

캡스톤 디자인 주간 진도 발표

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Bicycle Application

자전거 네비게이션

자전거 네비게이션 기능을 탑재한

자전거 전용 애플리케이션



Bicycle Application

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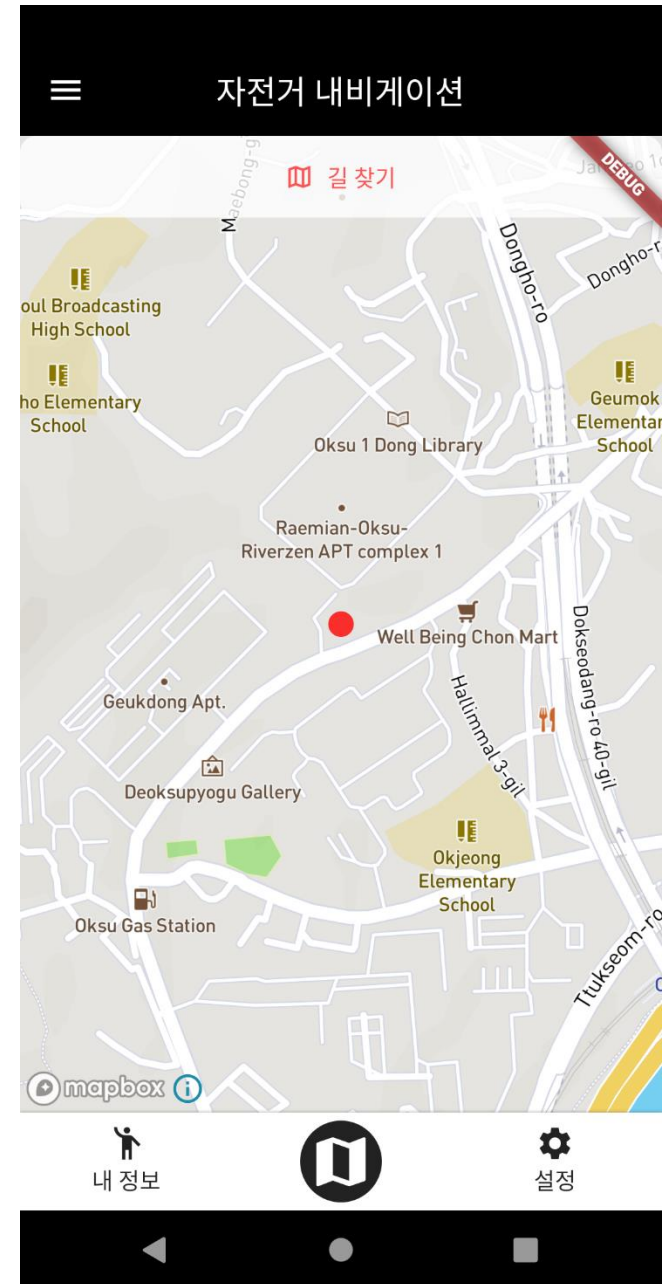
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데모 영상

