

WELCOME

Mobile Applications Testing



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

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.

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



Mobile Ecosystem

Mobile World Statistics

Carriers/Service Providers

Network

Manufactures

Devices

Platforms/OS

Frameworks

API-Apps

Services

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



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



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 : 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

Platforms / OS : What do I HAVE ?



Platforms / OS :

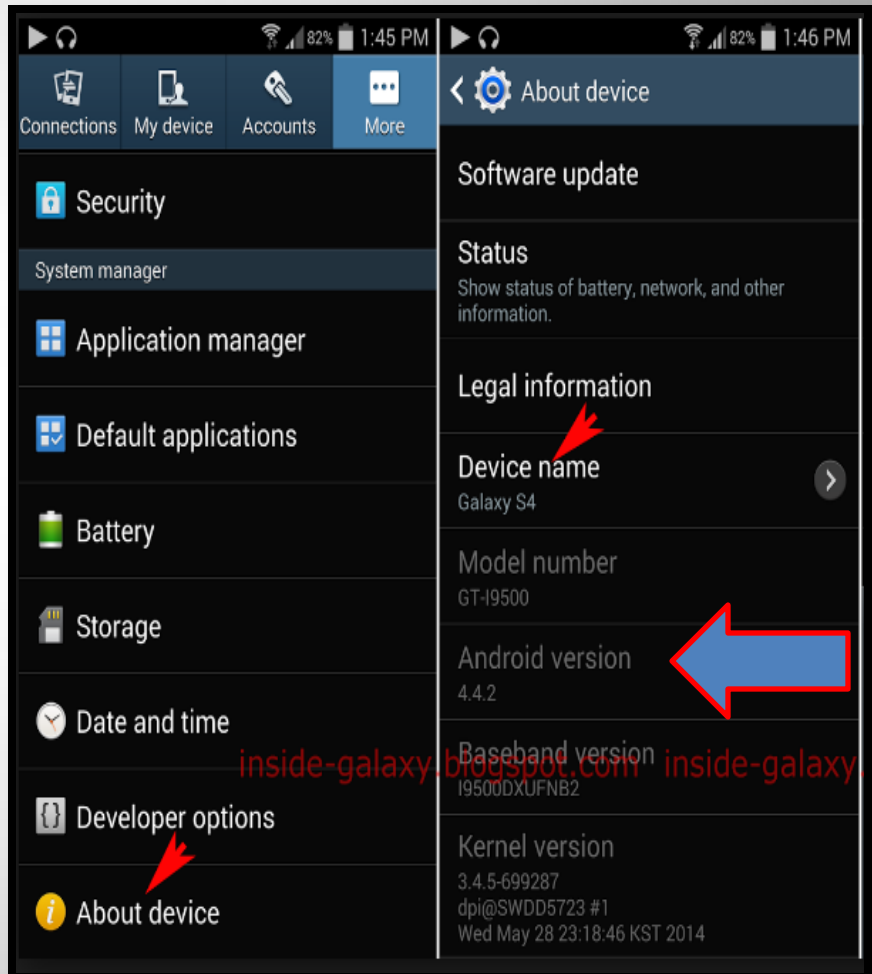
How to find my Android OS Version ?



**Open your
device
SETTINGS**

**Scroll to
ABOUT
PHONE**

**Look for line
which says
"Android
Version"**



Platforms / OS :

How to find my Apple iOS Version ?

