App research

Research on TripAdvisor, Foursquare and AirBnb

Introduction

The following Infographic represents a formative research document providing a detailed summary of three selected Android landmark applications: Air BnB, Trip Advisor and Foursquare City Guide. The Individual App overviews, implementations, screenshots and strengths and weaknesses will be covered, and a detailed comparison will be drawn to highlight prospective app features and functionalities for the use in the final OPSC7312 Android application.

TripAdvisor

overview

TripAdvisor lets you virtually explore places you want to visit. TripAdvisor can show places around your area for things to do. You can browse for hotels, restaurants, "things to do" attractions, and flights to find the best deals for your explore. Before you visit you can check reviews of the place to see what people think about (kTripAdvisor, 2021).

Foursquare

overview

Foursquare City Guide developed by Foursquare Labs Inc. is a location-based mobile app for iOS and Android that helps users discover new places from a community of peers. The app generates personalized recommendations of places to go that are near a user's current location and based on the user's previous visits, likes and check-in history. The App was originally released in 2009 as a social location-based sharing shorty after its launch in 2009 and at the time of writing Foursquare City Guide has amassed over 10 000 000 downloads on the Google Play Store. The successful App formed the foundation for Foursquare Labs Inc's powerful location platform. The platform currently powers over 105 million places worldwide and partnerships with reputable companies including Snapchat, Apple, and OracleFoursquare, 2021).

Airbnb

overview

Airbnb is online marketplace where hosts get to list properties for rental purposes for a specified period of time. This is a platform that allow anyone to make available for renting for guests. Airbnb does not own these properties. Due to the high popularity, it is possible to book a flat, house, or palace in various locations from all over the world(Airbnb, 2021).

TripAdvisor

Strengths

- Explore any place, even outside your country.
- Automatically get your current location.
- Users can review places. This gives other people a better idea of how people experience places rather than relying on bias business website. Abundance of reviews, more than 800 million.
- Algorithm to detect fake reviews.
- Built in trip planner. Used to save and organize travel ideas for hotels, restaurants, tours, and attractions and see them together on a map.
- Details of places. Easily find place email, website, phone number and closing time of a place.
- Use Google Pay or PayPal to make tour or activity bookings.
- Reserve tables at local restaurants.

Weakness

- No in app navigation to desired places.
- Can't report app running in background without their consent.
- Faulty in app planner. Users report app deleted app planner. No dark mode for browsing at night.
- Requires you to sign in to use.

App Implementation

- Implement location: Used google play services. Implemented google play services in Gradle file then instantiated "FusedLocationProviderClient". Using instance of "FusedLocationProviderClient" then "getLastLocation()" method was used to get users location(Google, 2021).
- Display list: TripAdvisor use recycler view to display data in list. You see this because app does not slow down after scrolling through a long list of items. Recycler view allows to implement regular list view, need LayoutManager and RecyclerView.Adapter. LayoutManager helps in positioning the item and RecyclerView.Adapter handles the data collection and bind it to the viewGoogle, 2021).

Foursquare

Strengths

- Defines user data to offer personalised location services and custom search results specific to the user.
- Access to the Places by foursquare API that has an expanding database of over 105 million recorded places.
- Profile and User features including profile customization and location History, Location Sharing, Favouriting, and saving.

Weakness

- South African experience is lacklustre due to a limited South African userbase and support.
- No dark mode.
- No in app social media sharing integration.
- Reported App bugs and crashes including issues adding locations and updating accounts.

App Implementation

- Integrated Google Sign In
- The Facebook SDK for Android enables people to sign into the app with Facebook Login
- Places Database and Places API are used to populate Locations and Venues
- Foursquare appears to be using the Map Box Maps SDK for Map styles, Run-time styling, Data clusters, Camera manipulation, Querying the map, Gestures and Map images SDK
- The App uses Foursquare underlying technology Places API that includes a database of over 105 million Components to populate the mapFoursquare, 2021).

Airbnb

Strengths

- The app interface is user friendly.
- Details about booking is well structured.
- Available on Android and IOS

Weakness

- According to Medium.com, the development of a similar app can be very costly in time and financially(Medium, 2021).
- The feature Ranking by price (highest to lowest or vice versa) is not available.

App Implementation

- Map Service: the app uses the Google Maps API(AirBnb, 2021).
- Cloud Service: the app uses Amazon Web Services such as Amazon EC2 to regulate the traffic, possibly due to many people on the app simultaneously and Amazon S3 to store the Homepage content that is frequently uploaded(Amazon, 2021).
- Web Server: Nginx is an efficient web server that accelerate market delivery. It has a high performance and stability, which makes Airbnb more secure. Major companies like Instagram and Netflix also used Nginx(Amazon, 2021).