기본 지도화면 주요 코드

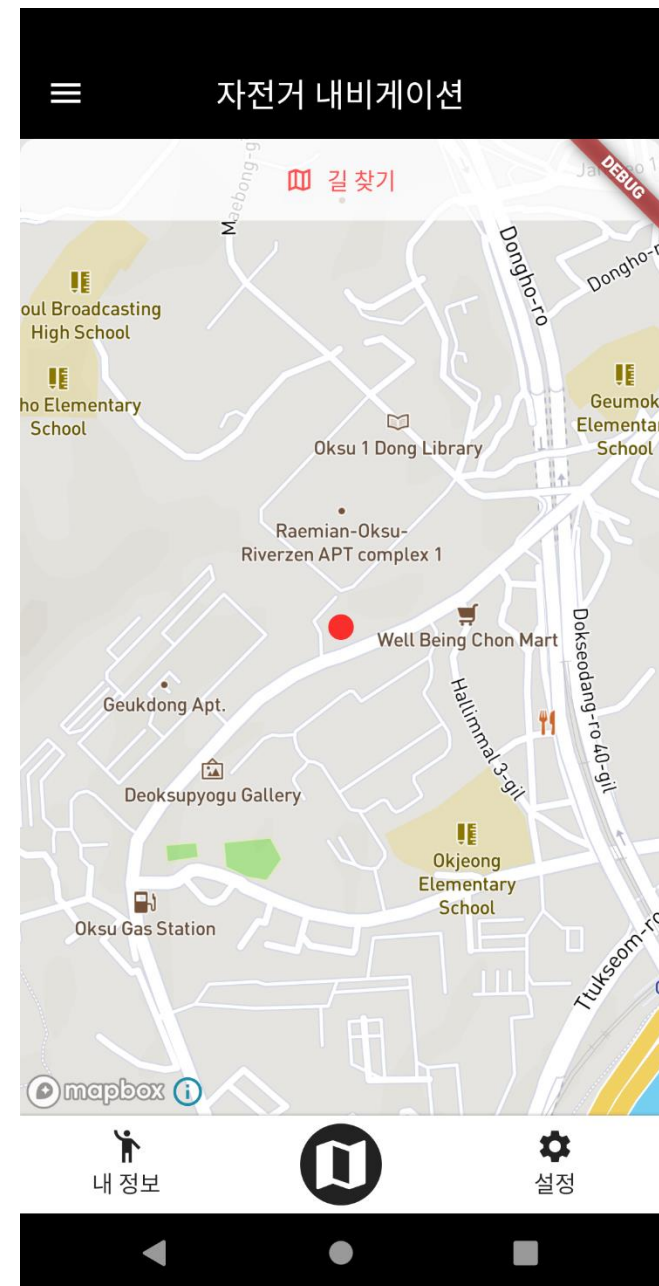
map_210521 [D:\FlutterProjects\map_210521] - ...lib\map.dart [map_210521] - Android Studio

```
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
p_210521 > lib > map.dart <no device selected> main.dart Pixel 3 API 30
1 import 'package:flutter/material.dart';
2 import 'package:location/location.dart';
3 import 'dart:async';
4 import 'package:mapbox_gl/mapbox_gl.dart';
5 import 'search.dart';
6
7
8 class Map extends StatefulWidget {
9   @override
10  State<StatefulWidget> createState() => _Map();
11 }
12
13 class _Map extends State<Map> {
14
15   late MapboxMapController mapController;
16
17   @override
18   Widget build(BuildContext context) {
19
20     final String token = 'pk.eyJ1Ijoia2ltbW0iLCJhIjoieY2tvYmd6'
```



기본 지도화면 주요 코드

```
22 return MaterialApp(  
23   home: Scaffold(  
24     body: Stack(  
25       children: <Widget>[  
26         MapboxMap(  
27           zoomGesturesEnabled: true,  
28           accessToken: token,  
29           initialCameraPosition: CameraPosition(  
30             zoom: 15.0,  
31             target: LatLng(37.517235, 127.047325),  
32           ), // CameraPosition  
33           onMapCreated: onMapCreated,  
34         ), // MapboxMap  
35         Positioned(  
36           child: Container(  
37             height: 50.0,  
38             width: double.infinity,  
39             decoration: BoxDecoration(  
40               borderRadius: BorderRadius.circular(10.0),  
41               color: Colors.white.withOpacity(0.8),  
42             ), // BoxDecoration  
43           child: TextButton.icon(  
44             onPressed: () {  
45               Navigator.push(  
46                 context,  
47                 MaterialPageRoute(  
48                   builder: (context) => Search(),  
49                 ), // MaterialPageRoute  
50             ),  
51           ),  
52           icon: Icon(Icons.map_outlined, size: 18),  
53           label: Text('길 찾기'),
```

