Urban Spot

Version No.: 1.0

Date: 12/02/2017

Project Name: Urban Spot– Nearby Recommendations

Presented by

Anantharaman Chandar	–	A20403439
Ashok Ramasami	–	A20441032
Gowrisankar Arumugam	–	A20400590

Revision History

Version No.	Date	Prepared by / Modified by	Significant Changes
1.0	11/11/2018	Ananth Ashok Gowrisankar	Initial project proposal.
1.1	12/02/2018	Ananth Ashok Gowrisankar	Phase 2 updates.

WHO CAN REFER

This document can be referred by the following persons as a part of ITMD555 Open Source Intelligent Devices

- ✓ James Papademas
- ✓ Bhavin Patel
- ✓ Anantharaman Chandar
- ✓ Ashok Ramasami
- ✓ Gowrisankar Arumugam

Table of Contents

1. INTRODUCTION

Urban Spot is an android application which can be accessed by Users to check out nearby spots based on the category selection. Users/Guest can view the nearby attraction/restaurants/hiking/movie places. Admins to perform DBA activities and updating the android application.

1.1 Cynosure of Urban Spot

- ✓ Login made easy by selecting either Guest/User/Admin
- ✓ Google OAuth is used for authenticating user credentials.
- ✓ Handled maximum exceptional handling and recorded all the exceptions in the database table to improve this android application.
- ✓ Choosing attraction category issue made easy by one click
- ✓ Guest can view the nearby attraction spots and will not be provided by top trending attraction spots.
- ✓ Provided in-built recommendations to some of the most important attraction spots which will be fetched from the database and listed in the screen for authenticated users.
- ✓ Admins are provided with nearby trending spots and locations which are to be updated.
- ✓ Maintain Login and Logout time for each individual.
- ✓ Use Google Maps to help the user to reach the attraction spot.

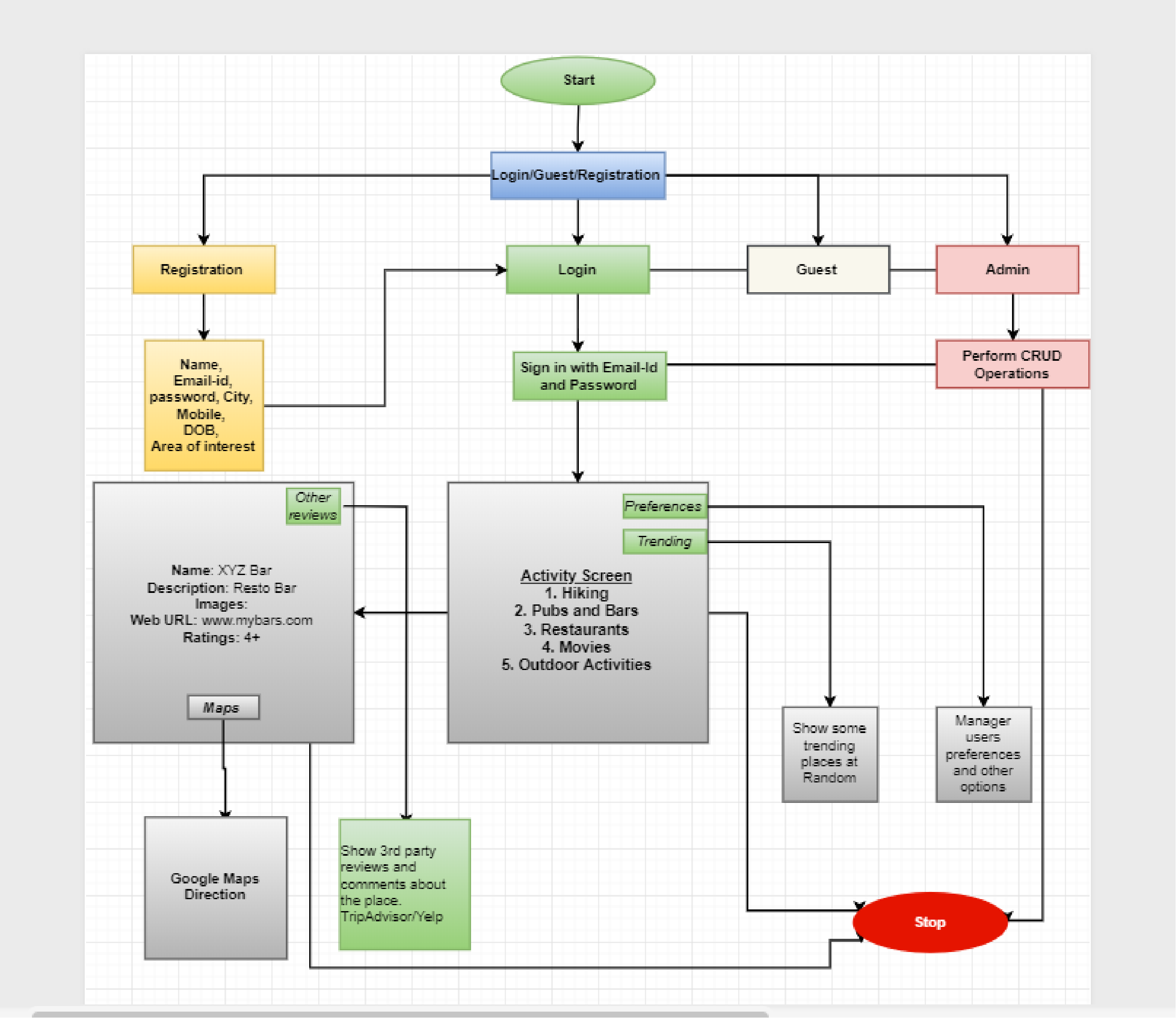
1.2 Expected outcomes

- ✓ Build a three click android application for nearby recommendations
- ✓ Develop a Hassle-free android application for the people
- ✓ Users to search nearby attractions based on the interest and provided with top trending attractions.
- ✓ Guest can search nearby attractions based on the category selected and will not be provided with top trending attractions.
- ✓ Admins to help the support the in-house android application and changing the top trending attractions.

