

WELCOME

Mobile Applications Testing



Platforms / OS :

iOS .IPA

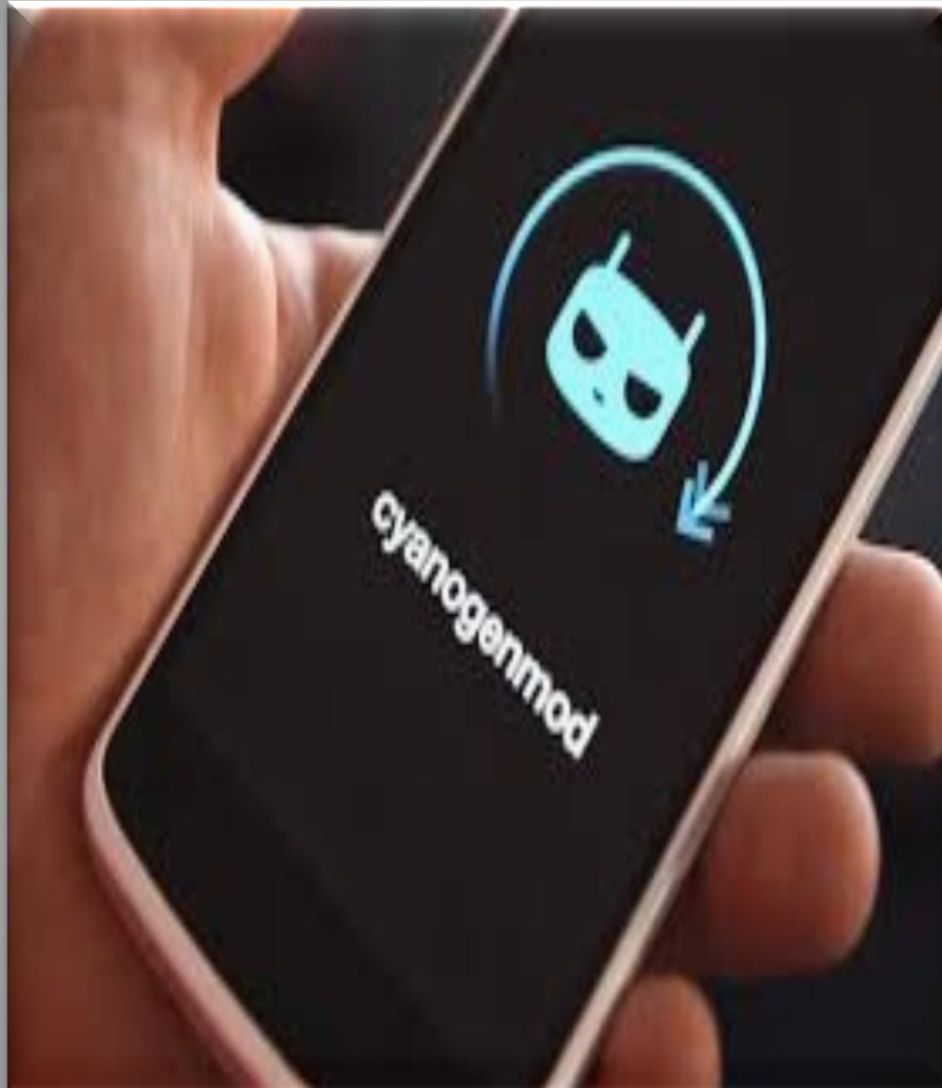
- An **.ipa** file is an iOS application archive file which stores an iOS app.
- Each **.ipa** file includes a binary for the ARM architecture and can only be installed on an iOS device.
- Files with the **.ipa** extension can be uncompressed by changing the extension to **.zip** and unzipping.

