



## Comparative Analysis of modern Android Technology (version 7.1) and its Pros & Cons

*RIMI PODDAR<sup>1</sup>, Dr. VISHAL SHRIVASTAVA<sup>2</sup>, Dr. AKHIL PANDEY<sup>3</sup>, Mr. SANTOSH KUMAR<sup>4</sup>*

<sup>1</sup>B.TECH. Scholar, <sup>2,3</sup>Professor, <sup>4</sup>Assistant Professor Computer Science & Engineering

Arya College of Engineering & I.T. India, Jaipur

<sup>1</sup>[rimipoddar14@gmail.com](mailto:rimipoddar14@gmail.com), <sup>2</sup>[vishalshrivastava.cs@aryacollege.in](mailto:vishalshrivastava.cs@aryacollege.in), <sup>3</sup>[akhil@aryacollege.in](mailto:akhil@aryacollege.in), <sup>4</sup>[santoshkumar.cs@aryacollege.in](mailto:santoshkumar.cs@aryacollege.in)

### ABSTRACT :

Also referred to as Android 7.1, Android "Nougat" is the seventh major version of the Android operating system. The operating system and its development platform were significantly improved by this version, which was released in March 2016. Notable features include compatibility for the Vulkan graphics rendering API, an Open JDK-based Java environment, inline answers to notifications, the ability to run multiple apps simultaneously in split-screen mode, and seamless system updates on supported devices..

### Introduction :

Let's go back to 2003, time travel. This is the year when Android, Inc. was established as a mobile technology enthusiast company with a goal of designing an amazing product. Without realizing it, they made an extremely popular platform that Google would later buy in 2005 thereby marking the origin of Android dynasty. On November 5th, 2007 the initial alpha version of Android mobile OS came out launching system into world's market. It was the beginning of something extraordinary that has revolutionized how we use our mobiles now.

### 3. Android Version :

The first commercial version of Android, known as Android 1.0, was released in

September 2008. Since then, this revolutionary operating system developed by Google and the Open Handset Alliance has significantly improved through a string of updates aimed at enhancing its performance and functionality.

It was in 2009 when Android 1.5 Cupcake was released, that imaginative and playful code names taken from sweets and desserts have been used for naming

all subsequent Android versions. These sweetly named Android features add a certain whim to the ever-evolving world of Android.

Code name	Version number	Initial release date	API level	Support status
Alpha	1.0	September 23, 2008	1	Unsupported
Beta	1.1	February 9, 2009	2	Unsupported
Cupcake	1.5	April 27, 2009	3	Unsupported
Donut	1.6	September 15, 2009	4	Unsupported
Eclair	2.0 – 2.1	October 26, 2009	5 – 7	Unsupported
Froyo	2.2 – 2.2.3	May 20, 2010	8	Unsupported
Gingerbread	2.3 – 2.3.7	December 6, 2010	9 – 10	Unsupported
Honeycomb	3.0 – 3.2.6	February 22, 2011	11 – 13	Unsupported
Ice Cream Sandwich	4.0 – 4.0.4	October 18, 2011	14 – 15	Unsupported
Jelly Bean	4.1 – 4.3.1	July 9, 2012	16 – 18	Unsupported
KitKat	4.4 – 4.4.4	October 31, 2013	19	Unsupported
Lollipop	5.0 – 5.1.1	November 12, 2014	21 – 22	Unsupported
Marshmallow	6.0 – 6.0.1	October 5, 2015	23	Supported
Nougat	7.0 – 7.1.2	August 22, 2016	24 – 25	Supported

#### 4. Android System Architecture Details :

Most Android users use their devices mainly for sending messages, surfing the internet, making calls, and running simple applications. On the other hand, developers must understand what's inside an Android system. Likewise in Windows OS, different partitions are used by Android for its files and folders management. Many people do not know what these partitions mean and what are they made of yet each partition is unique.

