Project 2

Final report

Lee Hern Ping

CSCI 4237

12 November 2023

Class Activities and Homework

Summary:

https://github.com/GWU-CSCI-4237-Fall-2023/project-2-hernpiblo/pull/1

App is inspired by my own experience now as an exchange student in the US. I am travelling to other cities/states/countries and when I have to start researching about the places I want to go, I usually look to Google Maps to find the major hotspots / tourist attractions first before finding the less known spots. This app helps to get me started on finding the main places since these places will have the most reviews/highest rated on Google Maps.

App allows user to login/signup using Firebase Auth which brings them to the home page where they can search for places and pre-select their choice of sorting. The results will show the place name, address, picture, rating, number of reviews and score (rating x number of reviews) which will then be used for the sorting. Users can save the places to the Firebase Realtime Database. When user clicks into their saved places page, it shows all their saved places where users can view it sorted by Name or by Saved time, either ascending or descending. Went with a dark theme this time and tried adding a lot of custom styling this time.

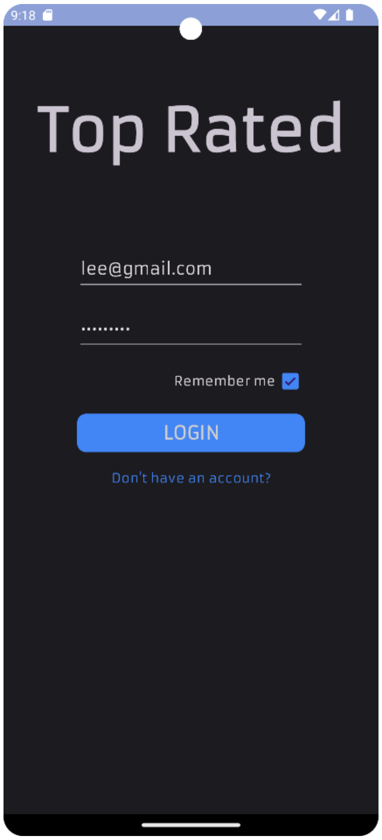
Login Page

The login page has these views: App title (TextView), Email input (EditText), Password input (EditText), Remember me (Checkbox), Login button (Button), Signup button (Button).

Remember me checkbox saves the user email and password into a sharedPref so that it is autofilled the next time. Login button checks if the credentials are correct based on Firebase Auth or else a helpful prompt is shown with the user-friendly error message. Signup button routes to the Sign Up Page.

Screenshots:

Login screen



Top Rated

lee@gmail.com

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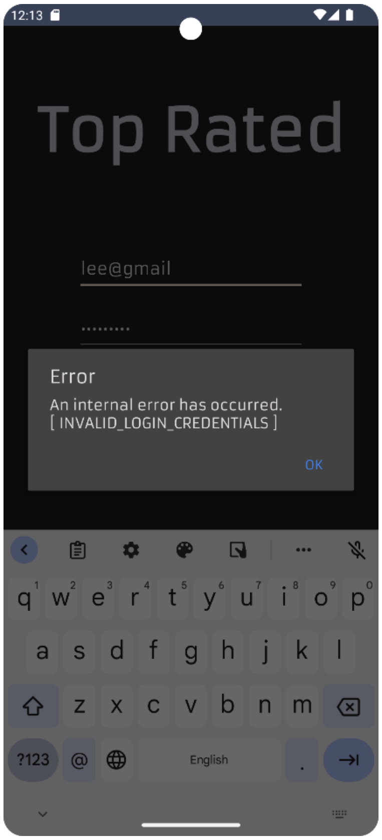
Remember me ☑

Wrong email/password



Top Rated

lee@gmail

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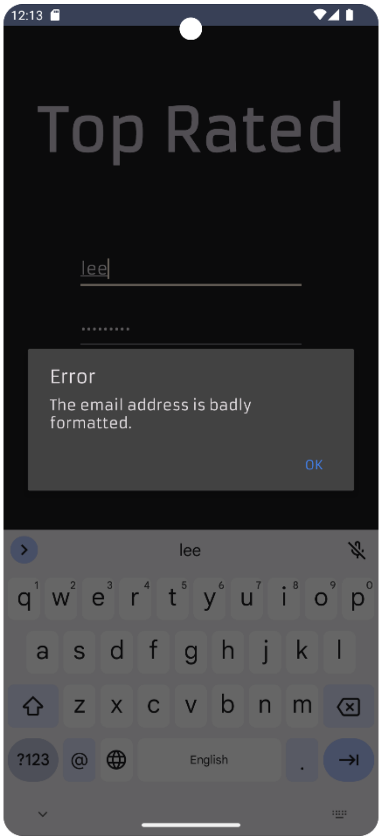
Error

An internal error has occurred. [INVALID_LOGIN_CREDENTIALS]

Badly formatted email



Top Rated

lee

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Error

The email address is badly formatted.

