

MOBILE OSS, DEVELOPMENT ENVIRONMENTS, IOS AND ANDROID

Lesson 04

Apple iOS

IPHONE 6

- Multimedia and Internet-enabled mobile phone
- Apple iPhone 6 uses A8 processor, a power-efficient processor for the mobiles
- Three versions with 16 GB, 64 GB, and 128 GB flash memory
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DEVICES AND SENSORS SUPPORT

- Global positioning system (GPS), Accelerometer, Magnetometer, Picture camera, Camera controls with digital zoom, a scene mode, white balance controls, macro focus, and colour effects.
- Video camera in camcorder mode supports video recording and playing.
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APPLE IPHONE

- FaceTime app for videoconferencing
- Support to iCloud and iCloud Drive, Health and Home Kits

APPLE IPHONE 6

- Uses Mac OS 8-based iOS 6, 7, and 8
- iOS 8 requires more than 500 MB and more than 5 GB for the apps
- Actual memory requirement depends on the OS version
- Mac OS very fast responding UIs, direct manipulation using multi-touch gestures.

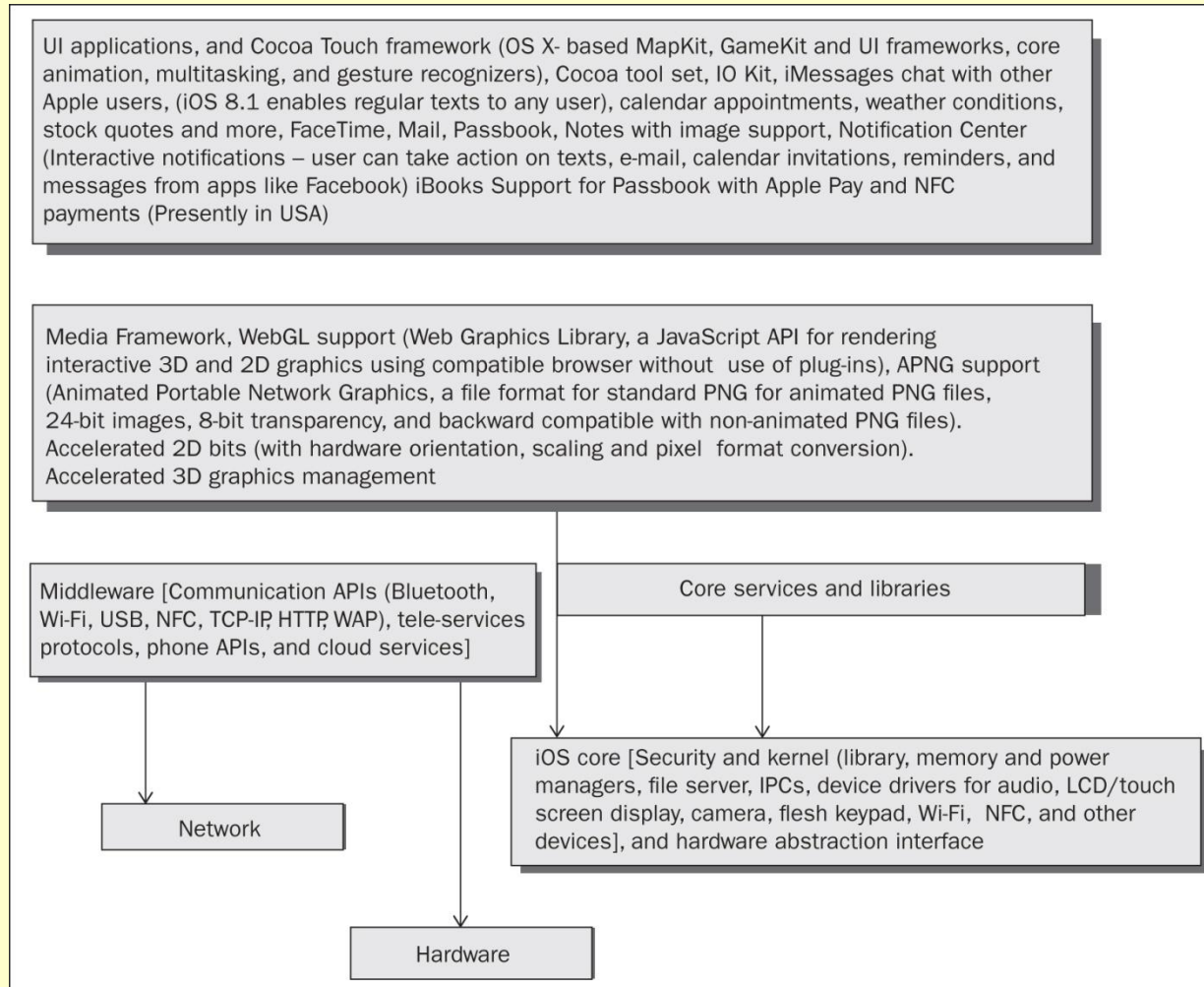
APPLE IPHONES

- Mac OS X
- Four abstract layers
- First layer for basic services
- Second for core services
- Third the media layer
- Fourth the touch layer called Cocoa Touch layer

COCOA TOUCH FRAMEWORK

- Include libraries, APIs, and run-times
- Framework gives an abstraction layer to the iOS

FOUR LAYER IOS ARCHITECTURE



MODEL-VIEW-CONTROLLER (MVC) ARCHITECTURE

- Framework model-view-controller (MVC) architecture
- The core services layer is above the iOS kernel/Core OS.

IOS 11

- Augmented reality
- App discovery ease
- iGames App discovery ease
- iMessages App
- iCloud Messages synchronisation
- Apple Pay
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IOS 11

- Control Centre, Lock Screen and Notifications
- 64-bit Processor- iPhone 6 and above devices

SAFARI WEB BROWSER

- Includes srcset (image source sets), animated png formats, extensions for native apps as plug-ins, Web addresses box with search, website bookmarks, frequently visited sites, pop up of choices and Spotlight's Web suggestions, scroll events, CSS layering, hairline borders

