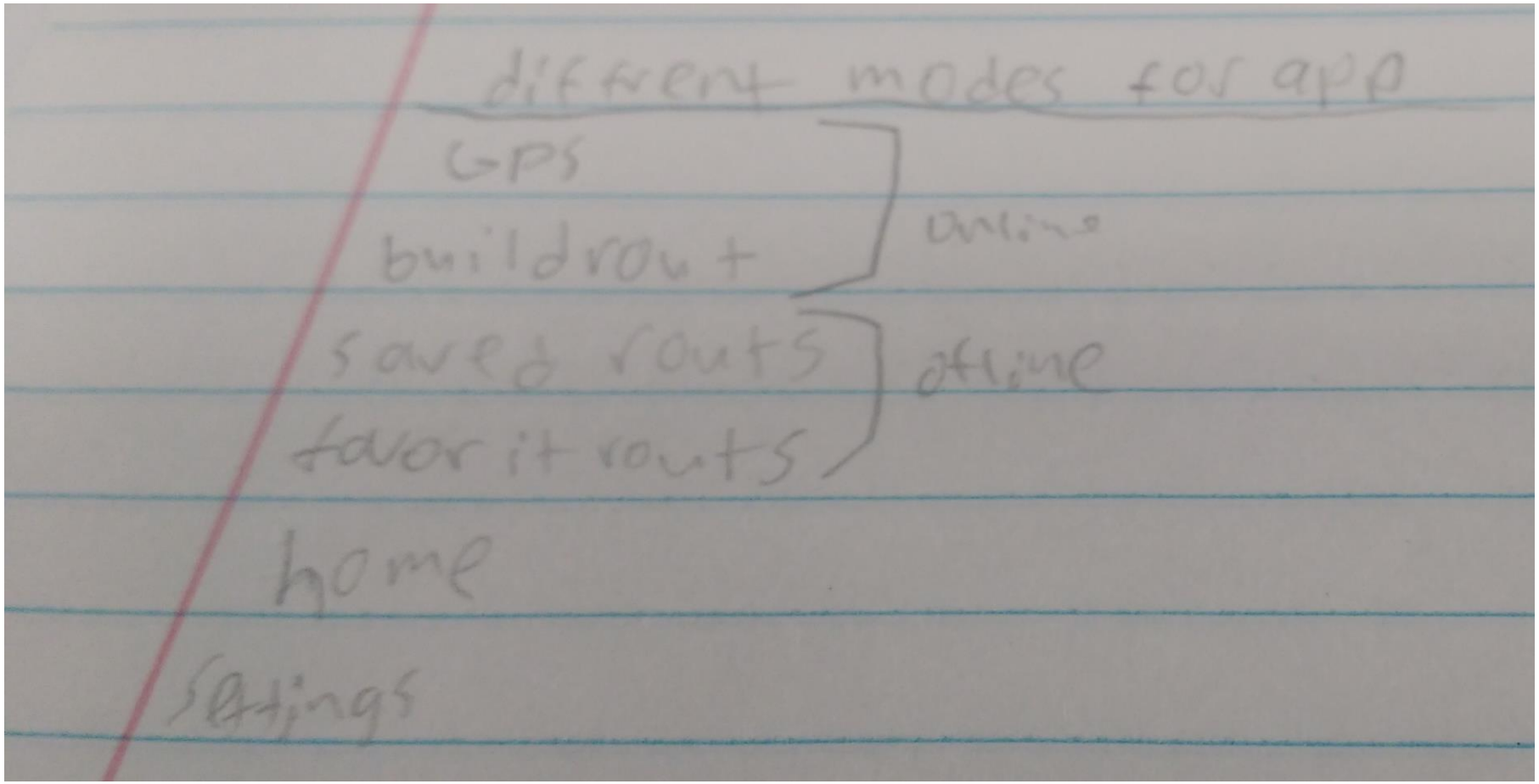
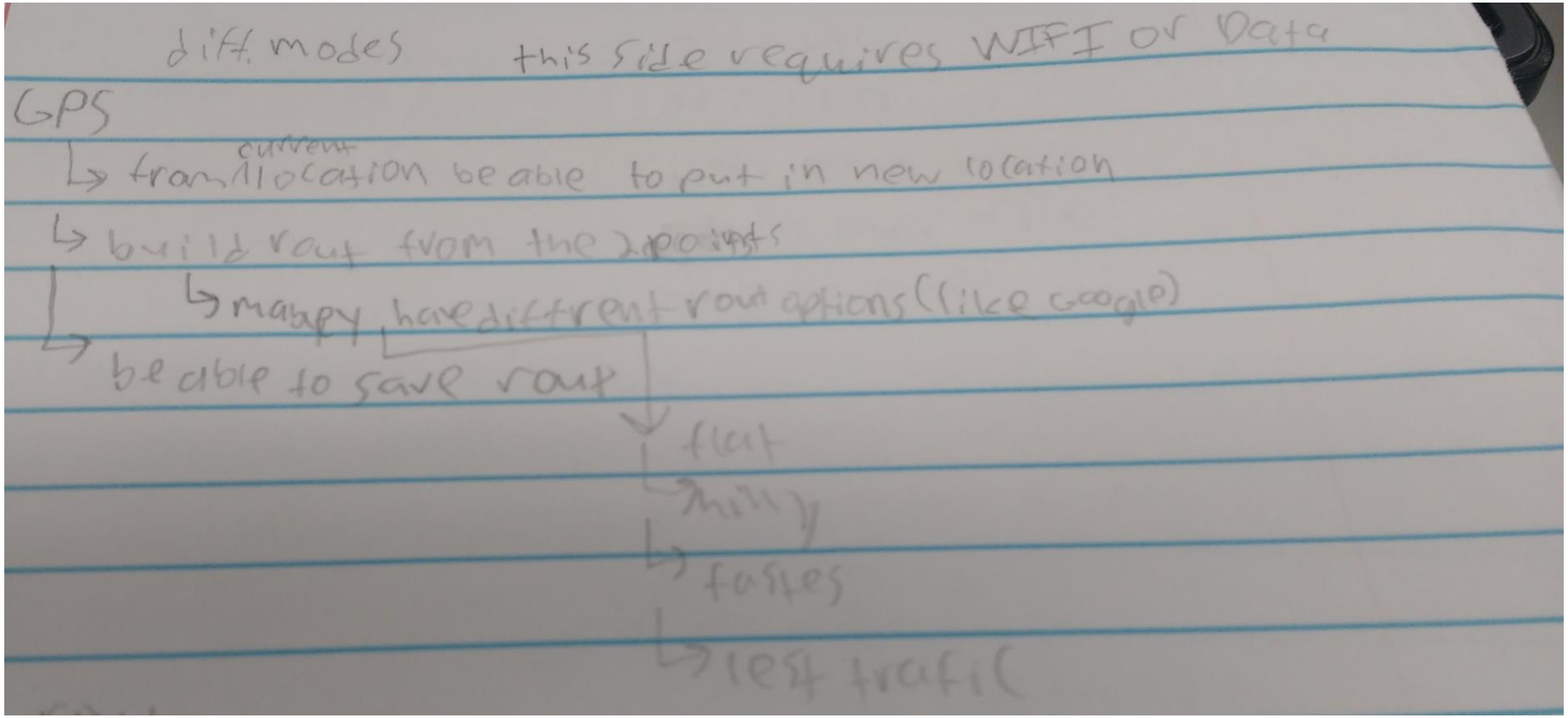
Cycling GPS App