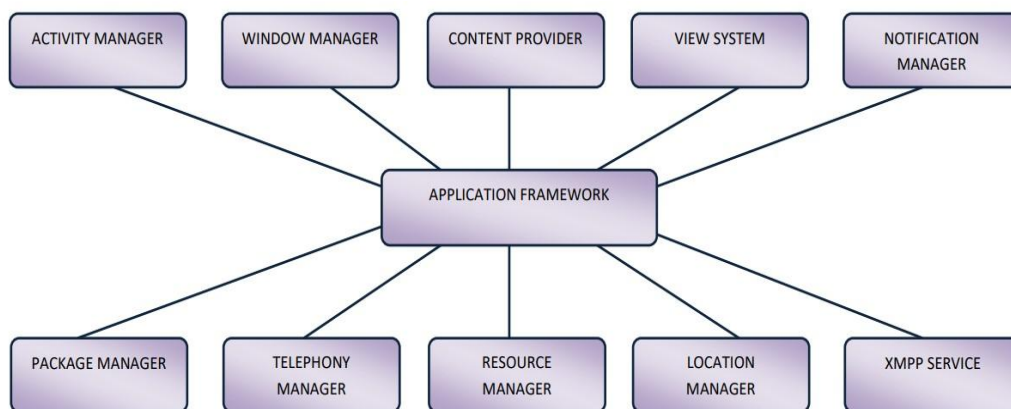
##### 4.1 About applications Layer

This application layer forms the basis for the whole Android structure. This is where it makes sure the apps either that you make or you install in your android device are kept together. Some of these programs include: for example, calendars, games, address books, web browsers and others.

##### 4.2 Application framework

One important layer sticks out in the realm of Java development: the application framework. In this layer are high level functions expressed as java classes that act like a lighthouse to developers.

It is like having a trustworthy tool box that contains all possible means that can help developers build error-free apps.

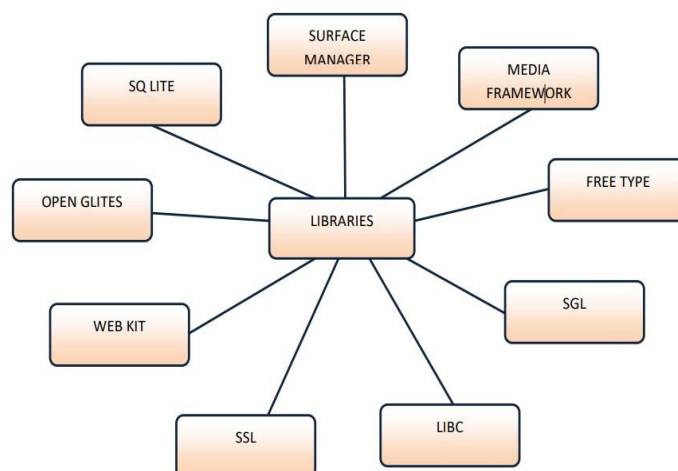


##### 4.3 Android libraries

One important layer sticks out in the realm of Java development: the application framework.

This layer comprise high level functions expressed in Java classes serving as a light house for developers.

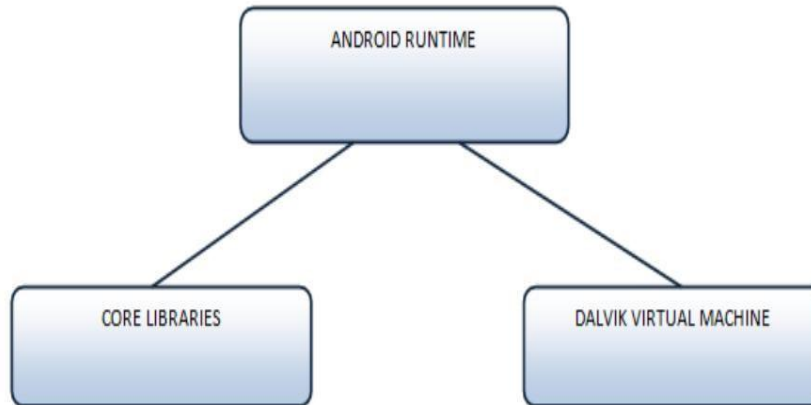
For instance, it serves as a reliable tool box full of any solution that will enable app developers create perfect apps without errors.



