Android: Features

General Features

- **Messaging**
  - SMS and MMS are available forms of messaging, including threaded text messaging
  - Android Google Cloud Messaging (GCM) is also a part of Android Push Messaging service.
- **Web browser**
  - The web browser available in Android is based on the open-source Blink (previously WebKit) layout engine.
- **Voice based features**
  - Google search through voice has been available since initial release.
  - Voice actions for calling, texting, navigation, etc. are supported on Android 2.2 onwards.

General Features

- **Multi-touch**
  - Android has native support for multi-touch which was initially made available in handsets such as the HTC Hero.
  - The feature was originally disabled at the kernel level (possibly to avoid infringing Apple's patents on touch-screen technology at the time
- **Multitasking**
  - Multitasking of applications, with unique handling of memory allocation, is available.
- **Screen capture**
- **Video calling**
- **Multiple language support**
- **Accessibility**
  - Built in text to speech is provided by *Talk back* for people with low or no vision. Enhancements for people with hearing difficulties are available as are other aids.

Connectivity Features

- **Connectivity**
  - Android supports connectivity technologies including GSM/EDGE, Wi-Fi, Bluetooth, LTE, CDMA, EV-DO, UMTS, NFC, IDEN and WiMAX.
- **Bluetooth**
  - Supports voice dialing and sending contacts between phones, sending files (OPP), accessing the phone book (PBAP), A2DP and AVRCP.
  - Keyboard, mouse and joystick (HID) support is available in Android 3.1+, and in earlier versions through manufacturer customizations and third-party applications.
- **Tethering**
  - Android supports tethering, which allows a phone to be used as a wireless/wired Wi-Fi hotspot.

Media Features

- **Streaming media support**
  - RTP/RTSP streaming (3GPP PSS, ISMA),
  - HTML progressive download (HTML5 <video> tag).
  - Adobe Flash Streaming (RTMP) and HTTP Dynamic Streaming are supported by the Flash plugin.
  - Apple HTTP Live Streaming is supported by RealPlayer for Android
- **Media support**
  - Android supports the following audio/video /still media formats: WebM, H.263, H.264, AAC, HE-AAC (in 3GP or MP4 container), MPEG-4 SP, AMR, AMR-WB (in 3GP container), MP3, MIDI, Ogg Vorbis, FLAC, WAV, JPEG, PNG, GIF, BMP, WebP.
- **External storage**
  - Most Android devices include microSD slot and can read microSD cards formatted with FAT32, Ext3 or Ext4 file system.
  - Storage formatted with FAT32 is handled by Linux Kernel VFAT driver, while 3rd party solutions are required to handle other popular file systems such as NTFS, HFS Plus and exFAT.

Hardware Support Feature

Android devices can include

- still/video cameras,
- touchscreens,
- GPS,
- accelerometers,
- gyroscopes,
- barometers,
- magnetometers,
- dedicated gaming controls,
- proximity and pressure sensors,
- thermometers,
- accelerated 2D bit blits (with hardware orientation, scaling, pixel format conversion) and
- accelerated 3D graphics.

Miscellaneous Features

- **Java support**
  - While most Android applications are written in Java, there is no Java Virtual Machine in the platform and Java byte code is not executed.
  - Java classes are compiled into Dalvik executables and run on Dalvik, a specialized virtual machine designed specifically for Android and optimized for battery-powered mobile devices with limited memory and CPU.
  - J2ME support can be provided via third-party applications.
- **Handset layouts**
  - The platform works for various screen sizes from smartphone sizes and to tablet size, and can potentially connect to an external screen, e.g. through HDMI, or wirelessly with Miracast.
  - Portrait and landscape orientations are supported and usually switching between by turning. A 2D graphics library, 3D graphics library based on OpenGL ES 2.0 specifications is used.
- **Storage**
  - SQLite, a lightweight relational database, is used for data storage purposes.

