WELCOME
Mobile Applications Testing

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Devices :
ROOTING : GLOSSARY

ROOT	• Rooting means you have root access to your device
ROM	• A ROM is a modified version of Android.
KERNEL	• A kernel is the component of your operating system that manages communications between your software and hardware.
RADIO	• Radios are part of your phone's firmware that controls your cellular data, GPS, Wi-Fi, and other things like that.
FLASH	• Flashing essentially means installing something on your device, whether it be a ROM, a Kernel, or a Recovery

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Devices :
ROOTING : GLOSSARY

BOOTLOADER	• Lowest level of software on a device, running all the code that's necessary to start OS
RECOVERY	• Software on a device that allow user to make backups, flash ROMs, and perform other system-level tasks
NANDROID	• From most third-party recovery modules, user can make device backups called nandroid backups.
ADB	• ADB stands for Android Debug Bridge
BRICK	• Breaking device during flashing or other acts.

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Devices :
TETHERING

TETHERING

connecting one device to another

In the context of mobile phones and tablet computers, tethering allows sharing the Internet connection of the phone or tablet with other devices such as laptops

Connection of the phone or tablet with other devices can be done over wireless LAN (Wi-Fi), over Bluetooth or by physical connection using a cable, for example through

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Mobile Ecosystem

- Mobile World Statistics
- Carriers/Service Providers
- Network
- Manufactures
- Devices
- **Platforms/OS**
- Frameworks
- API-Apps
- Services

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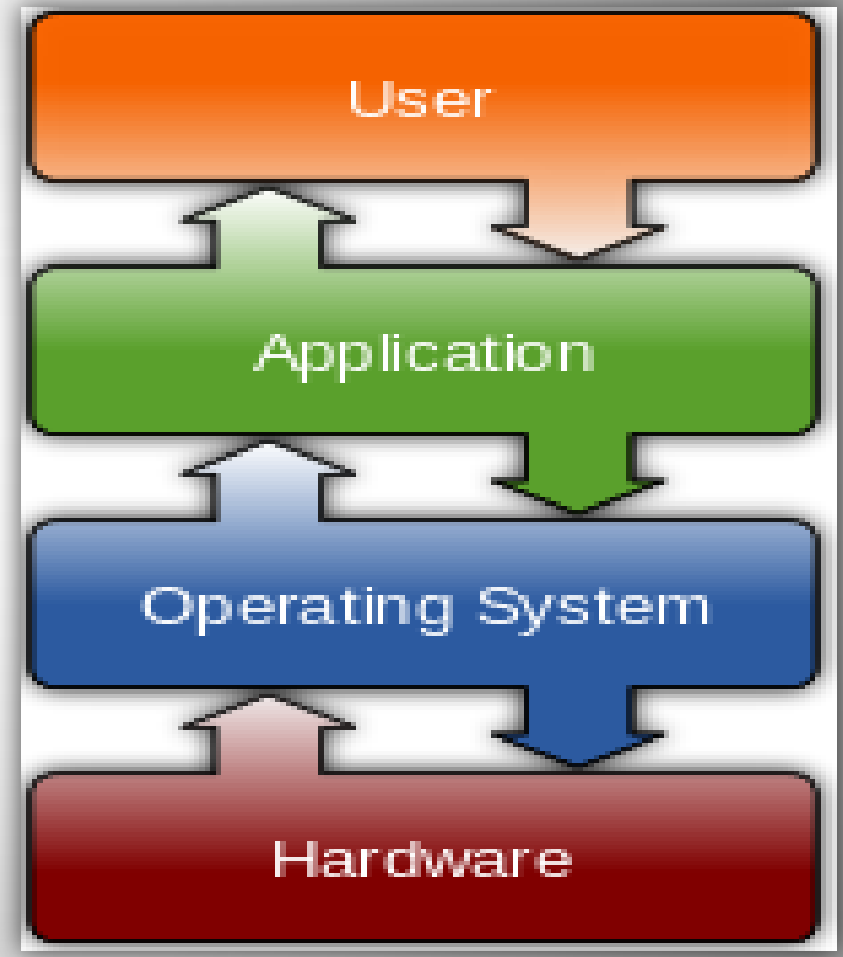
Platforms / OS : Explained

A computing platform is the "stage" where computer programs run.

