Group 7: Intown - Project Report

1. ABSTRACT

A lot of events keep happening in cities on a daily basis. People are mostly busy with their work, with a little time to leisure. They don't want to waste their time searching for the best things they could do during their leisure time.

Our app helps the people to quickly find out the best events (online / offline) happening around them according to their preferences using Geolocation services. It also helps the event organizers to post their events with its details on the app, for a wider reach.

2. INTRODUCTION

Our mobile app uses the user's location to find events near them, instead of letting them waste their time looking for events using different sources. The users will also be able to filter events according to their preferred category (E.g. Tech Events, Meetups, Concerts, Shopping, Party). Event organizers can add their events and make it reach a wider number of audience.

Our app will also be helpful for the tourists who visit new places and want to explore local events in that area.

3. FUNCTIONAL REQUIREMENTS

Functional Requirements of our App are explained Below

1) Users can login or create a new account into our app using Email and Password
2) People can create and post new events (online / offline) along with its details
3) The Event hosts can set a maximum count for the attendees.
4) The users can search offline events happening near them.
5) The users can search online events happening via Google Meet, Bluejeans etc..
6) The user can search for events in their preferred category via filters (like Shopping, Meetups, Concerts, Parties, Comedy etc..)
7) The users will be able to register for the events easily through google forms.
8) Users can see the list of events they've created.
9) Users can Like and react on the event posts.

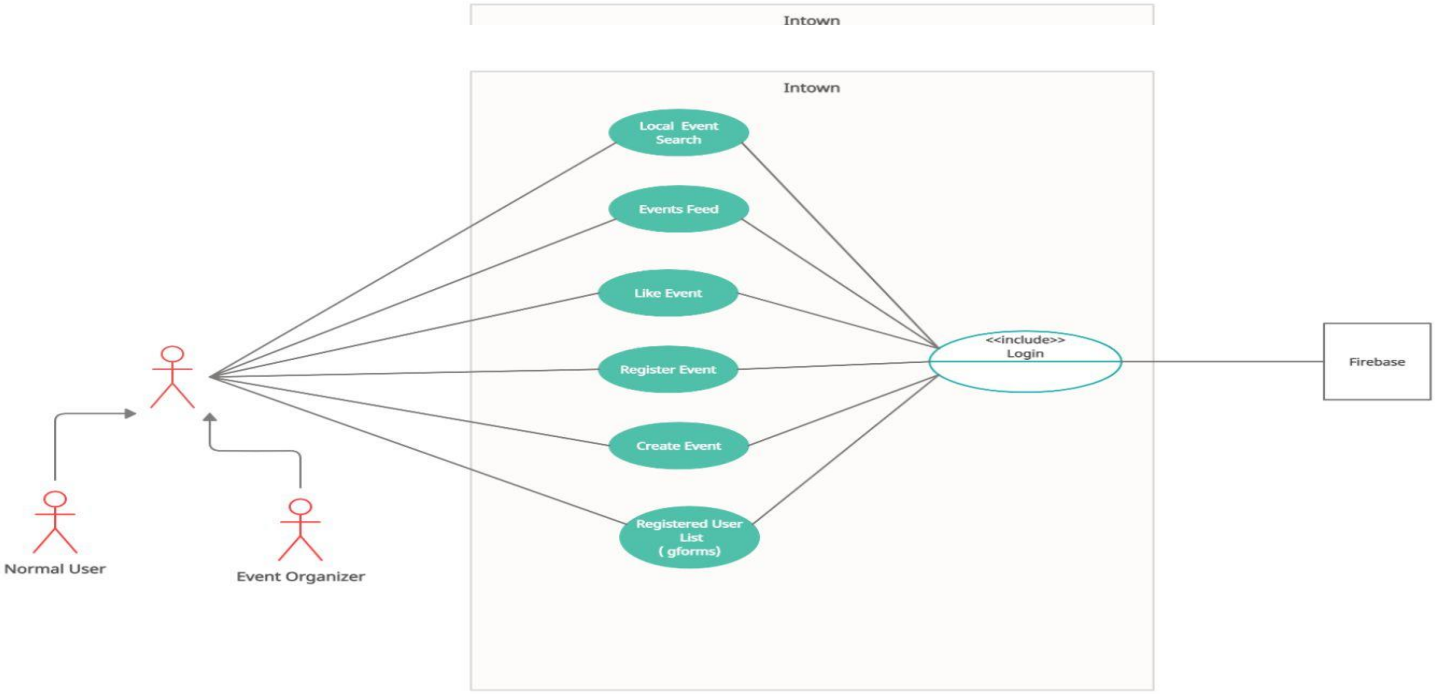
4. NON FUNCTIONAL REQUIREMENTS

Non-functional requirements of our App are mentioned below.