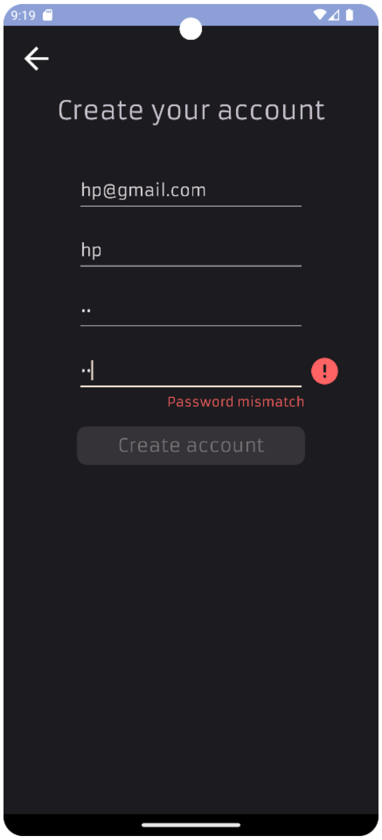
Sign Up Page

Allows user to input email, name and password and confirm password. Create account button does not enable until all 4 fields are inputted and the password and confirm password match.

Error message shows up too if email is already in use. Name is added into the firebase account using (`updateProfile(userProfileChangeRequest{displayName = name})`).When account is successfully created, toast message showing user's name appears and user is routed back to the login screen with their newly created account's email and password auto filled so that they do not have to re-type it all again and can just click login once here.

Screenshots:

Error (Password mismatch)


Create your account

hp@gmail.com

hp

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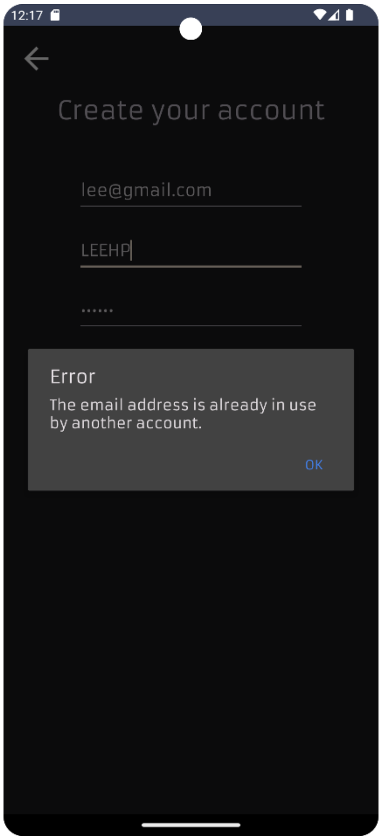
•|

Password mismatch

Error (Email already in use)


Create your account

lee@gmail.com

LEEHP

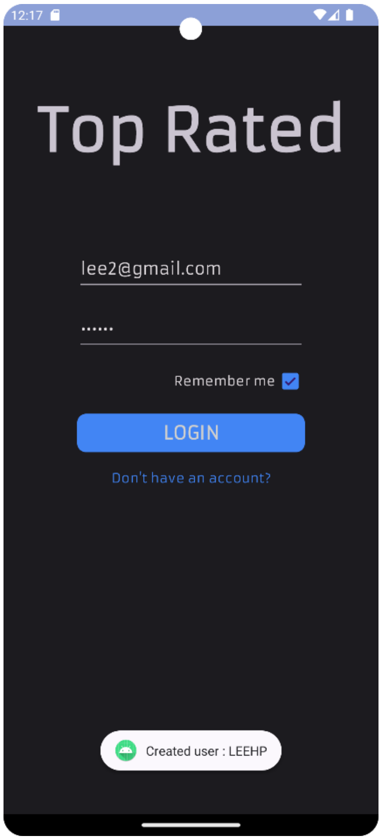
••••••

Error

The email address is already in use by another account.

