1. What is the difference between Internal Storage & External Storage?

Internal storage is seen as an integral part of your computing device. External storage is something you add on.

**INTERNAL STORAGE:**

The Internal Storage is actually divided into 2 sub spaces –

**1) Core Internal (System)** -

It is the memory available to you for installing your applications (Especially ones crucial to the Operating system) and data. Applications are installed in this storage and your personal data such as text messages, contact lists, your E-mail settings and the likes are stored on this.

This space is considered generally to have sensitive information and, is not accessible to you, unless root

You might have noticed that the box says it’s got 32 GB of ROM, and all you see is 25GB of available space, this is the other remaining space you never see and that you can never use.

**2) Phone Storage**

This is the space where your games and applications are installed and it is the default memory for storing your pictures, movies, songs and so on. You can access it when you connect your device to the computer.

**\*Note:**  The Internal Memory is faster than an external storage, you can verify this when you see the write-speed differences when copying a large file to either memory.

**EXTERNAL STORAGE:**

As the name suggests, this is the external 'Expandable' storage capacity of your phone. It depends on the compatibility of the memory card slot and to what extent is it supported. In simple terms, this storage can be removed physically off of the device and can be replaced and re-used. It is generally used for storing pictures, music, videos, and very large-sized games (if possible), and the likes. Although, you may or may not be able to install most applications on it, and that totally depends on the App developers, and even the manufacturer. A new kind of external 'Auxiliary' storage mechanism is the OTG support, with this you can use USB 2.0 storage devices (rated at 5v @ 500mA, and not more) by directly porting it to Micro USB charging/data port on your phone using an OTG cable.

1. For how long the data resides in the cache?

**Cache** is temporary files. One ex**ample** might be thumbnails for contacts in a social media app. These can be cleared without any major effect — the app can just download them again when it needs to — and if space is low the Android OS may remove cache files itself

1. What are the critical Permissions and Normal Permissions? What are the examples of each?

**Normal Permissions:**

*Normal* permissions cover areas where your app needs to access data or resources outside the app's sandbox, but where there's very little risk to the user's privacy or the operation of other apps. For example, permission to set the time zone is a normal permission. If an app declares that it needs a normal permission, the system automatically grants the permission to the app. As of API level 23, the following permissions are classified as [PROTECTION\_NORMAL](https://developer.android.com/reference/android/content/pm/PermissionInfo.html#PROTECTION_NORMAL):