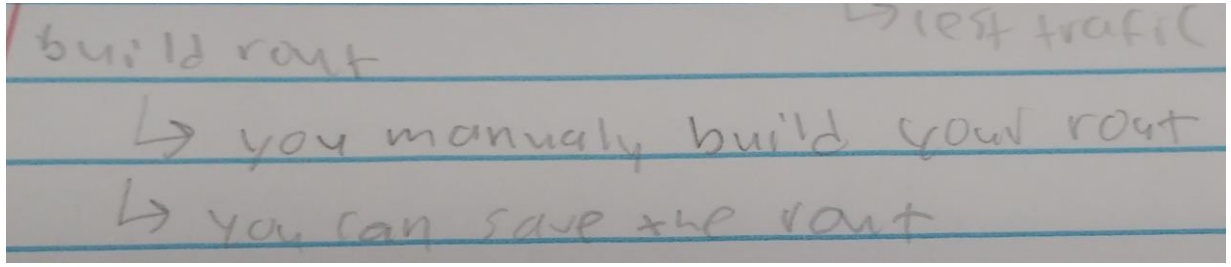
1) What are needs in community? What needs to change? What can be improved?
better health and more fitness
more people outside
more cycling trails
also more driver awareness of cyclist
2) I've learned a lot in Java what have I accomplished?