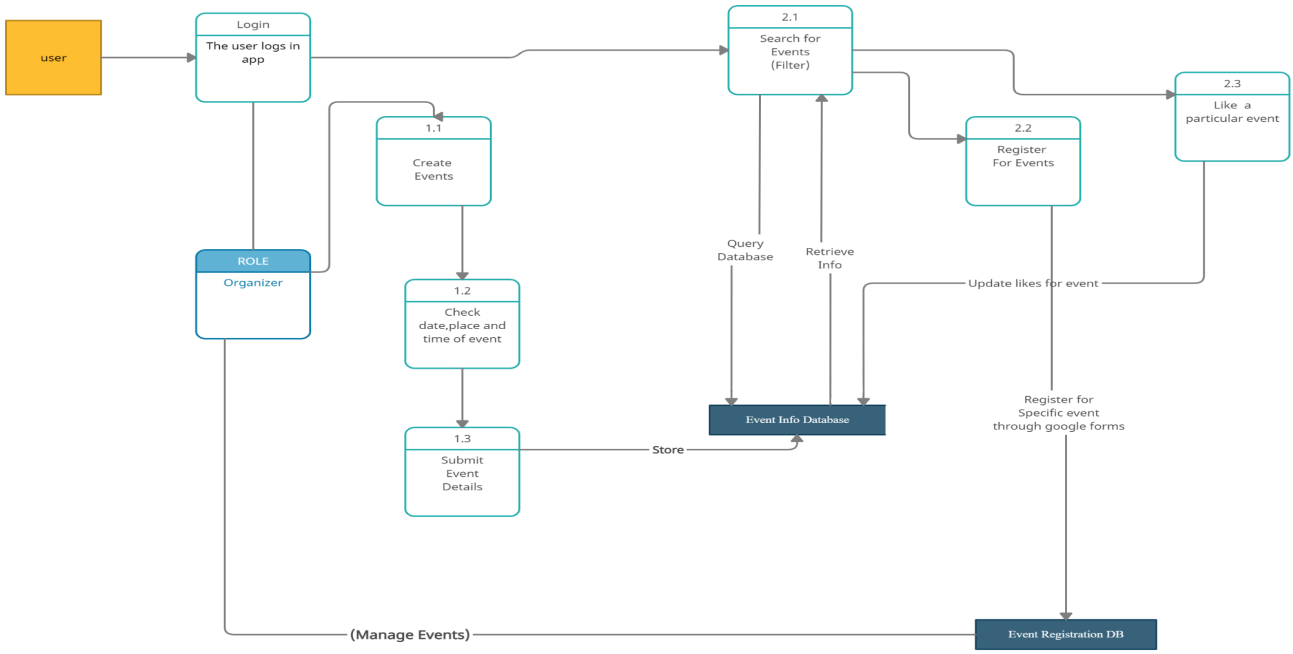
1) There will be Maximum Time Availability
2) The app will require device location permission to search nearby events via geolocation services.
3) There can be a maximum of 100 users at any given time. (Limitation of Firebase Free Tier)
4) The App will run on both Android and IOS (We've built and tested the app on Android.)

