

## Mobile Application Project 2

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# Favspot

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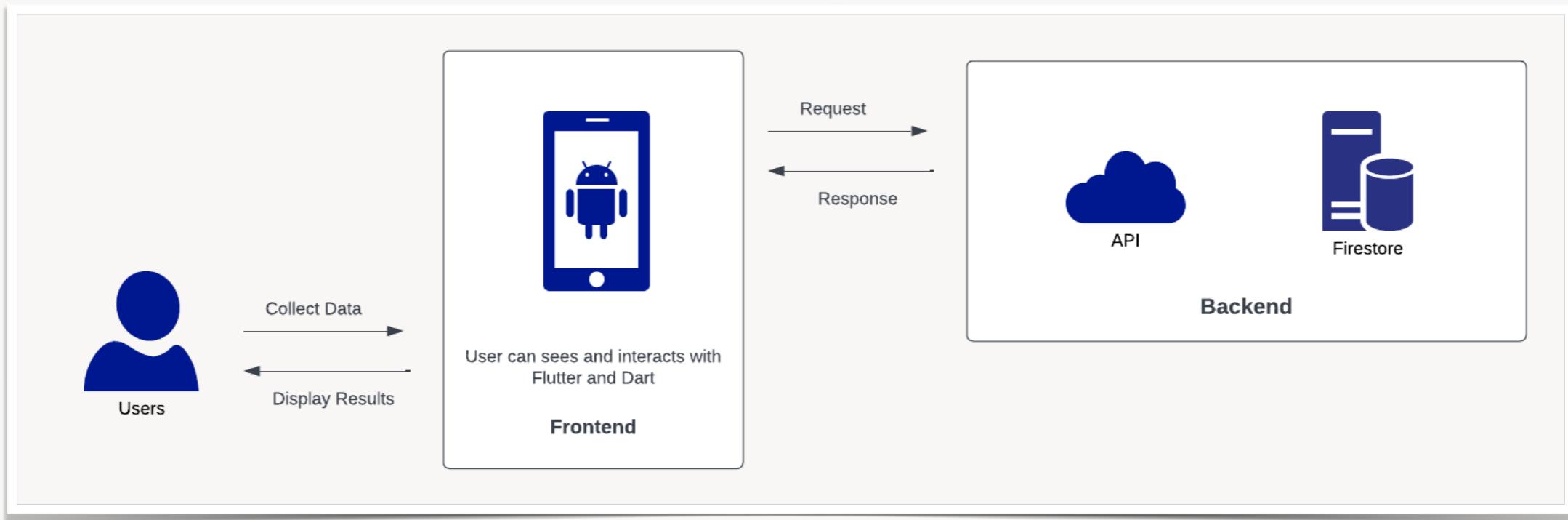


# What is Favspot?

Favspot is a traveling planner application allows user to organize and plan their trips easily. The traveling planner app is specially designed to promote Thailand's tourism since the app also supports the search hub based on TAT (Tourism Authority of Thailand) . The user can search for restaurants, accommodations and attractions for every city and province all over Thailand. More importantly, the user can add searched places directly to their plan.



# App Architecture



Frontend is where the user can see and interact with the application, in this project Flutter and Dart are used. Frontend collects data from the user such as registration information, trip information etc. after collecting the data frontend then sends or adds the data into firestore where the data of each particular user are stored or kept, in order for the data to be retrieved later on. In addition, Covid-19 API Thailand ddc open data and TAT API were called in order for us to retrieve the information which are covid cases information on each day and restaurant, accommodation, and attraction that they are provided in each region of Thailand, accordingly. As frontend receives the response from API and firestore, it will then display the results back to the user.

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# Figma Prototype

<https://www.figma.com/file/6gqCql8VBQEiZ6ZexzHqKV/Favspot-Prototype?node-id=0%3A1>

The image displays a grid of Figma prototypes for a mobile application called Favspot. The grid consists of ten cards, each representing a different screen or feature of the app:

- Home:** Shows the Favspot logo and a placeholder for user content.
- Register:** A sign-up form with fields for Username, Email, and Password, and a "Register" button.
- Login:** A login form with fields for Email and Password, and a "Login" button.
- HomePage:** Displays "My Trips" with a placeholder for "Add your Trip". It shows recent trips to Phuket (5 days) and Pattaya (4 days), and links to "Home", "covid", and "profile".
- CovidPage:** Shows Thailand's Covid Information with sections for Date, New Cases, Total Cases, New Cases Inbound, New Recovered, and Now Recovered. It also features a call-to-action for dialing 1330 for medical help.
- Expense:** A pie chart titled "Pattaya" showing spending distribution across categories like Food, Accommodation, and Transport. It includes a total of 6500 baht and spending ranges from 500 to 3500 baht.
- Frame 12:** A detailed trip summary for "Pattaya" from July 20 to 23. It includes entries for Underwater World Pattaya, Elephant Jungle Sanctuary Pattaya, and Floating Markets, along with expense details.
- ProfilePage:** A user profile page for "UserName" (UserName@gmail.com) with sections for Profile, Username, and Email.
- AddPlan...**: A screen for adding travel plans with a placeholder for "Today's 5 Jul 2022". It lists activities like "Visit Grandmother's house", "Go to Yaowarat", and "Go to Central World", and a "+ Add Trip" button.
- SearchPage:** A search interface for discovering new places in Thailand, with filters for City, Restaurant, Accommodation, and Attractions.
- PlaceDetail...:** A detailed view of "Guay Jub Ouan Pochana, Bangkok" showing a photo of a chef preparing food, address, and contact information.

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# Design Discussion

Since our mobile application is related to travel planner, we decide to use the pin point location logo that can truly represent us. Where the red color represents the meaning of life and love which can be gained from traveling.



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For the home page, since our application is a traveling planner we decided to put the add trip button similar to the trip details widget. However, distinguish by putting in the dotted container and putting the plus icon to signify the add action. After the add button is clicked, you will proceed with AddPlan Screen. The AddPlan will show one-line calendar. The reason that we decided to go with this one-line calendar style is because we need to make sure that the tasks that users are planning to do can be separated according to the date the user selects from the start date till end date.

### My Trips

Add your Trip

Today's Jul 5, 2022

Number of Trips 2

#### Recent Trips

Phuket

From Jul 5, 2022  
To Jul 10, 2022

5 Days

Pattaya

From Jul 20, 2022  
To Jul 23, 2022

4 Days

Home covid profile

Today's 5 Jul 2022 Completed

5 Jul 6 Jul 7 Jul 8 Jul

Visit Grandmother's house  
10:30 Am - 15:30 PM  
Visit my fav grandma, I love you nana!!!!  
0 Baht  
Ladproa soi 9

Go to Yaowarat  
16:30 PM - 19:30 PM  
Go eat michelin guay jub.  
500 Baht  
Yaowarat Night Market

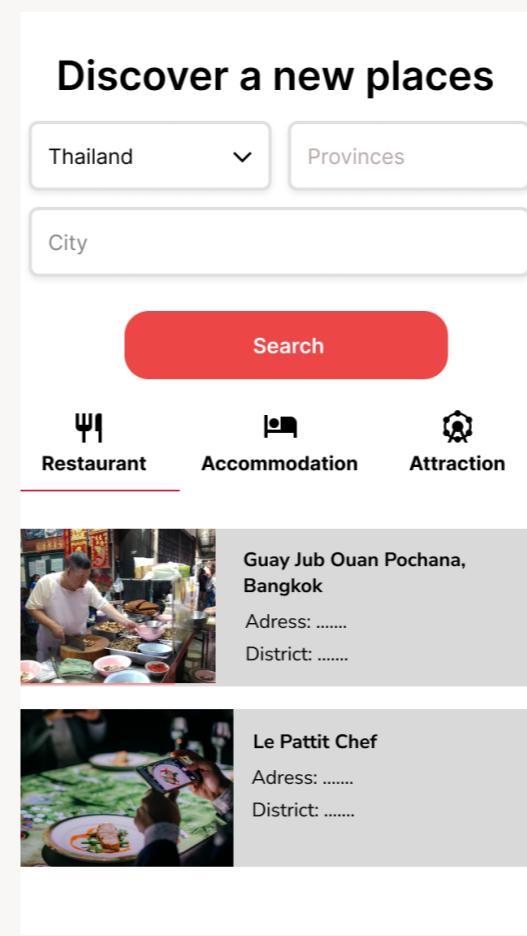
Go to Central World

+ Add Trip

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For the search page design, we provide three input boxes for the user to input the province and city according to their need. In each input box, the user is able to select from the drop down option that we provide or they can choose to type it themselves (the drop down suggestion will still show up according to the match input that user put in and then can select the target option that they want). Province and city can be chosen separately so that the data can be scope and accessed easily.

To show detail of the place, we decided to put the picture since picture can capture overall description of place the best. And we think when the user is looking for the place, they want to see the picture of how the place look like more than a written text explaining the place. That is why the picture come first and followed by written details.



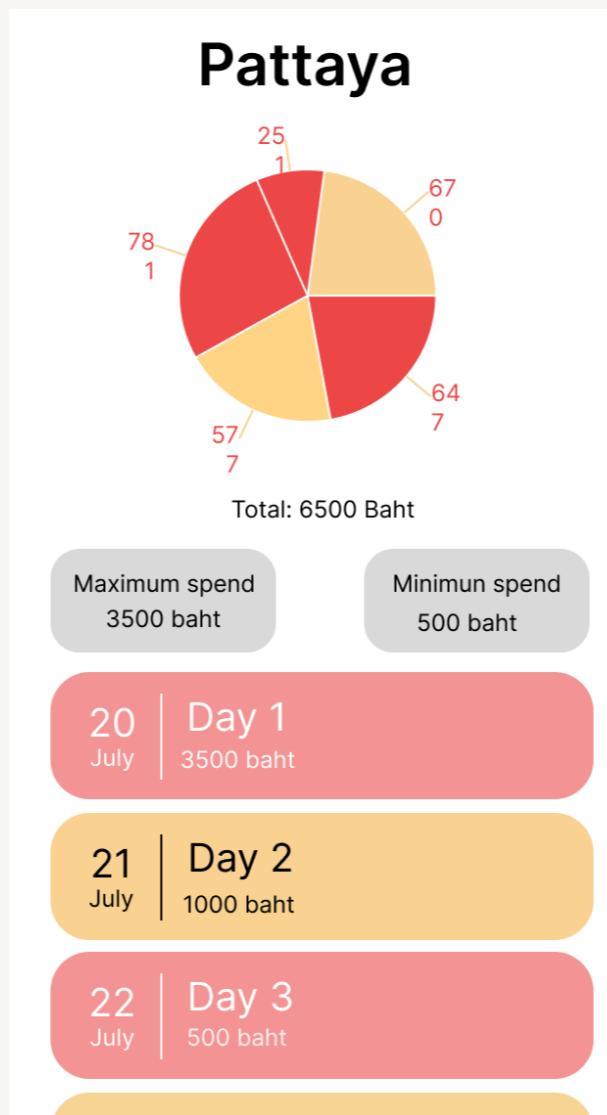
**District**  
Bangkok

Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic

typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum dummy text, and more recently with desktop publishing software like Aldus

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For the expense screen, we choose to display the amount of money spent each day by a pie chart because it shows a parts-to-whole relationship for expenses of each day clearly, and it can be easily represented in terms of percentage or proportion. Lists are provided in order for the user to observe the total expense activities on each day from first to last day. The list can be scrollable since the numbers of days in each trip varies.