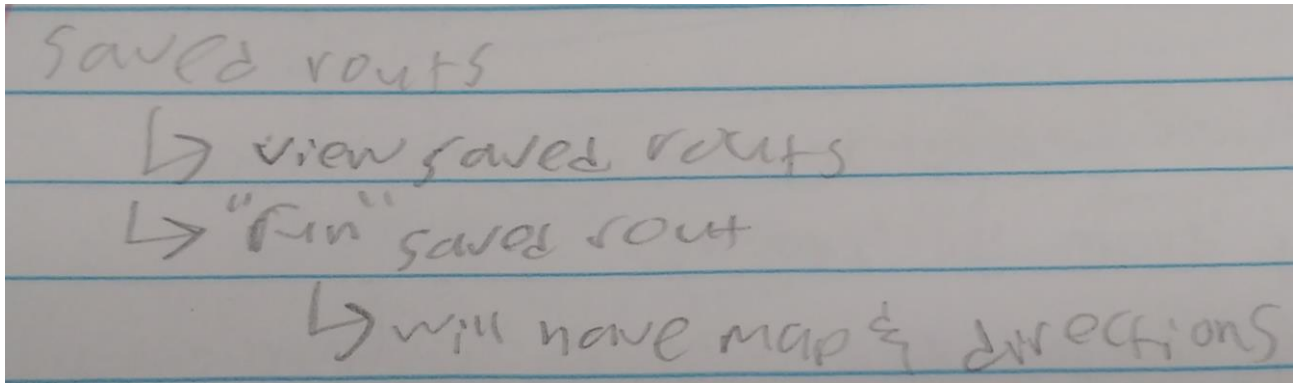
more bike lanes
make roles nicer.
make more conected trails
need to widen roles
more bike racks
make easer ways to access places

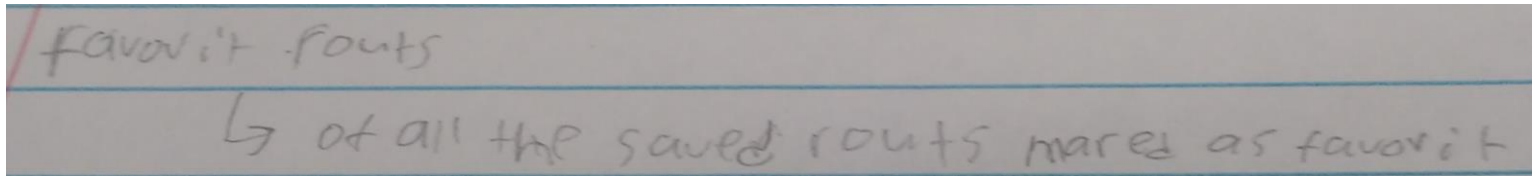
adress needs of community?
have program that takes you on routs w/ trails and bike lan
↳ make rout wanted on computer could be used on phone?