An operating system sits between applications and hardware, managing how applications access hardware and software resources.

This means that an operating system is a kind of computing platform, but a computing platform is not necessarily a kind of operating system.

A runtime library can also be a computing platform.



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Platforms / OS Licensed

Licensed platforms are sold to device makers for non-exclusive distribution on devices.

The major goal of Licensed Platforms was to create a common/standard platform of Application Programming Interfaces (APIs) development that work similarly across multiple devices with the minimum effort required to adapt the device differences.

Example: **Windows Mobile, JME - Sun Microsystems/Oracle; Brew MP – HTC Smart Phone or carrier's firmware, etc**

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Platforms / OS Proprietary

A proprietary operating system is one which a particular company conceptualizes, designs, develops and sells. Examples of proprietary operating systems are Windows and Mac OS X

Pros

- ✓ **Simplified user experience making the overall user experience simpler and smoother.**
- ✓ **User multiplier effect based on increasing number of people already using it.**

Cons

- ✓ **Limited Customizability**
- ✓ **Interoperability Operating systems are often designed to work with a fixed set of hardware specifications**

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Platforms / OS Open Source

Open source is a philosophy which suggests that the source code behind something should be freely available to the public.

Pros

- ✓ The main advantage is that it allows end users to directly interact with the source, potentially modifying it to suit their wishes.
- ✓ Encourages constant development and innovation, while also creating a community of shared information.

Cons

- ✓ Vulnerable to malicious users
- ✓ Might not be as user-friendly as commercial versions
- ✓ Don't come with extensive support

Platforms / OS SUMMARY

Licensed

- JME
- BREW
- LiMo

Proprietary

- OS X
- BB QNX
- Windows Phone
- bada
- Symbian (Eclipse Lic.)
- webOS

Open Source

- Android-OHA
- Tizen
- Maemo
- MeeGo
- Linux
- Alternative

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Platforms / OS : Open Source vs Proprietary

Open-Source Software
can replace proprietary software

for

Operating Systems

for

Office applications

for

Image editing

for

Internet browser

for

Video & audio playback

for

Ebooks

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Platforms / OS : What do I HAVE ?