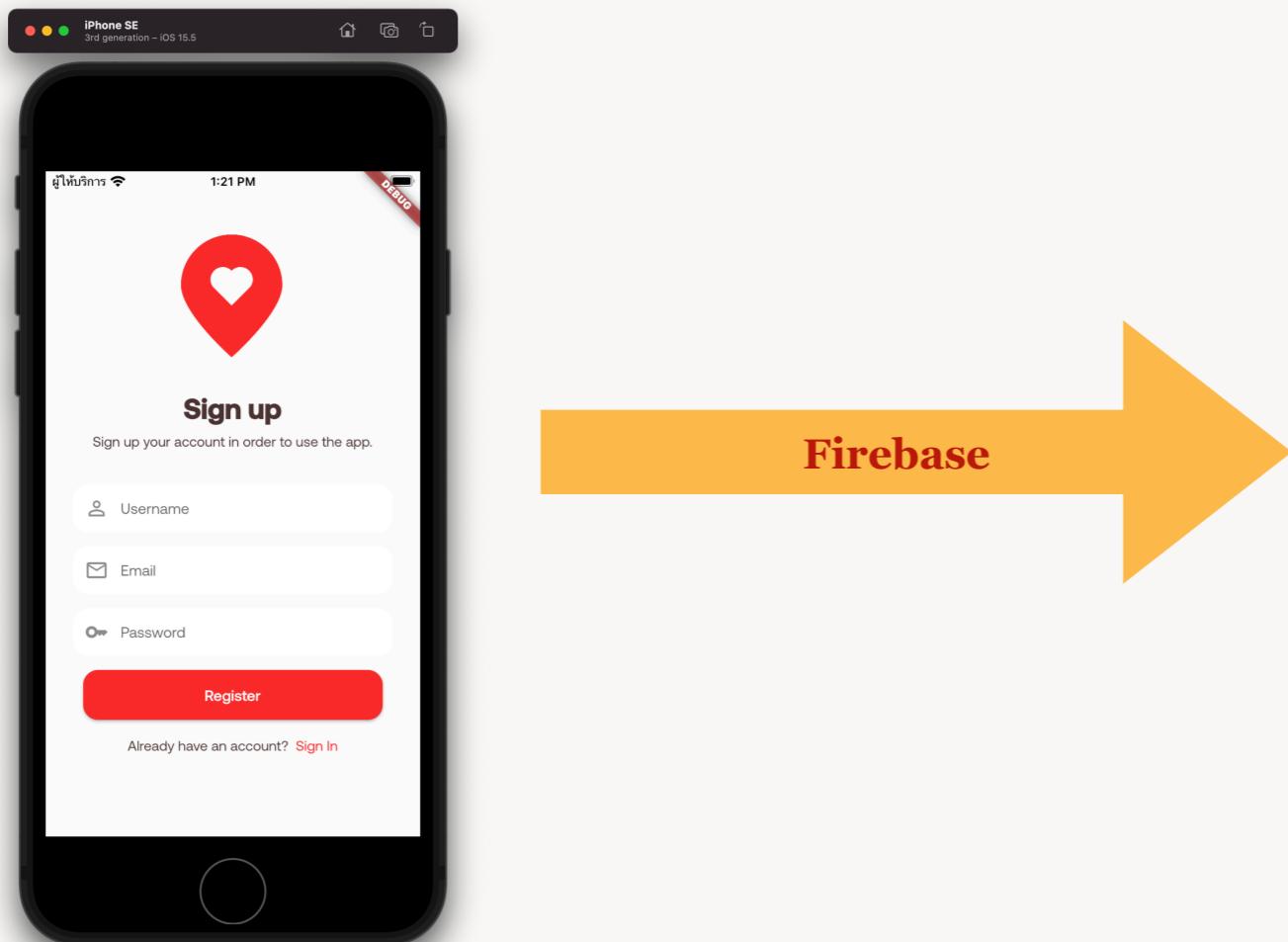
# Overview of Application:

# Features and Pages.



# Register Page

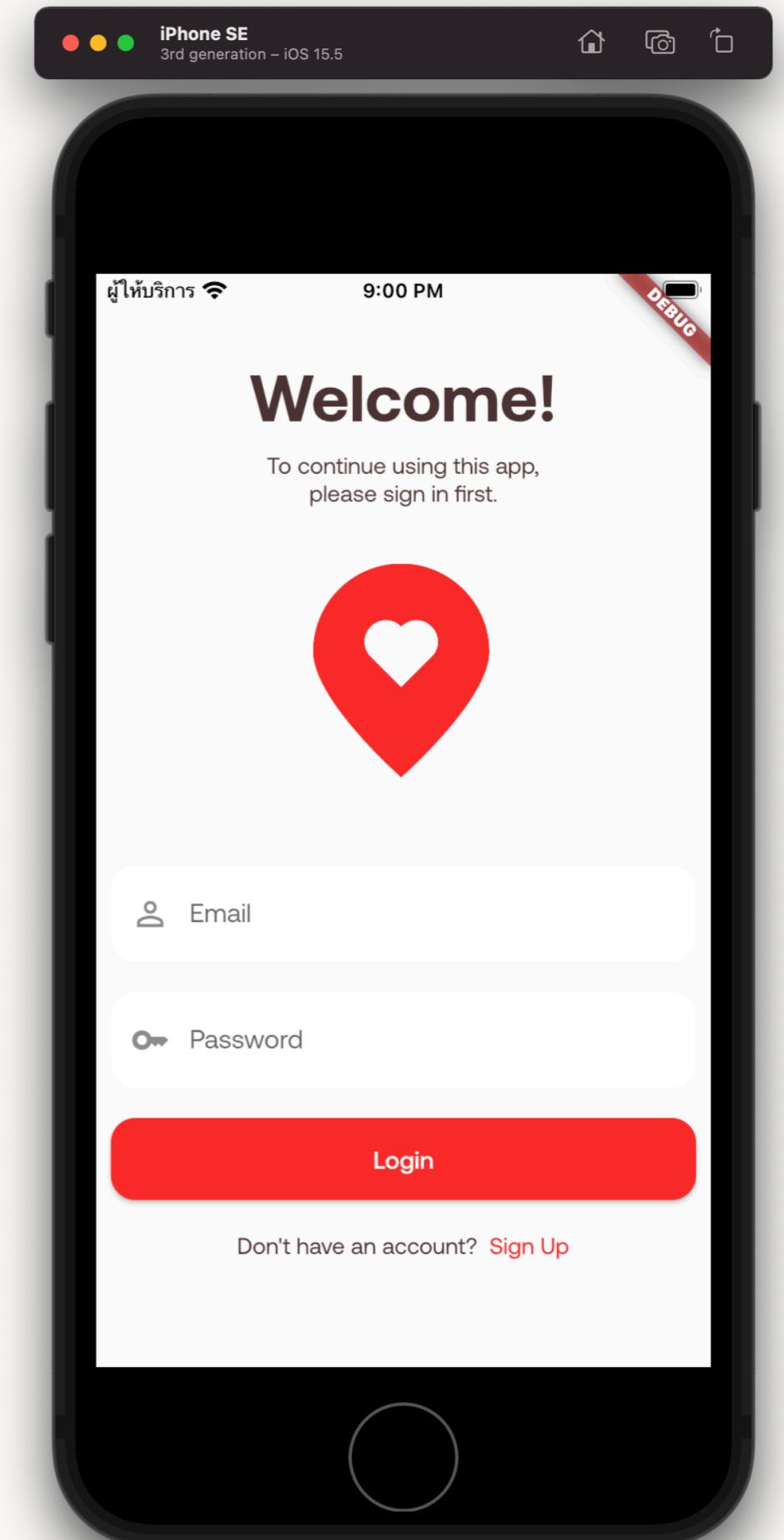
Our application allows only authenticated user to be able to use application's features. To register the account, the user needs to be in register page. In this page, the app asked user to create username, email and password. Those informations and the authentication will be stored and proceeded by Firebase Authentication. Once the the user successfully created the account, the user will be redirect to the login immediately. If the user has an account already, the user can click Sign in to redirect to login page as well.



Identifier	Providers	Created	Signed In	User UID
xyz@gmail.com	✉️	Jul 7, 2022	Jul 8, 2022	dNjsefqomWW4dZWHnEdUF2z5...
abc@gmail.com	✉️	Jul 7, 2022	Jul 7, 2022	crXUaUQwfaZ8S92FFDX8DF8Nm...
helen@gmail.com	✉️	Jul 4, 2022	Jul 4, 2022	geng3p4PdTlrrhNAhXy3dgAgh2
maylin@gmail.com	✉️	Jul 4, 2022	Jul 4, 2022	38UzMwpptJ3UDTFBjymSgCTYM2l...
phang@gmail.com	✉️	Jul 4, 2022	Jul 12, 2022	7r3xrnFf0mRsXdTZOXkOpHQK3hy1

# Login Page

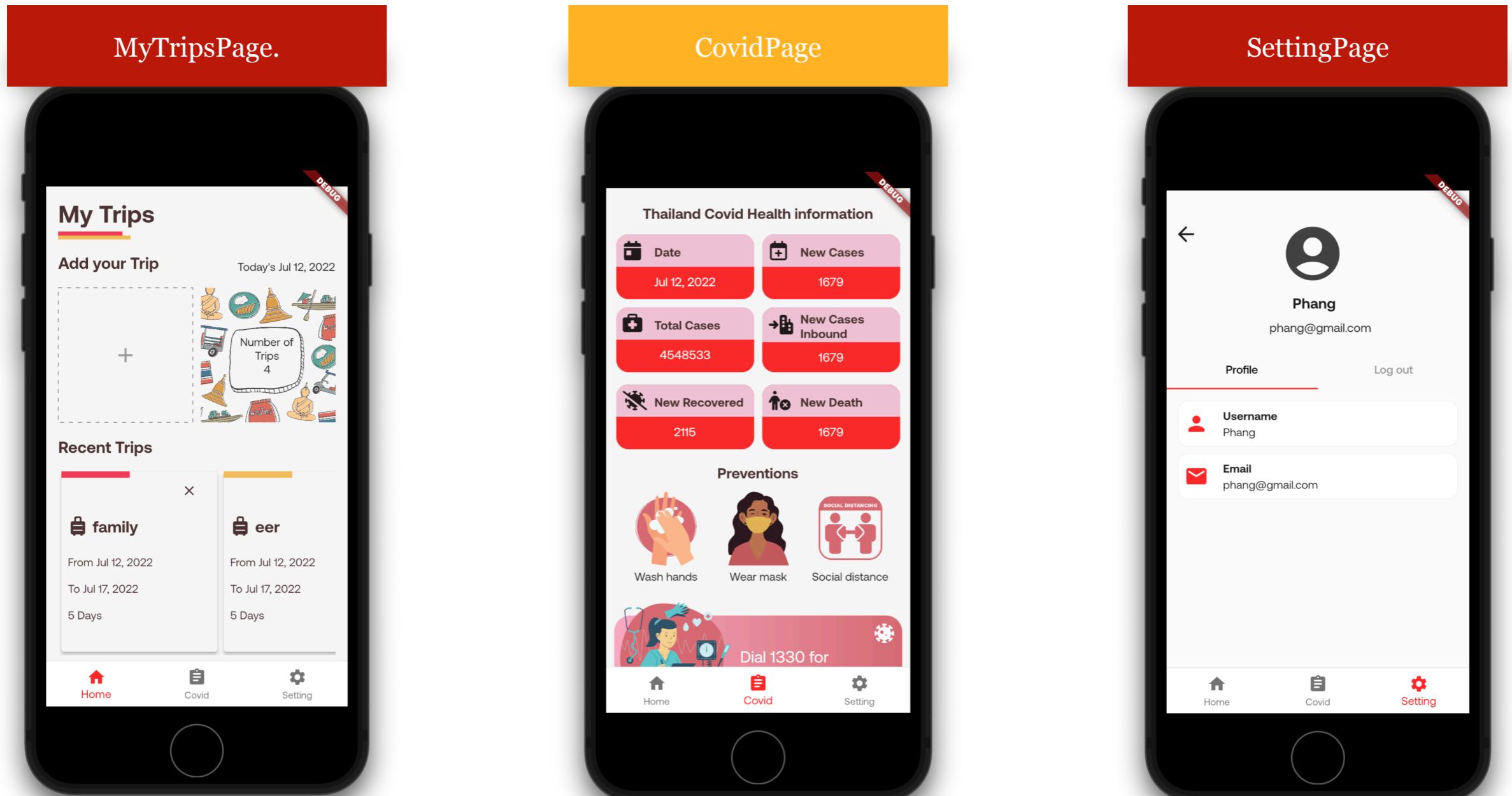
If the user never login to the application, this is the first page they will be introduced. The user needs to be login first in order to utilize the features of the application. The email and the password the user has input will be authenticated by Firebase Authentication. If the email or the password does not match, the error will be sent by Firebase Authentication and display to the user.