2. Technical Details

2.1 Application Architecture

Below is the overview of the application and the navigation inside the application depending upon the category



2.2 USE CASE

To be updated once the development is completed.

2.3 UML

To be updated once the development and testing is completed

2.4 ERD

To be updated once the Database design is completed

2.5 TECHNOLOGY USED

2.5.1 Front End:

Android: Software platform for creating and delivering desktop applications.

2.5.2 Back End:

Firebase: Store and sync data with our NoSQL cloud database. Data is synced across all clients in real-time, and remains available when your app goes offline

2.5.3 Technical Requirements:

Below is the technology that was required to build this project

Java

Android

ORM/SQLite3/Oracle/MYSQL/Firebase

2.5.4 Domain Knowledge Requirements

Data Analytics, Recommendation System

2.5.5 Tools Used:

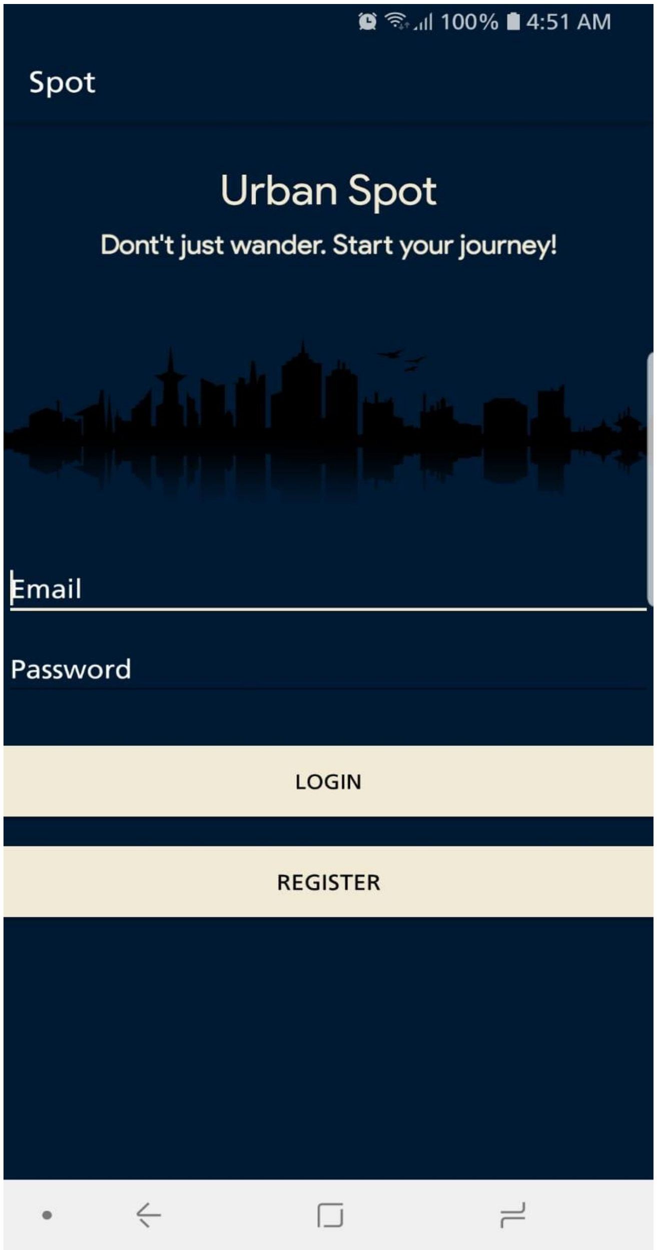
Android Studio

Firebase

3. LOGIN AND REGISTRATION

Login screen will allow user to access his own account, Google Firebase Authentication is used for authenticating the user credentials. Registration Button will also be available in this screen if a user wishes to create a personalize account. Below is an example of how Login/Registration screen will look like.

3.1.1 Screenshot of Login Page



100% 4:51 AM

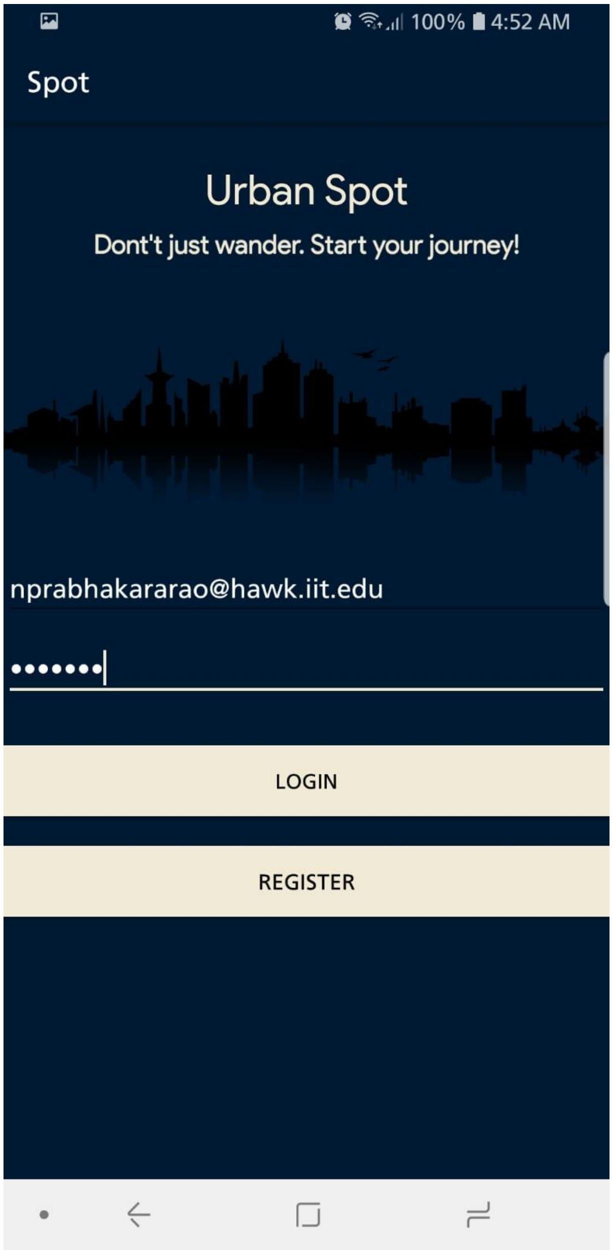
Spot

Urban Spot

Dont't just wander. Start your journey!