Success, routed to login,

email and password autofilled


Top Rated

lee2@gmail.com

••••••

Remember me ☑

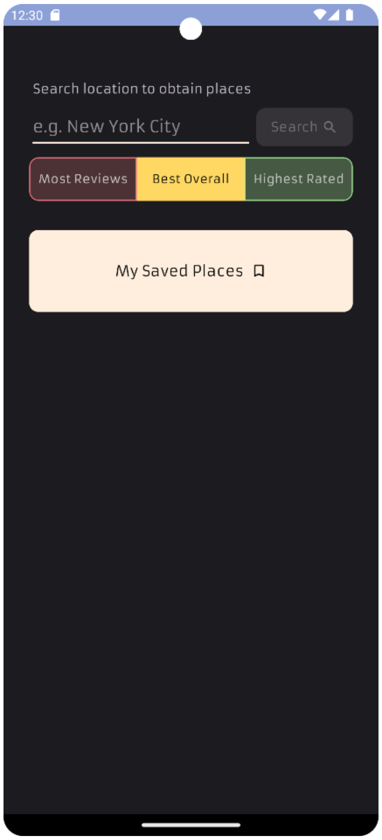
Created user : LEEHP

Home Page

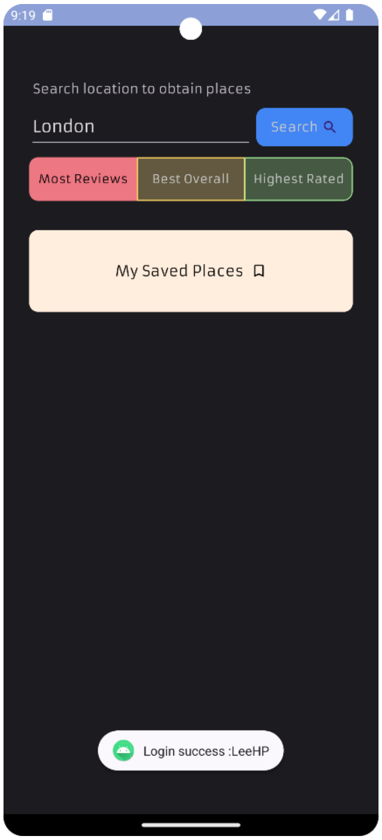
Has an InputText that allows user to enter the location they want to query, and only when it is not blank will the search button be enabled. There is a radio group with 3 radio buttons for user to choose what sort they want initially, either by the number of reviews, the highest rating first or the score (rating x number of reviews). Radio group has a custom appearance to it and it was achieved using custom Drawable Selectors XML and custom color XML that changes the appearance depending on whether the radio button is selected or not. There is a button to allow users to go to their saved places too from this screen. Search term is persistent too by using a sharedPrefs

Screenshots:

Search button disabled



Search button enabled + another radio selected



London

Login success :LeeHP

Results Page

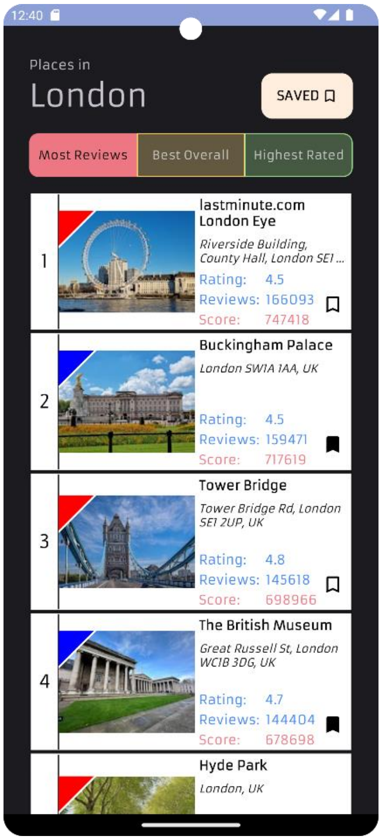
Results page shows the search term at the top and a button tot route users to their saved places page. There is the same radio group that allows user to change the sort order of results. The recycler view shows the saved places in the places cards. Data is fetched using 1) Google Places Text Search API which allows for a text search and then 2) API Ninja Geocoding API to obtain lat and long information and using that for Google Places Nearby Search API and then 3) use the returned results to get the place image from another Google Places Place Photo API. When results are loading, a spinner is shown, and when the results are ready but the photo is fetching another spinner is shown for that photo.