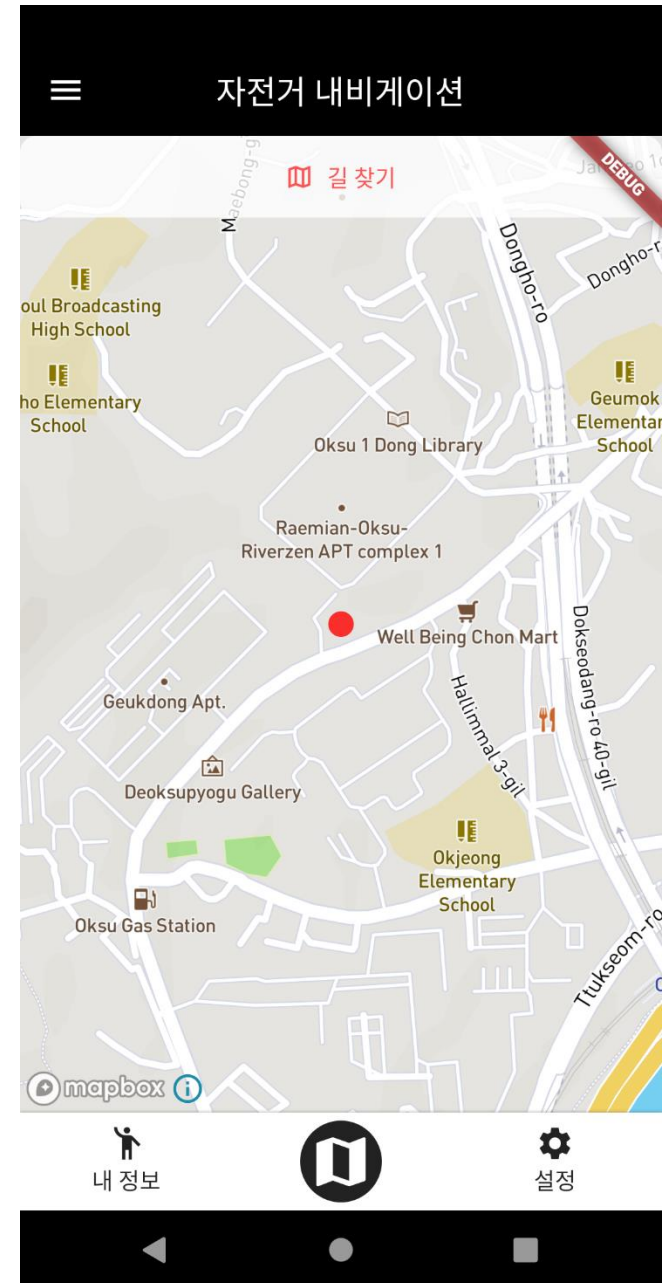


기본 지도화면 주요 코드

```
Future<void> onMapCreated(MapboxMapController controller) async {
  setState(() {
    mapController = controller;
  });
  final result = await acquireCurrentLocation();
  await controller.animateCamera(
    CameraUpdate.newLatLng(result),
  );
  await controller.addCircle(
    CircleOptions(
      circleRadius: 8.0,
      circleColor: '#ff0000',
      circleOpacity: 0.8,
      geometry: result,
      draggable: false,
    ),
  );
}

Future<LatLng> acquireCurrentLocation() async {
  // Initializes the plugin and starts listening for potential platform events
  Location location = new Location();

  // Whether or not the location service is enabled
```