Email

Password



100% 4:52 AM

Spot

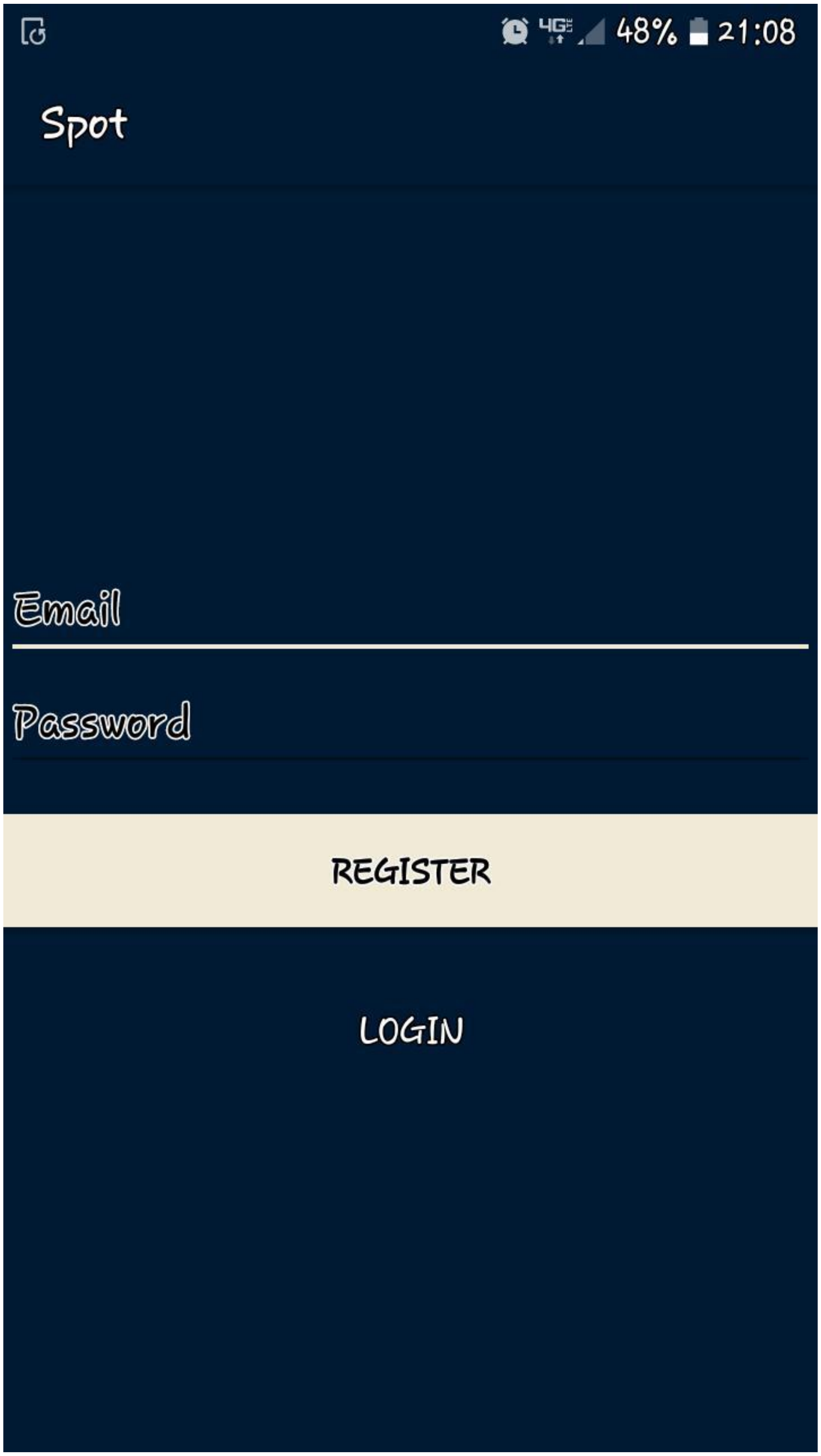
Urban Spot

Dont't just wander. Start your journey!

