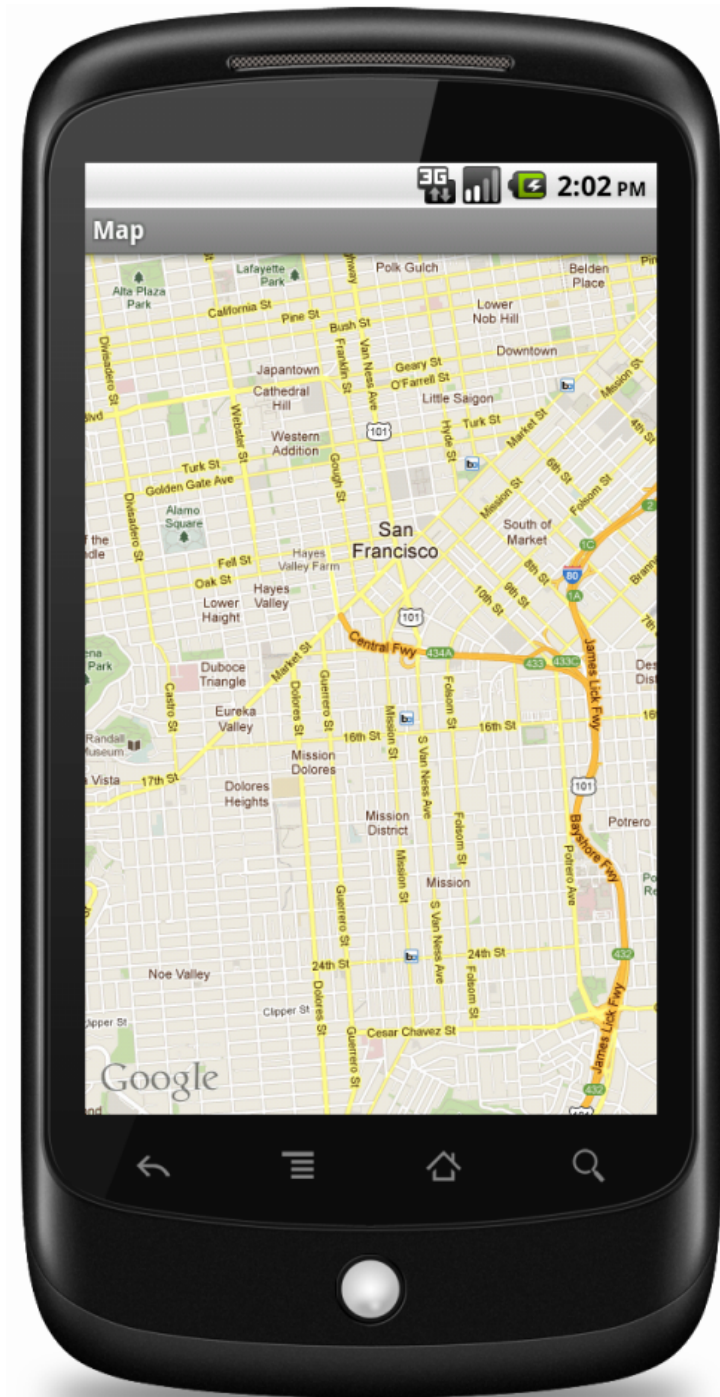
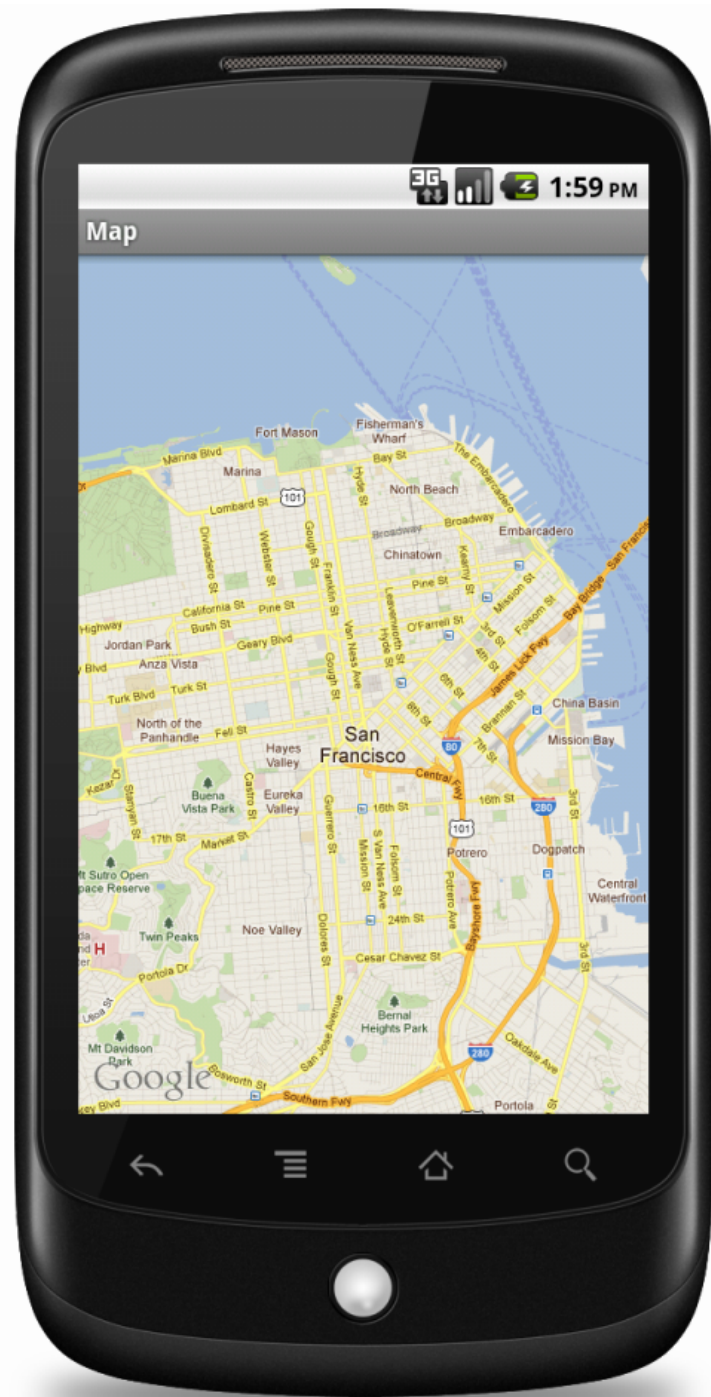


