Requirements

This app will get the current location and display the address, allow the user to enter a location by address and then display the distance to that location.

Implementation

Note: These are the main points of the implementation. Not all of the required code is shown.

1. Use the Fused Location Provider to get the current latitude and longitude:   
   in *onConnected*:

LocationServices.***FusedLocationApi***.requestLocationUpdates(  
 **googleApiClient**, **locationRequest**, **this**);  
  
in *onLocationChanged*:

**public void** onLocationChanged(Location location) {  
 *// The location is passed to us in the location object*

1. Use a Geocoder object to get the address and display it. In *onLocationChanged*:

Geocoder geo = **new** Geocoder(getApplicationContext(),  
 Locale.getDefault());

List<Address> addresses = geo.getFromLocation(  
 location.getLatitude(),  
 location.getLongitude(), 1);

1. Use a Geocoder object to convert the address entered by the user into latitude and longitude. In onClick for the appropriate button:

Geocoder selected\_place\_geocoder = **new** Geocoder(context); List<Address> address;   
address = selected\_place\_geocoder.getFromLocationName(place, 5); **if**(address != **null**) {   
 Address location = address.get(0);   
 Latitude lat= location.getLatitude();   
 Longitude lng = location.getLongitude();   
}

1. Use Location objects to calculate the distance between the two locations. Example:

Location l1=**new** Location("One");   
l1.setLatitude(location.getLatitude()); l1.setLongitude(location.getLongitude());   
Location l2=**new** Location("Two"); l2.setLatitude(Double.parseDouble(frnd\_lat)); l2.setLongitude(Double.parseDouble(frnd\_longi));   
**float** distance\_bw\_one\_and\_two=l1.distanceTo(l2);

References:

* <http://www.coders-hub.com/2013/10/android-location-address-and-distance.html#.V4fO25MrJE4>
* <https://developer.android.com/reference/android/location/Location.html>
* <https://developer.android.com/reference/android/location/Geocoder.html?hl=lt>