Places Card

Article card contains an index, image for the place, a place name, a place address, place rating, number of reviews for the place, score (which is rating x reviews) and a button to save the place to database. Button changes icon depending on if the place is saved or not, When clicked, a toast message shows up saying (Saved: <place> or Unsaved: <place>) . Upon Clicking the card itself, it redirects the user to open the place in Google Maps App. When user saves and unsaves, a spinner is shown until the firebase database is done with the action.

Screenshot (Results):

Results (default sort)



1 lastminute.com London Eye
Riverside Building, County Hall, London SE1 ...
Rating: 4.5
Reviews: 166093
Score: 747418

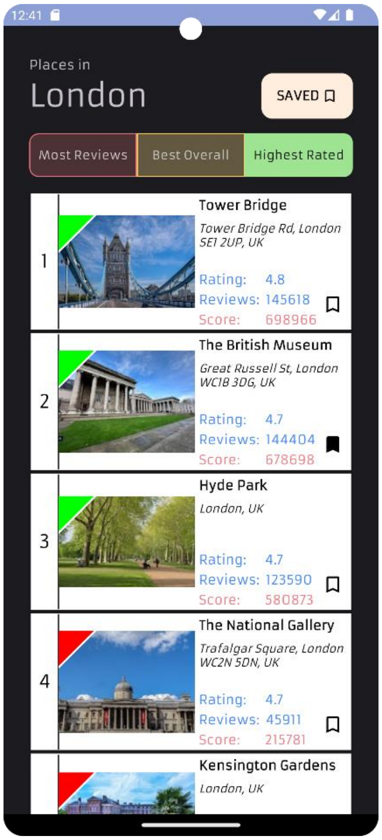
2 Buckingham Palace
London SW1A 1AA, UK
Rating: 4.5
Reviews: 159471
Score: 717619

3 Tower Bridge
Tower Bridge Rd, London SE1 2UP, UK
Rating: 4.8
Reviews: 145618
Score: 698966

4 The British Museum
Great Russell St, London WC1B 3DG, UK
Rating: 4.7
Reviews: 144404
Score: 678698

Hyde Park
London, UK

Results (different sort)



1 Tower Bridge
Tower Bridge Rd, London SE1 2UP, UK
Rating: 4.8
Reviews: 145618
Score: 698966

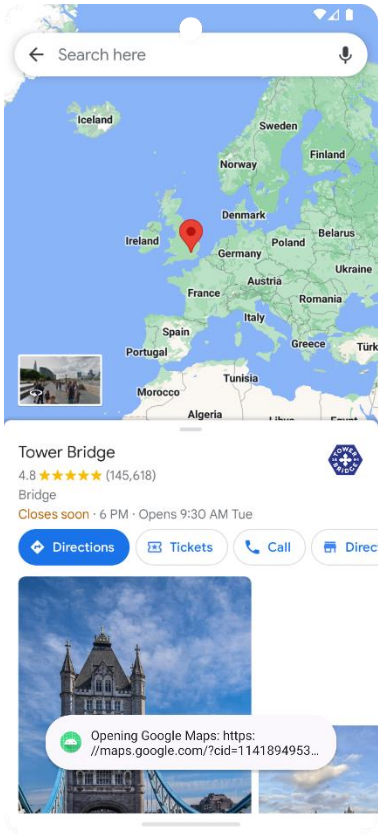
2 The British Museum
Great Russell St, London WC1B 3DG, UK
Rating: 4.7
Reviews: 144404
Score: 678698