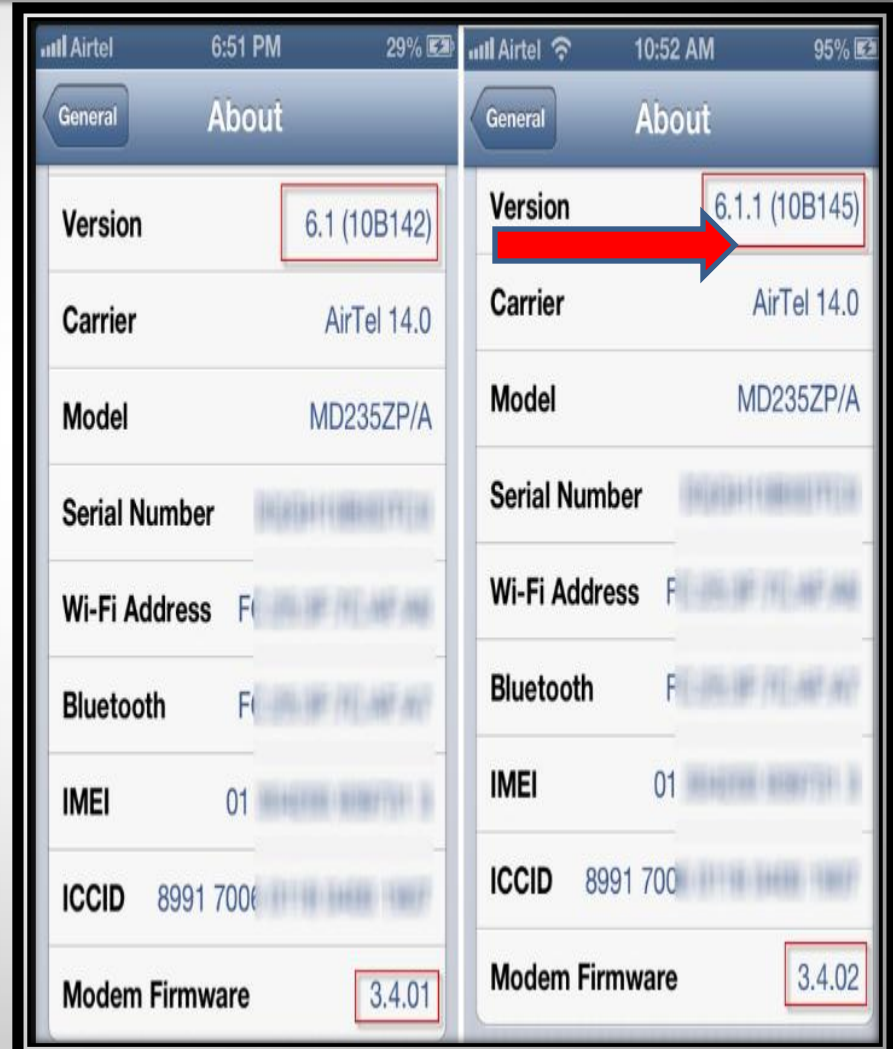


Open the
Settings

Tap 'General'

Tap 'About'

Scroll down
for 'Version'



Platforms / OS :

How to find my WinPhone OS version ?



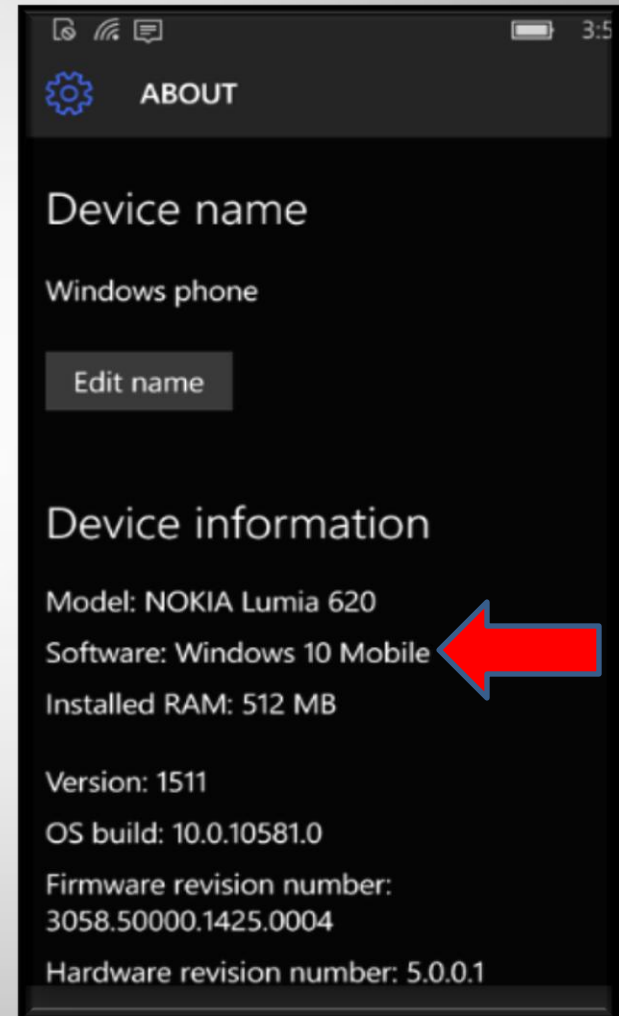
Windows Phone home screen

Swipe left to reveal more icons

Scroll down and tap 'SETTINGS'

