WeatherGuardian

Predicting weather changes for user safety and comfort

Description About Apps

Weather Guardian App is a comprehensive weather application that provides live weather data, weather warnings, and trip planning information to help users stay safe and comfortable during their journeys.

Install Now

casa0015-mobile-assessment
Yuxi Zheng

9:41

Hello

Login to your acccount

Sign in

Welcome to land

Don't have an account? Register

Email

Password

Forgotten password?

Sign in

WeatherGuardian

How Does This App Work?

Current Function Point:

User login registration function

Display of current city weather data

Provide real-time map function including temperature heat map

Search for weather conditions in other areas

Provide extreme weather warning notifications

Trip planning page, where users can select the departure location, destination, travel dates and number of days
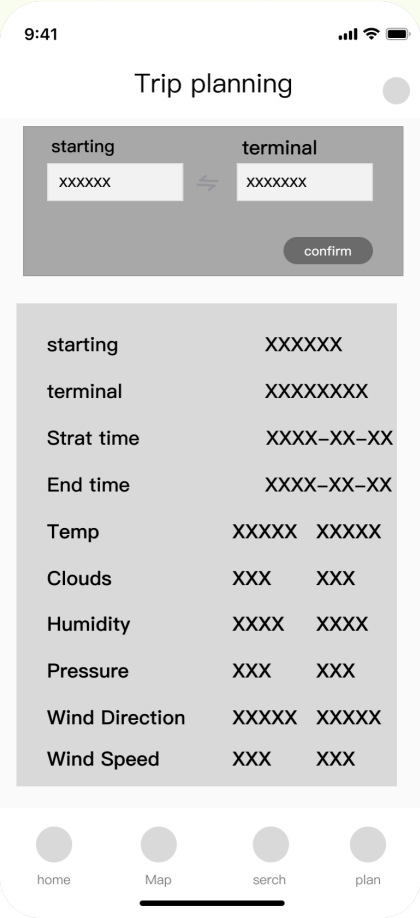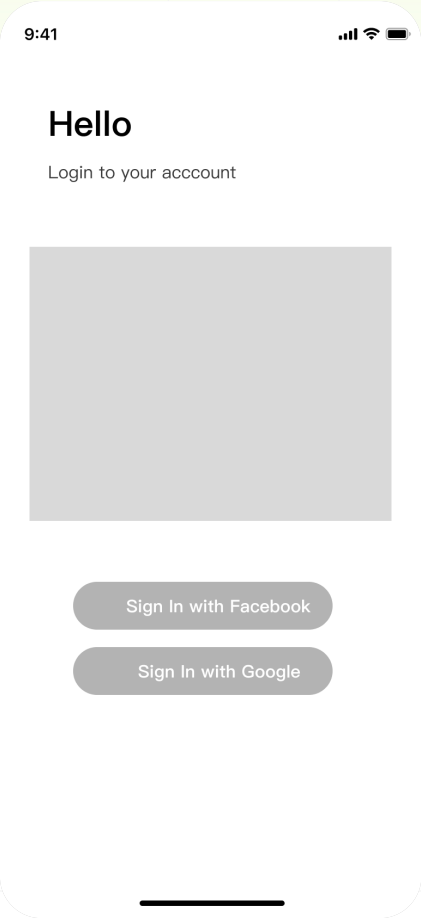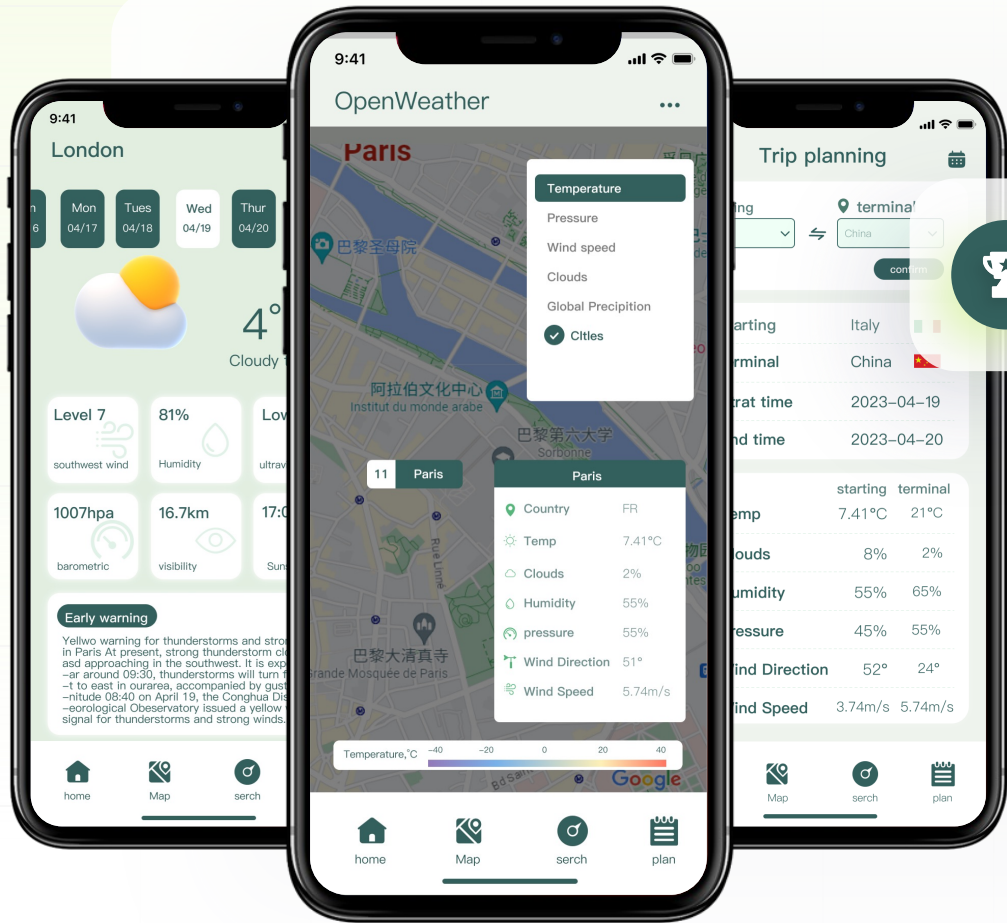
Further functional points for the future:

Automatically retrieves and displays weather data for departure and destination based on user input

Automatically generated trip details page, including each day's itinerary, including weather conditions, transport advice and suggestions for places to visit
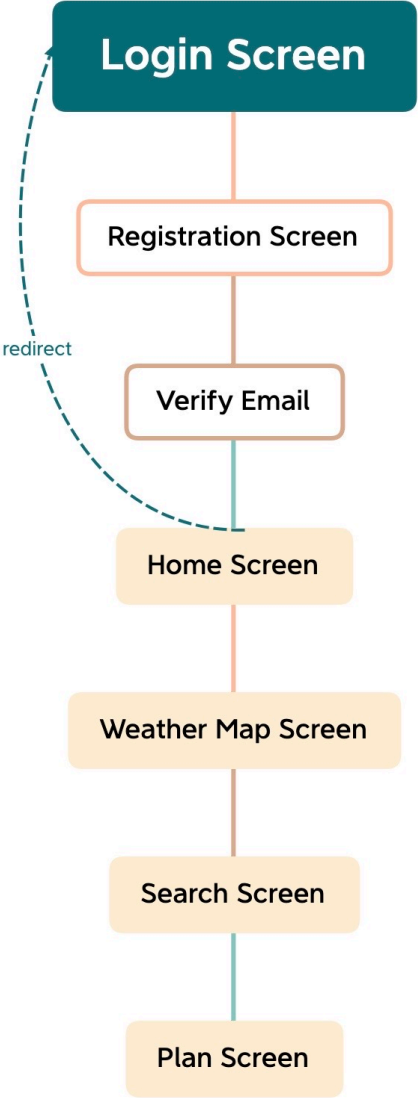
Wireframe Design