Platforms / OS :

ANDROID vs IOS : SUMMARY

Category	Google Android	Apple iOS
License - Source	Open Source	Close - Proprietary
Company	Open Handset Alliance/Google	Apple
OS Platform	Linux	OS X – Unix (Darwin)
Programming Language	Java <div data-bbox="948 622 1151 701" data-label="Image"> </div>	Objective-C, Swift 3.0
Virtual Machine	Dalvik VM	None
Package Manager	APK – Google Play/Play Store	iTunes (since iOS 6 – iStore)
Carriers	AT&T, Verizon, T-Mobile, Sprint, MetroPCS, Virgin, 96% out of 369 US carriers	Apple Store, AT&T, Verizon, Sprint, Virgin Mobile, Cricket + 10 regional carriers
Life Battery	Moderate	Advance high
Browser Engine	WebKit: Web, Opera Mini, Dolphin, Chrome	WebKit: Safari, Opera Mini, Chrome

CyanogenMod

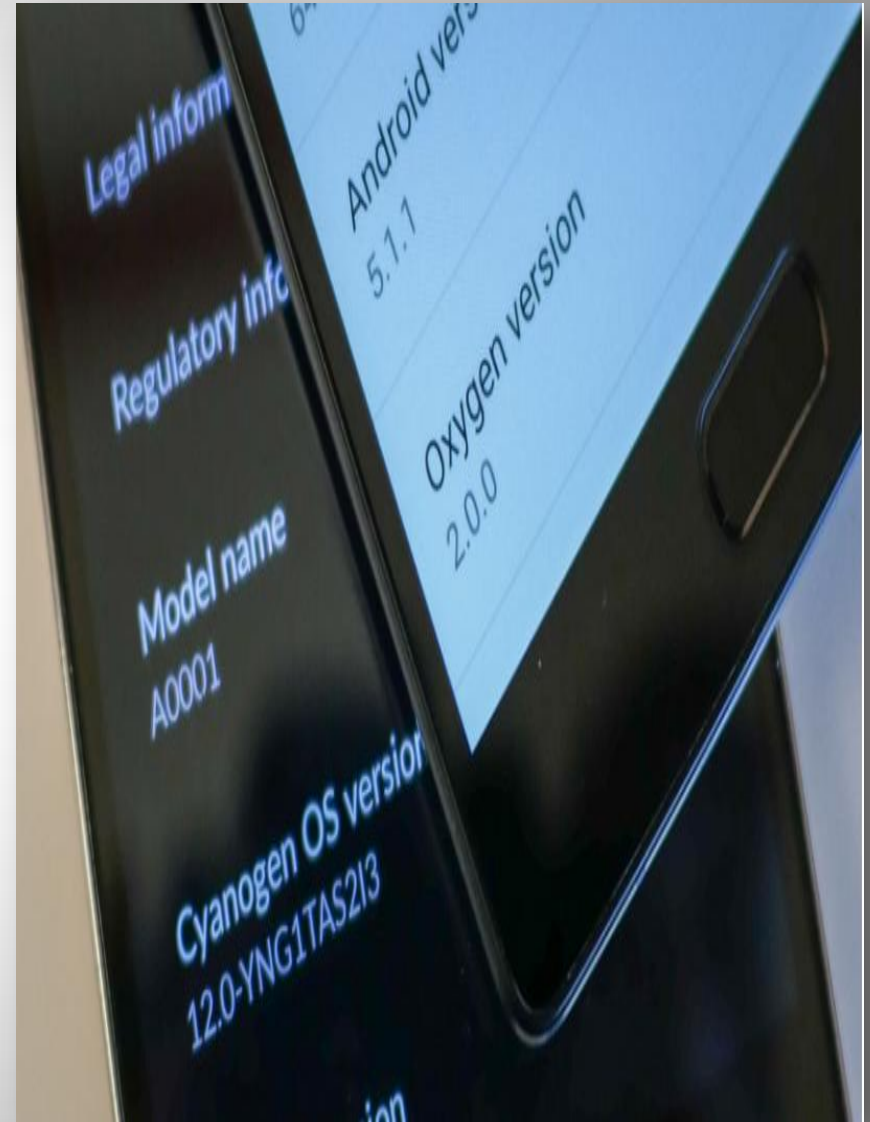


CyanogenMod

What is it ?

CyanogenMod is an enhanced open source firmware distribution for Smartphones and tablet computers based on the Android mobile operating system.

It offers features and options not found in the official firmware distributed by vendors of these devices.