길 찾기 화면 주요 코드

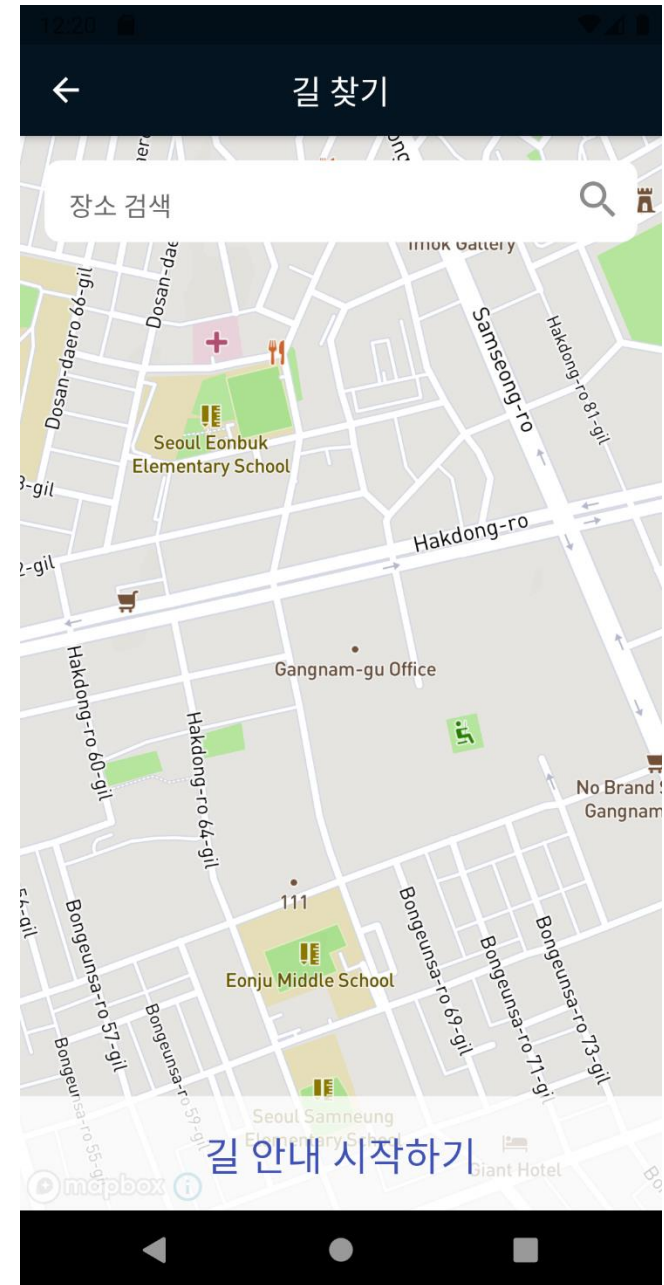
```
map_210521 [D:\FlutterProjects\map_210521] - ...lib\search.dart [map_210521] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

map_210521 > lib > search.dart sdk gphone x86 (mobile) main.dart Pixel 3 API 30

Project
  map_210521 D:\FlutterProjects\map_210521
    .dart_tool
    .idea
    android
    Assets
    build
    ios
    lib
      main.dart
      map.dart
      map_copy.dart
      myinfo.dart
      navi.dart
      search.dart
      setting.dart
    test
    .flutter-plugins
    .flutter-plugins-dependencies
    .gitignore

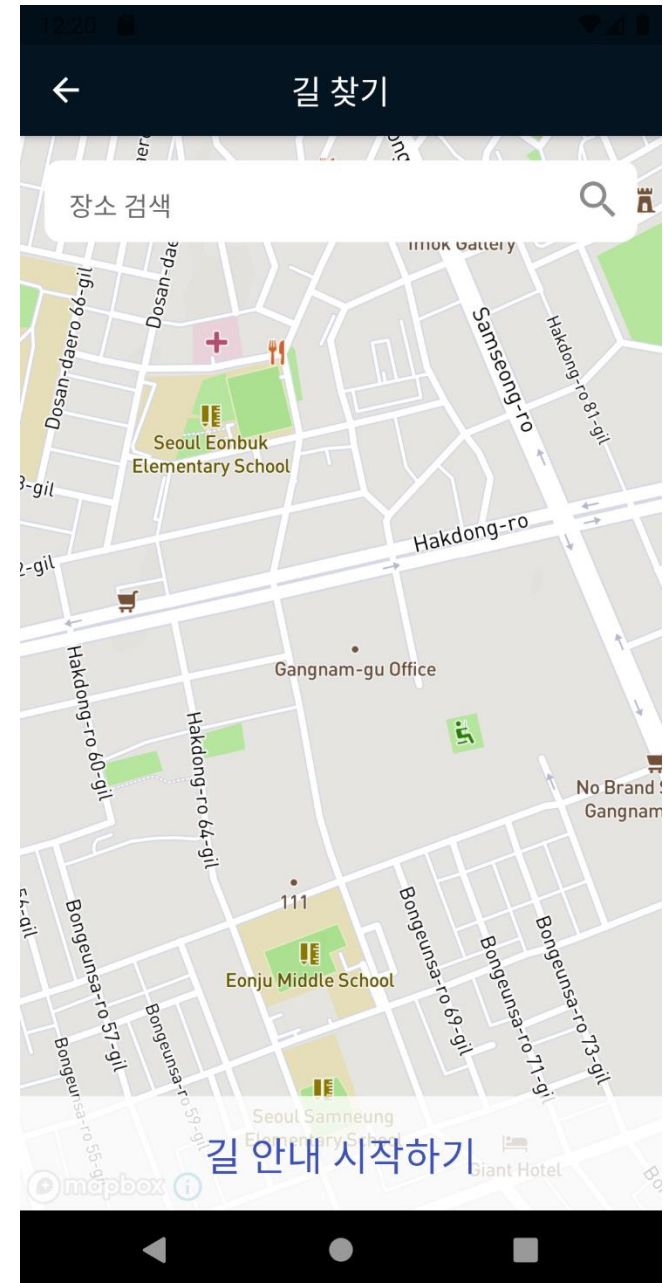
1 import 'package:flutter/material.dart';
2 import 'package:mapbox_gl/mapbox_gl.dart';
3 import 'package:geocoding/geocoding.dart' hide Location;
4 import 'package:mapbox_search_flutter/mapbox_search_flutter.dart';
5 import 'package:flutter_mapbox_navigation/library.dart';
6
7 const String token = 'pk.eyJ1Ijoia2ltbW0iLCJhIjoieY2tvYmd6ZGJxMDA2MDJ5d';
8
9 class Search extends StatefulWidget {
10   @override
11   State<Search> createState() => _Search();
12 }
13
14 class _Search extends State<Search> {
15
16   late MapboxMapController mapController;
17
18   late double latitude, longitude;
19   late double get_lat, get_lng;
20   late String searchAddr;
21 }
```



