

DESARROLLO DE APP MOVILES I
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Maps

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1.- Pubspec.yaml (Dependencias: Pub Get)

```
dependencies:
  flutter:
    sdk: flutter

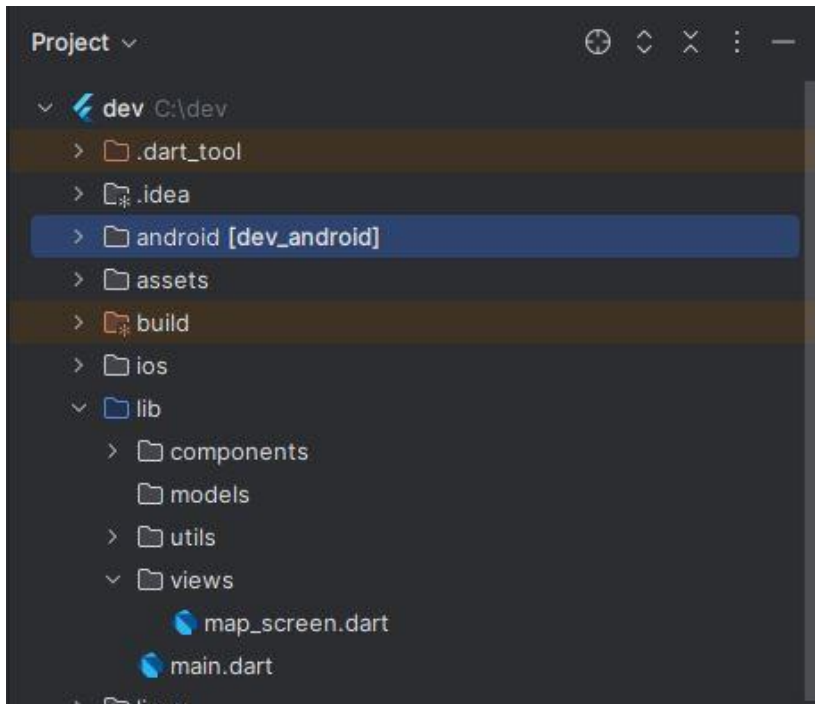
  # The following adds the Cupertino Icons font to your application.
  # Use with the CupertinoIcons class for iOS style icons.
  cupertino_icons: ^1.0.8
  lottie: ^3.3.1
  page_transition: ^2.2.1
  latlong2: ^0.9.1
  http: ^1.2.1
  url_launcher: ^6.2.5
  flutter_map: ^8.1.1
  geolocator: ^13.0.2
  permission_handler: ^11.4.0
```

2.- AndroidManifest.xml (Permisos)

```
<manifest xmlns:android="http://schemas.android.com/apk/res/android">
  <!-- The INTERNET permission is required for development. Specifically,
       the Flutter tool needs it to communicate with the running application
       to allow setting breakpoints, to provide hot reload, etc.
  -->
  <uses-permission android:name="android.permission.INTERNET"/>
  <uses-permission android:name="android.permission.ACCESS_FINE_LOCATION"/>
  <uses-permission android:name="android.permission.ACCESS_COARSE_LOCATION"/>

</manifest>
```

3. Estructura del Proyecto



4. Main.dart

```
main.dart x
1  import 'package:dev/views/map_screen.dart';
2  import 'package:flutter/material.dart';
3
4  void main() {
5      runApp(MyApp());
6  }
7
8  class MyApp extends StatelessWidget {
9      @override
10     Widget build(BuildContext context) {
11         return MaterialApp(
12             debugShowCheckedModeBanner: false,
13             home: MapScreen(),
14         ); // MaterialApp
15     }
16 }
17
```

4. MapScree.dart (Librerias)

```
import 'package:flutter/material.dart';
import 'package:flutter_map/flutter_map.dart';
import 'package:latlong2/latlong.dart';
import 'package:geolocator/geolocator.dart';
import 'package:permission_handler/permission_handler.dart';
```

5. MapScreen.dart

```
class MapScreen extends StatefulWidget {
  @override
  _MapScreenState createState() => _MapScreenState();
}

class _MapScreenState extends State<MapScreen> {
  LatLng? _currentLocation;
  final MapController _mapController = MapController();

  @override
  void initState() {
    super.initState();
    _getLocation();
  }
}
```