nprabhakararao@hawk.iit.edu

•••••••

3.1.2 Screenshot of Registration Page

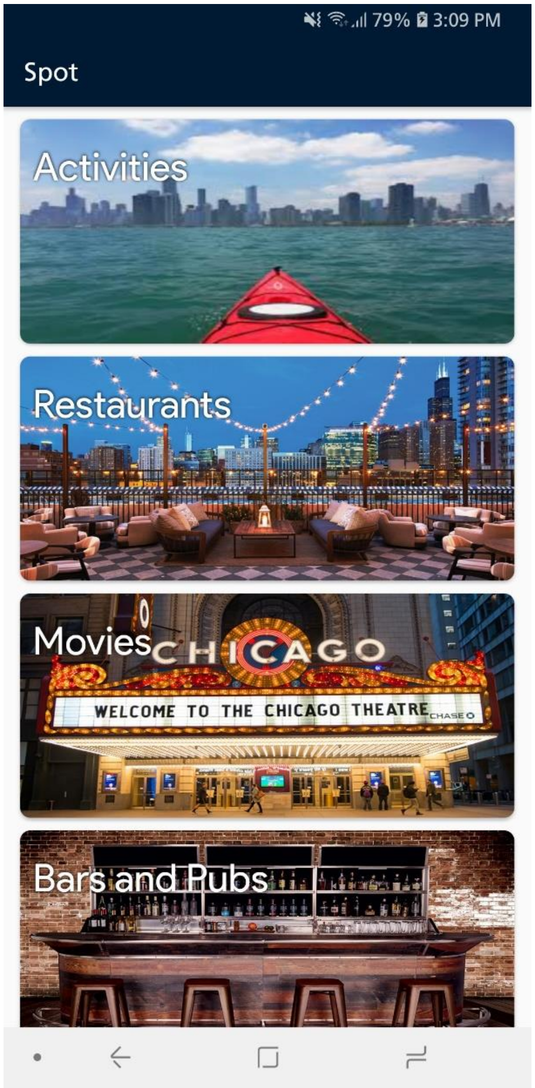


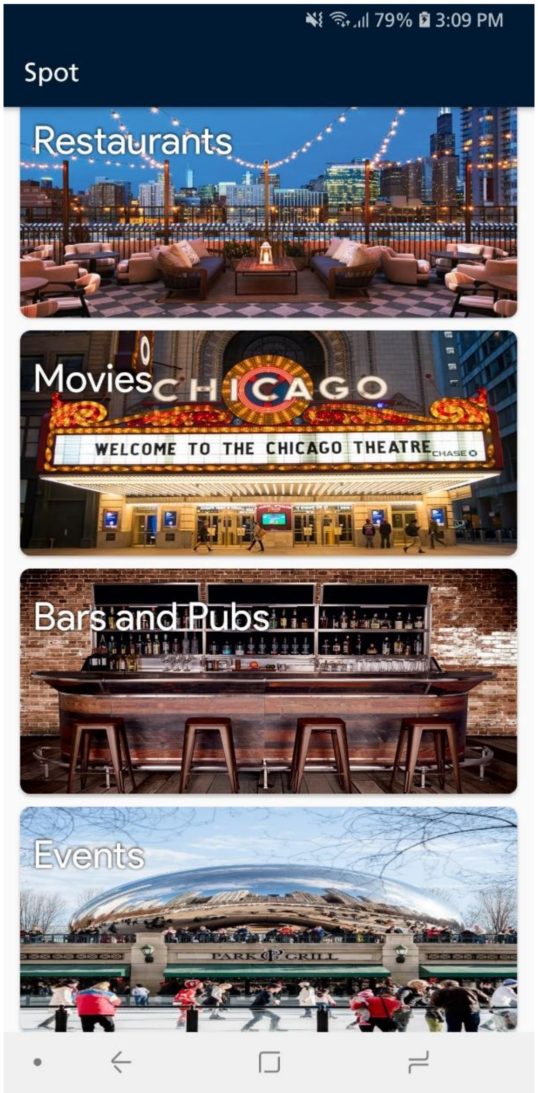
4. Home Screen

4.1 Home Screen:

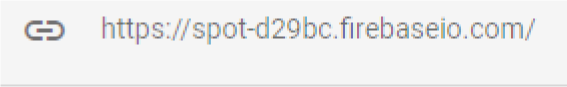
Home screen will be the starting page when the android application is started and below is an example of how Home screen will look. In this User can view the available category such as Activities/Movies/Restaurants/Pubs/Events.

Once the user login, thee user will be taken to a the home screen which contains the list of all the available categories to browse for. The user may select the category which he wishes to explore. Future scope of this screen would be to add a navigation pane which includes two more tabs, one with notifications based on the user interests and the other would be the current trending places, activities or restaurants.

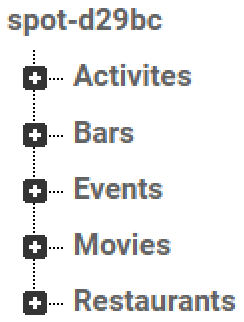




All the details are fetched from the Firebase DB. The categories are available in the DB. The cardview is populated based on the data.



https://spot-d29bc.firebaseio.com/



spot-d29bc

- Activites
- Bars
- Events
- Movies
- Restaurants

4.1.1 Technical references

Java class used: MainActivity.java

Firebase DB : spot-d29bc

XML files used: activity_main.xml

5. DETIALS PAGE

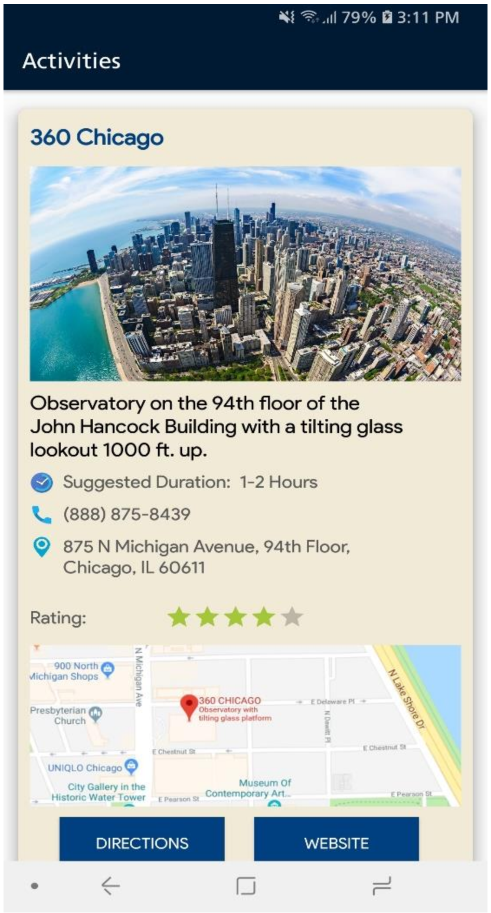
Activity page will allow user to select the activity category based on the user interest. Based on the category selection nearby attractions will be displayed. An example of the nearby places based on the category selected can be seen in 5.1.2. The card provides an image of the particular place, the description of the place. The card also shows the user an suggested duration which will be optimal for the user to spend, which can help the user plan the day. Followed by this is the contact number of the particular place, the address, the user ratings and two buttons, one for directions and the other for website.

On clicking the phone number of a particular place, the user will be prompted to complete the action through the list of available phone dialers, on selecting the dialer, the user will be able to call the place. This saves the user time and helps in querying about the place with the need to note the number and then call it from the dialer. The steps are given as below.