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# Overview of Homepage

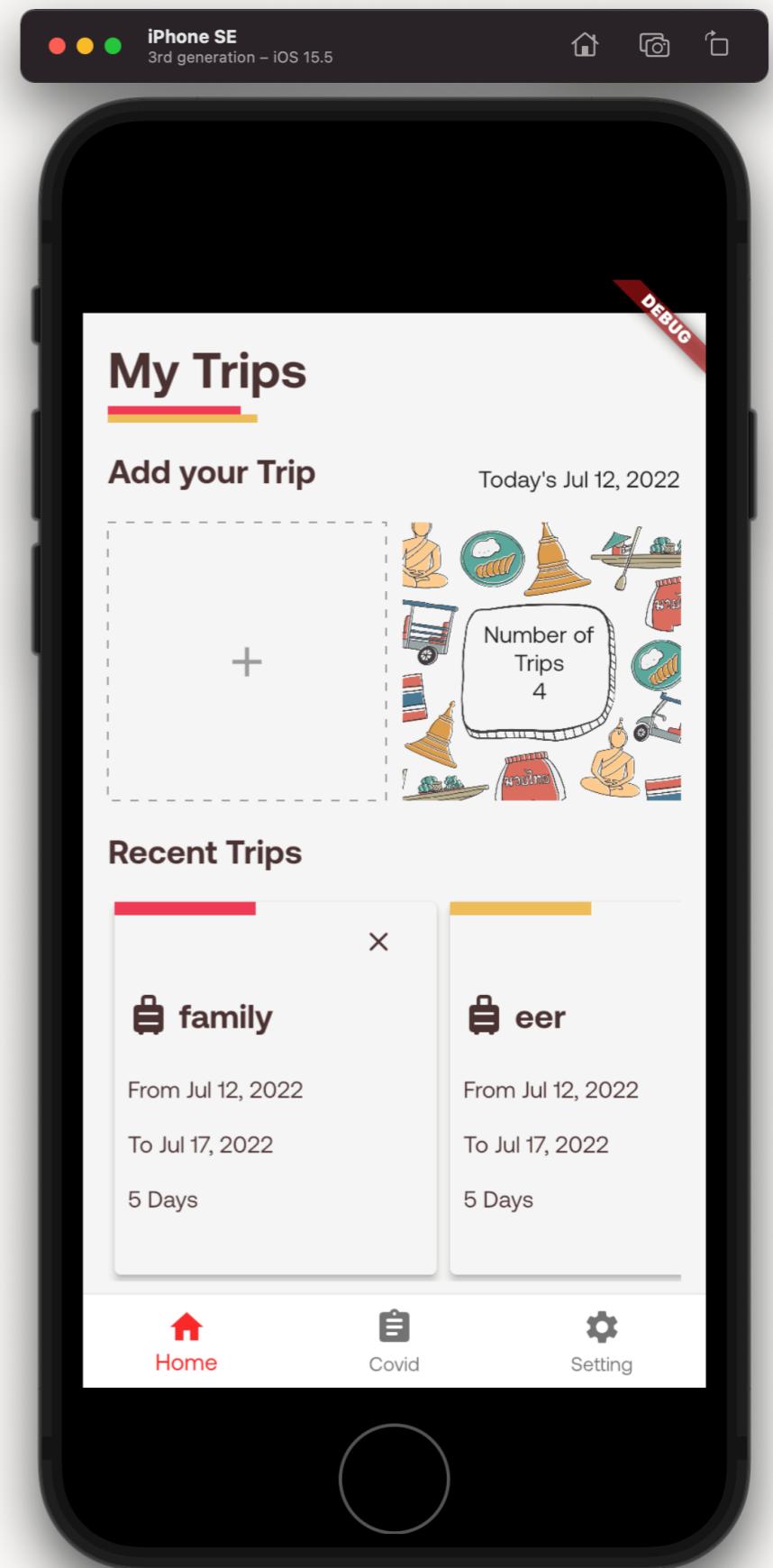
After the user login successfully, user will be redirect to homepage. Homepage is mainly consists of three sub-pages, which are MyTripsPage, CovidPage, SettingPage.



## Mobile Application Project 2

# 1. MyTripsPage

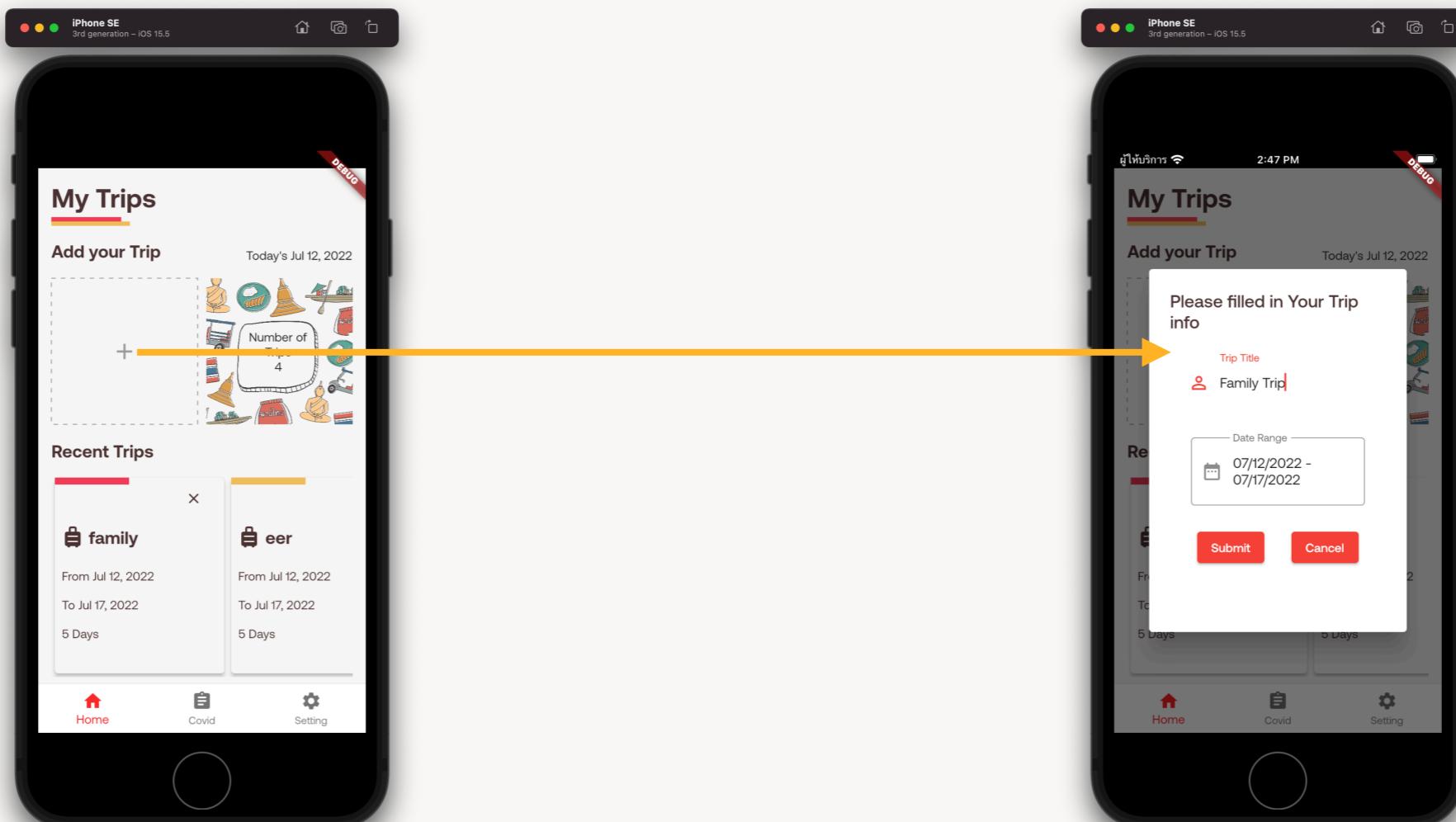
MyTripsPage composes of two sections. The first section is Add your Trip. You can create your new trip by clicking + in the dotted box. The box next to dated box will display number of trips that this user has created so far. For the second section, Recent Trips, it will display title, date and duration of each trips that the user has created. The user can click at each each box it will show details of each trip as well as the expense details as well. The detail of each features will be discussed next.



