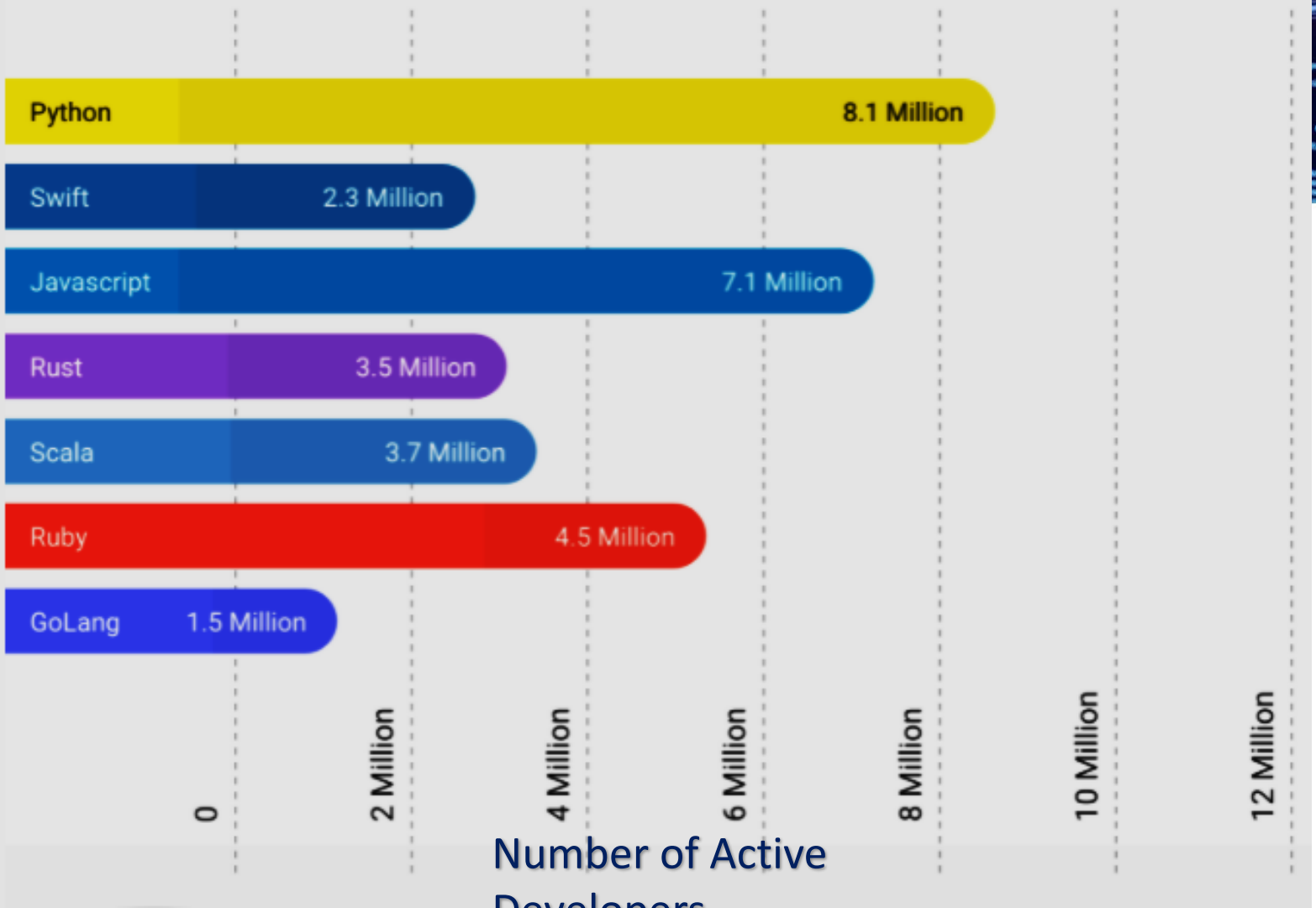
Enterprise Mobile Application Development Process