There are two other buttons which comes in handy for the user while browsing through the activities detail. One is the the directions button, which when clicked takes the user to a screen which shows the place in Google maps through google maps API. The user can click on the specified marker and click on directions to navigate to the place using google maps.

The other button is the Website button which when clicked takes the user to the website of the place which was selected. This helps the user in booking tickets, reserving tables or helps them to know any related information about the place from the website of the place. This comes in handy especially when the user looks up on a restaurant or the movies nearby so that they can book tickets directly, without the need for them to go and type in the website to make any bookings or reservations.

The screenshots for the Directions and the website buttons are given below. Future improvements would include option like showing the Realtime availability of the seats available for the movies. Another possible addition would be to include the working hours of the place which would help them better plan their trip.



79% 3:11 PM

Activities

360 Chicago

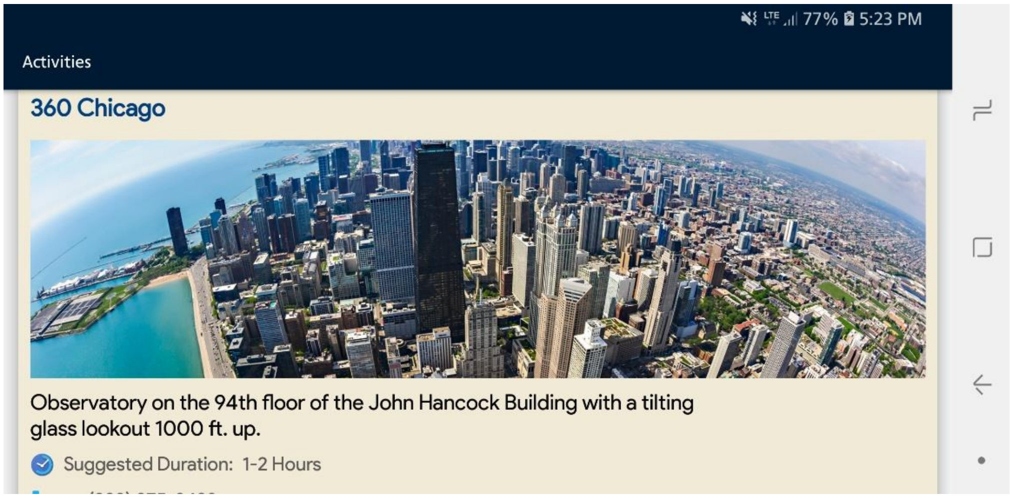
Observatory on the 94th floor of the John Hancock Building with a tilting glass lookout 1000 ft. up.

Suggested Duration: 1-2 Hours

☎ (888) 875-8439

875 N Michigan Avenue, 94th Floor, Chicago, IL 60611

Rating: ★★★★☆



77% 5:23 PM

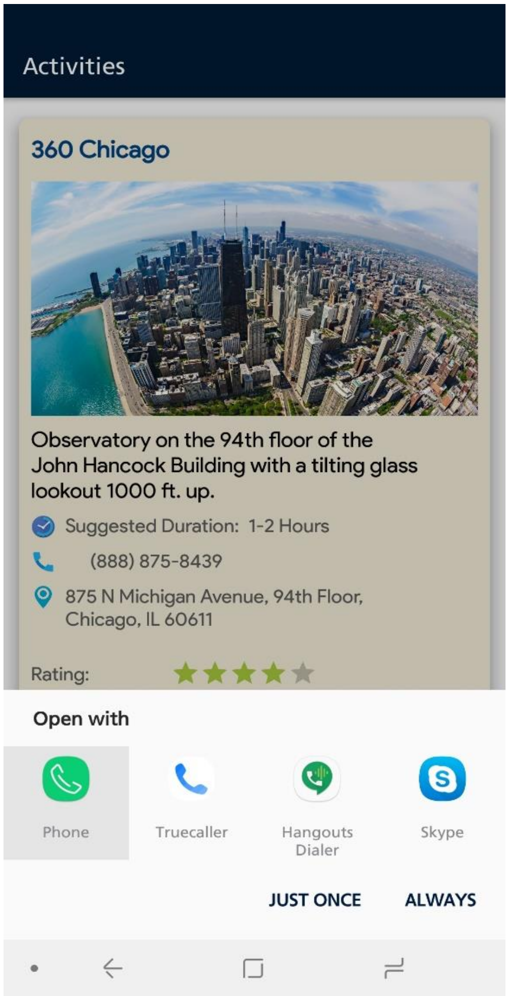
Activities

360 Chicago

Observatory on the 94th floor of the John Hancock Building with a tilting glass lookout 1000 ft. up.

Suggested Duration: 1-2 Hours

5.1.1 Phone Activity



Activities

360 Chicago

Observatory on the 94th floor of the John Hancock Building with a tilting glass lookout 1000 ft. up.

Suggested Duration: 1-2 Hours

(888) 875-8439

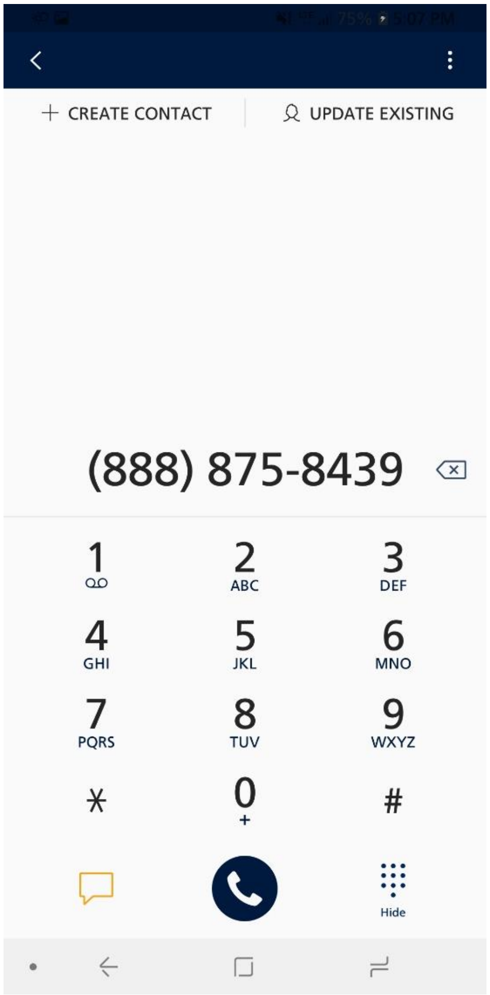
875 N Michigan Avenue, 94th Floor, Chicago, IL 60611