SAMSUNG bada

MeeGo™

iOS 4

Windows Mobile

android

RIM BlackBerry

palm webOS™

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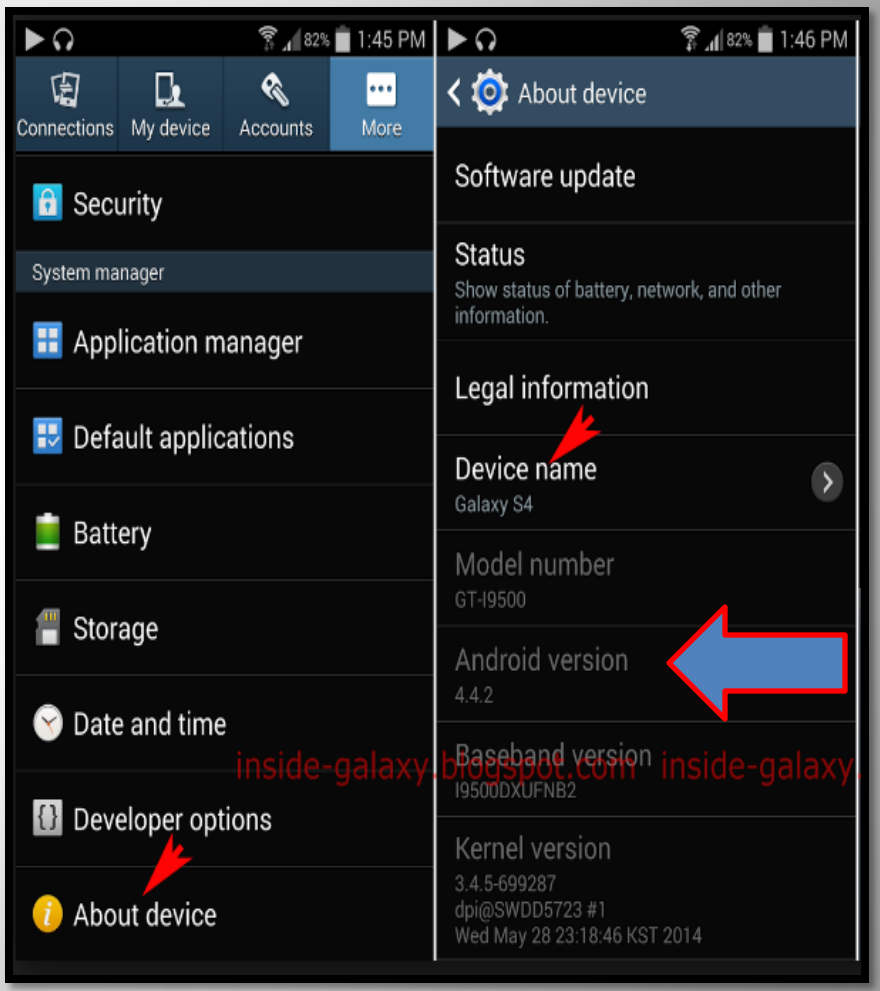
Platforms / OS :

How to find my Android OS Version ?

Open your device SETTINGS

Scroll to ABOUT PHONE

Look for line which says "Android Version"



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Platforms / OS :

How to find my Apple iOS Version ?

Open the Settings

Tap 'General'

Tap 'About'

Scroll down for 'Version'

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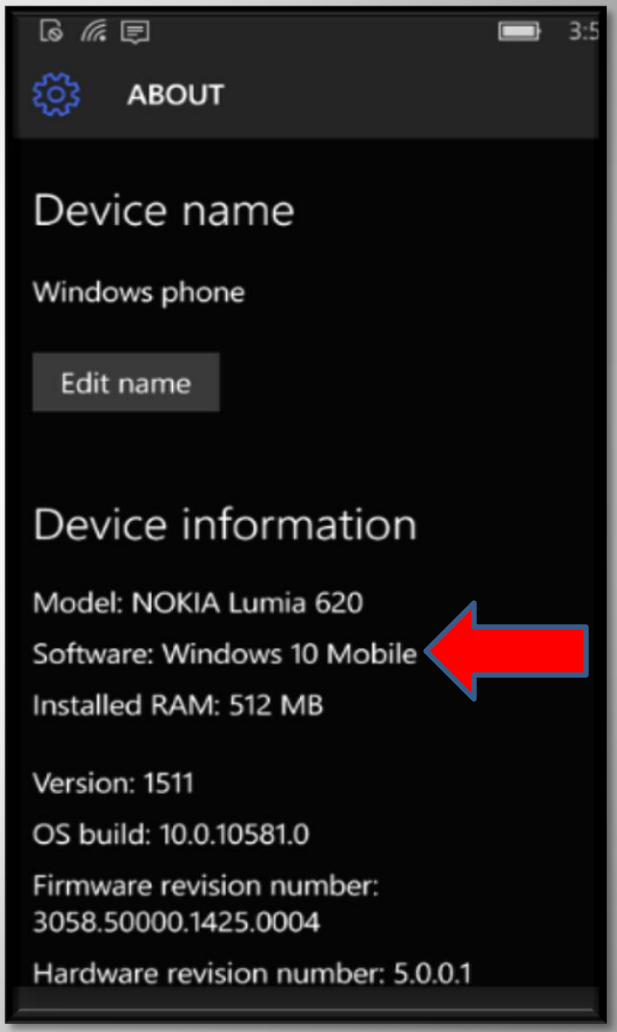
Platforms / OS :
How to find my WinPhone OS version ?