Scroll down and tap 'ABOUT'

'About' screen, tap MORE INFO



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.*



Platforms / OS : ANDROID

ACTIVE OPERATING SYSTEMS



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***



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

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

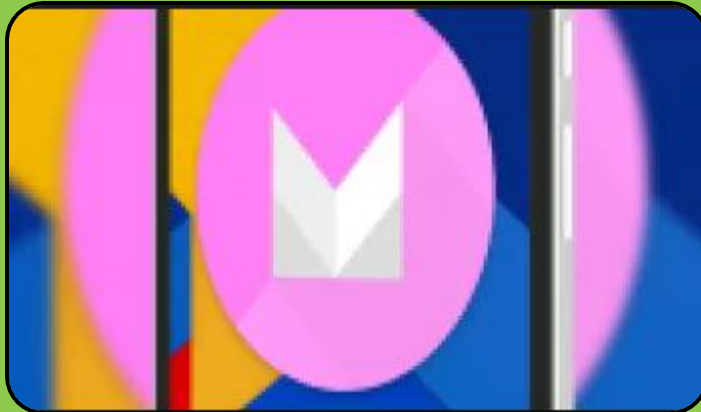


Platforms / OS :

ANDROID version 6.0-6.0.1

API level 23

“MARSHMALLOW”



Officially released in
October 2015



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**



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**



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%↑

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 4.1-4.3
(Jelly Bean)



Android 4.0
(Ice-Cream Sandwich)



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)



Platforms / OS :

iOS

- *iOS (originally iPhone OS) is a mobile operating system created and developed by Apple Inc. and distributed exclusively for Apple hardware*
- It is the operating system that presently powers many of the company's mobile devices, including the iPhone, iPad, and iPod touch.



Platforms / OS :

iOS latest version 12 (Sept 17th, 2018)

**Original Version 12
released on
September 17, 2018**

iOS 12 focuses on reliability and performance with this update, and it supports all of the same iPhones and iPads that iOS 11 worked with.



Platforms / OS : iOS 12

Overview

- **Apple** announced [iOS 12](#) on June 4, 2018, at its annual Apple Worldwide Developers Conference (WWDC) event.
- **Apple** will continue support for all devices supported by **iOS 11**, and will add performance enhancements across all devices served by **iOS 11**.
- Features announced but aren't limited to:
 - **Siri Shortcuts**,
 - **Group FaceTime** calls with up to 32 people,
 - **Memoji**,
 - organized **Lock Screen** that hides multiple messages from the same person or a group of people in conversations.

Platforms / OS :

iOS latest version 11.X

<http://www.mobiloitte.com/blog/evolution-iphone-os-1-ios-10-journey-ios>

IPHONE: 1 TO X

A look at the evolution of the Apple gadget across key specs

WEIGHT (in gm)



@network18 creative

Platforms / OS :Version Name HISTORY →

iOS 12 – HOPE, 12.1-HopeB, 12.2 -HopeE)



1.0:Alpine (1.0.0 - 1.0.2: Heavenly)	8.0: Okemo
1.1: Little Bear	8.1: OkemoTaos
1.1.1: Snowbird, 1.1.2: Oktoberfest	8.2: OkemoZurs
2.0: Big Bear	8.3: Stowe
2.1: Sugarbowl	8.4: Copper
2.2: Timberline	9.0: Monarch
3.0: Kirkwood	9.1: Boulder
3.1: Northstar	9.2: Castlerock
3.2: Wildcat (iPad only)	9.3: Eagle
4.0: Apex	10.0: Whitetail
4.1: Baker	10.1: Butler
4.2: Jasper (4.2.5 - 4.2.10: Phoenix)	10.2: Corry
4.3: Durango	10.3: Erie
5.0: Telluride	11.0: Tigris
5.1: Hoodoo	11.1 Bursa
6.0: Sundance	11.2 Cinar
6.1: Brighton	11.2.5 Dalaman
7.0: Innsbruck	11.3 Emet
7.1: Sochi	11.4 Fatsa