Rating: ★★★★☆

Open with

Phone | Truecaller | Hangouts Dialer | Skype

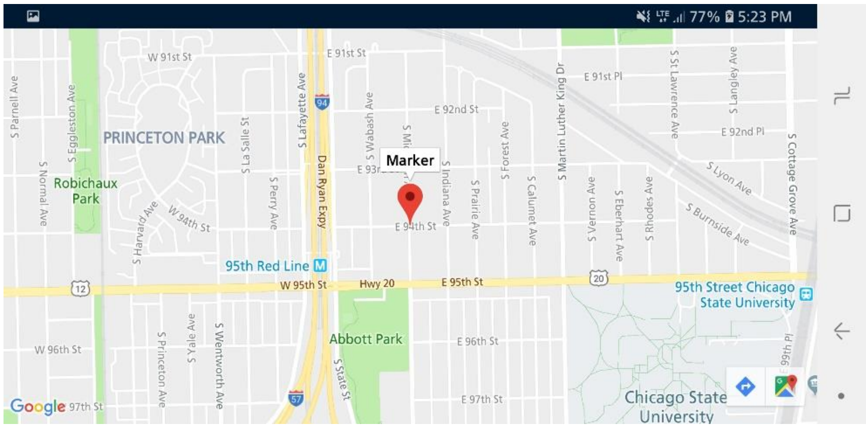
JUST ONCE ALWAYS

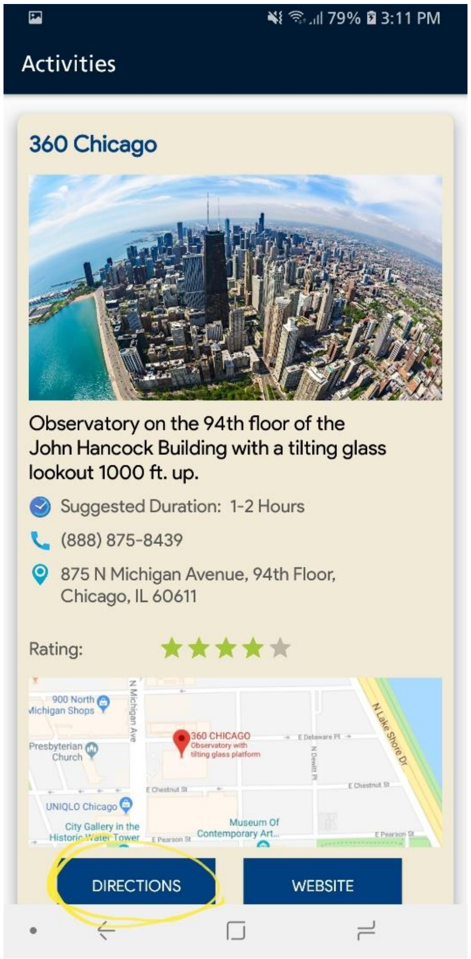


+ CREATE CONTACT | UPDATE EXISTING

(888) 875-8439

5.1.2 Map Activity





79% 3:11 PM

Activities

360 Chicago

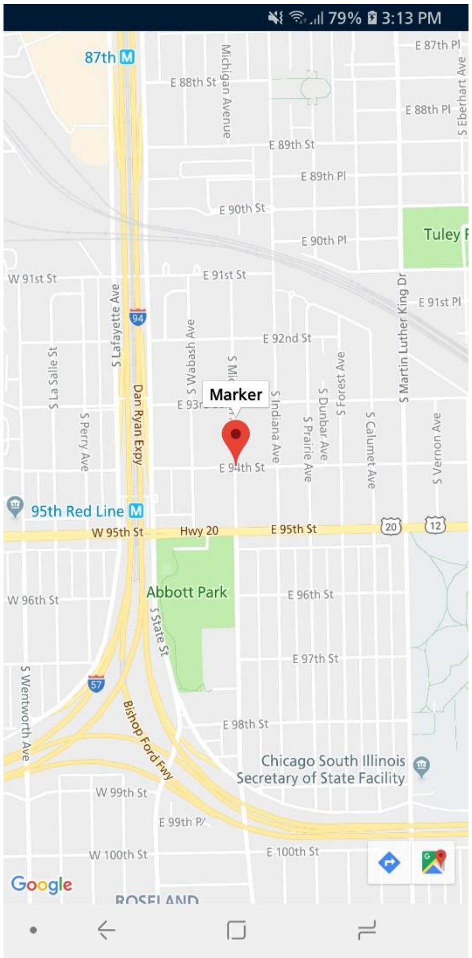
Observatory on the 94th floor of the John Hancock Building with a tilting glass lookout 1000 ft. up.