5. SOLUTION AND DESIGN

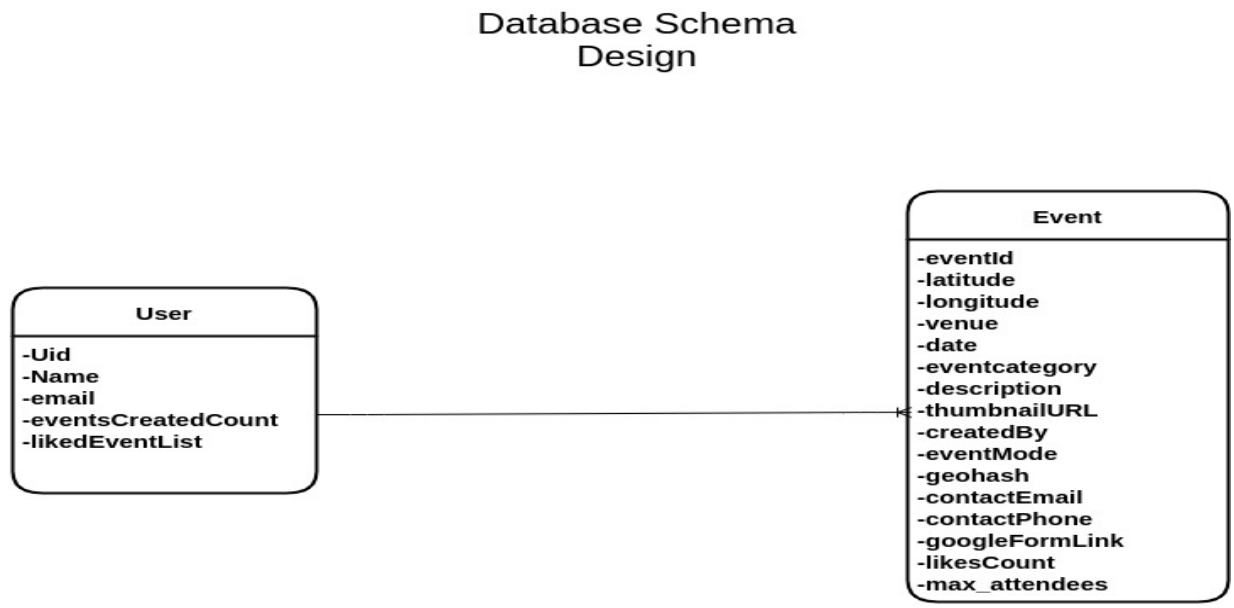
5.1) Use Case Diagram



5.2) Data-Flow Diagram



5.3) Database Design



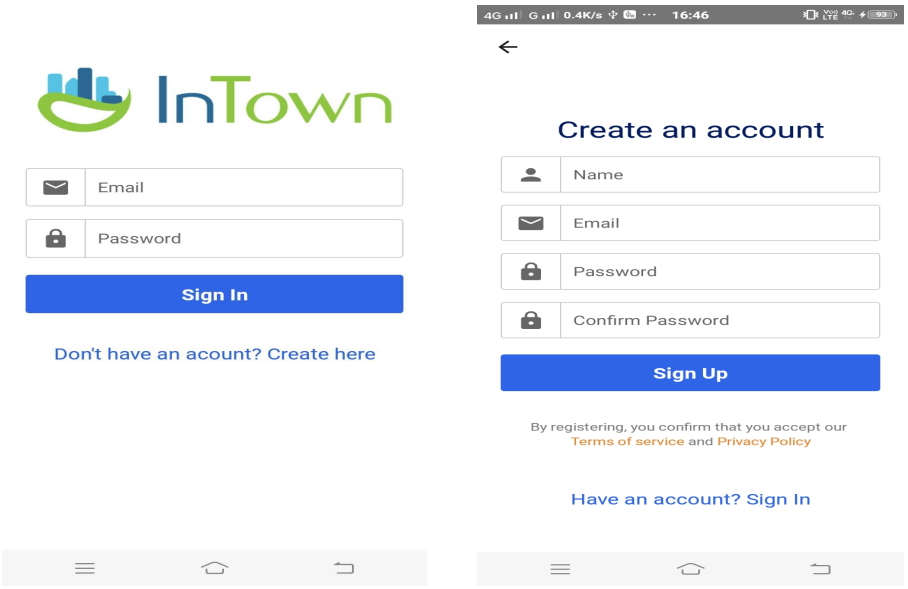
- One user can like/unlike many events
- One User can like an event only one time
- Each Event will have one list of registered users in google forms

6. Implementation

Initial version of the mobile application was implemented on React-native Expo. Later, we migrated to react-native-cli platform for using native API'S available in react native.