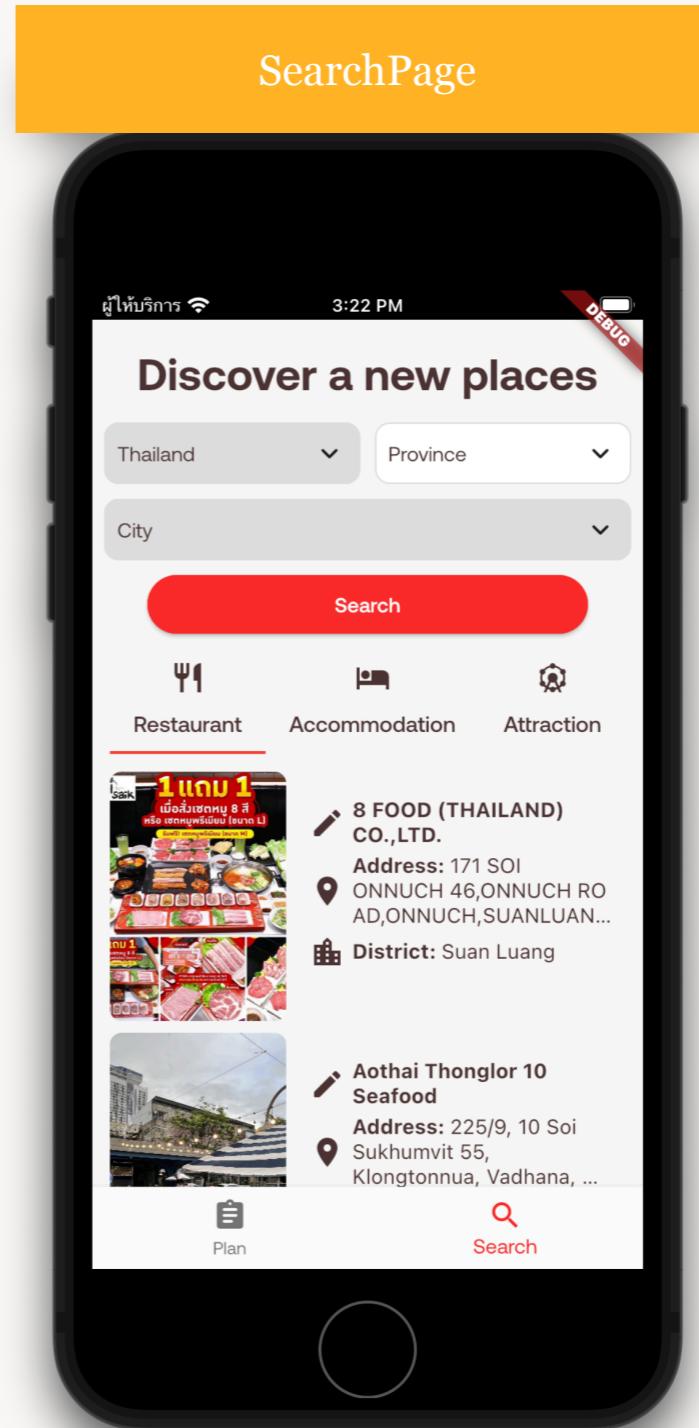
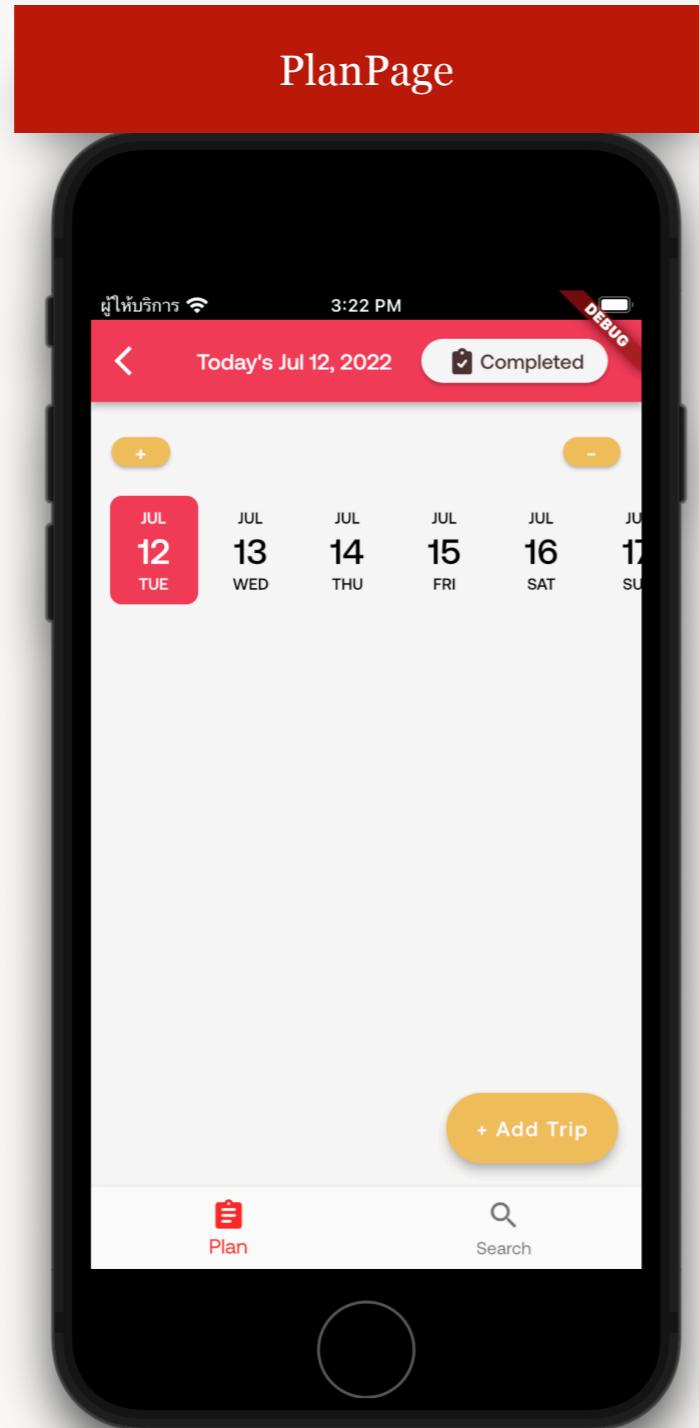
## Mobile Application Project 2

# 1.1 Create a new trip

The user can create a new trip by clicking the + in the dotted box. Once the user has clicked, there will be a dialog pop up for the user to fill in the title and the start date and end date of the trip. If the user has finished filling those two input, the user can click submit to proceed next. Otherwise, clicking cancel to go back to MyTripPage.



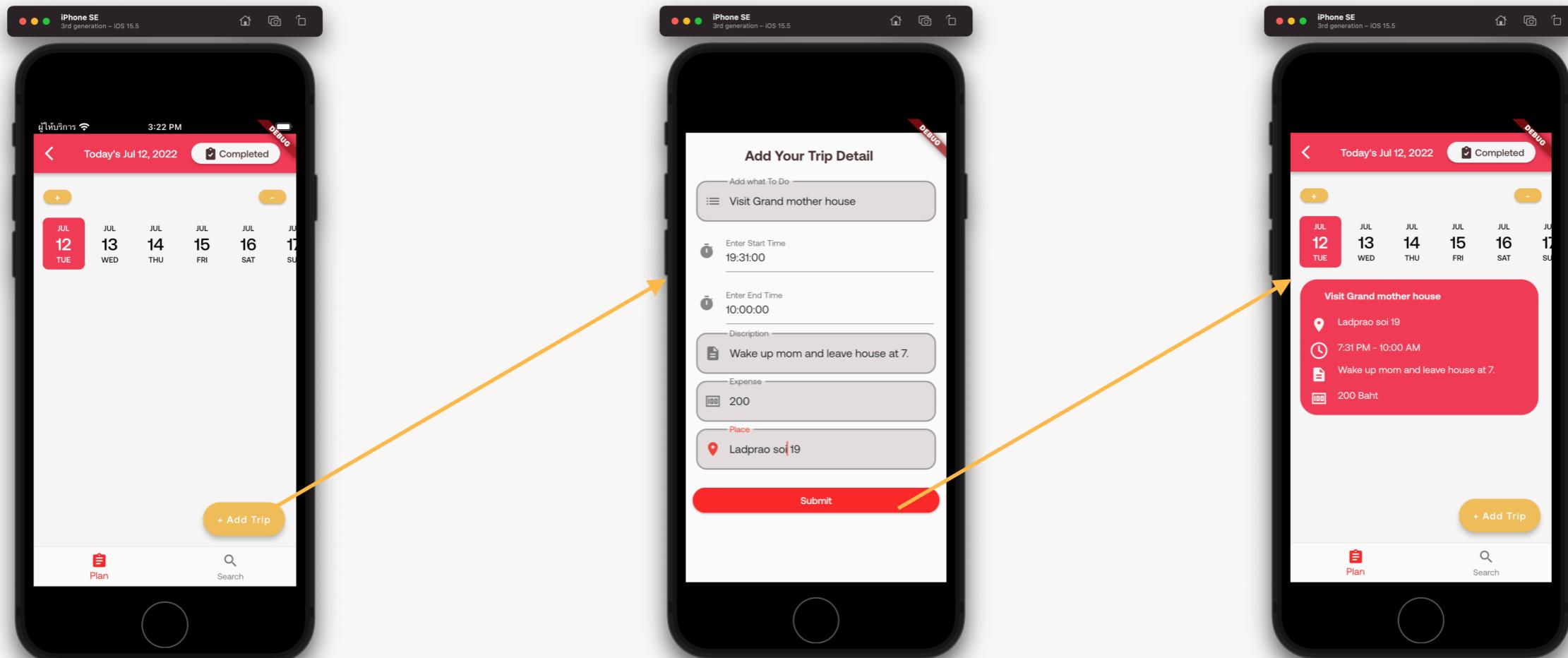
After the user clicked submit, the user will be introduced to AddPlanPage where AddPlanPage is also has two sub pages which are PlanPage and Search Page.



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# Plan Page

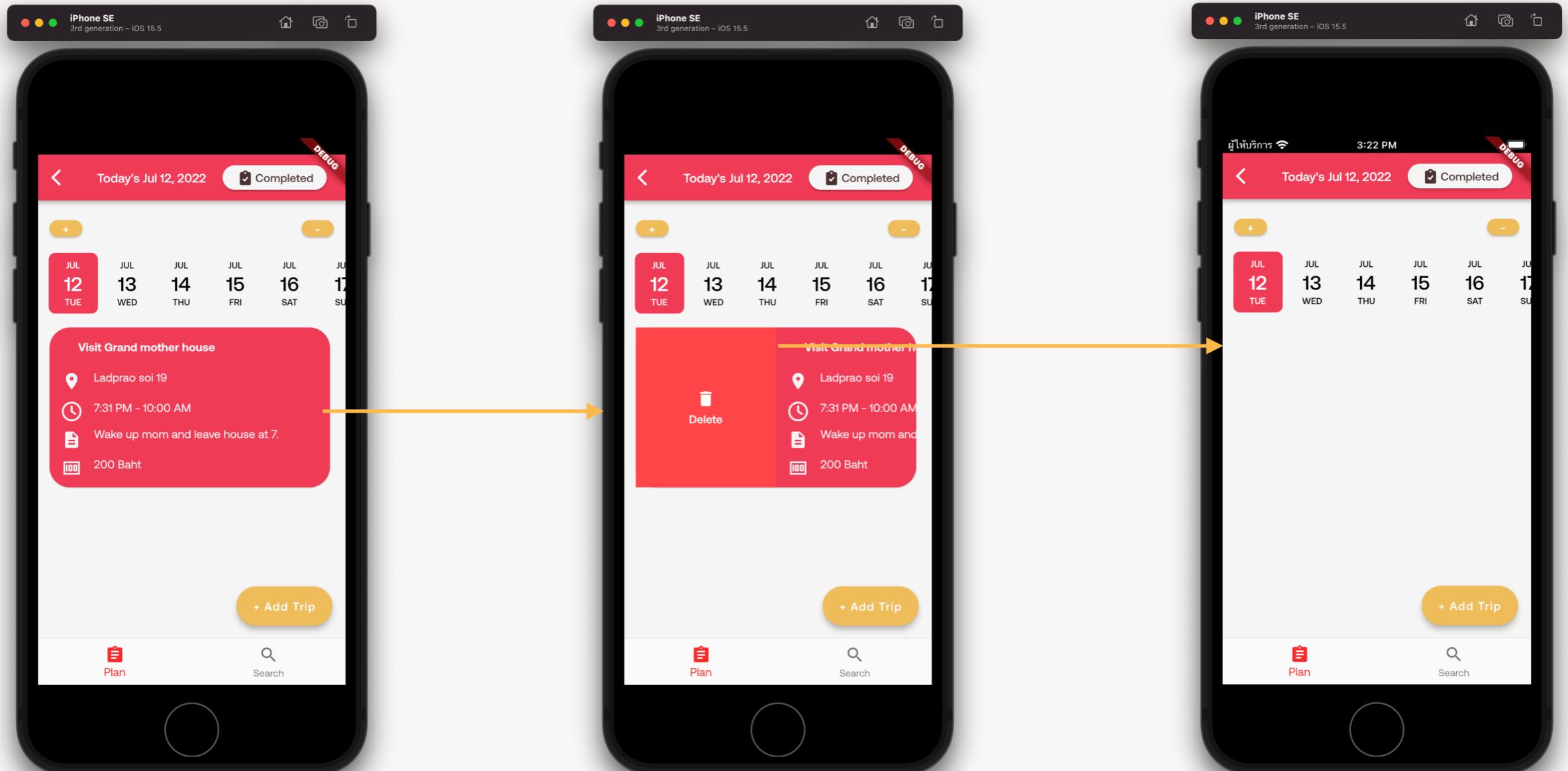
In this page, the user will see the calendar of the date that the user has input, the user can click the calendar to choose which date the user wish to plan. For example, in this case, the user select 12 July 2022, the user can add trip detail on 12 July by click the add trip yellow button. The add trip detail dialog will pop up afterwards. The dialog will ask use to fill in what to do, description, expense, start time, end time and place the user have to go. Once the user filled all information, the detail will be display in the plan page. The add and delete button are provided for the user in case they want to increase or decrease the duration of the trip.



