

Android Architecture



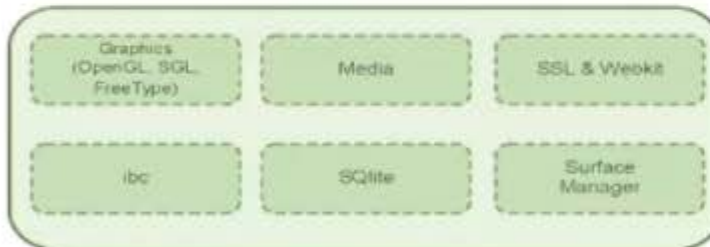
APPLICATION LAYER



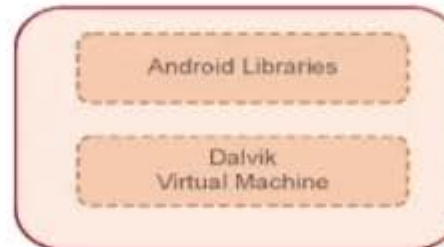
APPLICATION FRAMEWORK



LIBRARIES



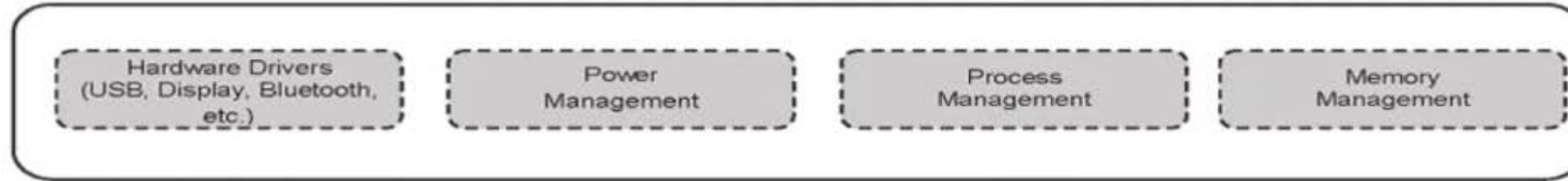
ANDROID RUN TIME



LINUX KERNEL



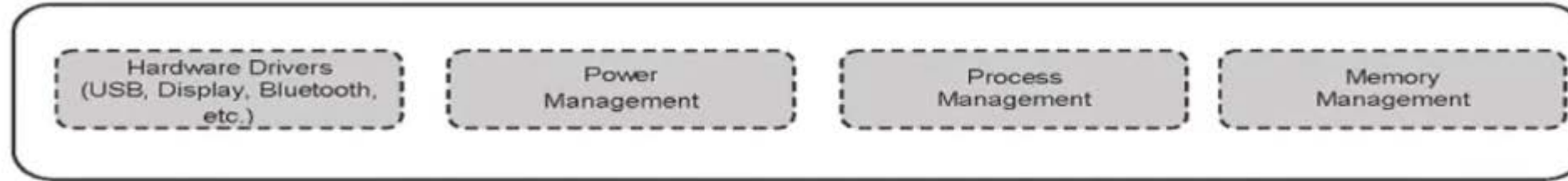
LINUX KERNEL



- It is like heart of android operating system and present at the bottom of android architecture.
- It contains essential hardware drivers like display, audio, camera, bluetooth, wifi, etc.