Screen 1 — Login

9:41

Hello
Login to your acccount

Sign In with Facebook

Sign In with Google

Screen 2 — Weather

9:41

XXXXXXX

Wed 04/19	Wed 04/19	Wed 04/19	Wed 04/19	Wed 04/19

4°/9°

XXXXXXXXXX

XXX southwest wind	XXX Humidity	XXX ultraviolet rays
XXXX barometric	XXX visibility	XXX Sunset

home   Map   serch   plan

Screen 3 — OpenWeather

9:41

OpenWeather

Paris

巴黎圣母院

阿拉伯文化中心
Institut du monde arabe

巴黎第六大学
Sorbonne

Temperature
Pressure
Wind speed
Clouds
Global Precipition
○ CItles

Rue Linné

巴黎大清真寺
Grande Mosquée de Paris

XX	XXX	

	XXX
Country	XXX
Temp	XXX
Clouds	XXX
Humidity	XXX
pressure	XXX
Wind Direction	XXX
Wind Speed	XXXXX

Google

home   Map   serch   plan

Screen 4 — Trip planning

9:41

Trip planning

starting	terminal
xxxxx	xxxxxxx

confirm

starting	XXXXXX	
terminal	XXXXXXXX	
Strat time	XXXX–XX–XX	
End time	XXXX–XX–XX	
Temp	XXXXX	XXXXX
Clouds	XXX	XXX
Humidity	XXX	XXXXX
Pressure	XXX	XXX
Wind Direction	XXXXX	XXXXX
Wind Speed	XXX	XXX

home   Map   serch   plan

WeatherGuardian

User Interface Design & Hierarchy And Navigation

London
9:41

Mon 04/17
Tues 04/18
Wed 04/19
Thur 04/20

4°
Cloudy

Level 7
southwest wind

81%
Humidity

Low
ultrav

1007hpa
barometric

16.7km
visibility

17:0
Sun

Early warning
Yellwo warning for thunderstorms and stro
in Paris At present, strong thunderstorm cle
asd approaching in the southwest. It is exp
—ar around 09:30, thunderstorms will turn f
—t to east in ourarea, accompanied by gust
—nitude 08:40 on April 19, the Conghua Dis
—eorological Observatory issued a yellow
signal for thunderstorms and strong winds.

home   Map   serch

9:41
OpenWeather   ...

Paris

巴黎圣母院

阿拉伯文化中心
Institut du monde arabe

巴黎第六大学
Sorbonne

巴黎大清真寺
Grande Mosquée de Paris

Rue Linne

Bd Sain

Temperature,°C   -40 -20 0 20 40

Google

Temperature
Pressure
Wind speed
Clouds
Global Precipition
✓ CItles

11 Paris

Paris

	Country	FR
	Temp	7.41°C
	Clouds	2%
	Humidity	55%
	pressure	55%
	Wind Direction	51°
	Wind Speed	5.74m/s

home   Map   serch   plan

Trip planning   9:41

ting   ⌖ terminal'

China

confirm

	starting	terminal
arting	Italy	
erminal	China	
rat time	2023-04-19	
nd time	2023-04-20	
emp	7.41°C	21°C
louds	8%	2%
umidity	55%	65%
ressure	45%	55%
ind Direction	52°	24°
ind Speed	3.74m/s	5.74m/s