3 Hyde Park
London, UK
Rating: 4.7
Reviews: 123590
Score: 580873

4 The National Gallery
Trafalgar Square, London WC2N 5DN, UK
Rating: 4.7
Reviews: 45911
Score: 215781

Kensington Gardens
London, UK

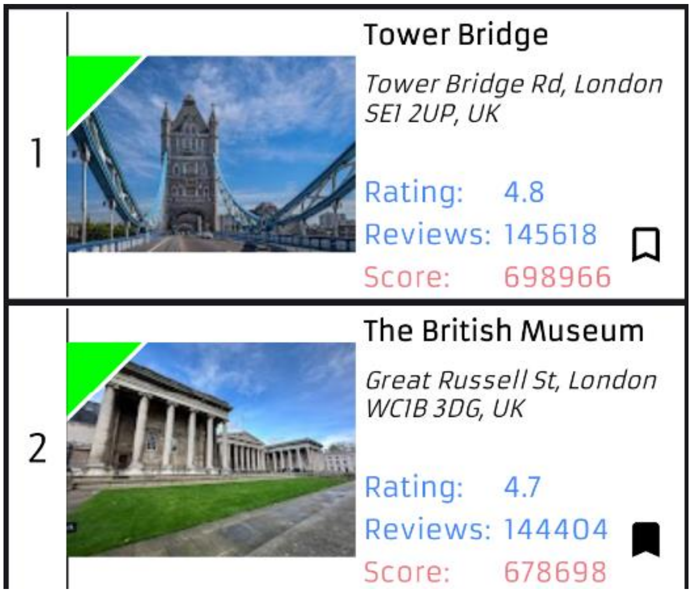
Results (card on click)



Tower Bridge
4.8 ★★★★★ (145,618)
Bridge
Closes soon · 6 PM · Opens 9:30 AM Tue

Opening Google Maps: https: //maps.google.com/?cid=1141894953...

Screenshots (Card Layout):



1 Tower Bridge
Tower Bridge Rd, London SE1 2UP, UK
Rating: 4.8
Reviews: 145618
Score: 698966

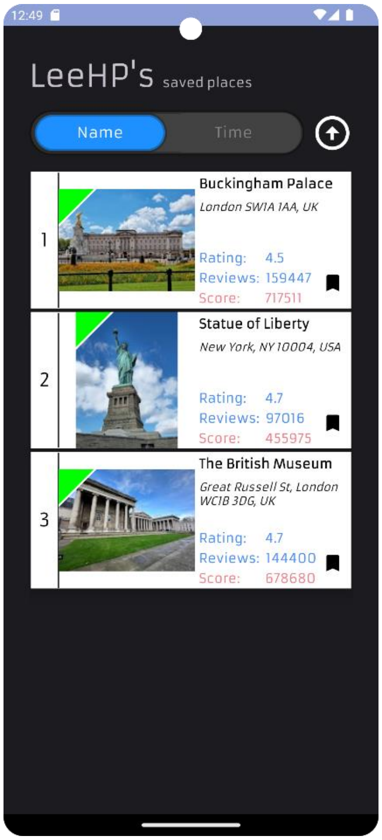
2 The British Museum
Great Russell St, London WC1B 3DG, UK
Rating: 4.7
Reviews: 144404
Score: 678698

Saved Places Page

This page retrieves the user’s stored places from the Firebase DB. There are custom appearance radio buttons again (tried to make it look clean and modern like a pill shaped toggle) to allow user to sort their saved places by Name or by Saved Time (using Firebase’s server timestamp) and either ascending or descending. Cards used are the same so user can unsave places here too. Title shows user’s account name too.

Screenshots:

Saved (default order, alphabetically ascending)



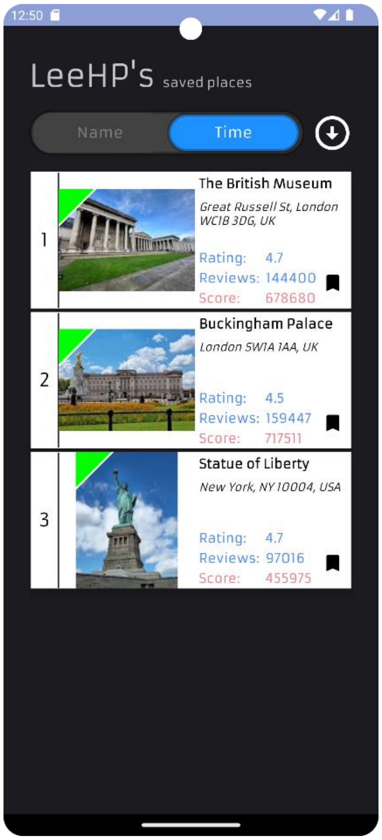
LeeHP's saved places

1 Buckingham Palace
London SW1A 1AA, UK
Rating: 4.5
Reviews: 159447
Score: 717511

2 Statue of Liberty
New York, NY 10004, USA
Rating: 4.7
Reviews: 97016
Score: 455975

3 The British Museum
Great Russell St, London WC1B 3DG, UK
Rating: 4.7
Reviews: 144400
Score: 678680

Saved (changed to by time and latest on top)