CyanogenMod

CYANOGEN OS

VS

ANDROID

About 1-2 times a year, the vanilla Android operating system (known as AOSP, or the Android Open Source Project) is internally developed, then released to the public, by Google. They provide the source code to anyone who wants to download it.

The CyanogenMod community, comprised mostly of unpaid volunteers and enthusiasts from around the world, takes this newest Android code and "ports" it to dozens of new and older (aka "legacy") devices.

CyanogenMod

In many cases, CyanogenMod may increase performance and reliability compared with official firmware releases.

CyanogenMod is developed as free and open source software based on the official releases of Android by Google, with added original and third-party code.

Features supported

Native Theming

FLAC Audio Codec

Large Access Point Name List

Openvpn Client

Enhanced Reboot Menu

Wi-fi

Bluetooth

USB Tethering

CPU Overclocking

Other Performance Enhancements

Soft Buttons And Other "Tablet Tweaks"

App Permissions Management

Other Interface Enhancements

CyanogenMod

PROS

Remove Unwanted Programs ("Bloatware") Installed By Your Carrier

Receive More Frequent Security Updates

Have Access To The Current Version Of Android - Most Carriers Take Months To Update Devices

Better Performance

Extra Features

Cyanogenmod Has Proven To Be More Stable Than Many Official Roms.

CONS

Limited Or Voided Warranty After Modifying

New Security Risks.

Non-stock Firmware *Could* Contain Malicious Code

Stability Issues May Arise When Using An Experimental Operating System.

CyanogenMod

FEATURE LIST

CM Updater

Privacy Guard

Global Blacklist

Quick Setting Ribbon

Quick Settings Config

Them

Trebuchet

Status Bar Behavior

CM File Manager

Display and Lights

Profiles

Button Configuration

Navbar

AudioFX

Tethering

Developer Tools

Root Access

**Superuser: Advanced Device
controls**

SMS Rate limit

CyanogenMod

Difference between CyanogenMode and Cyanogen OS

CyanogenMod is an aftermarket ROM.

It is a custom ROM based on AOSP, and has some nifty features of it's own. It is open source.

Cyanogen Inc. is a company which distributes CyanogenOS, a slightly more polished variant of CyanogenMod with certain device-specific features.

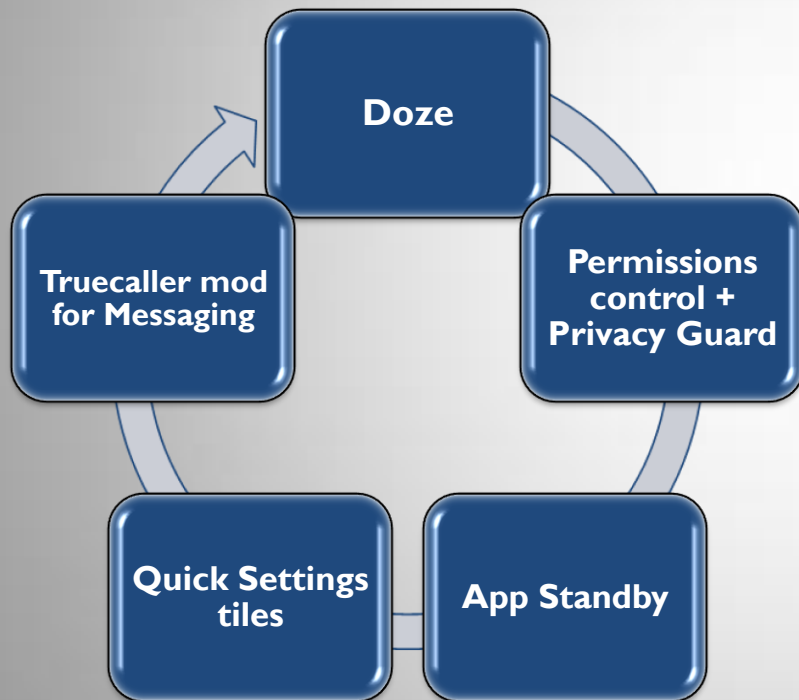
CyanogenOS is not open-source.