- Windows Phone home screen
- Swipe left to reveal more icons
- Scroll down and tap 'SETTIGS'
- Scroll down and tap 'ABOUT'
- 'About' screen, tap MORE INFO



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Platforms / OS :
ANDROID

ANDROID

is a mobile ***operating system*** *developed by GoogleBased on the Linux Kernel and designed primarily for touch screen Mobile Devices such as : SmartPhones and Tablets.*

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Platforms / OS : ANDROID

ACTIVE OPERATING SYSTEMS

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Platforms/OS
ANDROID version 9.0
API level 28

Android 9.0 "Pie"

Released August 6th, 2018

Pixel Devices only as of release date

All others will be updated in late 2018 and 2019

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Platforms/OS
ANDROID version 8.0-8.1
API level 26-27 (info as of 1/23/18)

Android 8.0 "OREO"

21, 2017*Officially released on* **August**

Oreo 8.1 – Dec, 2017

- **Nexus 5X**
- **Nexus 6P**
- **Google Pixel**
- **Google Pixel XL**
- **Pixel C**
- **Nexus Player**

More devices would be covered in coming months

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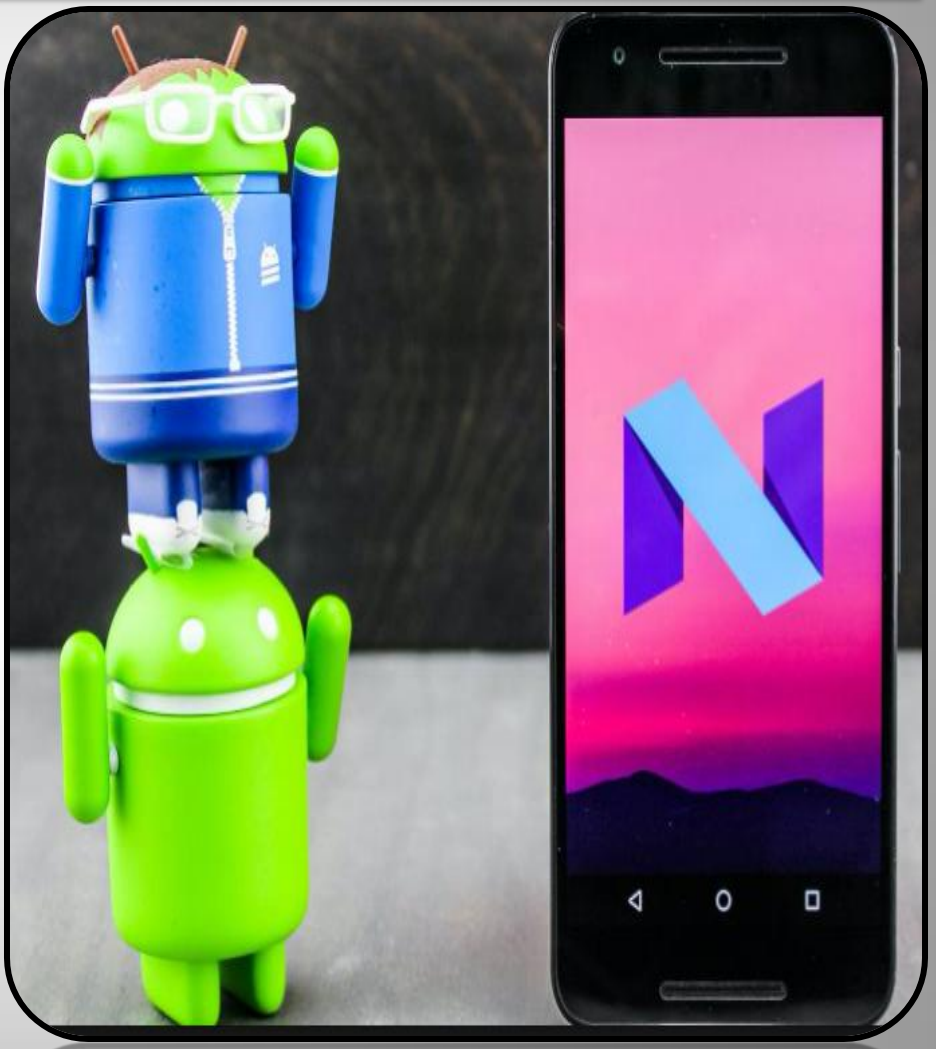
Platforms / OS :

