Android Architecture

1. Android Architecture contains different number of components to support any device needs.
2. There are 5 major android components (Fig 1.1)
    - Applications
    - Application Framework
    - Android Runtime
    - Platform Libraries
    - Linux kernel

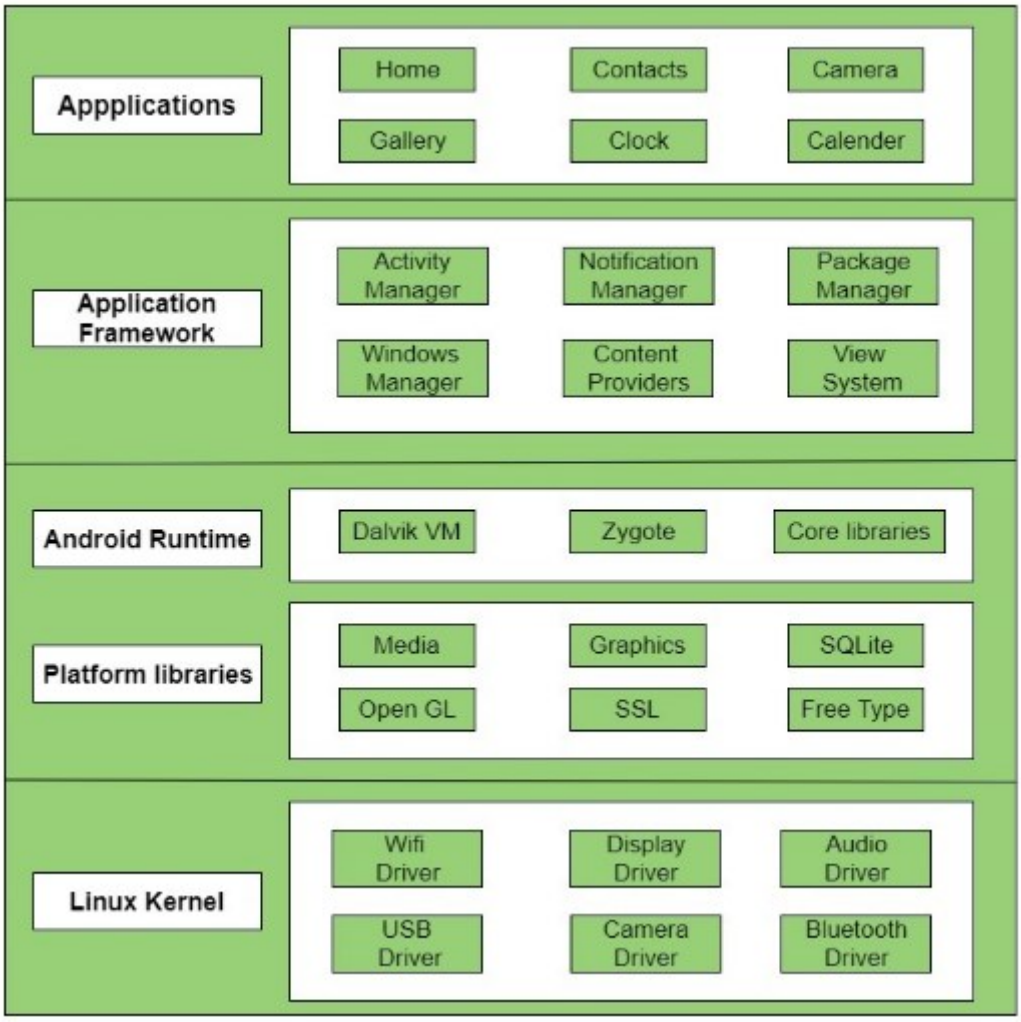

Figure 1.1

1.1 Applications

1. Applications are the top level components of android components it can be preinstalled or user installed application.
   Ex. Camera, Gallery, games, chat applications etc.

1.2 Application framework

1. Application framework provides several classes to build android apps and it provides abstraction between applications and android hardware.
2. It includes package mangers, activity mangers, view system, notification managers etc.

1.3 Android runtime

1. Android runtime contains core libraries and Dalvik virtual machine **(DVM)** to run android applications
2. DVM is virtual machine specially designed and optimized to run multiple android applications
3. Core libraries enables us to implements android apps using Java and Kotlin.

1.4 Platform libraries

1. Platform Libraries contains C/C++ and java based libraries such as sqlite, media, openGL, surface manager, SSL

1.5 Linux Kernel

1. Linux Kernel is heart of the android architecture. It manages all the available drivers such as display drivers, camera drivers, Bluetooth drivers, audio drivers, memory drivers.
2. The linux kernel provides abstraction between hardware and other components of android applications.
3. And linux kernel is responsible for security, memory management, power management, process management, driver model and network stack.