- ***Cyanogen Inc. is the company***
- ***CyanogenOS is it's product***
- ***CyanogenMod is the ROM which essentially is the backbone of CyanogenOS, and Cyanogen Inc.***

CyanogenMod

Latest Version **for all devices**

Marshmallow offers a number of useful features that Cyanogen leverages, including:



Tastes like Marshmallow



Supported Devices : <http://www.ibtimes.co.uk/cyanogenmod-l3-0-full-list-devices-getting-official-stable-release-l550461>

CyanogenMod

OS 14.1: Released November 09, 2016

Available for Selected Devices ONLY



- CM 14.1 is simply the latest version of CyanogenMod, based on the Android 7.1 Nougat source code.

Multi-window Mode

New System UI

Optimized Battery Management

Pre-set AudioFX audio settings

Other Android 7.1 Features

Supported Devices : <http://www.cyanogenmods.org/official-cyanogenmod-14-1-cm14-1-devices-list/>

Mobile Ecosystem

Mobile World Statistics

Carriers/Service Providers

Network

Manufactures

Devices

Platforms/OS

Frameworks

API-Apps

Services

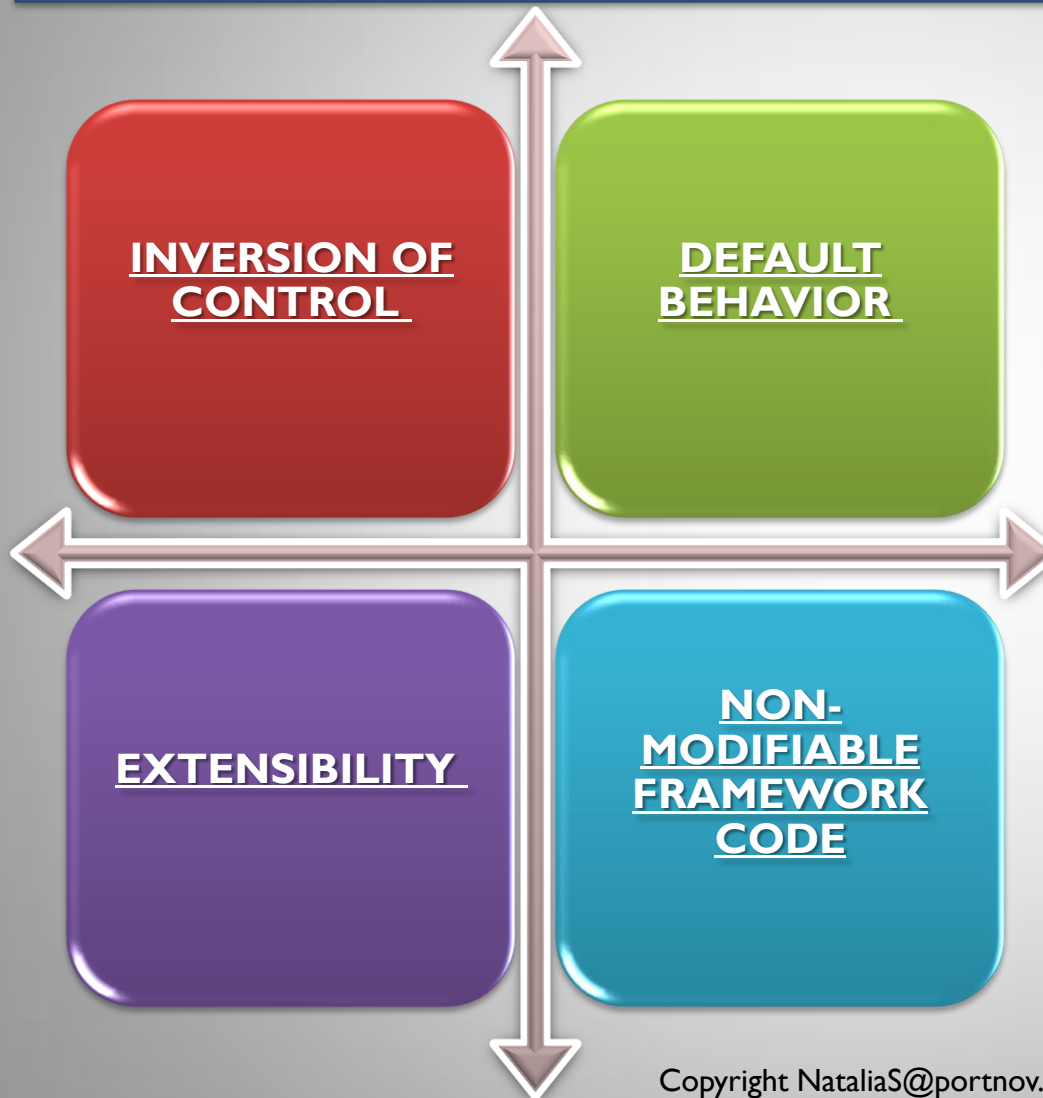
FRAMEWORKS

SOFTWARE FRAMEWORK in computer programming, is an abstraction in which common code providing generic functionality can be selectively overridden or specialized by user code providing specific functionality

FRAMEWORKS are a special case of software libraries in that they are reusable abstractions of code wrapped in a well-defined Application programming interface (API), yet they contain some key distinguishing features that separate them from normal libraries



FRAMEWORKS : distinguishing features



FRAMEWORKS

Example → ANDROID APP

Application Framework sits on top of native libraries, android runtime and Linux kernel.

This framework come pre-installed with high-level building blocks that developers can use to program applications.

RIGHT SIDE → the most important application framework components for our application and Android development in general.

Activity Manager

- **Manages the lifecycle of application**

Content Provider

- **Stores and retrieves data and makes it accessible to all applications**

View system

- **Handles GUI related Tasks**

Package Manager

- **Retrieves various info related to the currently installed app on a device**

Resource Manager

- **Provides access to non-code resources such as icons, etc**

Location Manager

- **Location-based and related services**

Notification Manager

- **Executes and Manages all Notifications, alerts, etc**