LeeHP's saved places

1 The British Museum
Great Russell St, London WC1B 3DG, UK
Rating: 4.7
Reviews: 144400
Score: 678680

2 Buckingham Palace
London SW1A 1AA, UK
Rating: 4.5
Reviews: 159447
Score: 717511

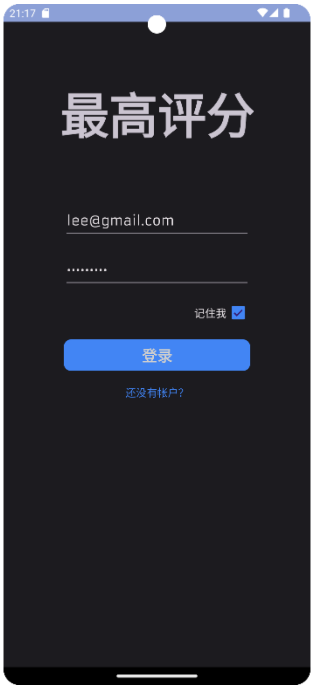
3 Statue of Liberty
New York, NY 10004, USA
Rating: 4.7
Reviews: 97016
Score: 455975

Language

Added resource file for string translation to Chinese (Mandarin)

Screenshots:

Login Page



lee@gmail.com
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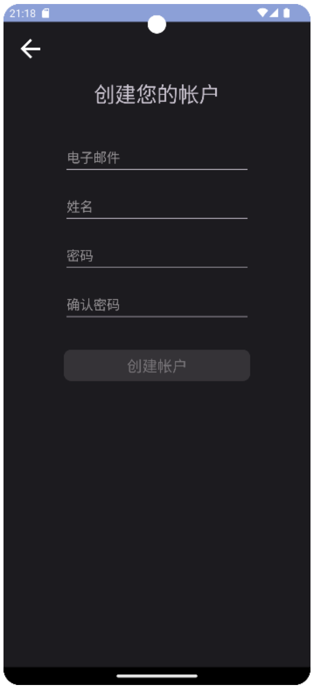
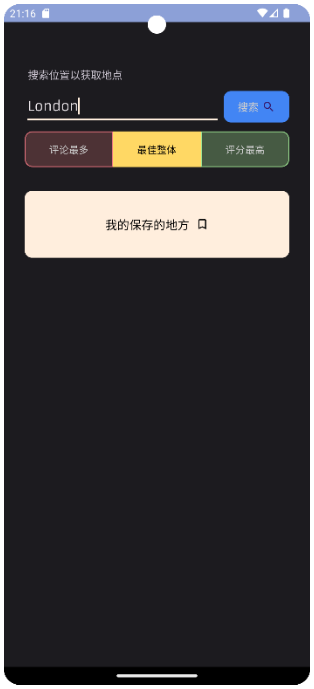
Sign Up Page

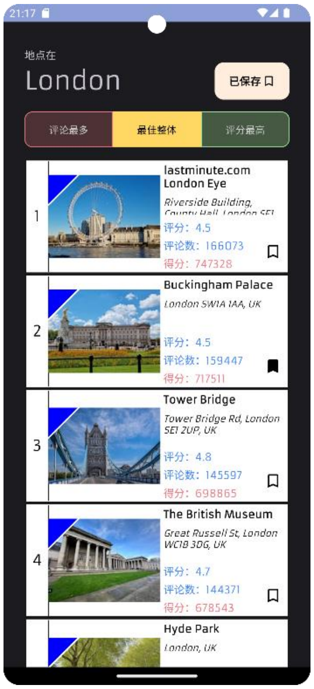


Home Page



London

Results Page



London

1 lastminute.com London Eye
Riverside Building, County Hall, London SE1
评分: 4.5
评论数: 166073
得分: 747328