6. MapScreen.dart (Geolocation)

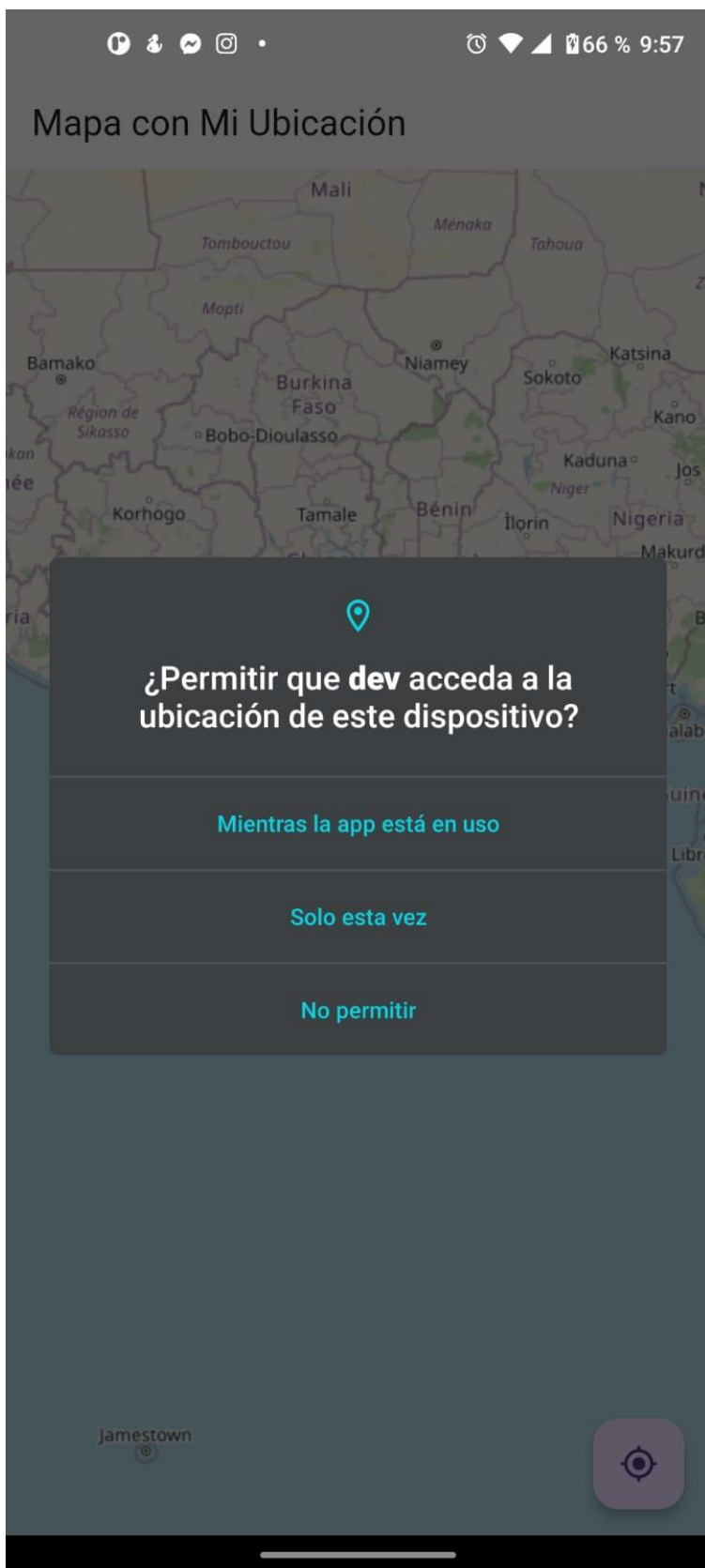
```
Future<void> _getLocation() async {
  // Solicitar permisos
  var status = await Permission.location.request();
  if (status.isGranted) {
    try {
      Position position = await Geolocator.getCurrentPosition(
        desiredAccuracy: LocationAccuracy.high,
      );

      setState(() {
        _currentLocation = LatLng(position.latitude, position.longitude);
        _mapController.move(_currentLocation!, 15.0); // Centrar el mapa
      });
    } catch (e) {
      print("Error obteniendo ubicación: $e");
    }
  } else {
    print("Permiso de ubicación denegado");
  }
}
```