길 찾기 화면 주요 코드

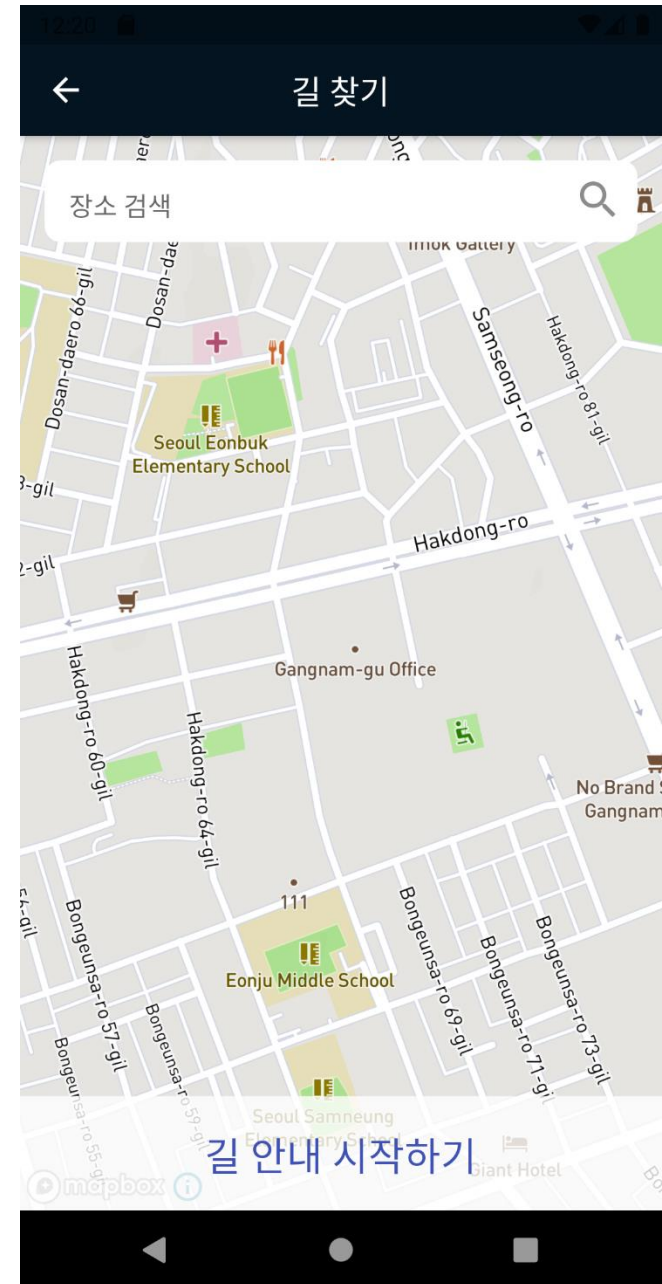
```
body: Container(  
  child: Stack(  
    children: <Widget>  
    MapboxMap(  
      zoomGesturesEnabled: true,  
      accessToken: token,  
      initialCameraPosition: CameraPosition(  
        zoom: 15.0,  
        target: LatLng(37.517235, 127.047325),  
      ), // CameraPosition  
      onMapCreated: onMapCreated,  
      onMapLongClick: (point, latlng) {  
        setState(() {  
          get_lat = latlng.latitude;  
          get_lng = latlng.longitude;  
        });  
        print(  
          "From Map _${get_lat}_ | _${get_lng}_");  
      },  
    ), // MapboxMap
```

