

Premises

1. Separation of foreground location access (While-in-use access)from background location access (all-the-time access)
2. Users should only use foreground location access.
3. In Android 11, we can't request both permissions at the same time.
4. Rely on foreground access only.

How to identify background usage from our code?

1. Find any location APIs in your code, to determine if it is used in background
 - a. FusedLocationProvider
2. Determine if the code is executed in the background. (dependent to the app architecture)
3. Evaluate whether using background location is critical to the core functionality
 - a. Migrate to use foreground or remove.
 - b. Remove ACCESS_BACKGROUND_LOCATION from androidmanifest.xml
4. Get the location update from the foreground
 - a. <https://codelabs.developers.google.com/codelabs/while-in-use-location/#0>
 - b. Location Permission dialog differs upon the version. (10 vs 11)
 - c. Use and tie to ForegroundService with notification (Free from Background Location)
 - d. Googler's sample uses BindService and BroadcastReceiver, so we can bind to a service which handles all the location code.
 - e. When the UI stuff is invisible (When Service calls onUnbind()), then transition to the foreground service with notification.
 - f. When coming back to the visible state and binding again, then stopForegroundService and remove notification.
 - g. Review Google's Policy
 - h. <https://google.dev/pathways/beta/location-based-features-in-android?authuser=1>
 - i. For the background use case
 - <https://github.com/android/location-samples/tree/master/LocationUpdatesBackgroundKotlin>