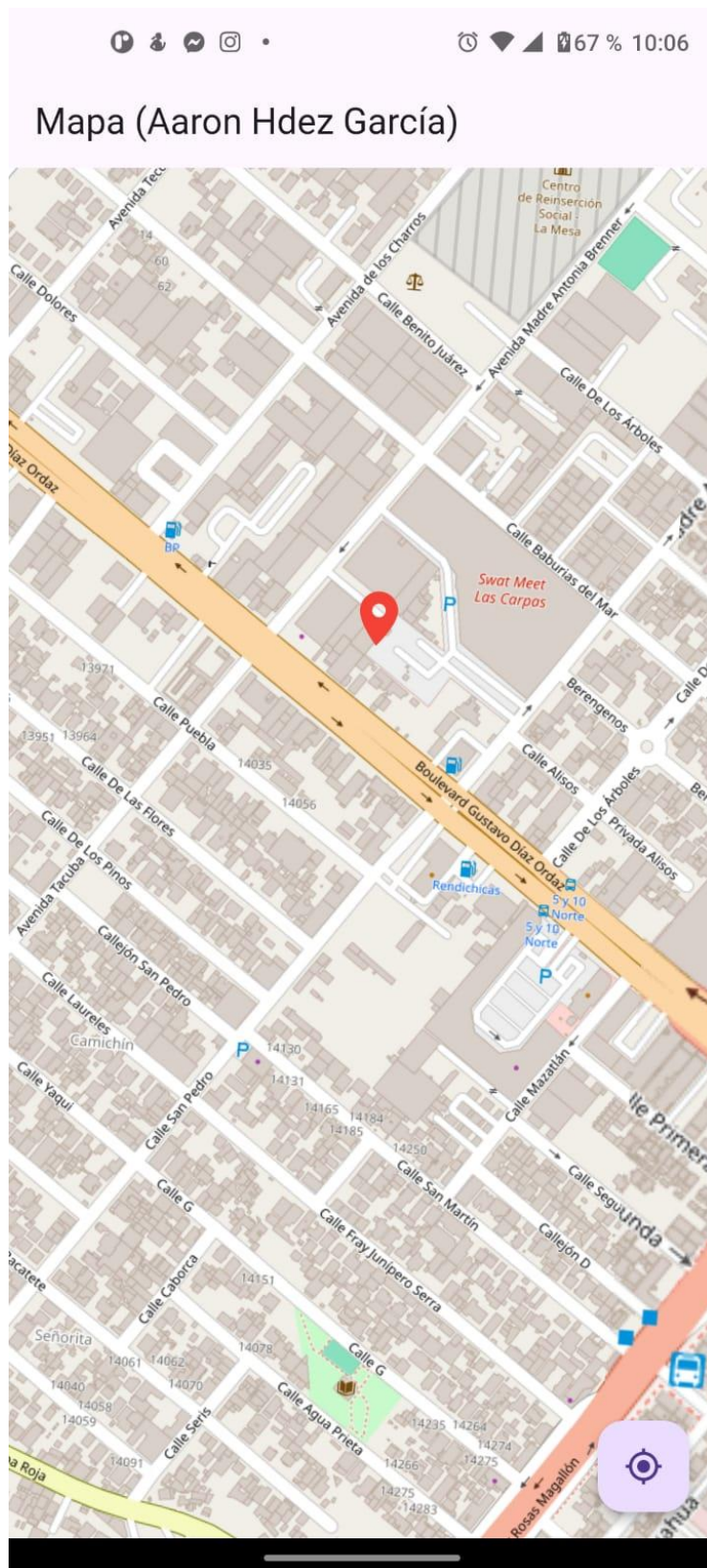
7. MapScreen.dart (Builder)

```
@override
Widget build(BuildContext context) {
  return Scaffold(
    appBar: AppBar(title: Text("Mapa (Aaron Hdez Garcia)"),
    body: FlutterMap(
      mapController: _mapController,
      options: MapOptions(
        initialCenter: _currentLocation ?? LatLng(0, 0),
        initialZoom: 5.0,
      ), // MapOptions
      children: [
        TileLayer(
          urlTemplate: 'https://tile.openstreetmap.org/{z}/{x}/{y}.png',
          userAgentPackageName: 'com.example.app',
        ), // TileLayer
        if (_currentLocation != null)
          MarkerLayer(
            markers: [
              Marker(
                point: _currentLocation!,
                width: 50,
                height: 50,
                child: Icon(Icons.location_on, color: Colors.red, size: 40),
              ), // Marker
            ],
          ), // MarkerLayer
      ],
    ), // FlutterMap
    floatingActionButton: FloatingActionButton(
      onPressed: _getLocation,
      child: Icon(Icons.my_location),
    ), // FloatingActionButton
  ); // Scaffold
}
```

8. Emulador (Moto g9 >Pantalla emergente de permisos)



8. Emulador (Moto g9 >General)





Mapa (Aaron Hdez García)