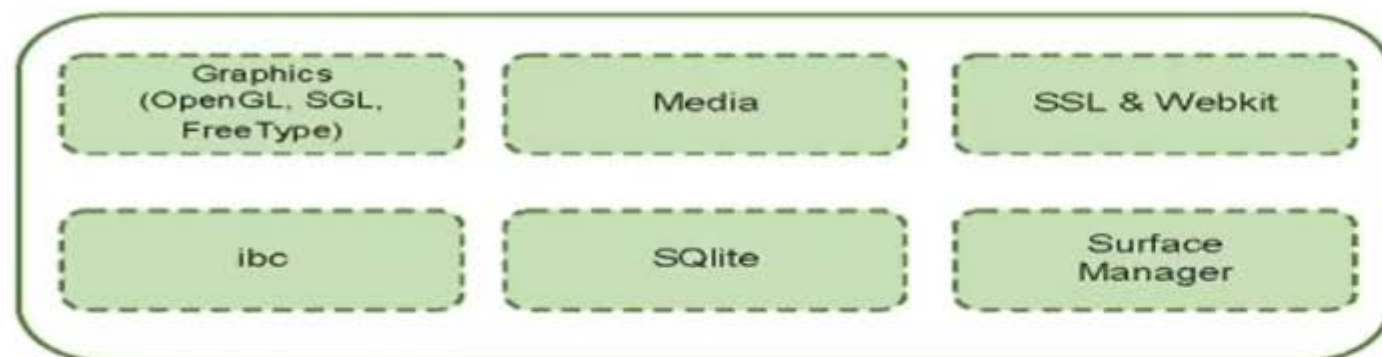
LINUX KERNEL



- It provides functionalities such as power management, process management and memory management.
- It provides a level of abstraction between device hardware and upper layers of Android software stack.



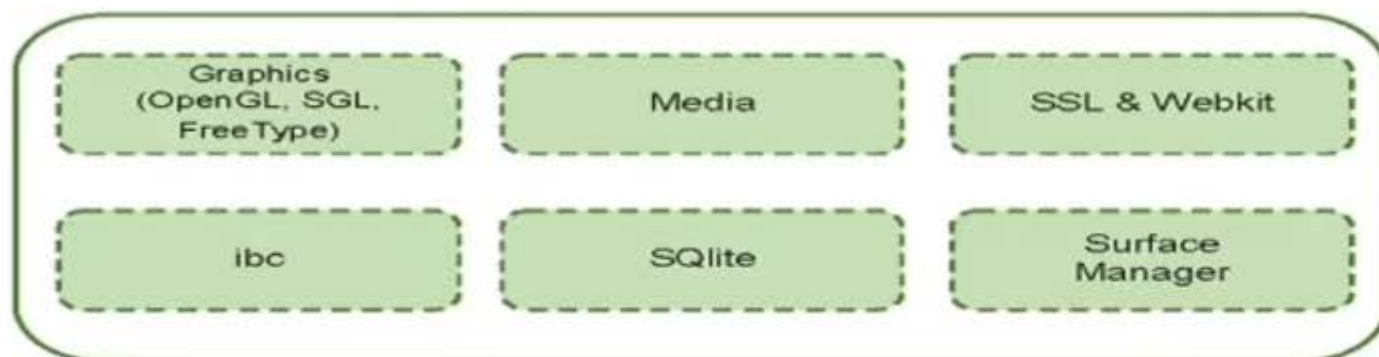
LIBRARIES



- Above Linux kernel there are native libraries such as SQLite, WebKit, OpenGL, SSL, etc.

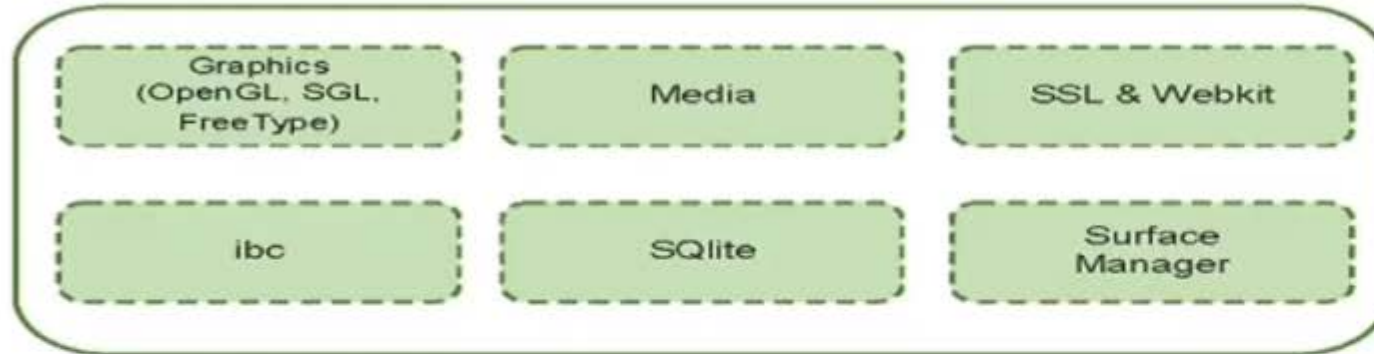


LIBRARIES



- Some of these libraries are briefly explained below.
 - **SQLite** – It provides various classes used for database management.
 - **WebKit** – It is a web browser engine used to display internet content.