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# 1.2 Delete trip details

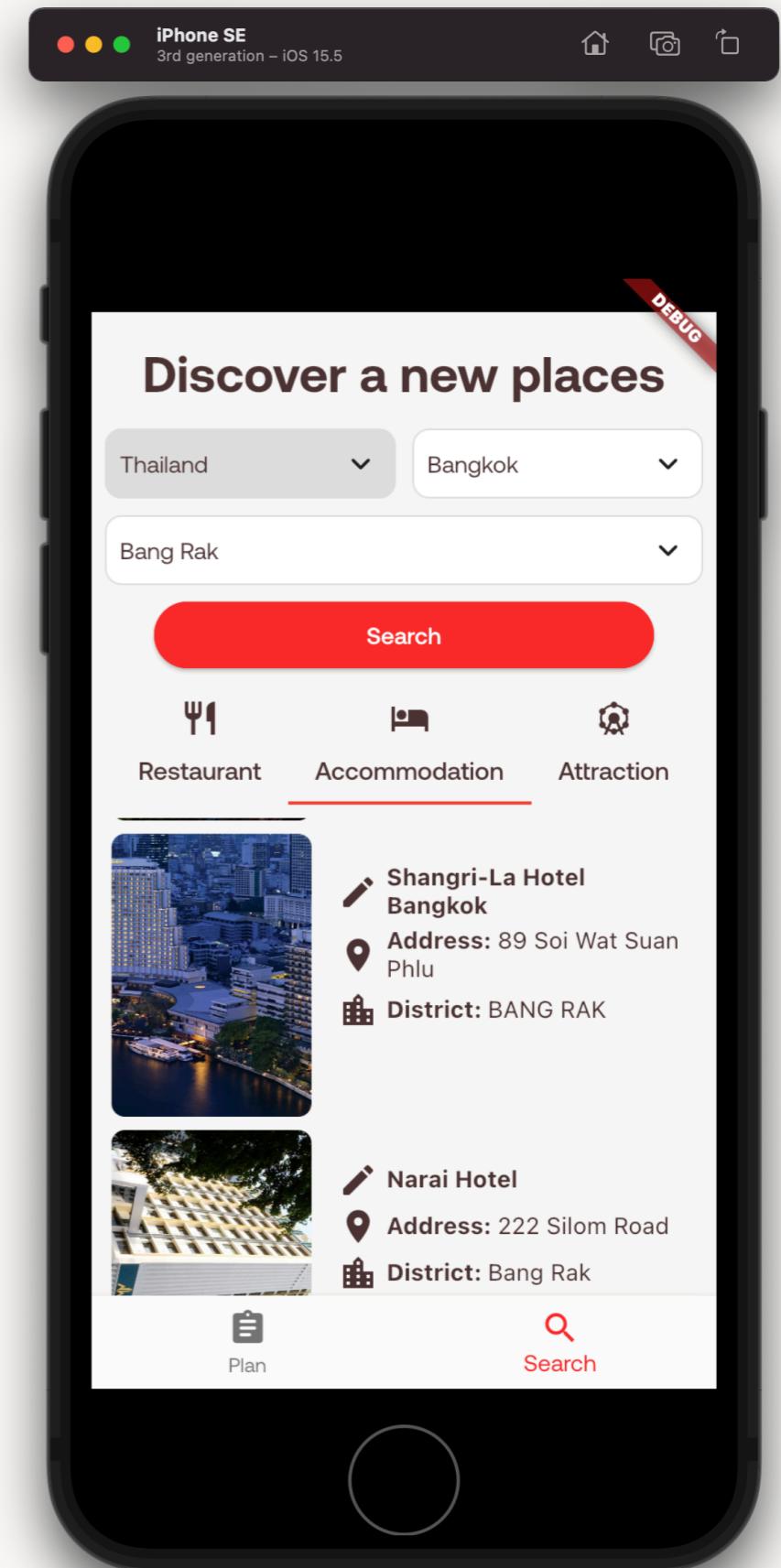
You can delete each trip details by slide the box to right. There will be a delete button for you. Once it is clicked, the details trip will no longer appear.



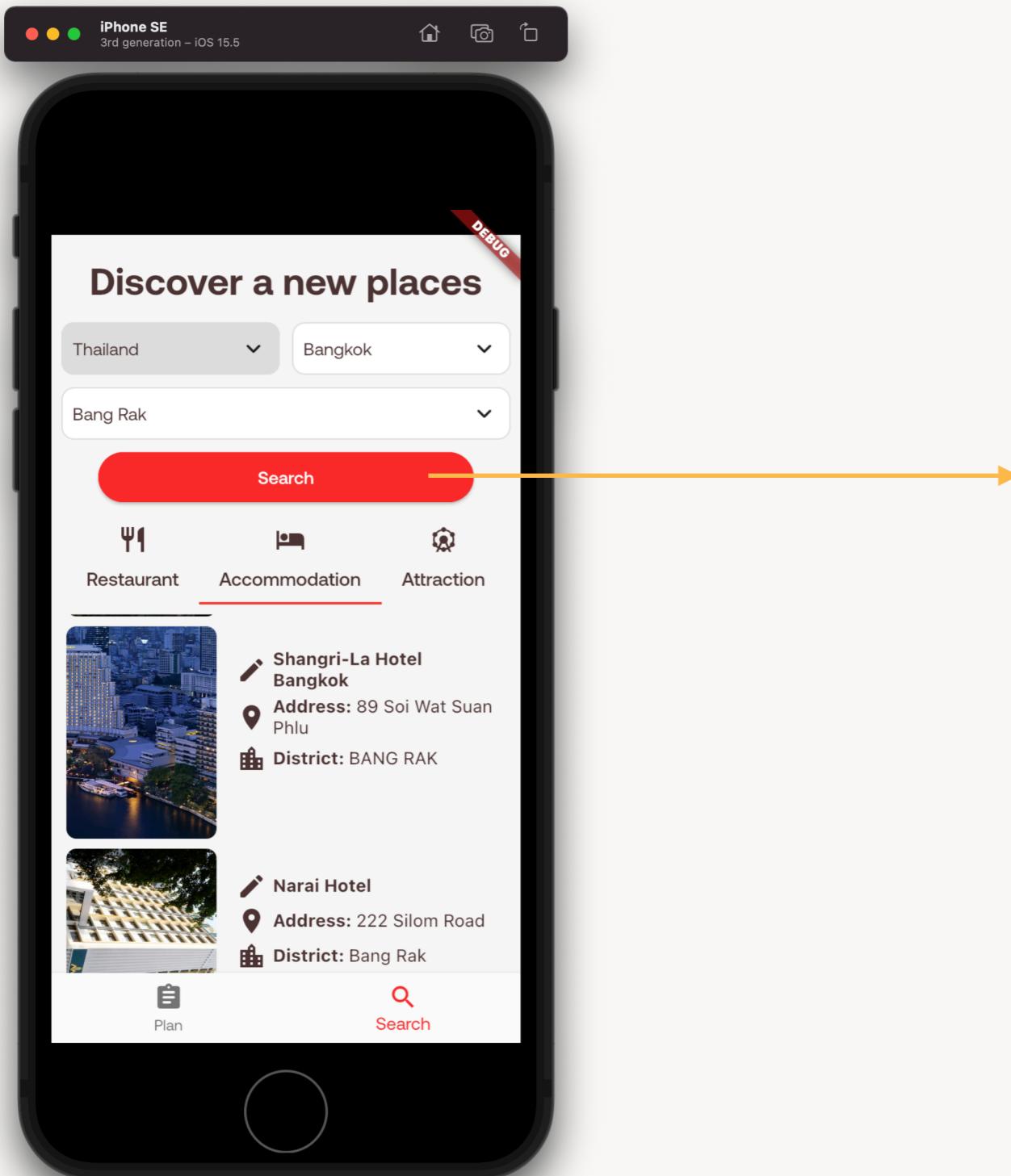
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# 1.3 Search Page

The user can click ‘Search’ Icon on the bottom Navigation in order for them to search for a particular place from a specific province and city according to their needs. We provided them with three different categories which are restaurant, accommodation and attraction, along with some of the details of that particular place such as place name, address, and district. As they scroll through the page and find their specific target, the user can click into the picture and it will then link the user into the show place details page.



Once the user clicked search, the province and the city of user's choice will be translated to a geolocation or latitude and longitude. We convert this by using api from Back4App which provide you a pair of latitude and longitude to that province and city.



The screenshot shows the Back4App Database Hub. The top navigation bar includes "Database", "API Playground", "Get Started", "Issues", and "Contributors". A red banner at the top right says "Lat Long Api". Below the banner, there is a section titled "Clone a Database Today" with instructions: "1. Choose a public database", "2. Clone", and "3. Now you have a copy of it!". A diagram shows a "Read" icon connected to a "Clone" button, which then connects to a "Read & Write" icon. The main content area shows a table titled "Zip and Postal Codes of All Countries / TH". The table has columns: accuracy, adminCode1, adminName1, countryCode, geoPosition, placeName, and postalCode. The data is as follows:

accuracy	adminCode1	adminName1	countryCode	geoPosition	placeName	postalCode
4	10	Bangkok	TH	(14.3333, 99.9167)	Lat Phrao	10230
4	10	Bangkok	TH	(13.7667, 100.45)	Taling Chan	10170
	10	Bangkok	TH	(13.7083, 100.4562)	Yannawa	10120
4	10	Bangkok	TH	(13.7167, 100.4333)	Phasi Charoen	10160
4	10	Bangkok	TH	(13.8667, 100.6)	Bang Khen	10220
	10	Bangkok	TH	(13.7083, 100.4562)	Wattana	10110

After we receive the latitude and longitude, we then call api from TAT (Tourism Authority of Thailand to get Restaurant, Accommodation and Attraction details of a specific longitude. However, to get those details, the api of TAT requires the query parameters to be a place id. To retrieve a place id, we call another API of TAT called GetPlace where its required input are longitude and latitude and a province name. We called GetPlaceSearch Api first and then use the place id we received called GetRestaurantDetail, GetAccomodationDetail and GetAttractionDetail Api from TAT as well then display on search place.

**GetAttractionDetail**

Get Attraction Details. Additional information about specified location such as open-close time, telephone number, email, etc.

**HTTP Request**

https://tatapi.tourismthailand.org/tatapi/v5/attraction/{place\_id}

**Request header**

Header	Description
Content-Type	application/json, text/json
Authorization	Bearer (Your TAT API key)
Accept-Language	Display language support: "th" or "en"

\*\* TAT Token Key. To get the Token Key, please register your profile on the "Developers Thailand Tourism"

**Parameter**

Name	Type	Required	Description
place_id	String	Required	ID of Place which are returned from TAT services for example 'PlaceSearch'

**GetPlaceSearch**

This service allows you to search place information in TAT POI. You can query specified area by sending parameters, category or province name.