Android - Map

- This application is uses Google API to display map of San Francisco
- Google API offers its own `MapActivity` and the application has to be derived from it
- Every application that uses Google Maps API has to
 - Register with Google
 - Obtain a Map API Key
 - Include the key in `android:apiKey` attribute of the layout resource
- `MapView`
 - acts as a wrapper around the Google Maps API to manipulate and work with Google Maps data
- `setBuiltInZoomControls()`
 - Used to retrieve the built in `ZoomControls` object from `MapView`

- `GeoPoint`
 - Represents a pair of latitude and longitude
- `MapController`
 - Used to set view location and zooming
- In `AndroidManifest.xml`
 - Permissions have to be declared :
 - `INTERNET`
 - To access internet and retrieve Gogle Maps tiles
 - `ACCESS_FINE_LOCATION`
 - Reference the Map API via `<uses-library>`
`<uses-library android:name="com.google.android.maps"/>`
 - Because we are using Google Maps library



References:

- [Maps API key](#)
- [GeoPoint](#)
- [Location and Maps](#)
- [MapView](#)
- [MapController](#)

Exercise

- Change the hardcoded longitude/latitude coordinates so that the map shows downtown Manhattan in New York City.
- Also show a pin at those coordinates
 - (hint: <http://developer.android.com/resources/tutorials/views/hello-mapview.html>)