ANDROID version 7.0-7.1.2
API level 24-25

Android 7.0-7.1.2 "Nougat“

Officially released on August 22, 2016 and 7.1.2 released April 7th, 2017

- Nexus 5X
- Nexus 6P
- Nexus 6
- Nexus 9
- Nexus Player
- Pixel C
- Android One General Mobile 4G



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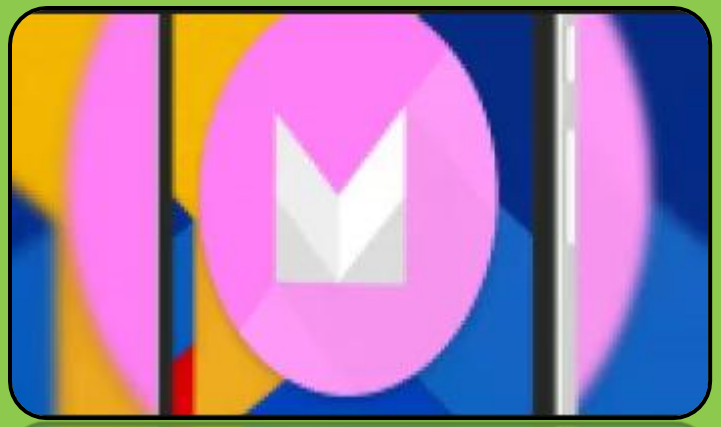
Platforms / OS :

ANDROID version 6.0-6.0.1

API level 23

"MARSHMALLOW"



Officially released in October 2015

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Platforms / OS :

ANDROID version 5.0-5.1.X

API level 22-23

"LOLLIPOP"

Officially released in June , 2014

5.1 released in February, 2016

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Platforms / OS :

ANDROID version 4.4-4.4.4

API level 19-20

"KITKAT" 4.4.

Officially released in June , 2014

4.4.4. released in June, 2014

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Platforms/OS
Google OS Stats :ANDROID

Android Name	Android Version	Usage Share
Nougat	7.0, 7.1	30.8%
Marshmallow	6.0	22.7%↓
Lollipop	5.0, 5.1	19.2%↓
Oreo	8.0, 8.1	14.6%↑
KitKat	4.4	8.6%↓
Jelly Bean	4.1.x, 4.2.x, 4.3.x	3.5%↓
Ice Cream Sandwich	4.0.3, 4.0.4	0.3%↓
Gingerbread	2.3.3 to 2.3.7	0.3%↑

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Platforms / OS :
ANDROID HISTORY 2009-2018

Android 1.5 (CupCake)

Android 1.6 (Donut)

Android 2.0 and 2.1 (Eclair)

Android 2.2 (Froyo)

Android 2.3 and 2.4 (Gingerbread)

Android 3.0-3.2 (Honeycomb)

Android 4.0 (Ice-Cream Sandwich)

Android 4.1-4.3 (Jelly Bean)

Android 4.4 (KitKat)

Android 5.0- 5.1 (Lollipop)

Android 6.0 (Marshmallow)

Android 7.0 (Nougat)

Android 8.0 (Oreo)

Android 9.0 (Pie)

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