I/flutter (4629): From Map 37.485330498177134 |126.98211737631317



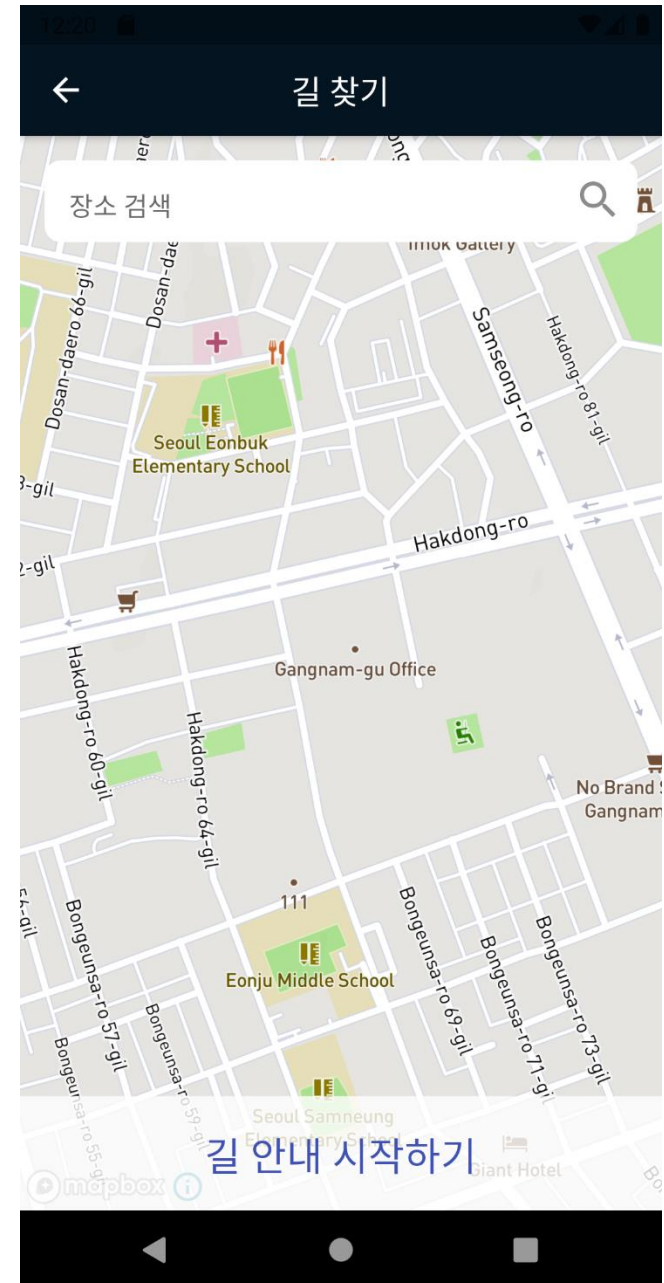
길 찾기 화면 주요 코드

```
Positioned(
  top:15.0,
  left: 15.0,
  right: 15.0,
  child: Container(
    height: 50.0,
    width: double.infinity,
    decoration: BoxDecoration(
      borderRadius: BorderRadius.circular(10.0),
      color: Colors.white
    ), // BoxDecoration
    child: TextField(
      decoration: InputDecoration(
        hintText: '장소 검색',
        border: InputBorder.none,
        contentPadding: EdgeInsets.only(left: 15.0, top: 15.0),
        suffixIcon: IconButton(
          icon: Icon(Icons.search),
          onPressed: searchandNavigate,
          iconSize: 30.0), // IconButton
        ), // InputDecoration
      onChanged: (val) {
        setState(() {
          searchAddr = val;
        });
      },
    ), // TextField
  ), // Container
), // Positioned
```



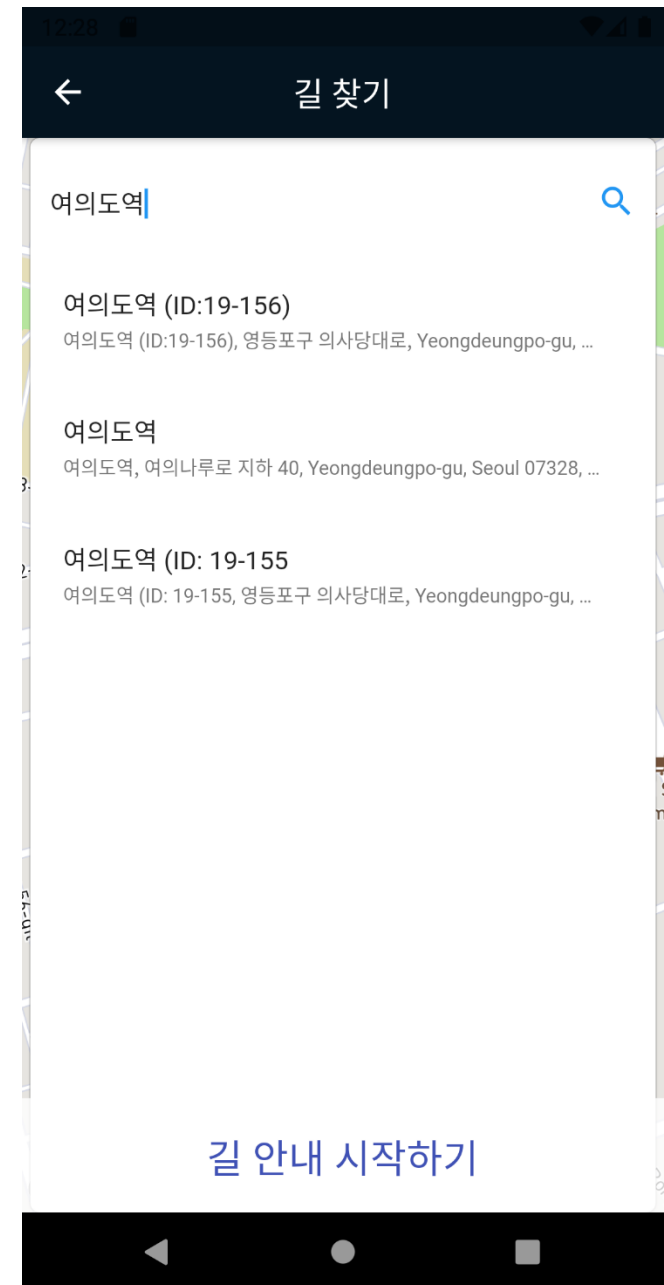
길 찾기 화면 주요 코드

```
searchAndNavigate() {  
  locationFromAddress(searchAddr).then((result) {  
    mapController.animateCamera(CameraUpdate.newCameraPosition(CameraPosition(  
      target: LatLng(result[0].latitude, result[0].longitude),  
      zoom: 15,  
    ))); // CameraPosition  
  });  
}  
  
void onMapCreated(controller) {  
  setState(() {  
    mapController = controller;  
  });  
}
```