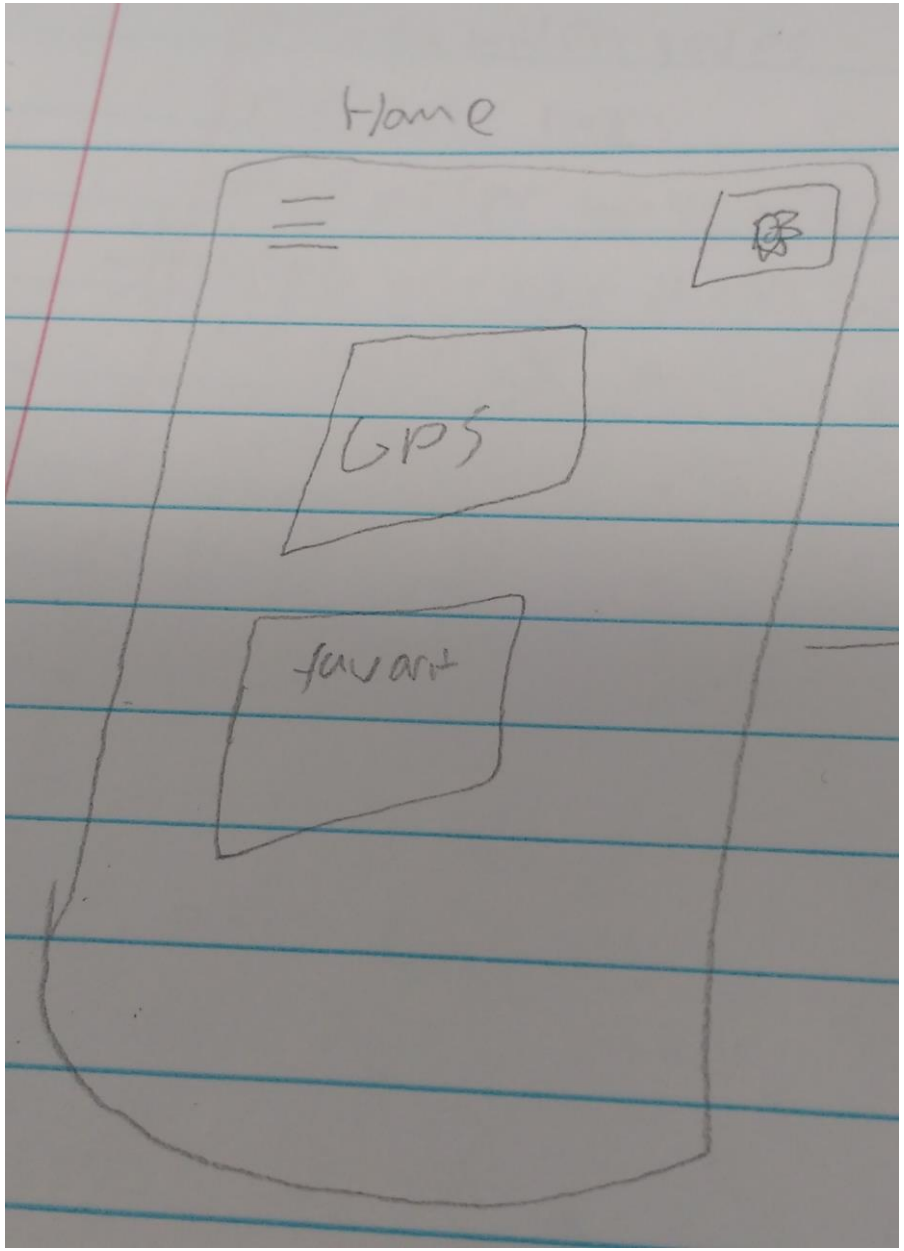

different modes for app
GPS
buildrout
online
saved routs
favorit routs
offline
home
settings

