ANKARA ÜNİVERSİTESİ
MÜHENDİSLİK FAKÜLTESİ
BİLGİSAYAR MÜHENDİSLİĞİ BÖLÜMÜ

BLM4537-A IOS İLE MOBİL UYGULAMA GELİŞTİRME
PROJE RAPORU

Hava Durumu Uygulaması

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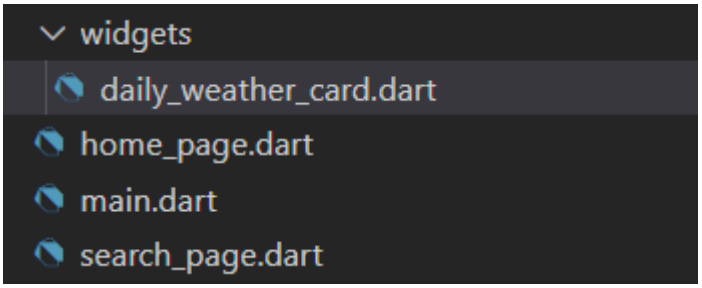
ÖZET

Bu proje açık kaynaklı https://openweathermap.org/api kullanılarak kullanıcının bulunduğu konumun algılanmasını ve istediği bir bölgenin anlık hava durumu bilgilerini öğrenebilmesini amaçlar .

Projenin kaynak kodları https://github.com/denizkilicaslan/MyWeatherApp adresinde yer almaktadır.

Proje Yapısı



Proje 4 ana bölümden oluşmaktadır.Bunlar widgets/daily_wheather_card.dart

home_page.dart , main.dart ve search page.dart dosyalarından oluşmaktadır.

daily_wheather_card.dart

```dart
class DailyWeatherCard extends StatelessWidget {
  const DailyWeatherCard({Key? key, required this.icon, required this.temperature, required this.date}) : super(key: key);

  final String icon;
  final double temperature;
  final String date;

  @override
  Widget build(BuildContext context) {
    List<String> days = ['Pazartesi','Salı', 'Çarşmba', 'Perşembe', 'Cuma', 'Cumartesi', 'Pazar'];
    String weekday = days[DateTime.parse(date).weekday - 1];
    return Card(
      color: Colors.transparent,
      child: SizedBox(
        width: 90,
        child: Column(
          children: [
            Image.network('http://openweathermap.org/img/wn/$icon.png'),
            Text(
              '$temperature°C',
              style: const TextStyle(fontSize: 16, fontWeight: FontWeight.bold),
            ),
            Text(weekday),
          ],
        ),
      ),
    );
  }
}
```

lib > main.dart

```dart
import 'package:flutter/material.dart';
import 'package:hava_durumu/home_page.dart';

void main() {
  runApp(const MyApp());
}

class MyApp extends StatelessWidget {
  const MyApp({Key? key}) : super(key: key);

  // This widget is the root of your application.
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      debugShowCheckedModeBanner: false,
      title: 'Hava Durumu',
      theme: ThemeData.dark(),
      home: const HomePage(),
    );
  }
}
```

home_page.dart kısmında API ile verileri alabileceğimiz fonksiyonlar bulunur.

```dart
Future<void> getLocationDataFromAPI() async {
  locationData = await http.get(Uri.parse(
      'https://api.openweathermap.org/data/2.5/weather?q=$location&appid=$key&units=metric'));
  final locationDataParsed = jsonDecode(locationData.body);
  setState(() {
    temperature = locationDataParsed['main']['temp'];
    location = locationDataParsed['name'];
    code = locationDataParsed['weather'].first['main'];
    icon = locationDataParsed['weather'].first['icon'];
  });
}
```

```dart
Future<void> getLocationDataFromAPIByLatLan() async {
  if (devicePosition != null) {
    locationData = await http.get(Uri.parse(
        'https://api.openweathermap.org/data/2.5/weather?lat=${devicePosition!.latitude}&lon=${devicePosition!.longitude}&appid=$key&units=metric'));
    final locationDataParsed = jsonDecode(locationData.body);
    setState(() {
      temperature = locationDataParsed['main']['temp'];
      location = locationDataParsed['name'];
      code = locationDataParsed['weather'].first['main'];
      icon = locationDataParsed['weather'].first['icon'];
    });
  }
}
```

```dart
Future<void> getDevicePosition() async {
  devicePosition = await _determinePosition();
}
Future<void> getDailyForecastByLatLon() async{
  var forecastData = await http.get(Uri.parse('https://api.openweathermap.org/data/2.5/forecast?lat=${devicePosition!.latitude}&lon=${devicePosition!.
  var forecastDataParsed = jsonDecode(forecastData.body);

  temperatures.clear();
  icons.clear();
  dates.clear();
  DateTime dateTime;
  setState(() {
    for(int i = 7; i<40; i = i+8){
      temperatures.add(forecastDataParsed['list'][i]['main']['temp']);
      icons.add(forecastDataParsed['list'][i]['weather'][0]['icon']);
      dates.add(forecastDataParsed['list'][i]['dt_txt']);
    }
  });
}
```

```dart
Future<void> getDailyForecastByLocation() async{
  var forecastData = await http.get(Uri.parse('https://api.openweathermap.org/data/2.5/forecast?q=$location&appid=$key&units=metric'));
  var forecastDataParsed = jsonDecode(forecastData.body);

  temperatures.clear();
  icons.clear();
  dates.clear();
  DateTime dateTime;
  setState(() {
    for(int i = 7; i<40; i = i+8){
      temperatures.add(forecastDataParsed['list'][i]['main']['temp']);
      icons.add(forecastDataParsed['list'][i]['weather'][0]['icon']);
      dates.add(forecastDataParsed['list'][i]['dt_txt']);
    }
  });

}

void getInitialData() async {
  await getDevicePosition();
  await getLocationDataFromAPIByLatLan();
  await getDailyForecastByLatLon();
}
```