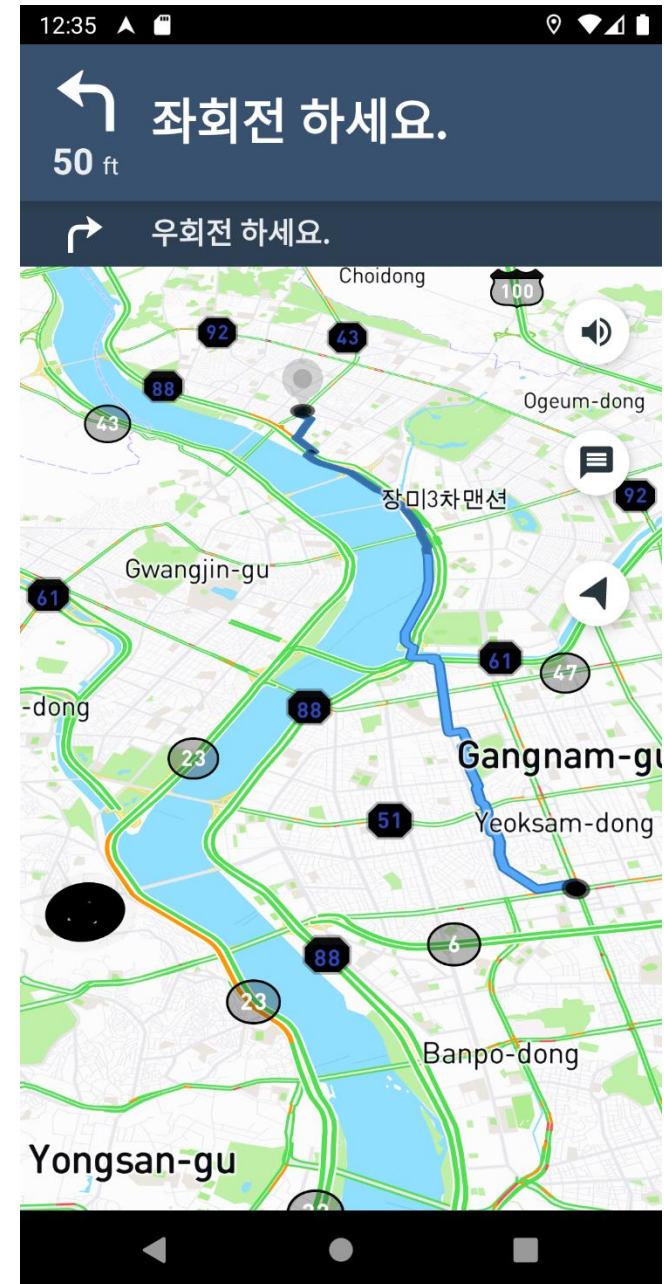
길 찾기 화면 주요 코드

```
SafeArea(  
  bottom: false,  
  child: MapBoxPlaceSearchWidget(  
    popOnSelect: true,  
    apiKey: token,  
    searchHint: '장소 검색',  
    onSelected: (dynamic place) {  
      setState(() {  
        searchAddr = place;  
      });  
    },  
    context: context,  
  ), // MapBoxPlaceSearchWidget  
), // SafeArea  
/*  
Positioned(  
  top: 15.0,  
  left: 15.0,  
  right: 15.0,
```