Features to use

- Allow user to enter review place.
- Provide landmark details. Website, email, phone number and closing time.
- Option to explore places globally.
- Get user Current location.
- Filter search landmarks. Hotels, "things to do", restaurants, holiday rentals, flights etc.

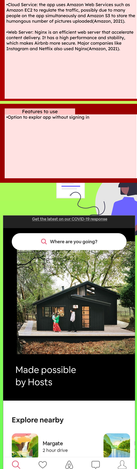
Features to use

- Facebook Sign in
- Google sign in
- Track user history

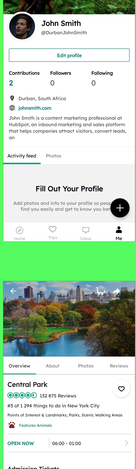
Features to use

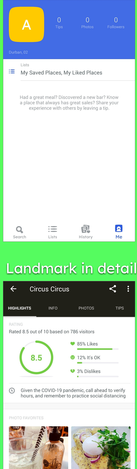
- Option to explor app without signing in

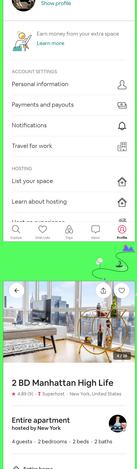
Home screen



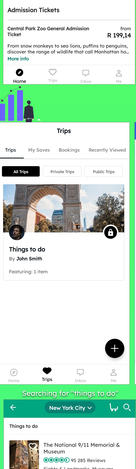
User profile

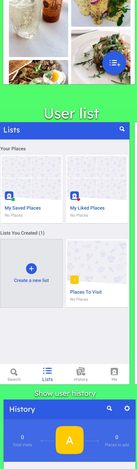


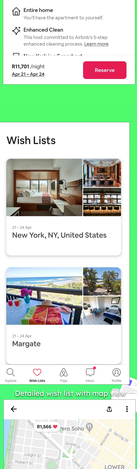




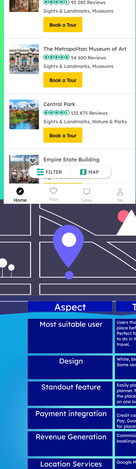
Landmark in detail

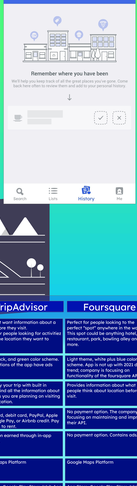


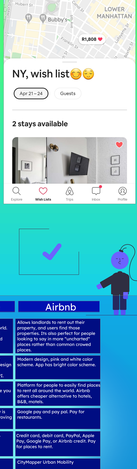




User list







Searching for "things to do"

Show user history

Detailed wish list with map view

Aspect	TripAdvisor	Foursquare	Airbnb
Most suitable user	Users that want information about a place before they visit. Perfect for people looking for activities that in the location they want to visit.	Perfect for people looking to the perfect "spot" anywhere in the world. This spot could be anything hotel, restaurant, park, bowling alley and more.	Allows landlords to rent out their property, and users find these properties. Its also perfect for people looking for a place to stay in a place rather than common crowd places.
Design	White, black, and green color scheme. Some sections of the app have ads.	Light theme, white plus blue color scheme. App is not up with 2021 design trend, company is focusing on functionality of the foursquare API.	Modern design, pink and white color scheme. App has bright color scheme.
Standout feature	Easily plan your trip with built in planner. Find all the information about the places you are planning on staying on one location.	Provides information about what people think about location before you visit.	Platform for people to easily find places to rent all around the world. Airbnb offers cheaper alternative to hotels, motels, hostels.
Payment integration	Credit card, debit card, PayPal, Apple Pay, Google Pay, or Airbnb credit. Pay for places to rent.	No payment option. The company is focusing on maintaining and improving their API.	Google pay and pay pal. Pay for restaurants.
Revenue Generation	Commission earned through in-app bookings.	No payment option. Contains ads.	Credit card, debit card, PayPal, Apple Pay, Google Pay, or Airbnb credit. Pay for places to rent.
Location Services Provider	Google Maps Platform	Google Maps Platform	CityMapper Urban Mobility
App Availability	App Store, Google Play Store, Web App	App Store, Google Play Store, Web App	App Store, Google Play Store, Web App
Programming Language	Java	Scala Python	Ruby
Web Server	Apache HTTP	Nginx	Nginx
Database	PostgreSQL, Lucene, Hadoop, MemCached	MongoDB, Hadoop, Elasticsearch	Amazon Databoxes, Hadoop, ElastiSearch, Redis, MemCached

Conclusion

These researches help us understand the traits of a successful landmark app, including what they are about, how their designs fit their targeted audience, their strengths and weaknesses, and how they were each implemented, for example their use the Google Map API. This has set the blueprint of the development of our app, DiscoveReach, and how we can stand out in the current competitive marketplace