SAFARI WEB BROWSER

- , full screen and metadata APIs, HTML5 new APIs (WebGL 3D canvas), IndexedDB, Navigation Timing API, Crypto API, native hybrids, auto-fill forms, credit card scanner, OCR, Remote Web Inspector (in Yosemite), Web, and native application integration.

IOS 8 AND ABOVE

- App extension
- Seven extension points when the apps run at the Apple device

APP EXTENSION POINTS

1. Activating a single task and contents
2. Sharing among the Apple devices and Mac computer of a user
3. Storing, 4.Picking 5.Viewing notifications
6. Photo editing 7. Customizing

CODING LANGUAGE

- iOS enables use of an innovative new programming language called Swift
- It uses Cocoa and Cocoa Touch, which use interactive coding feature of Swift.
- Swift coexists with Objective-C, the language used in several iOS apps.

iOS

- iOS frameworks
- New frameworks introduced in iOS
- System libraries
- <https://developer.apple.com/library/ios/documentation/Miscellaneous/Conceptual/iPhoneOSTechOverview/iPhoneOSFrameworks/iPhoneOSFrameworks.html>.

APPLICATION DEVELOPMENT PLATFORM

- OS X and OS X Yosemite
- XNU Base of OS X
- XNU a hybrid kernel that includes FreeBSD
- The APIs use Embedded C++ based IO kit
- (earlier Objective-C DriverKit)

APP DEVELOPMENT PLATFORM

- iOS Developer
(<http://developer.apple.com/iphone>)
- Library developer site—
<https://developer.apple.com/library/ios/navigation/iOS>
- Objective-C DriverKit

DEVICE EMULATOR

- Free download.
- Includes ,debugging tools, and performance profiling
- Includes a plug-in for Eclipse integrated development environment (creation, debugging, deployment, and updating the application)

SUMMARY

- Apple iOS 11
- Framework include libraries, APIs, and run-times
- Framework gives an abstraction layer to the iOS
- Four Layers, basic, core, media, Cocoa Touch
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SUMMARY

- Web browsing using Safari
- iCloud, iCloud Drive
- Sensors
- Notification Center
- Free download Device Emulator

End of Lesson 04

Apple iOS