Mobile Application Space

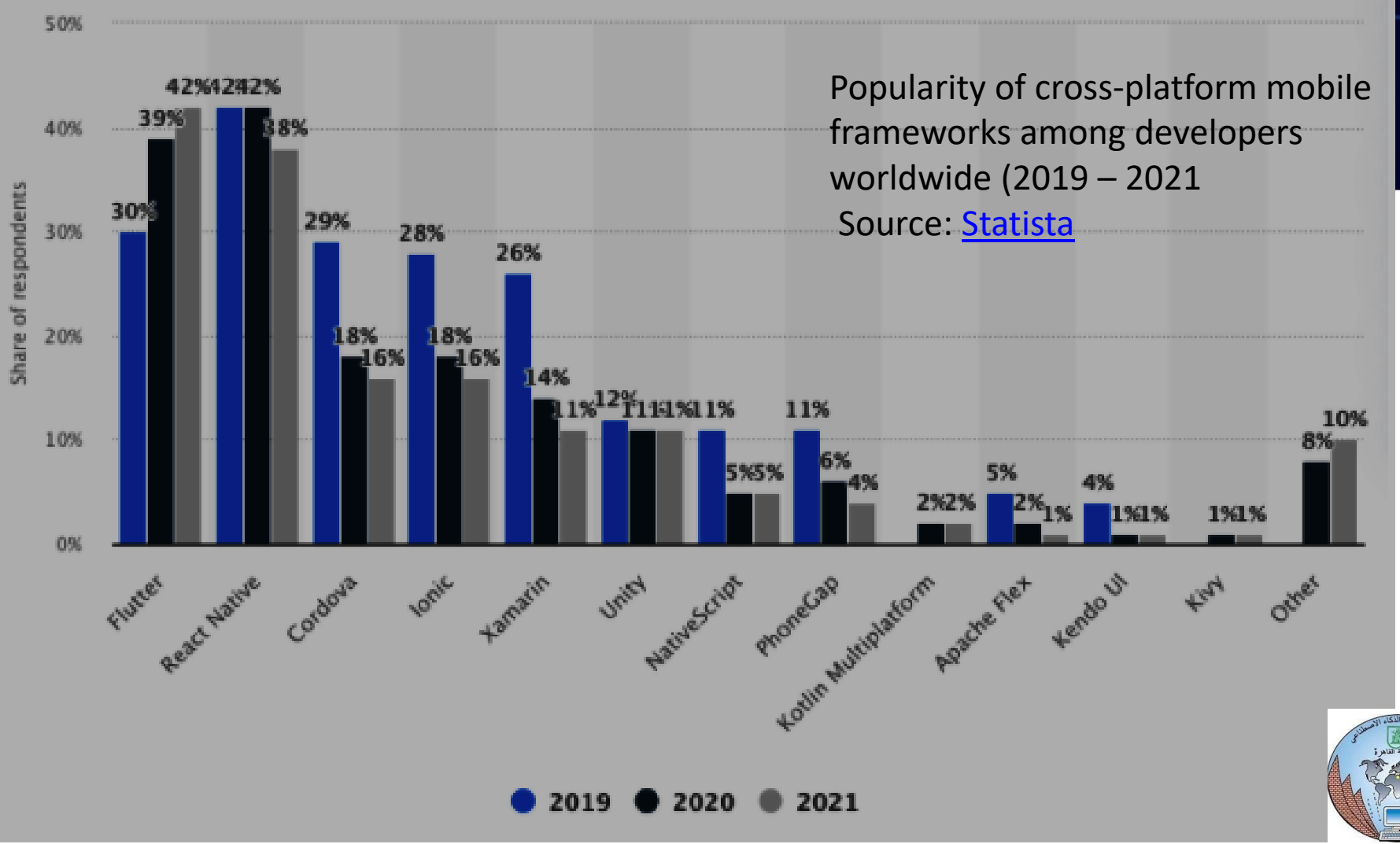


Top 25 Programming Languages for Mobile Application Development

1. Python
2. Swift
3. JavaScript
4. Rust
5. Scala
6. Ruby
7. GoLang/Go
8. Java
9. R
10. C++
11. PHP
12. SQL
13. C#
14. Objective-C
15. Kotlin
16. HTML5
17. jQuery
18. Lua
19. Corona
20. ObjectPascal
21. Perl
22. QML
23. Scheme
24. ActionScript
25. Scratch



Number of Active Developers


Popularity of cross-platform mobile frameworks among developers worldwide (2019 – 2021
Source: Statista
Share of respondents
50%
40%
30%
20%
10%
0%
Flutter
React Native
Cordova
Ionic
Xamarin
Unity
NativeScript
PhoneGap
Kotlin Multiplatform
Apache Flex
Kendo UI
Kivy
Other
2019
2020
2021

Popular Mobile Programming Languages in Egypt

- JAVA for Android (J2ME)
- Kotlin
- Objective C for iOS
- Swift for iOS
- Flutter
- React Native
- Xamarin