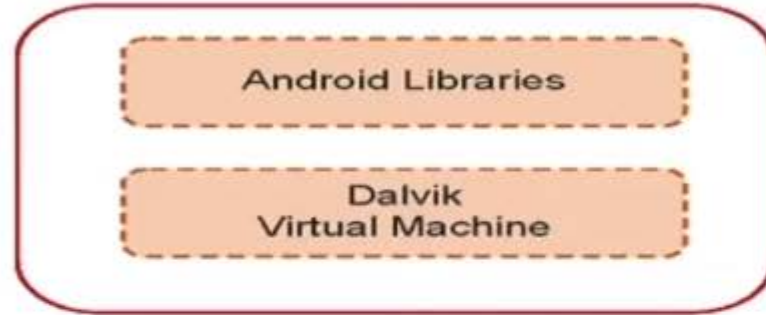
LIBRARIES



- **SSL** – It provides internet security.
- **OpenGL** – It is a Java interface to the OpenGL ES 3D graphics rendering API.

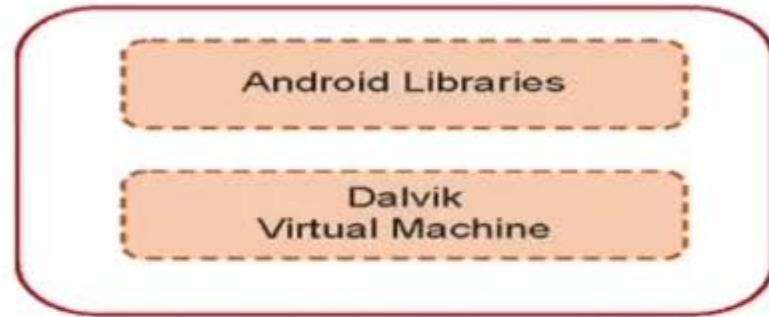


ANDROID RUN TIME



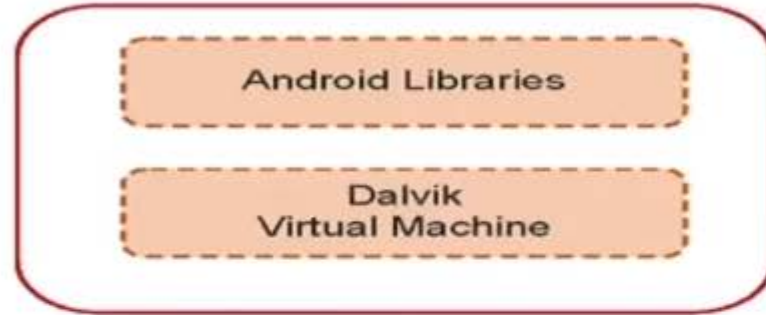
- It is third section which is also present on the second layer from bottom of Android architecture.
- Android runtime provides core libraries and Dalvik Virtual Machine (DVM).

ANDROID RUN TIME



- These core libraries enable Android developers to write Android applications using standard Java programming language.
- DVM is a major component of Android OS. It is same as like Java Virtual Machine (JVM).

ANDROID RUN TIME



- DVM is responsible for running Android applications. It consumes less memory and provides very fast performance.



APPLICATION FRAMEWORK



- It is the fourth section and third layer present on the top of native libraries and android runtime.
- It provides various API's like activity manager, resource manager, content providers, telephony manager, etc.
- These API's are used by Android application developers.

APPLICATION LAYER



- Applications layer is present at the top. Various applications created by developers like games, contacts, browser, etc. are installed on this layer.



APPLICATION LAYER



- This layer consists of 3 main parts:
 - Native apps.
 - Third Party apps.
 - Developer apps.