Map   serch   plan

Login Screen

Registration Screen

redirect

Verify Email

Home Screen

Weather Map Screen

Search Screen

Plan Screen
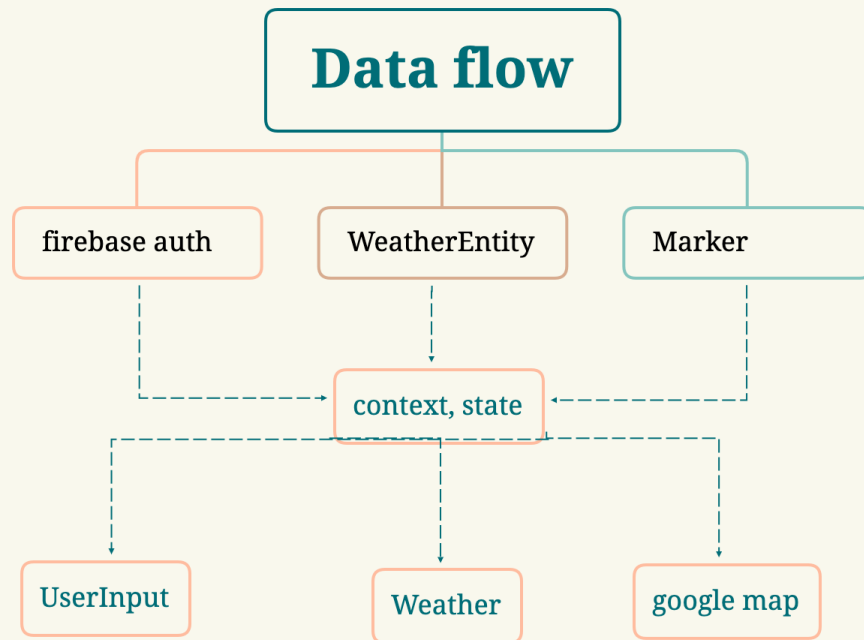
Data Flow

1 **Firebase Authentication**

Firebase Authentication is a feature of Firebase that provides an easy way to authenticate users. In Flutter, you can use the Firebase Authentication plugin to implement user login. To use the Firebase Authentication plugin you need to import it in the Dart code.

Data Flow

OpenWeather is an API that provides weather data and can be used to obtain weather information from around the world. Flutter can use the OpenWeather API via HTTP requests. Here are the steps to use the OpenWeather API:

1. Register on the OpenWeather website and obtain an API key.
2. Add the http dependency to the Flutter project.
3. Add a Dart file to the Flutter project for handling API requests and responses.
4. Use the http package to send the API request and handle the response.

Data Flow

Data flow

firebase auth | WeatherEntity | Marker

context, state

UserInput | Weather | google map
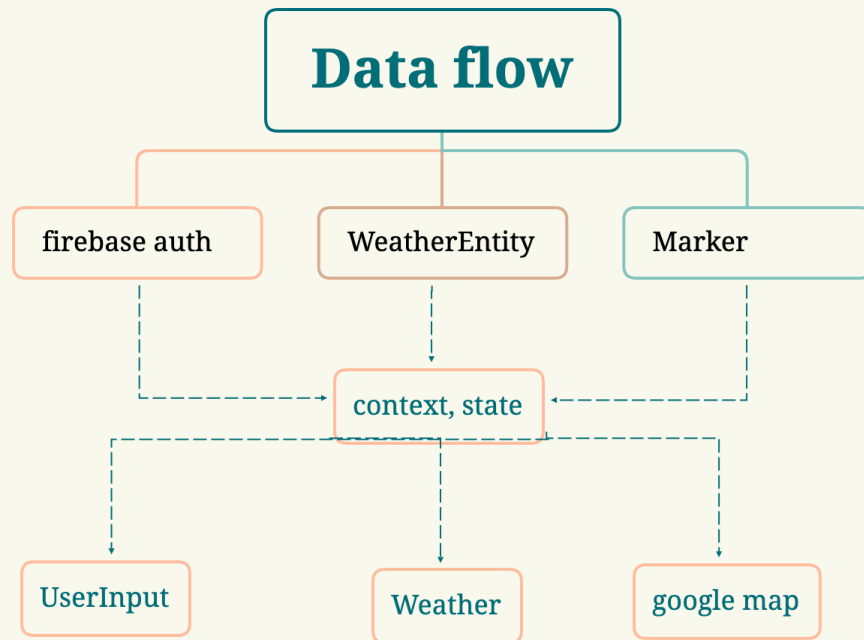
Gogoole maps ApI

In Flutter, you can use the google_maps_flutter plugin to integrate Google Maps. The plugin provides a Map class that you can use to display the map and customise it with various options and controls. To implement search functionality on Google Maps you need to use the Places API provided by the Google Maps API. the Places API allows you to search for locations, get details and display them on the map. You can call the Places API using the google_maps_web service plugin, which provides a PlacesService class that you can use to call the Places API and get results.

WeatherGuardian

Mobile Apps

Thank You

For Your Listening