* ACCESS\_LOCATION\_EXTRA\_COMMANDS
* [ACCESS\_NETWORK\_STATE](https://developer.android.com/reference/android/Manifest.permission.html#ACCESS_NETWORK_STATE)
* [ACCESS\_NOTIFICATION\_POLICY](https://developer.android.com/reference/android/Manifest.permission.html#ACCESS_NOTIFICATION_POLICY)
* [ACCESS\_WIFI\_STATE](https://developer.android.com/reference/android/Manifest.permission.html#ACCESS_WIFI_STATE)
* [BLUETOOTH](https://developer.android.com/reference/android/Manifest.permission.html#BLUETOOTH)
* [BLUETOOTH\_ADMIN](https://developer.android.com/reference/android/Manifest.permission.html#BLUETOOTH_ADMIN)
* [BROADCAST\_STICKY](https://developer.android.com/reference/android/Manifest.permission.html#BROADCAST_STICKY)
* [CHANGE\_NETWORK\_STATE](https://developer.android.com/reference/android/Manifest.permission.html#CHANGE_NETWORK_STATE)
* [CHANGE\_WIFI\_MULTICAST\_STATE](https://developer.android.com/reference/android/Manifest.permission.html#CHANGE_WIFI_MULTICAST_STATE)
* [CHANGE\_WIFI\_STATE](https://developer.android.com/reference/android/Manifest.permission.html#CHANGE_WIFI_STATE)
* [DISABLE\_KEYGUARD](https://developer.android.com/reference/android/Manifest.permission.html#DISABLE_KEYGUARD)
* [EXPAND\_STATUS\_BAR](https://developer.android.com/reference/android/Manifest.permission.html#EXPAND_STATUS_BAR)
* [GET\_PACKAGE\_SIZE](https://developer.android.com/reference/android/Manifest.permission.html#GET_PACKAGE_SIZE)
* [INSTALL\_SHORTCUT](https://developer.android.com/reference/android/Manifest.permission.html#INSTALL_SHORTCUT)
* [INTERNET](https://developer.android.com/reference/android/Manifest.permission.html#INTERNET)
* [KILL\_BACKGROUND\_PROCESSES](https://developer.android.com/reference/android/Manifest.permission.html#KILL_BACKGROUND_PROCESSES)
* [MODIFY\_AUDIO\_SETTINGS](https://developer.android.com/reference/android/Manifest.permission.html#MODIFY_AUDIO_SETTINGS)
* [NFC](https://developer.android.com/reference/android/Manifest.permission.html#NFC)
* [READ\_SYNC\_SETTINGS](https://developer.android.com/reference/android/Manifest.permission.html#READ_SYNC_SETTINGS)
* [READ\_SYNC\_STATS](https://developer.android.com/reference/android/Manifest.permission.html#READ_SYNC_STATS)
* [RECEIVE\_BOOT\_COMPLETED](https://developer.android.com/reference/android/Manifest.permission.html#RECEIVE_BOOT_COMPLETED)
* [REORDER\_TASKS](https://developer.android.com/reference/android/Manifest.permission.html#REORDER_TASKS)
* [REQUEST\_IGNORE\_BATTERY\_OPTIMIZATIONS](https://developer.android.com/reference/android/Manifest.permission.html#REQUEST_IGNORE_BATTERY_OPTIMIZATIONS)
* [REQUEST\_INSTALL\_PACKAGES](https://developer.android.com/reference/android/Manifest.permission.html#REQUEST_INSTALL_PACKAGES)
* [SET\_ALARM](https://developer.android.com/reference/android/Manifest.permission.html#SET_ALARM)
* [SET\_TIME\_ZONE](https://developer.android.com/reference/android/Manifest.permission.html#SET_TIME_ZONE)
* [SET\_WALLPAPER](https://developer.android.com/reference/android/Manifest.permission.html#SET_WALLPAPER)
* [SET\_WALLPAPER\_HINTS](https://developer.android.com/reference/android/Manifest.permission.html#SET_WALLPAPER_HINTS)
* [TRANSMIT\_IR](https://developer.android.com/reference/android/Manifest.permission.html#TRANSMIT_IR)
* [UNINSTALL\_SHORTCUT](https://developer.android.com/reference/android/Manifest.permission.html#UNINSTALL_SHORTCUT)
* [USE\_FINGERPRINT](https://developer.android.com/reference/android/Manifest.permission.html#USE_FINGERPRINT)
* [VIBRATE](https://developer.android.com/reference/android/Manifest.permission.html#VIBRATE)
* [WAKE\_LOCK](https://developer.android.com/reference/android/Manifest.permission.html#WAKE_LOCK)
* [WRITE\_SYNC\_SETTINGS](https://developer.android.com/reference/android/Manifest.permission.html#WRITE_SYNC_SETTINGS)

**Critical Permissions:**

Critical permissions cover areas where the app wants data or resources that involve the user's private information, or could potentially affect the user's stored data or the operation of other apps. For example, the ability to read the user's contacts is a dangerous permission. If an app declares that it needs a dangerous permission, the user has to explicitly grant the permission to the app

* READ\_CALENDAR
* WRITE\_CALENDAR
* CAMERA
* CONTACTS
* READ\_CONTACTS
* WRITE\_CONTACTS
* GET\_ACCOUNTS
* ACCESS\_FINE\_LOCATION
* ACCESS\_COARSE\_LOCATION
* RECORD\_AUDIO
* READ\_PHONE\_STATE
* CALL\_PHONE
* READ\_CALL\_LOG
* WRITE\_CALL\_LOG
* ADD\_VOICEMAIL
* USE\_SIP
* PROCESS\_OUTGOING\_CALLS
* BODY\_SENSORS
* SEND\_SMS
* RECEIVE\_SMS
* READ\_SMS
* RECEIVE\_WAP\_PUSH
* RECEIVE\_MMS
* READ\_EXTERNAL\_STORAGE
* WRITE\_EXTERNAL\_STORAGE