**HTTP Request**

https://tatapi.tourismthailand.org/tatapi/v5/places/search

**Request header**

Header	Description
Content-Type	application/json, text/json
Authorization	Bearer (Your TAT API key)
Accept-Language	Display language support: "th" or "en"

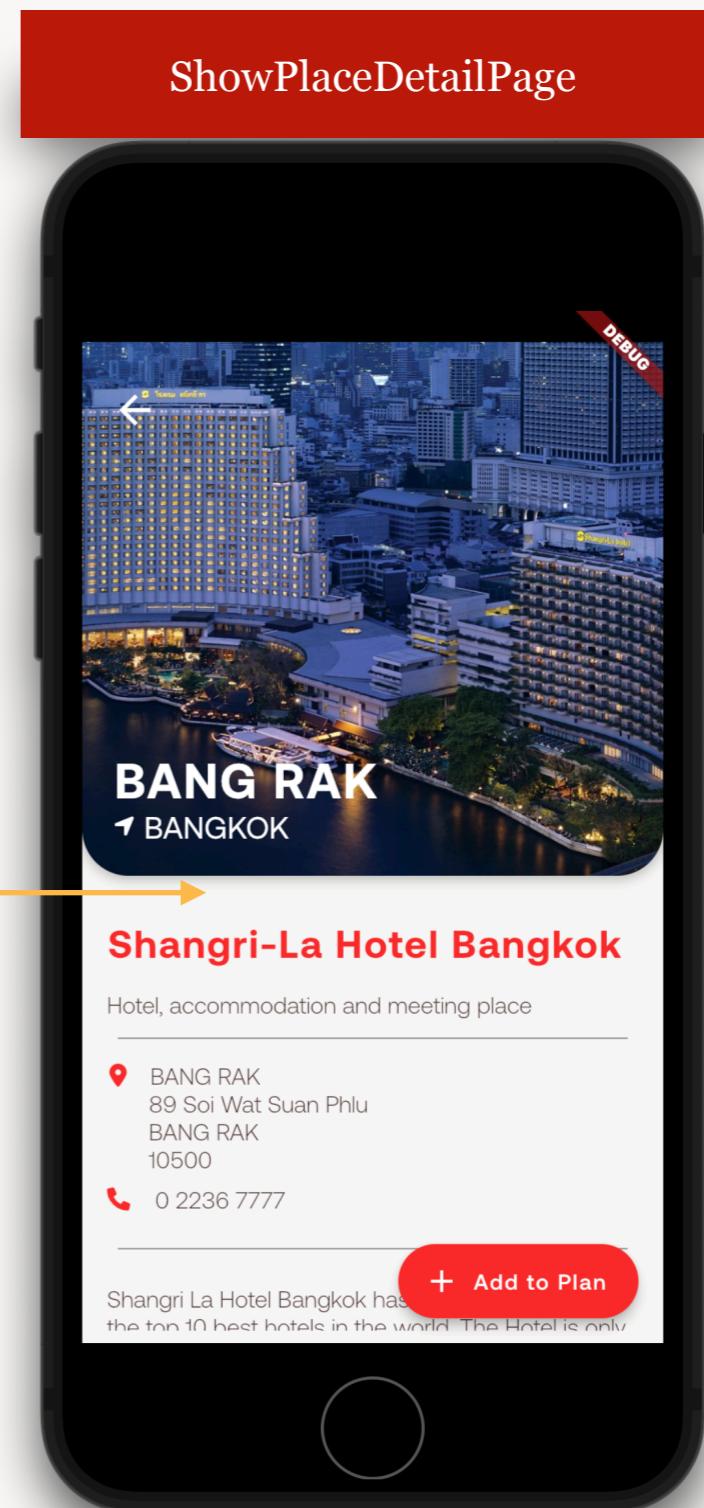
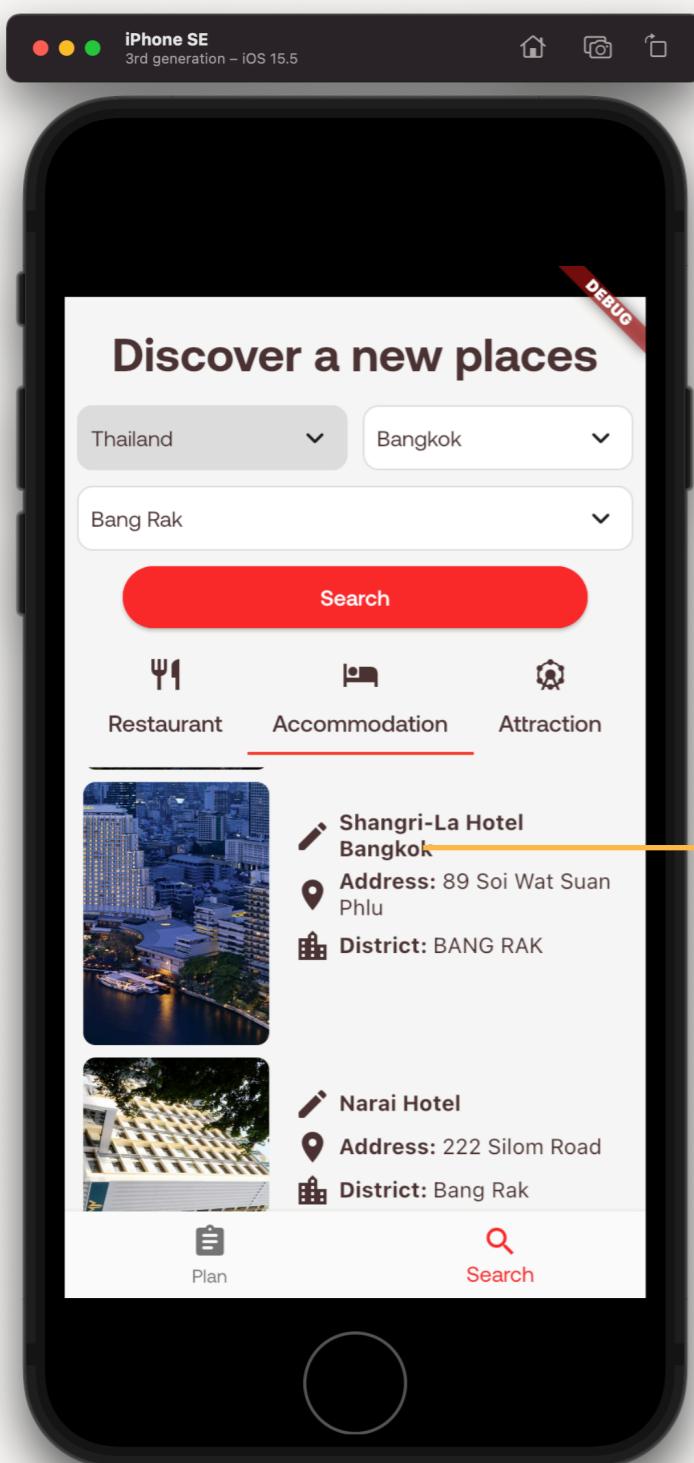
\*\* TAT Token Key. To get the Token Key, please register your profile on the "Developers Thailand Tourism"

**Parameter**

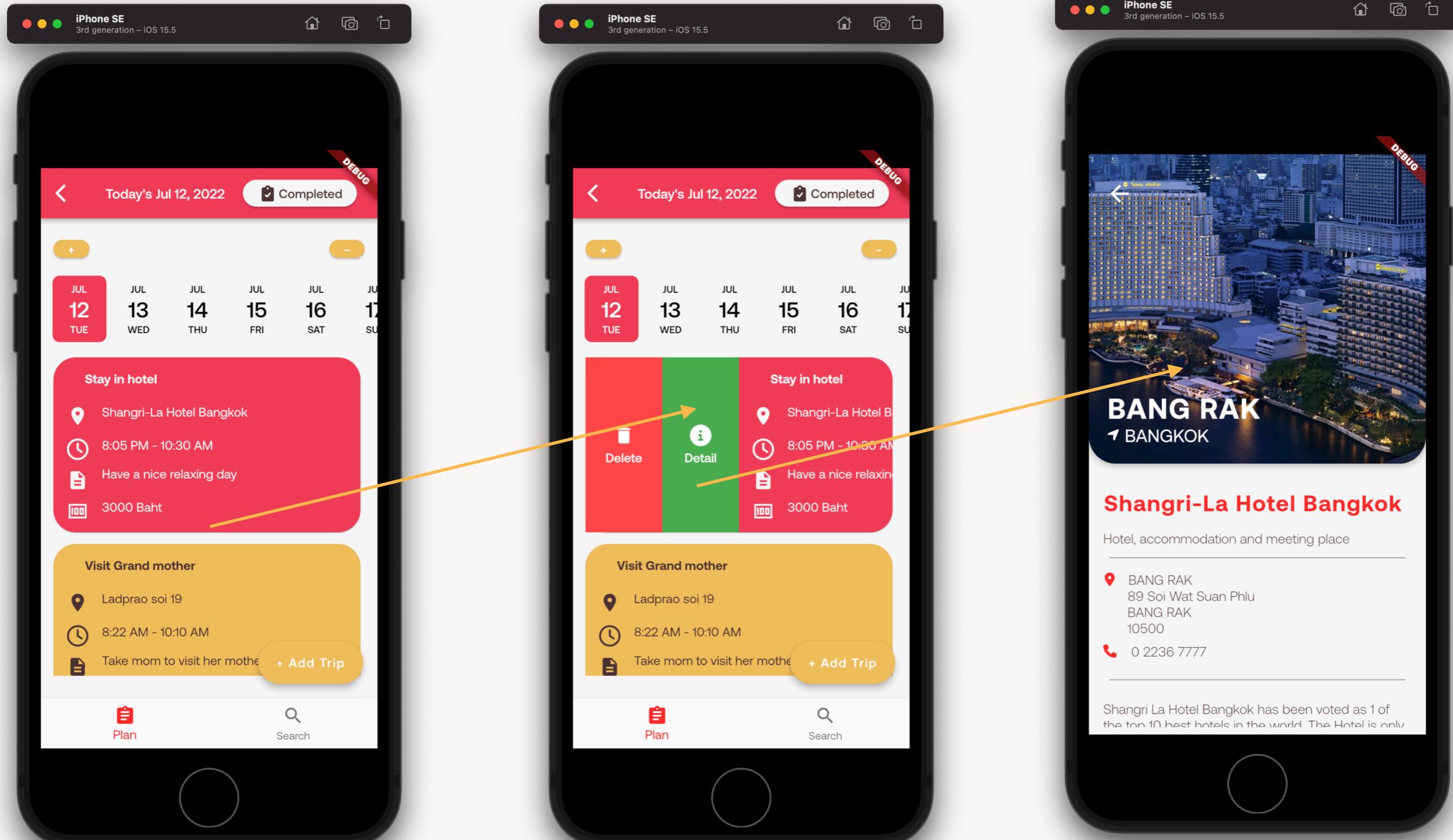
Name	Type	Required	Description
keyword	String	Required	A term to be matched with TAT place name, mapcode or latitude,longitude.
geolocation	String	Required	A GIS location of Latitude and Longitude in decimal degree. latitude is between -90 to 90 and longitude is between -180 and 180. For example: geolocation=13.7222793,100.528923

TAT's Place category such as "SHOP|ACCOMMODATION". All categories are separated using the pipe (|) character.  
Category for Filter support:  
• ALL = All Category.