Android Lollipop: Features

- **Tap and Go**
  - Transfer your settings and apps from an old phone to a new one.
  - When you're setting up a Lollipop device for the first time you will see a new option to "Tap & Go" all your Google account info, settings, data, widgets, wallpapers, and apps via a NFC/Bluetooth connection to another device..

- **Ok Google**
  - Even if phone is in standby mode. Your phone will wake and then you can use voice to search, send texts, and more.
  - It requires compatible hardware.

- **Double tap to wake**
  - Speaking of waking up your Android device, you can just double tap the screen of the Nexus 9 tablet to wake it up.
  - Like the advanced "Ok Google" command, it requires compatible hardware.

- **Priority Mode**
  - Gives user ways to control when you can get notified, which apps take priority, and when sensitive content should be hidden.
  - You can turn on "Priority Mode" so only alarms and calls from important people get through.
  - Select certain apps as "Sensitive" so prying eyes can't see the contents of the notification on your lock screen.
  - User can silence all the noise of constant notifications for a determined period of time.
- **Lock screen notifications**
  - User can see all of your notifications on the lock screen even if he/she has a password or pattern lock, but can hide the contents of certain notifications.

- **Smart Lock**
  - You can choose Bluetooth and NFC devices as "trusted," or even certain locations so your phone knows you are nearby or in a safe place.
  - Trusted face
    - After you set it up in **Settings > Security > Smart Lock** your phone will check for your face in the background when you're on the lock screen. If it recognizes you the password or pattern lock will be disabled.
- **Do Not Disturb**
  - When you press the volume buttons you'll see options for NONE, PRIORITY, and ALL. The NONE option is what we're calling "Do Not Disturb." When you're in this mode you will not be disturbed by anything. Even alarms can't get through this mode. Like Priority mode you can set it indefinitely or for a few hours.

- **Device sharing**
  - Screen pinning
    - you can lock your phone to one app so guests can't go snooping around.
  - Guest Mode
    - In Guest Mode they will be able to make phone calls and sign into apps as if it was their own device.
    - None of your apps or information is accessible, and if they try to switch back into your user account it will ask for a password.
- **Battery Saver**
  - When battery saver is enabled it reduces your device's performance, turns of vibrations, and blocks most background data.
  - Battery saver can be turned on manually or set to automatically kick in when your battery is at 15% or 5%.
  - You'll know it's working when the status and nav bars turn orange-red. Go to Settings > Battery > tap the menu button.

Advantage Android...

- **Multitasking**
  - Android phones can run many applications, it means you can browse, Facebook while listened to the song.

- **Ease of Notification**
  - Any SMS, Email, or even the latest articles from an RSS Reader, there will always be a notification on the Home Screen Android phone, do not miss the LED indicator is blinking, so you will not miss a single SMS, Email or even Misscall .

- **Easy access to thousands of applications via the Google Android Android App Market**
  - When you love to install applications or games, through Google's Android App Market, Again can download applications for free. There are many thousands of applications and games that are ready for download on Android phones You.

Advantage Android

- **Phone options are diverse**
  - Talk Android phone, it will feel 'different' than the IOS, if the IOS is limited to the iPhone from Apple, then Android is available on mobile phones from various manufacturers, from Sony Ericsson, Motorola, HTC to Samsung.
  - And each handset manufacturer also presents an Android phone in the style of each, such as Motorola with its Motoblur, Sony Ericsson with its Timescape. So You can freely choose the Android phone in accordance with the 'brand' favorite.
- **Can install a modified ROM**
  - not satisfied with the standard view of Android, do not worry there are many custom ROM that can be used in your mobile phones Android .
- **Widget**
  - absolutely right, with the widgets on the home screen, You can easily access a variety of settings quickly and easily.
- **Google Maniac**
  - If you are a loyal user of Google services ranging from Gmail to Google Reader Android phone has integrated with Google services, so you can quickly check e-mail from Gmail.

Disadvantage of Android

- **Advertising** –
  - Application in the Android phones can indeed be obtained easily and for free, but the consequences in each of these applications, will always be ads on display, either the top or bottom of the application.