#### 4.4 Android Runtime system

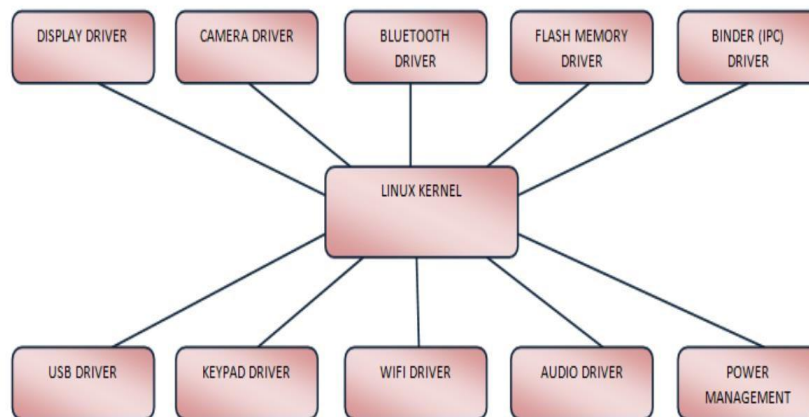
Android's architectures are complex which makes it important to consider the Android Runtime system carefully. This paper discusses the other part of this design that is commonly referred to as the Dalvik Virtual Machine.

A powerful platform comprises of critical components such as the Dalvik virtual machine specially developed and optimized for Android.



#### 4.5 Android Linux Kernel:

The third phase of the mobile device's open source operating system kernel, which plays a fundamental role in the structure, progresses further still. The subsequent section focuses on the revolutionary virtual computing platform intentionally developed and refined specifically for the mobile OS. Prepare for enhanced performance on devices running this OS.



### 5. Pros of Android Nougat:

- The dual-display phone setting is one of the intriguing new capabilities in Android Nougat. By employing this option, users can maximize visible space by fastening two programs adjoining. Consider utilizing a web browser to examine messages and connect with friends simultaneously. The dual-display function found in Android Nougat makes it all possible.
- The newer version of the mobile operating system enhances past notifications. Announcements now appear in a vivid format on a "sheet"-like view rather than traditional cards. The device looks trendier and more modern with this reorganized appearance. In addition, inline replies within notices are now practical, creating an easier way to stay connected than before.

---

## 6. Cons of Android Nougat

- One drawback that some users of Android Nougat have experienced is a decrease, in battery life. After updating to this operating system your smartphones battery may drain quickly. It's important to be aware of this issue and adjust your devices power usage accordingly.
- Unfortunately there have been instances, with Android Nougat where certain apps encounter crashes. Users may find this frustrating as it disrupts their software usage and may require troubleshooting to resolve the problem.

---

## Conclusion:

In this article we explored the tactics employed by the mobile operating system for managing equipment. We also delved deeper into the different versions and their architecture. While we will briefly discuss iterations, our primary attention will center on the most recent major release by the technology company. Ready yourself to be impressed as we uncover the particulars of its debut and showcase its new capabilities.

---

## REFERENCES:

1. [https://www.android.com/intl/en\\_in/versions/nougat-7-0/](https://www.android.com/intl/en_in/versions/nougat-7-0/)
2. [https://en.wikipedia.org/wiki/Android\\_Nougat](https://en.wikipedia.org/wiki/Android_Nougat)
3. <https://developer.android.com/about/versions/nougat>
4. <https://blog.google/products/android/android-70-nougat-more-powerful-osmade/>
5. <https://www.javatpoint.com/android-nougat>