Location Tracker

Purpose: To create a service which runs when app is in foreground, background or closed to collect GPS location in every 5 sec by user.

Requirement:
- Android Studio
- Min SDK 21, Targeted SDK 26

Project Structure

MainActivity.class
- Checks permissions (Internet and Fine Location)
- Location Service Call
- MapActivity Call

LocationService.class
- implements
    - GoogleAPIClient
        ConnectionCalback
        onConnectionFailed
    - LocationListener
- START STICKY for restarts the service.
- FusedLocationAPI for getting location updates from WI-FI, GPS, Cellular Network
- Save latitude and longitude to the database.

MapActivity.class
- Initialises Basic Map
- implements ClusterManager.OnClusterItemClickListener
    - combine multiple markers to a single entity with a count
    - marker click listener
- GeoCoder
    - fetches address when clicked on a marker (reverse geo coding)
- retrieve all locations from database every 20 sec and updates map.

DBHelper.class
- implements SQLiteOpenHelper
- creates database and tables
- getAllLocations , addLocation methods

LocationEntity.class
- Object Mapping of database record for location
- getter, setter methods

LocationItem.class
- implements Cluster Item
- mPosition (LatLng object)