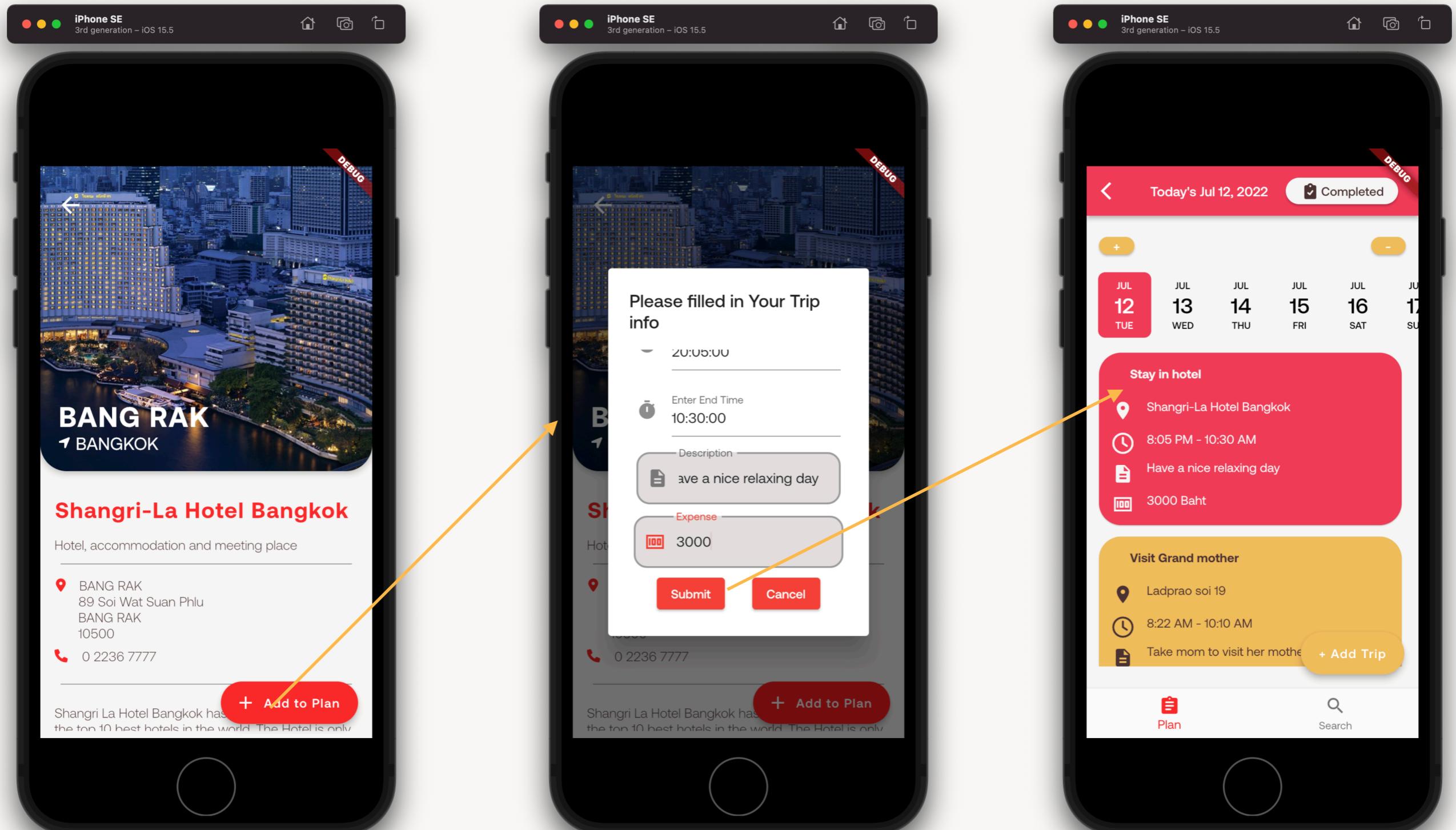
Once the api call is completed. The app will display all details and the user can click into the picture and it will then link the user into the show place details page. This page will display the name, the picture, the city, the province, contact, location and the description of the place. Note that not all the places have this informations. We display only the information that provided.



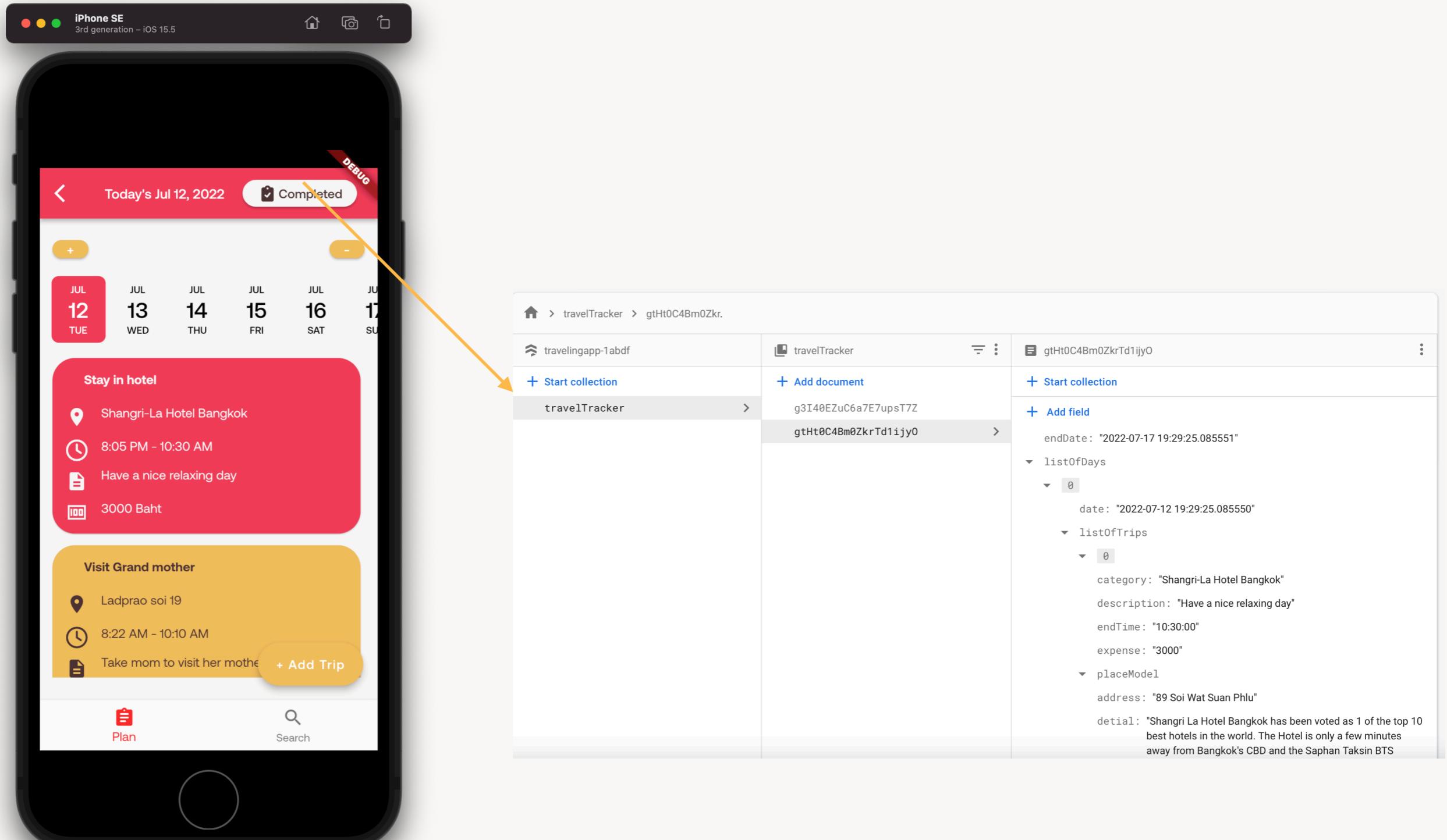
Now if the user wants to go back take look the place detail again, in this case Shangri-La Hotel Bangkok, then the user can swipe the box the right. It will appear to you delete option and detail option, click on detail. It will link you to the ShowPlaceDetailPage.



Now, not only the user can search places according to where the user wish. The user could directly add those places to the user plan by clicking +Add to Plan button. It will pop dialog for the user to additional detail such as start time, end time, expense and description. Once the user fished, the user can click submit and the detail will be pop in the PlanePage on the specific date that the user previously selected.

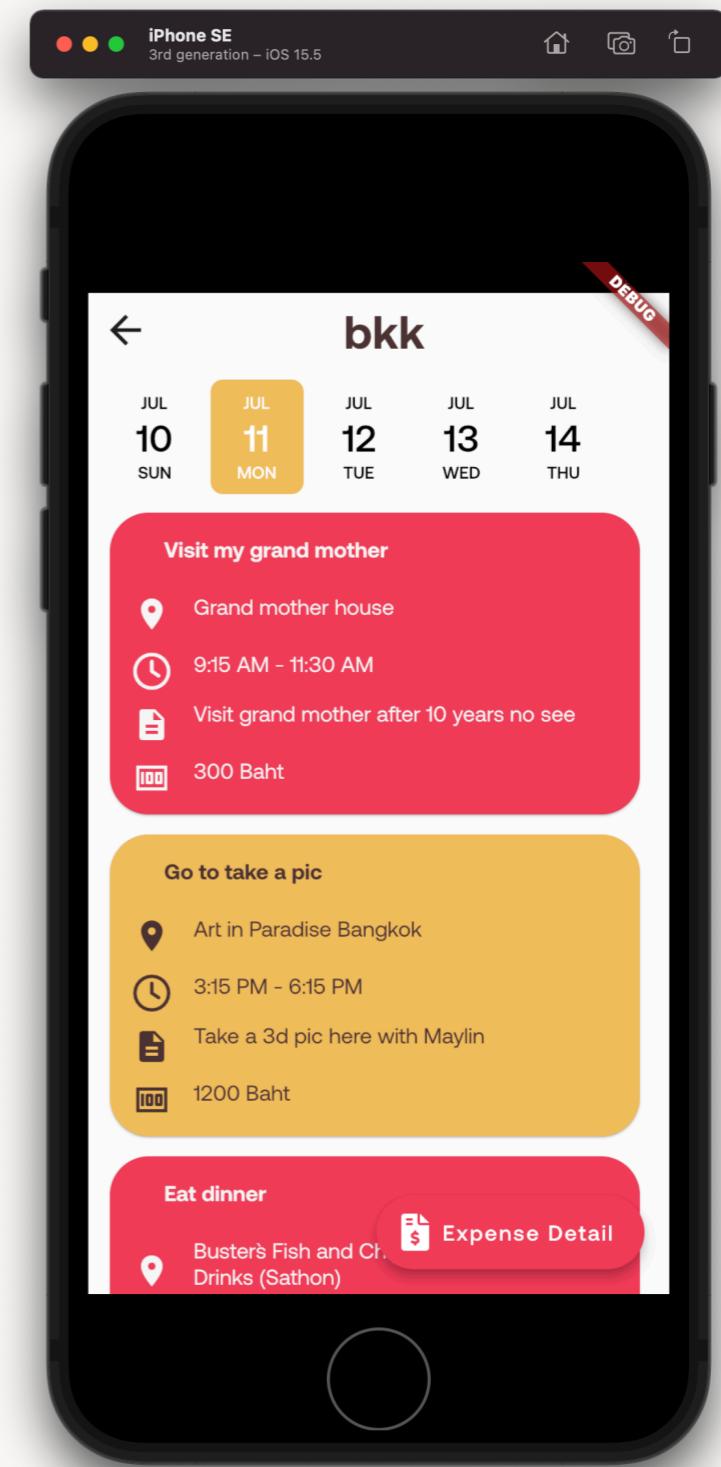


Now, if the user finished add all detail of this trip The user can click completed button on the right top. When the completed button is fire, the trip detail will be store at the fire store.