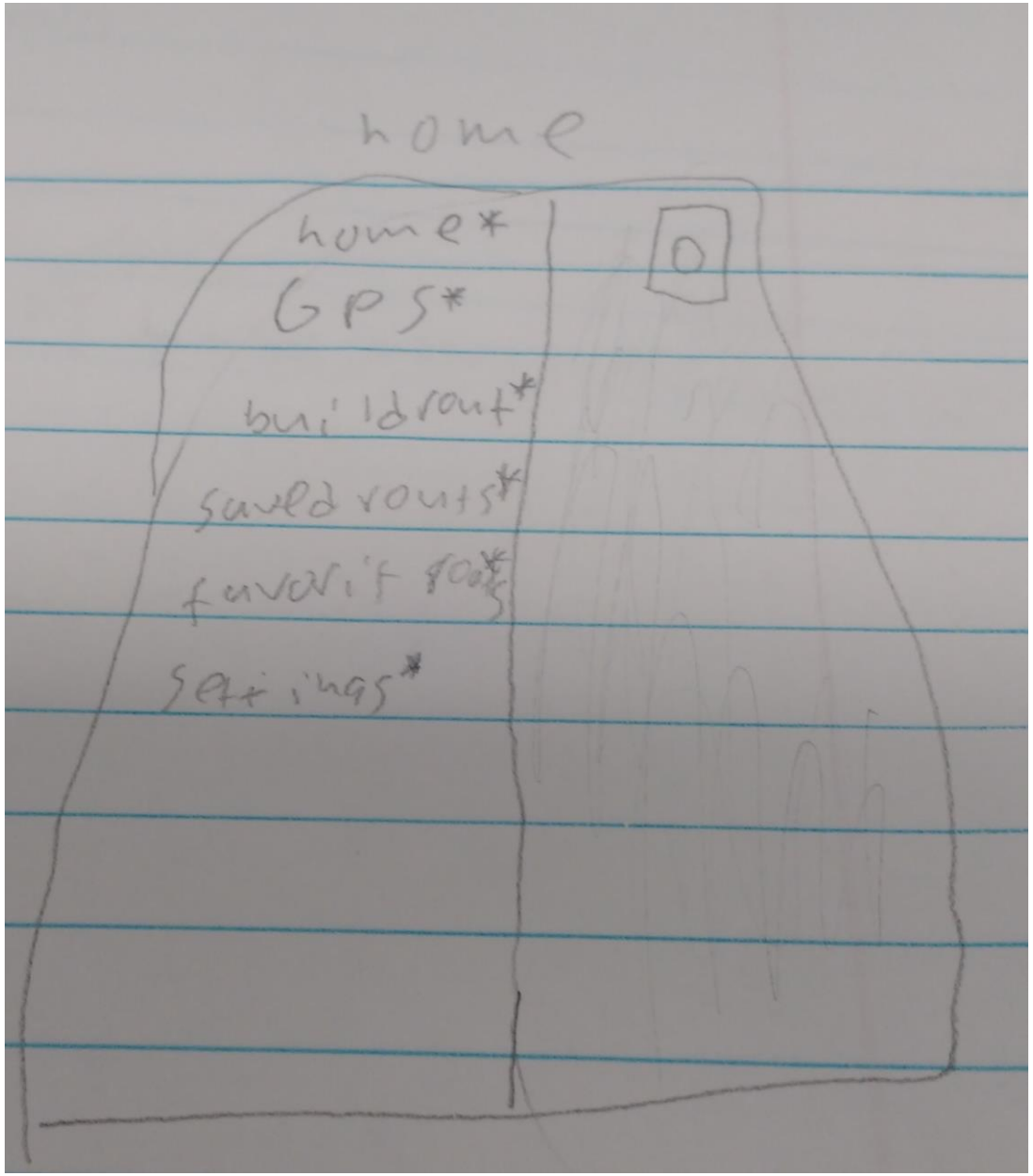

diff. modes
this side requires WIFI or Data
GPS
current
from location be able to put in new location
build rout from the 2 points
maybe have diff rout options (like Google)
be able to save rout
flat
hilly
fastes
less trafic