내비게이션 주요 코드

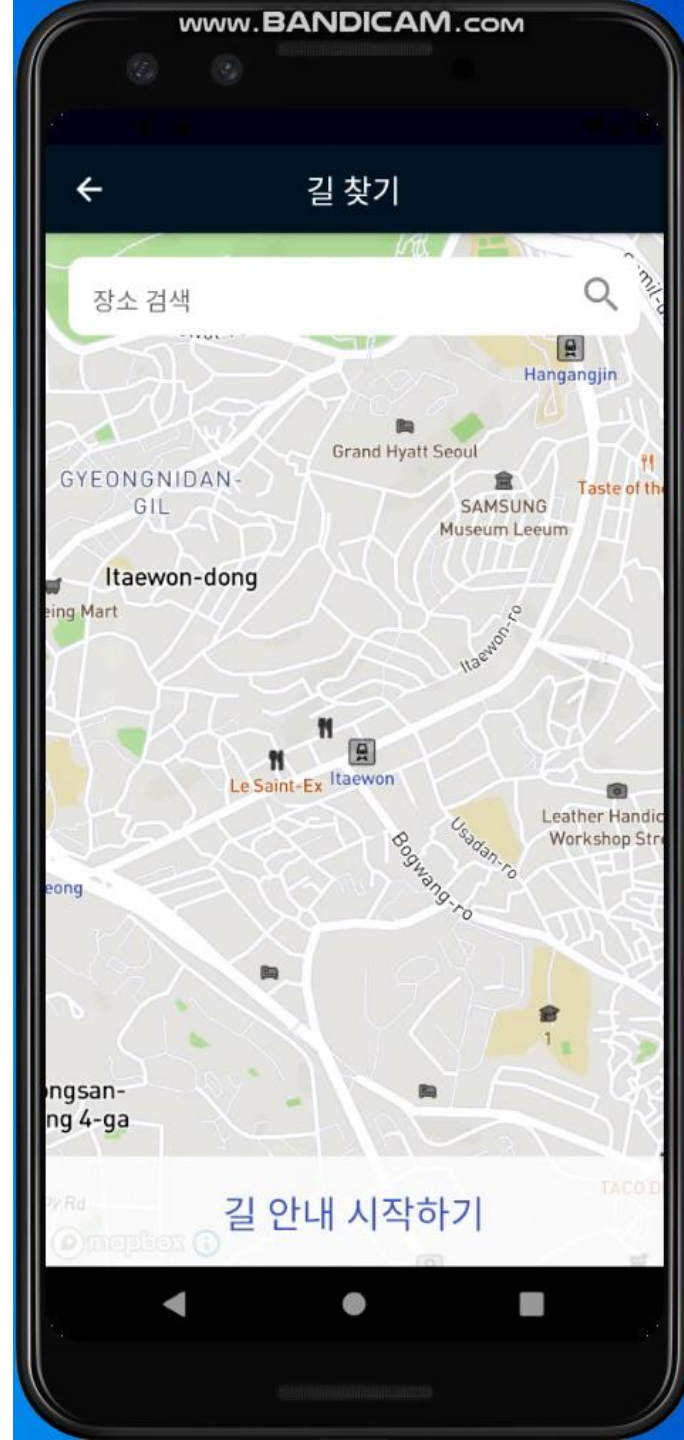
```
Align(  
  alignment: Alignment.bottomCenter,  
  child: Container(  
    color: Colors.white.withOpacity(0.8),  
    width: double.infinity,  
    height: 70,  
    child: TextButton(  
      onPressed: () async {  
        var waypoints = <WayPoint>[];  
        waypoints.add(_origin);  
        waypoints.add(  
          WayPoint(  
            name: "Way Point 2",  
            latitude: get_lat,  
            longitude: get_lng) // WayPoint  
          );  
        await _directions.startNavigation(  
          waypoints: waypoints,  
          options: _options);  
      },  
      style: TextButton.styleFrom(  
        primary: Colors.indigo, // foreground  
        textStyle: TextStyle(fontSize: 24)  
      ),  
      child: Text("길 안내 시작하기")  
    )  
  )  
);
```



데모 영상 1



데모 영상 2



THANK YOU