**1. What's the latest version of Android, What changed and**

**mention two devices that got the latest version**?

**Answer:**

The latest version of Android is Android 8.0 (Oreo).

**The Android 8.0 has two Behavior Changes**

i) Changes for all apps

ii) Changes for apps targeting Android 8.0.

**Changes for all apps**

1) Background execution limits

To improve battery life, when your app enters the cached state, with no active components, the system releases any wakelocks that the app holds.

2) Android background location limits

In order to preserve battery, user experience, and system health, background apps receive location updates less frequently when used on a device running Android 8.0.

These changes affect the following APIs:

i) Fused Location Provider (FLP)

ii) Geofencing

iii) GNSS Measurements

iv) Location Manager

v) Wi-Fi Manager

3) App shortcuts

4) Locales and internationalization

5) Alert windows etc.

**Changes for apps targeting Android 8.0.**

1) Alert windows

Apps that use the SYSTEM\_ALERT\_WINDOW permission can no longer use the following window types to display alert windows above other apps and system windows:

TYPE\_PHONE

TYPE\_PRIORITY\_PHONE

TYPE\_SYSTEM\_ALERT

TYPE\_SYSTEM\_OVERLAY

TYPE\_SYSTEM\_ERROR

Instead, apps must use a new window type called TYPE\_APPLICATION\_OVERLAY.

2) Content change notifications

changes how ContentResolver.notifyChange() and registerContentObserver(Uri, boolean, ContentObserver) behave for apps targeting Android 8.0.

3) View focus

Clickable View objects are now also focusable by default.

4) Security

i) Each WebView object must use HTTPS instead.

ii) The Allow unknown sources system setting has been removed. in its place, the Install unknown apps permission manages unknown app installs from unknown sources

**Two devices that got the latest version are: OnePlus 5,HTC U11**

**2. Your opinion about ART, what improved?**

**Answer**:

Android Runtime (ART) is an application runtime environment used by the Android operating system. Replacing Dalvik, which is the process virtual machine originally used by Android, ART performs the translation of the application's bytecode into native instructions that are later executed by the device's runtime environmen.

i) ART runs app machine code directly (native execution), it doesn’t hit the CPU as hard as just-in-time code compiling on Dalvik. Because of less CPU usage results in less battery drain.

ii) Apps run faster as DEX bytecode translation done during installation.

ii)Reduces startup time of applications as native code is directly executed.

iv)Improves battery performance as power utilized to interpreted byte codes line by line is saved.

v) Improved garbage collector.

vi) Improved developer tool.

vii) App Installation takes more time because of DEX bytecodes conversion into machine code during installation.

**3. What's your Opinion about Kotlin?**

**Answer:**

For being an officially supported language to write Android Apps Development ,I have started learning and developing android apps using kotlin .

During the learning and developing apps using kotlin ,I realized that

i) Android development using kotlin is much easier than java

ii) Less errors

iii) The code is easier to understand

iv) More work done in less time, more stability, and less time spent in fixing bugs.