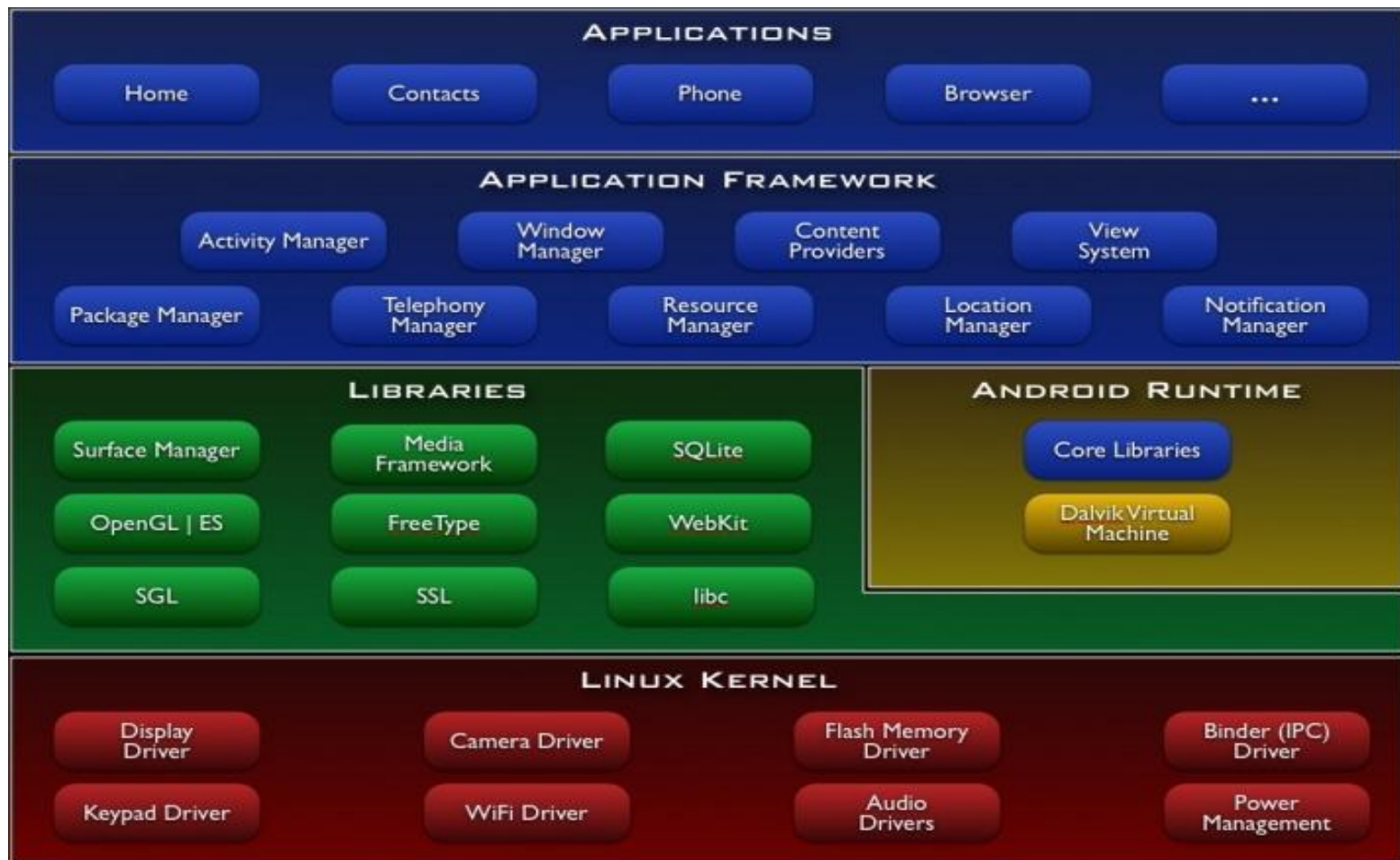


# Android Architecture

# Android Operating System



# Android OS Components

- Linux Kernal
- Native Libraries
- Android Runtime
- Application Framework
- Applications

# Linux Kernal

- Exists at the root of the android architecture
- Responsible:
  - 1) Device drivers
  - 2) Power management
  - 3) Memory management
  - 4) Device Access

# Native Libraries

- Placed on top of the Linux kernel
- Examples:
  - 1) WebKit – browser support
  - 2) Sqlite – database connectivity
  - 3) Media – playing and recording audio

# Android Runtime

- Set of core libraries and DVM which enable Android developers to develop applications using standard Java programming language.
- Responsible is to run android applications.
- Consumes less memory and fast performance.

# Application Framework

- Includes Android API such as UI, telephony, resources, locations
- Provides lot of classes and interfaces for developing android applications.

# Android Core Building Blocks

- Activity
- Views
- Intents
- Content Providers
- Services
- Fragments
- AndroidManifest.xml



# Intent

Intent is used to invoke components.

Usage:

- Start the service
- Launch an activity
- Display a web page
- Display a list of contacts
- Broadcast a message
- Dial a phone call etc.

# Service

- background process that can run for a long time.
- Types of Service:
  - 1) Local Service
  - 2) Remote Service

- Content Providers:
  - Share data between the applications
- Fragment:
  - Part of activity
  - An activity can display one or more fragments on the screen at the same time.
- AndroidManifest.xml:
  - Contains info about activities, content providers, permissions etc..

# Activity Lifecycle Methods

Method	Description
<b>onCreate</b>	called when activity is first created.
<b>onStart</b>	called when activity is becoming visible to the user.
<b>onResume</b>	called when activity will start interacting with the user.
<b>onPause</b>	called when activity is not visible to the user.
<b>onStop</b>	called when activity is no longer visible to the user.
<b>onRestart</b>	called after your activity is stopped, prior to start.
<b>onDestroy</b>	called before the activity is destroyed.

# Activity Lifecycle