Applicable Application extensions

- .apk
- .ipa

Applicable programming language extensions

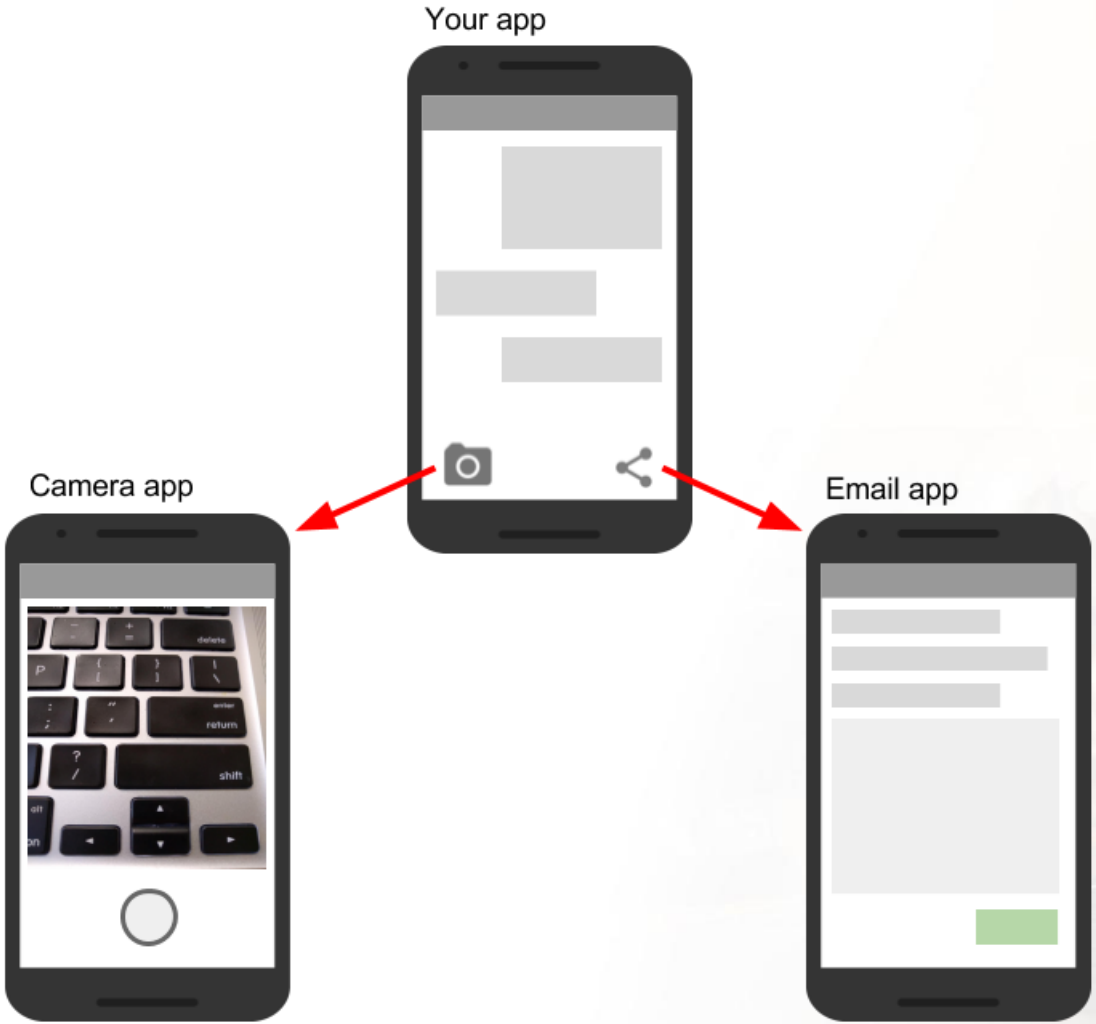
- HTML5 and JavaScript => Cordova
- JavaScript => React Native
- Dart => Flutter
- C# => Xamarin

Multiple activities and Intents

- Activities
- Intents

What is activity?

- An *activity* represents a single screen in your app with an interface the user can interact with.
- For example, an email app might have one activity that shows a list of new emails, another activity to compose an email, and another activity for reading individual messages.
- Your app is probably a collection of activities that you create yourself, or that you reuse from other apps.


Your app
Camera app
Email app

What is Intent?