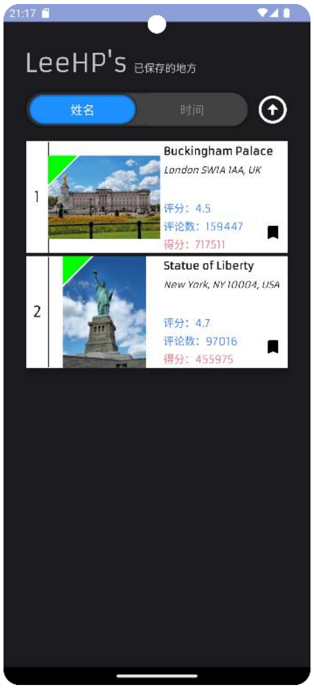
2 Buckingham Palace
London SW1A 1AA, UK
评分: 4.5
评论数: 159447
得分: 717511

3 Tower Bridge
Tower Bridge Rd, London SE1 2UP, UK
评分: 4.8
评论数: 145597
得分: 698865

4 The British Museum
Great Russell St, London WC1B 3DG, UK
评分: 4.7
评论数: 144371
得分: 678543

Hyde Park
London, UK

Saved Places Page

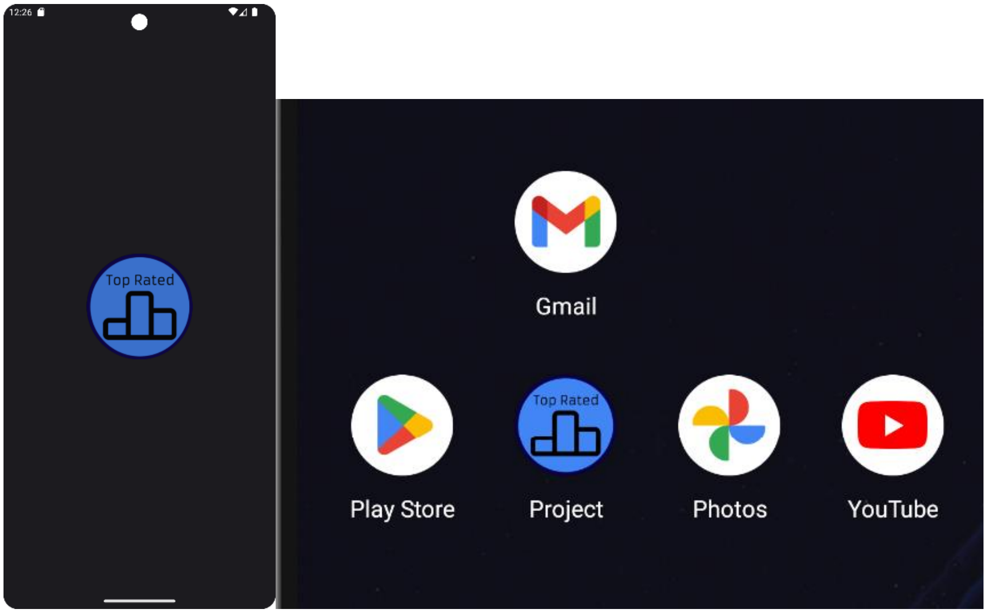


1 Buckingham Palace
London SW1A 1AA, UK
评分: 4.5
评论数: 159447
得分: 717511

2 Statue of Liberty
New York, NY 10004, USA
评分: 4.7
评论数: 97016
得分: 455975

App Icon

Added a custom app icon



Challenges:

Not sure why the photo has a coloured upper left corner, no information on the Google Places API and online too so can't figure out.

Places API endpoints also limit the number of results to 20 Maximum so I couldn't get the ideal functionality of the app. Got around this by making more requests to the endpoints and hopefully getting more results and discarding the duplicates.

apiNinja is easy to use but Google Places API is not easy to use since it required many custom headers and auth issues but manage to get over it though.

Customizing my radio buttons to look the way I want it to is challenging as I have to create new XMLs for them

Interesting Notes:

Learnt about custom appearance using drawable XML and color XML

Firebase has its own server timestamp that you can access for stuff like database insertion time

Recommendations/Feedback

Good project assignment, will be using this in my resume and interviews and hope to land a mobile app dev job when I graduate (maybe try learning swift too)