FRAMEWORKS

Example → Win CE and OS X

SF is a universal, reusable software platform used to develop applications, products and solutions.

SF include support programs, compilers, code libraries ,APIs and tool sets that bring together all the different components to enable development of a project or solution.

- Platform: Windows CE□
- OS: Windows Phone
- Framework: .NET
- Platform: OS X□
- OS: iOS
- Framework: Cocoa Touch



FRAMEWORKS : CONCLUSION

SUMMARY

Soft development is about getting stuff done, not figuring out how to get it done.

Frameworks and libraries help the developers focus on creating rather than figuring stuff out.

Rather than reinventing the wheel, Developers can use a framework or library to delegate brunt, noncreative and repetitive work, freeing up their time and energy to create the actual website or application.



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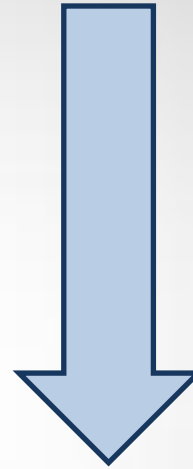
Services

API-APP

Application Programming interface (API) is a set of functions, classes, libraries, or packages (a.k.a. frameworks)

API allowing developers access an application's services by using the programming languages □

An API may include specifications for routines, data structures, object classes, and variables



Generally speaking, API → specification of how some SW components should be interacting with one another other
[Tutorial : Click Here](#)



API-APPS : EXAMPLES

The following list contains several examples of popular APIs:



Google Maps API: *Google Maps APIs lets developers embed Google Maps on webpages using a JavaScript or FlashInterface*



YouTube APIs: *YouTube API: Google's APIs lets developers integrate YouTube videos and functionality into websites or applications*



Flickr API: *The Flickr API is used by developers to access the Flickr photo sharing community dataThe Flickr API consists of a set of callable methods, and some API endpoints*



Twitter APIs: *Twitter offers two APIs. The REST API and Search API*



Amazon Product Advertising API: *Amazon's Product Advertising API gives developers access to product selection and discovery*



UserEngage : *Engagement tool, marketing automation platform that tracks your visitors*

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SERVICES



MOBILE SERVICES



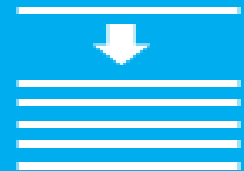
Auth



Server Logic



Notifications



Logging



Data



Diagnostics



Scale