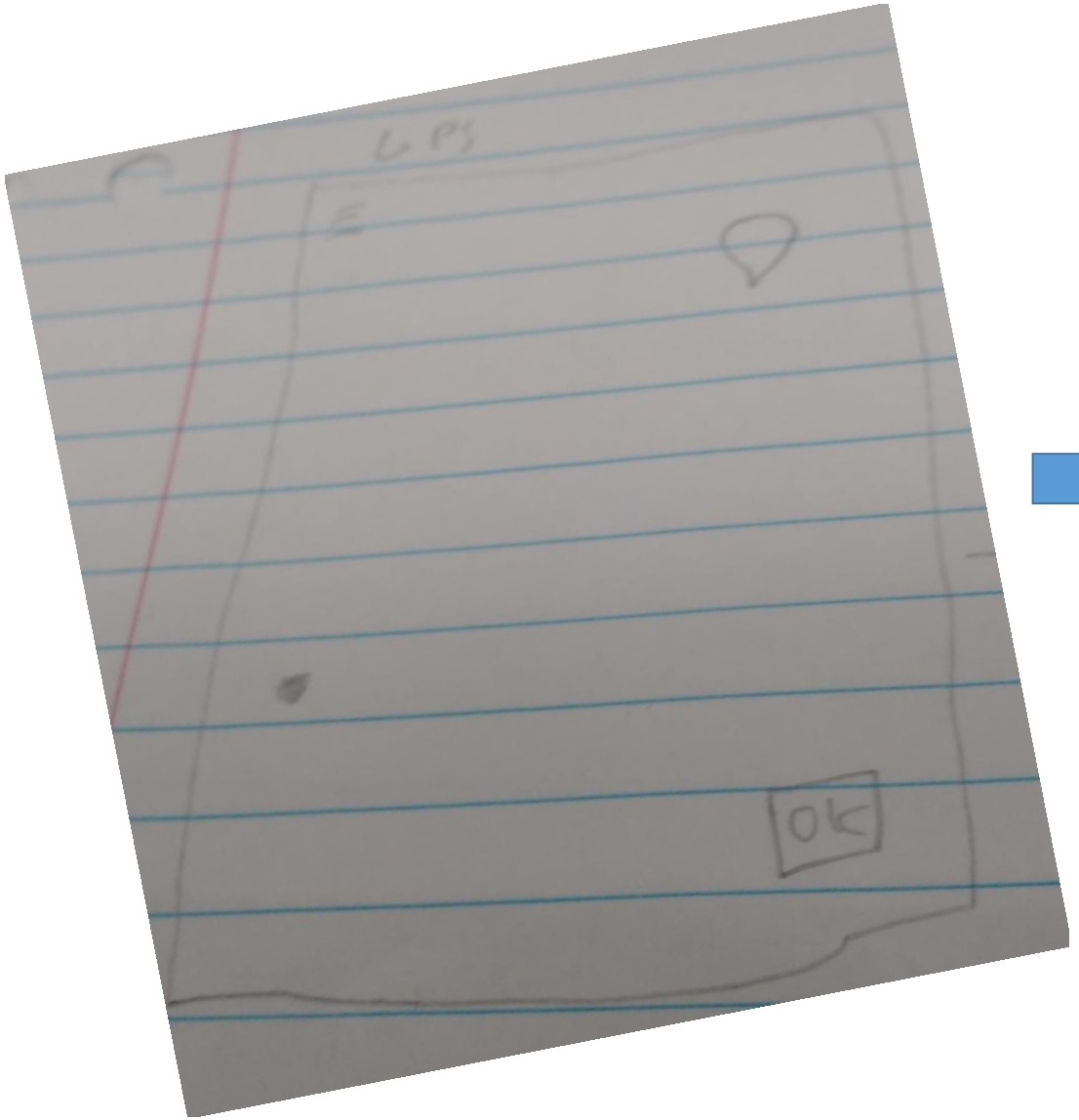

less trafic
build rout
you manualy build your rout
you can save the rout

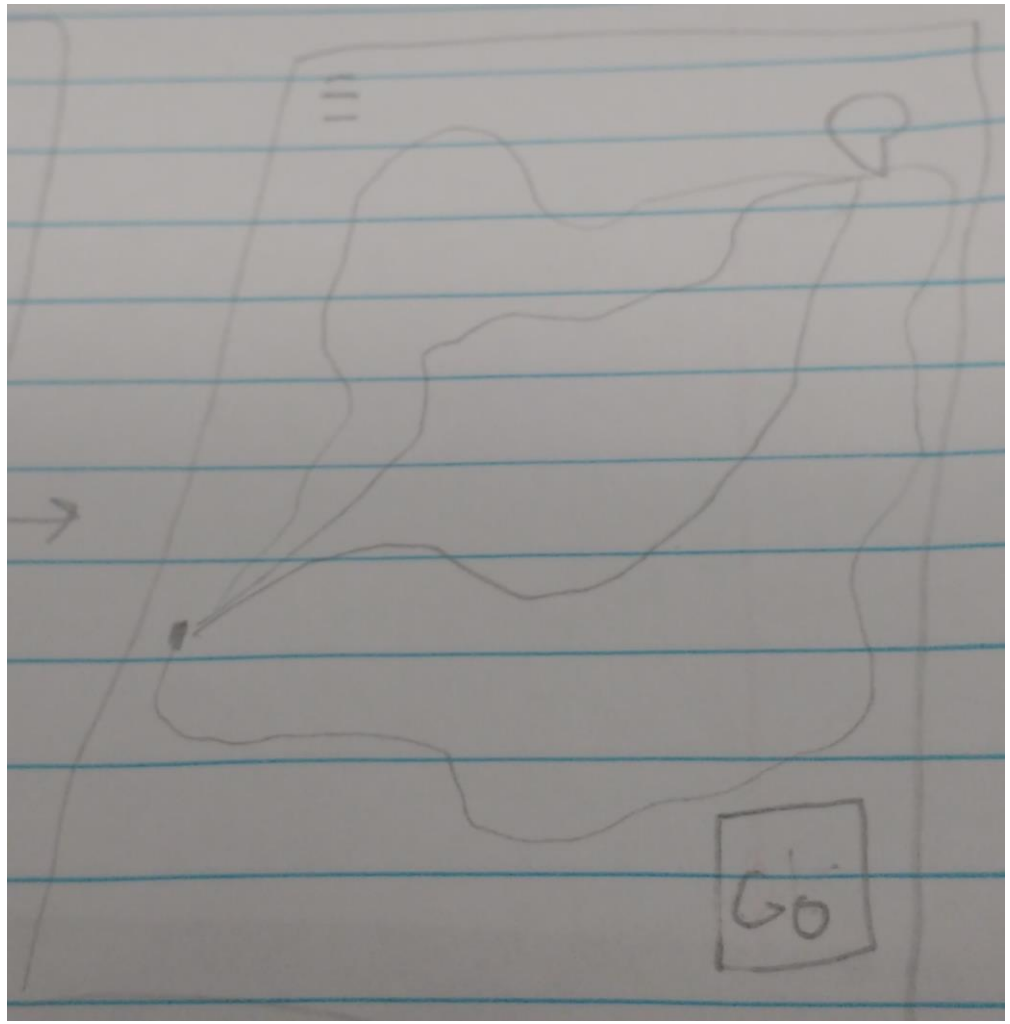

saved routs
↳ view saved routs
↳ "run" saved rout
↳ will have map & directions


favorit routs
↳ of all the saved routs mared as favorit


Home
GPS
favart


home
home*
GPS*
buildrout*
savedrouts*
favorit roo*
settings*


OK


GO

Maps1
Palo Alto
Sunnyvale

Setting Up Maps

Set up Billing

Create a Project

Enable Maps API

Set up Credentials

Excellence for All | Kenned | Files - OneDrive | AP Comp Sci final prestati | Add Google Maps to your | Credentials - first map

https://console.developers.google.com/apis/credentials?project=first-map-167715

Google APIs first map

API Manager

- Dashboard
- Library
- Credentials

Credentials

Credentials | OAuth consent screen | Domain verification

Create credentials | Delete

Create credentials to access your enabled APIs. Refer to the API documentation for details.