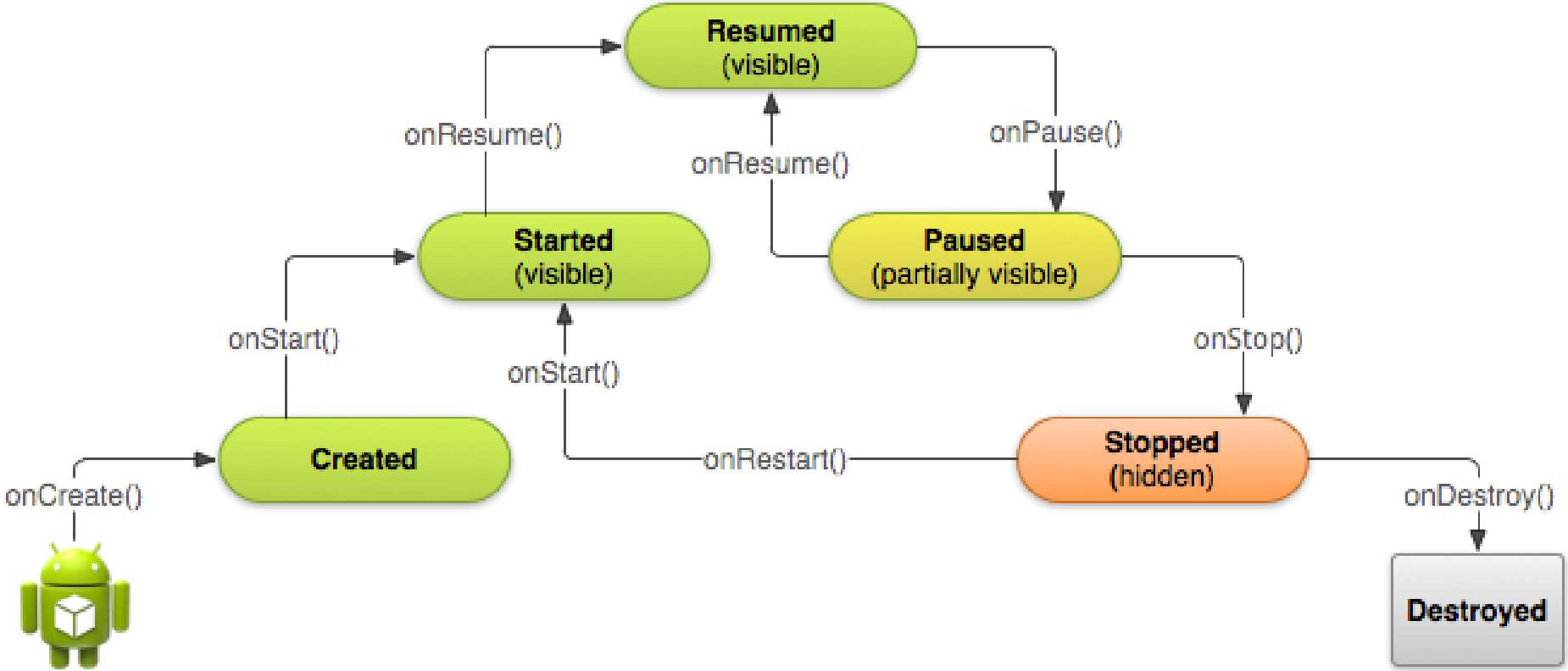
- Each activity is started or activated with an intent, which is a message object that makes a request to the Android runtime to start an activity or other app component in your app or in some other app.
- When your app is first started from the device home screen, the OS runtime sends an intent to your app to start your app's main activity
- To start another activity in your app, or to request that some other activity available on the device perform an action, you build your own intent and call the startActivity() method to send the intent

WHAT IS AN INTENT

How intent works?

Intent Types

- *Explicit intent:* You specify the receiving activity using the activity's fully qualified class name. You use explicit intents to start components in your own app, because you already know the package and class name of that component.
- *Implicit intent:* You do *not* specify a specific activity or other component to receive the intent. Instead, you declare a general action to perform, and the operating system matches your request to an activity or other component that can handle the requested action.



Activity Lifecycle

If you're an Enterprise CEO ☺

1. What is the most required Mobile Application for your enterprise
2. Why Mobile Application is the most required one?
3. How you decided to develop this Mobile Application not any other one?
4. How will you best utilize it?
5. How you guarantee it will fit to its importance to be most required App for your enterprise?

See you Next Time ☺
MacBook Pro