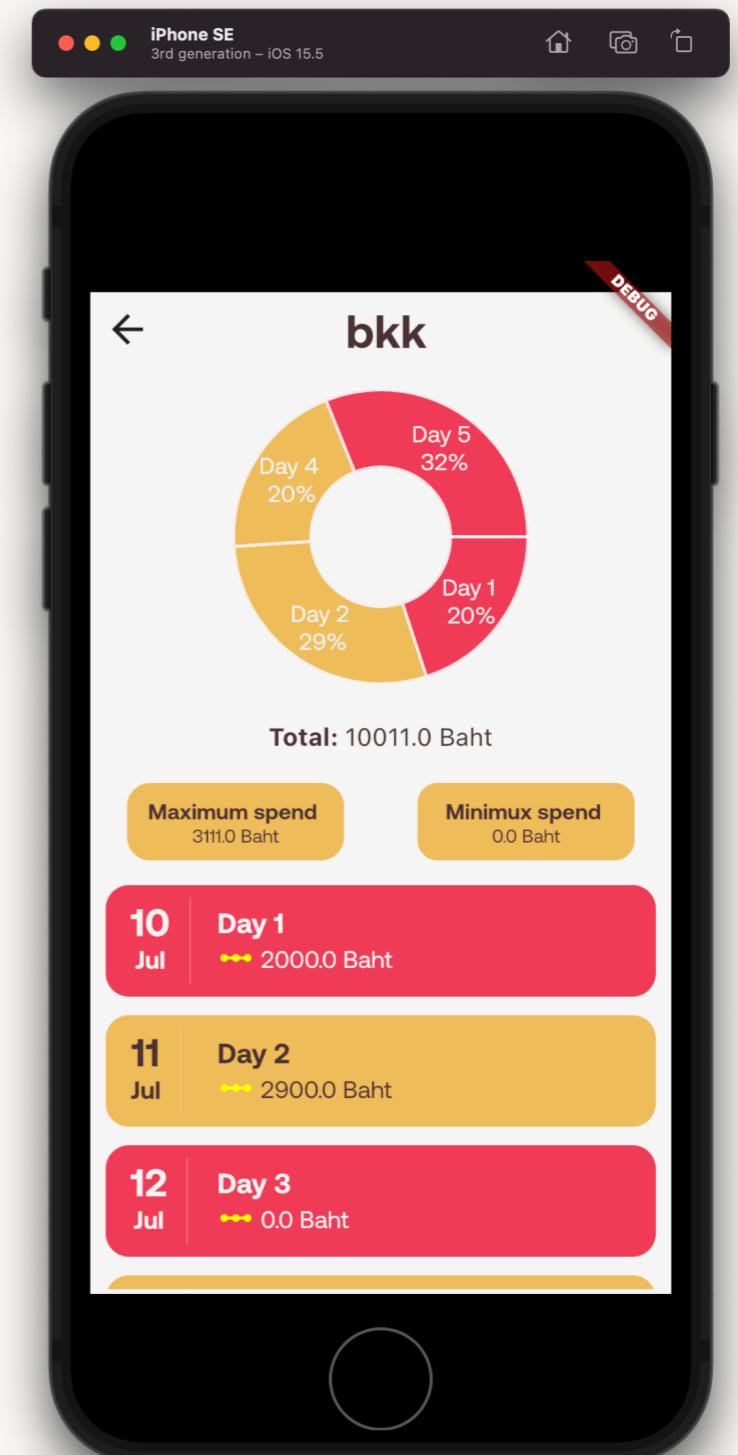
# 1.4 Look at Trips that has already created

With this page the user can check their recent details of the trip on each day by selecting the date from the datepicker, which will then display each detail box. Those boxes represent each different task that the user chooses to do on that particular day and include specific details. Moreover, users can slide each box to the right to see more details about it. Those particular tasks and their information were retrieved from the firestore as we store it in the beginning of add trip information. In addition, on the bottom right of the screen there's a floating button called 'Expense details', where the user can click and see their overall expense in this recent trip.



# 1.5 Summary expense report in a trip

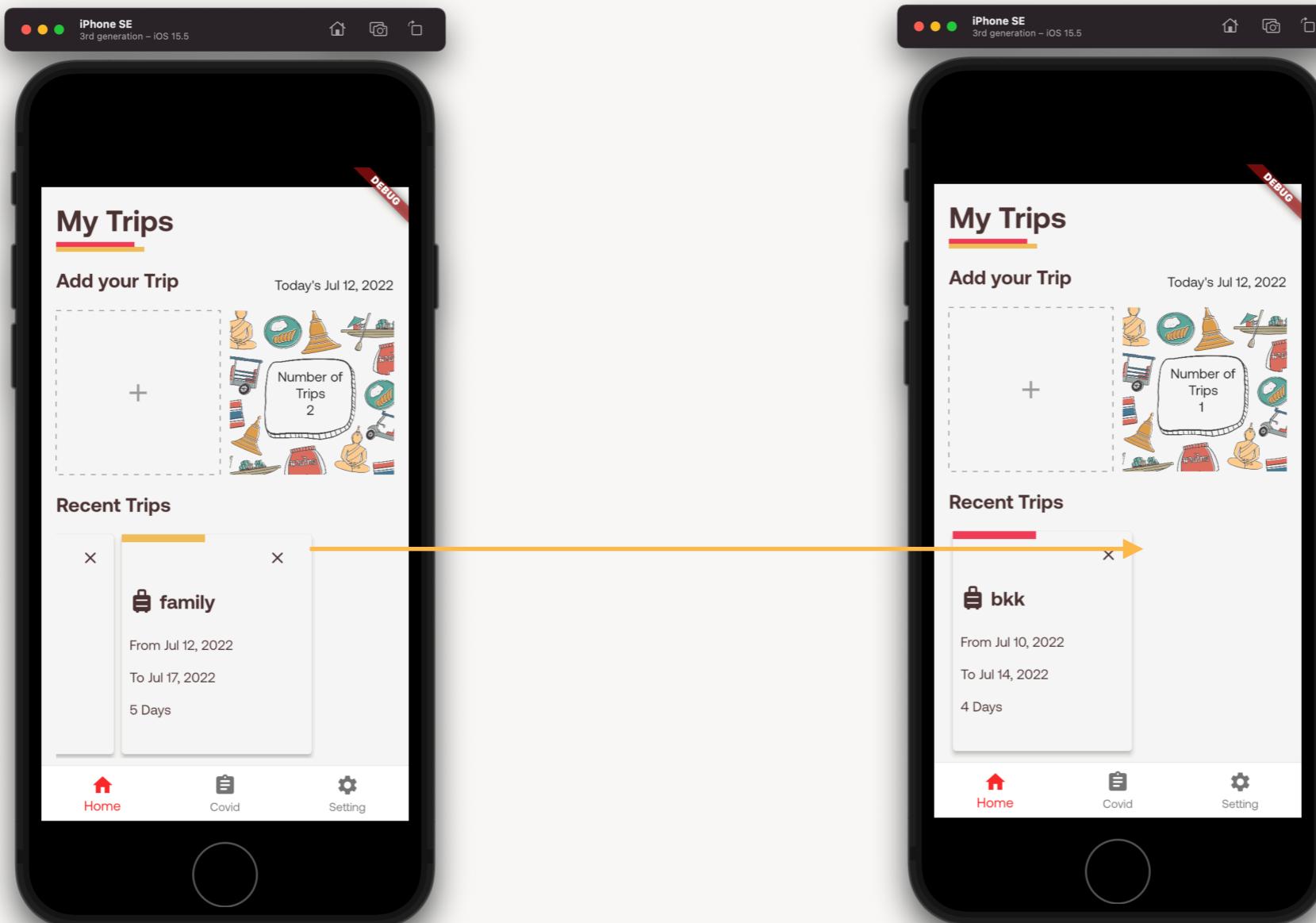
As the user arrives on this page, a pie chart will be provided to show the percentage of expense distribution on each day in the trip. Maximum, minimum and total expenses are shown, where the list below shows the expenses from the first day till last day of the trip. Same as before the data were retrieved from firestore and used for displaying to users.



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# 1.6 Delete Recent Trips

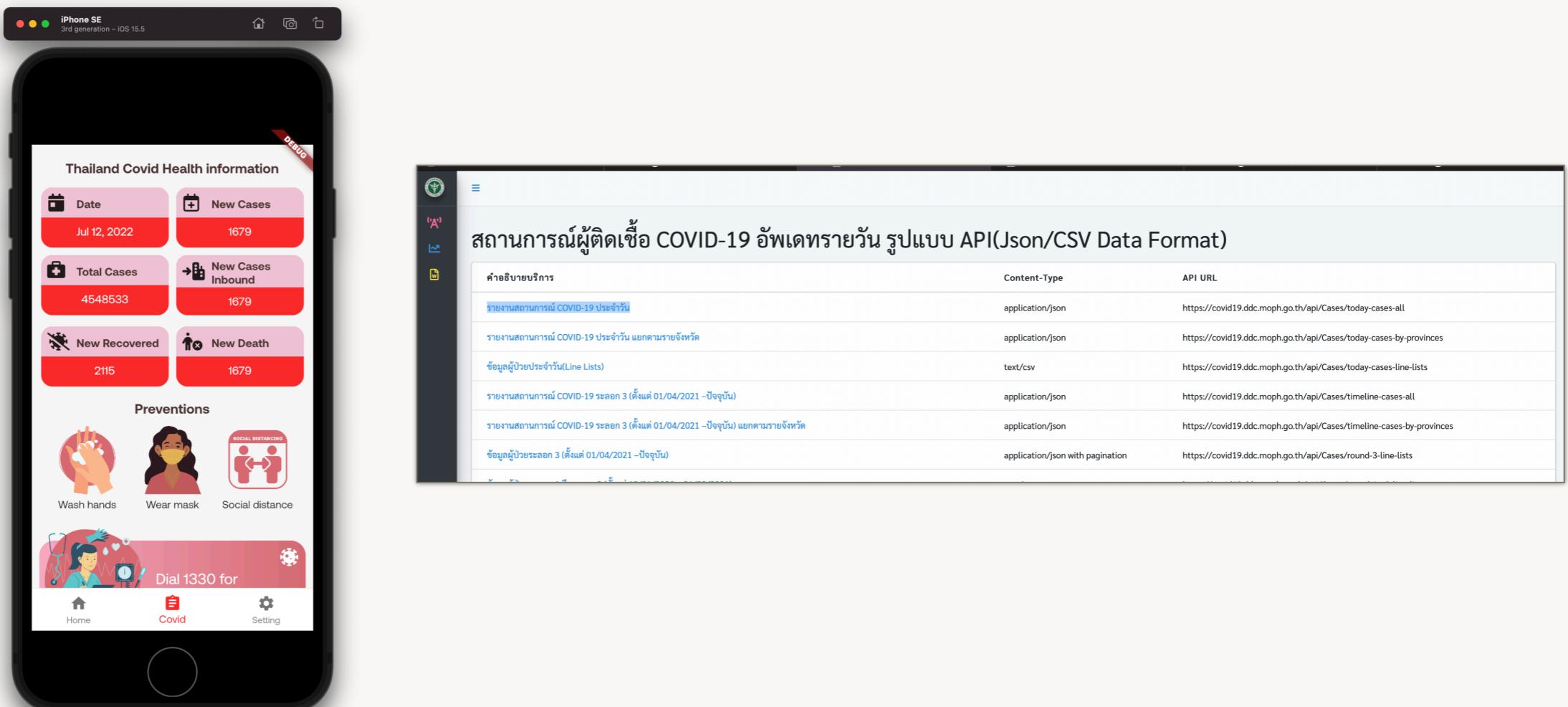
The user can also delete the trip that has already been created by clicking the X on the trip user wan to delete. Once it is clicked, we will call Firestore to delete this trip where it has this specific documentId. Afterwards, the trip will no longer display and the number of trip will be decreased too.



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# 2. CovidPage

In this page, we provide users the information about covid cases according to each particular day. Where the information include date, new case, total cases, new cases inbound, new recovered, and new death, as well as prevention strategies and emergency contact are shown. As the user enter this page, the data from Covid-19 thailand ddc open data were called and retrieve by API รายงานสถานการณ์ COVID-19 ประจำวัน, which then result and display information to the user.



# 3. SettingPage

For the setting page, the information of that particular user is shown such as username and email. In addition, a logout button was added as well. As the user clicks log out there will be a pop up dialog asking for the confirmation where the user can assure and leave the page.