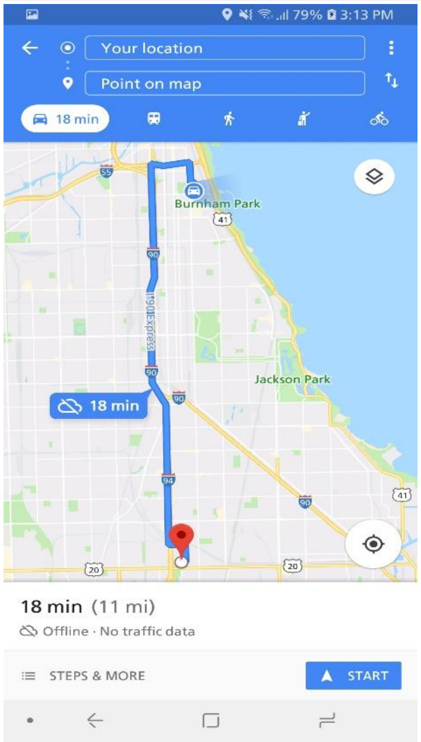
Suggested Duration: 1-2 Hours

☎ (888) 875-8439

875 N Michigan Avenue, 94th Floor, Chicago, IL 60611

Rating: ★★★★☆





79% 3:13 PM

Your location

Point on map

18 min

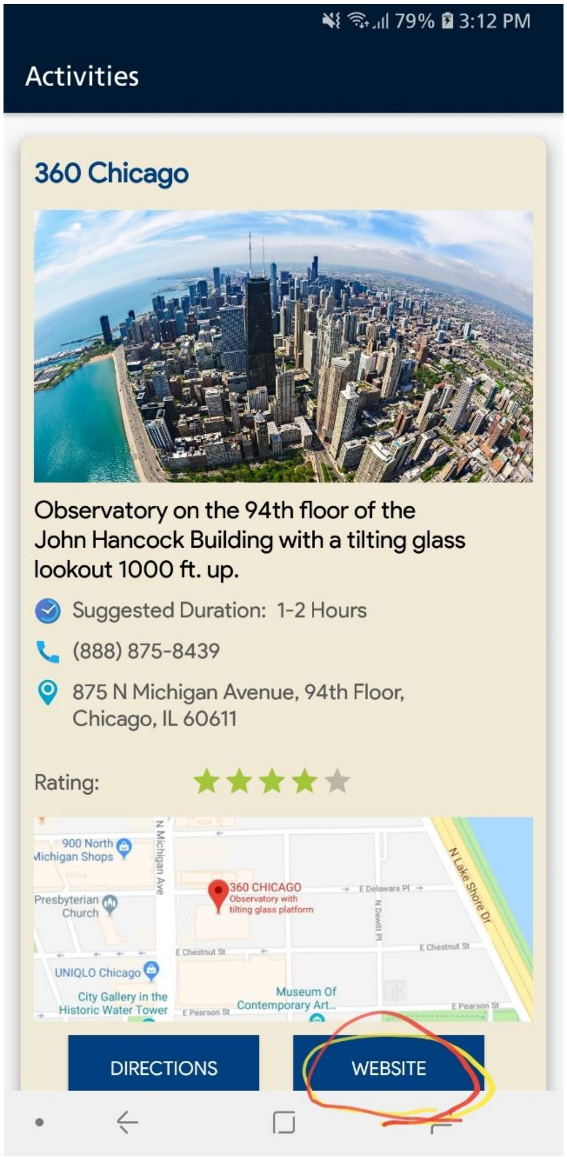
18 min (11 mi)

Offline · No traffic data

STEPS & MORE

START

5.1.3 Web Activity



79% 3:12 PM

Activities

360 Chicago

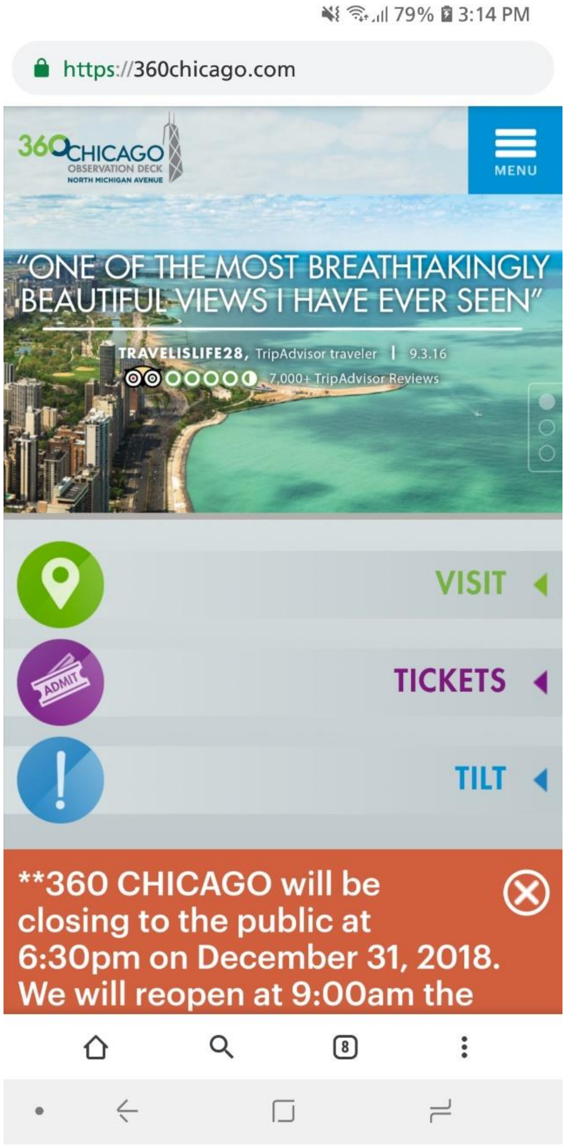
Observatory on the 94th floor of the John Hancock Building with a tilting glass lookout 1000 ft. up.