API keys

Name	Creation date	Restriction	Key
API key 1	May 15, 2017	Android app	AIzaSyBJUuzxwQtYJSXkcA_B3-0N2s7J11327Fs

Search the web and Windows

10:19 AM
5/23/2017

New App Checklist

1. Create Blank Activity App ✓
2. Edit Build.gradle ✓
3. Edit Android.manifest
    - meta for Google Services ✓
    - meta for API Key ✓
    - permissions for:
        internet, network state and write external storage
    - meta for OpenGL ✓

AndroidManifest.xml × | activity_main.xml × | app ×

```
apply plugin: 'com.android.application'

android {
    compileSdkVersion 25
    buildToolsVersion "25.0.3"
    defaultConfig {
        applicationId "com.example.a19cpeterson.firstmap"
        minSdkVersion 22
        targetSdkVersion 25
        versionCode 1
        versionName "1.0"
        testInstrumentationRunner "android.support.test.runner.AndroidJUnitRunner"
    }
    buildTypes {
        release {
            minifyEnabled false
            proguardFiles getDefaultProguardFile('proguard-android.txt'), 'proguard-rules.pro'
        }
    }
}

dependencies {
    compile fileTree(dir: 'libs', include: ['*.jar'])
    androidTestCompile('com.android.support.test.espresso:espresso-core:2.2.2', {
        exclude group: 'com.android.support', module: 'support-annotations'
    })
    compile 'com.android.support:appcompat-v7:25.3.1'
    compile 'com.google.android.gms:play-services:10.2.4'
    testCompile 'junit:junit:4.12'
}
```

Gradle

AndroidManifest.xml

```
ml version="1.0" encoding="utf-8"?>
nifest xmlns:android="http://schemas.android.com/apk/res/android"
 package="com.example.a19cpeterson.firstmap">
 <uses-feature
     android:glEsVersion="0x00020000"
     android:required="true">
 </uses-feature>
 <application
     android:allowBackup="true"
     android:icon="@mipmap/ic_launcher"
     android:label="First map"
     android:supportsRtl="true"
     android:theme="@style/AppTheme" >
     <meta-data
         android:name = "com.google.gms.version"
         android:value = "10240000" />
     <meta-data android:name="android:name=com.google.android.maps.v2.API_KEY" android:value="AIzaSyBJUuzxwQtYJSXkcA_B3-0N2s7J11327Fs"/>
     <activity
         android:name=".MainActivity"
         android:label="First map">
            android:label="@string/app_name">
             <action android:name="android.intent.action.MAIN" />
             <category android:name="android.intent.category.LAUNCHER" />
         </intent-filter>
     </activity>
 </application>
 <uses-permission android:name="android.permission.INTERNET"></uses-permission>
 <uses-permission android:name="android.permission.ACCESS_NETWORK_STATE">
 </uses-permission>
 <uses-permission android:name="android.permission.WRITE_EXTERNAL_STORAGE"></uses-permission>
anifest>
```

Adding a Map Fragment

Edit activity_main.xml

```
<fragment xmlns:android="http://schemas.android.com/apk/res/android"
    android:id="@+id/map"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:name="com.google.android.gms.maps.MapFragment"/>
```

AndroidManifest.xml × activity_main.xml ×

```xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/activity_map"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    tools:context="com.example.a19cpeterson.firstmap.MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!" />

    <fragment xmlns:android="http://schemas.android.com/apk/res/android"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:name="com.google.android.gms.maps.MapFragment"/>

</RelativeLayout>
```

Gradle

Android M

Talking about MapFragment

Questions?