Suggested Duration: 1-2 Hours

☎ (888) 875-8439

875 N Michigan Avenue, 94th Floor, Chicago, IL 60611

Rating: ★★★★☆



79% 3:14 PM

https://360chicago.com

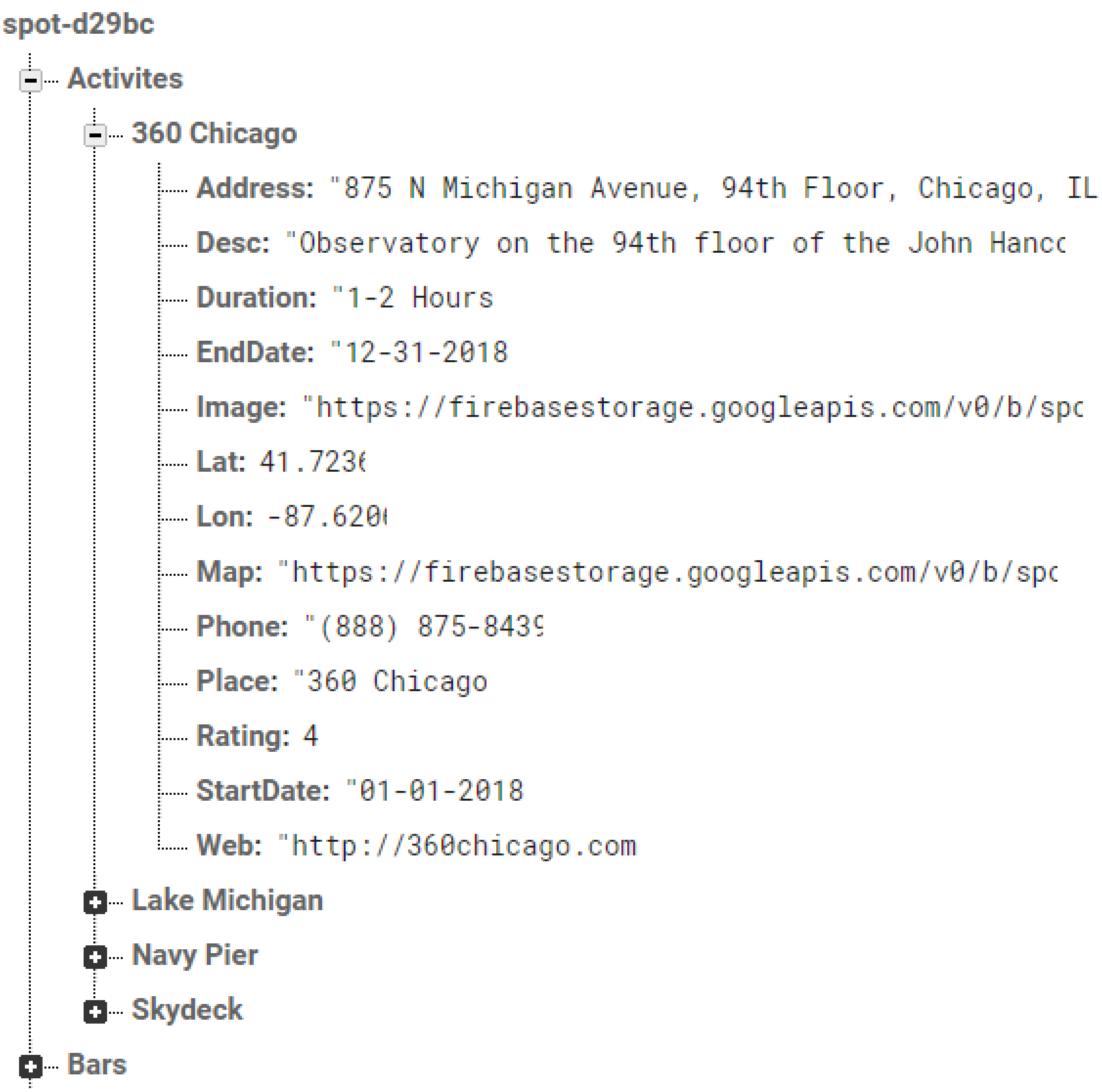
"ONE OF THE MOST BREATHTAKINGLY BEAUTIFUL VIEWS I HAVE EVER SEEN"

TRAVELISLIFE28, TripAdvisor traveler | 9.3.16

7,000+ TripAdvisor Reviews

**360 CHICAGO will be closing to the public at 6:30pm on December 31, 2018. We will reopen at 9:00am the

The same list of operations can be performed by the user for all the categories. The functionality of the screens remain the same, although the data which is populated differs. The data populated in the cardview are fetched from the FirebaseDB. Each category is populated based on the data vailable in the database. A refernec snapshot of the data is provided below for the structure.



```
spot-d29bc
 ⊟ Activites
    ⊟ 360 Chicago
        Address: "875 N Michigan Avenue, 94th Floor, Chicago, IL
        Desc: "Observatory on the 94th floor of the John Hancc
        Duration: "1-2 Hours
        EndDate: "12-31-2018
        Image: "https://firebasestorage.googleapis.com/v0/b/spc
        Lat: 41.723
        Lon: -87.620
        Map: "https://firebasestorage.googleapis.com/v0/b/spc
        Phone: "(888) 875-8439
        Place: "360 Chicago
        Rating: 4
        StartDate: "01-01-2018
        Web: "http://360chicago.com
    ⊞ Lake Michigan
    ⊞ Navy Pier
    ⊞ Skydeck
 ⊞ Bars
```

5.1.4 Technical references

Java class used: Activities.java, Activities_Model.java, ViewHolder_Activities.java, Bars.java, Bars_Model.java, ViewHolder_Bars.java, Events.java, Events_Model.java, ViewHolder_Events.java, Movies.java, Movies_Model.java, ViewHolder_Movies.java, Restaurants.java, Restaurants_Model.java, ViewHolder_Restaurants.java, MapsActiviy.java

Firebase DB: spot-d29bc

XML files used: activities_activity.xml, activities_bars.xml, activities_events.xml, activities_movies.xml, activities_restaurants.xml, activities_row.xml, activities_map.xml

6. DATABASE

Below is the list of available fields in the Firebase DB for each category.

Columns	Description
Address	The address of the place.
Desc	A brief description of the place.
Duration	An estimated duration that can be spent on this particular place
EndDate	The date in which the place goes inactive.
Image	The image which will be loaded in the card
Lat	The latitude value for the particular location.
Lon	The longitude value for the particular location.
Map	The map image segment to show the location of the place.
Phone	The contact number for the place.
Place	Name of the place.
StartDate	The date in which the place goes active to be listed in the card view.
Web	The website of the place.

The schema used is **spot-d29bc**.

7. ADMIN

Admin plays the role of IT Ops in Urban Spot. Admins functionalities are described as to manage the overall android application. Admins will also be able to change the top trending places and update user recommendations. The admin dashboard is currently in development, which gives insights on the number of users and performing data updates to the places. Right now, the data can be updated through the Firebase console.