6.1) Login and Create New Account

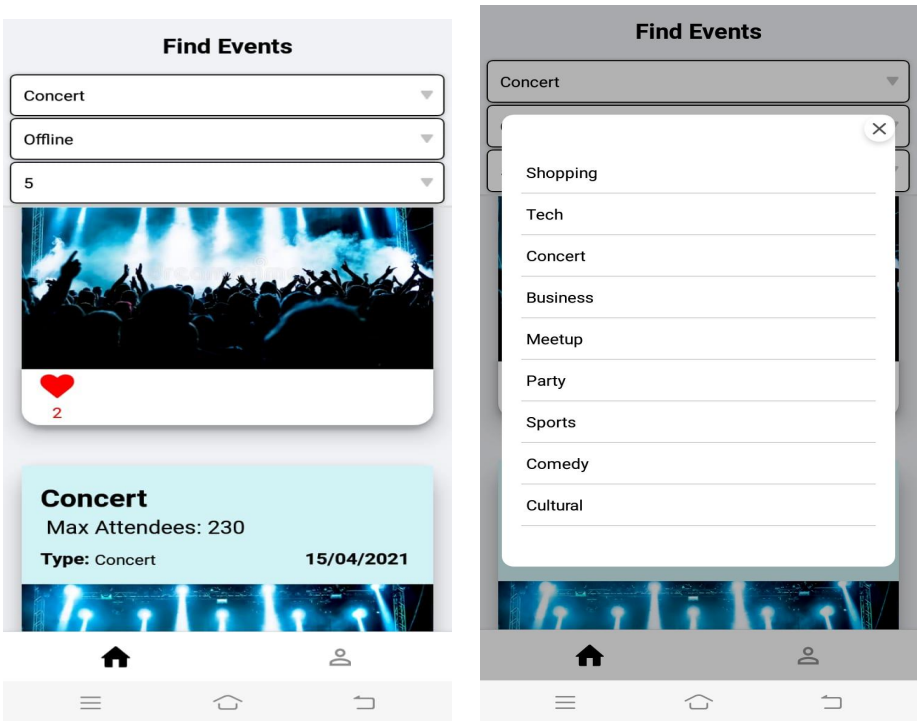
Firebase Authentication service was used to implement Login and Create a new account using email and password. React Native's Context APIs were used to provide authentication and user data globally to the app, and navigation in the app was managed by react navigation.



6.2) Event Screen

Once logged in, users would be directed to the event dashboard which consists of local events happening around the city. Users would be able to filter events based on their preferences and give likes to the events they are interested in. On pressing a particular event card, users would be directed to the Event Details Page.

That Events data is stored in Firestore Collection.

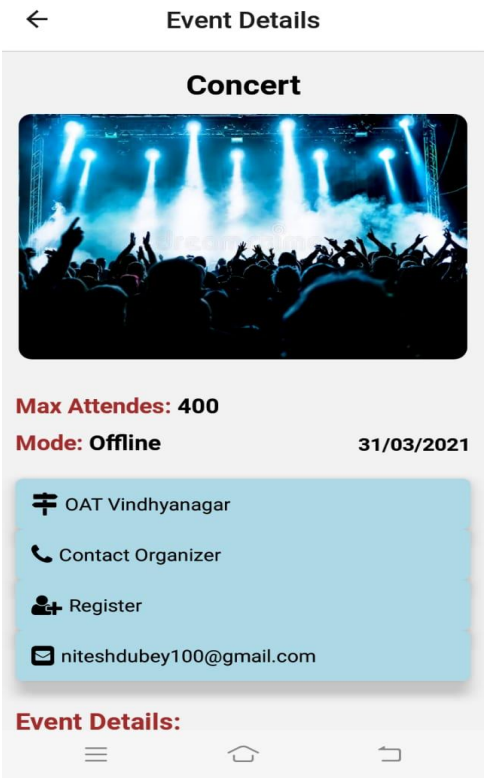


6.2) Events Detail Screen

i) Main screen

This is the event Detail Screen, which can be opened by pressing the EventCard, by using react navigation's stack navigator.
When the user clicks on the buttons on the screen, they'll be navigated to the following screens.

1. Venue (Here OAT Vindhyanagar) : The event location will open in google maps.
2. Contact Organizer : The user is redirected to their Phone's calling app, from where they can call the event organizer.
3. Register : The user will be redirected to a form, from where they can register for the event.
4. EmailId : The user will be redirected to the phone's email app, from where they can email the organizer.

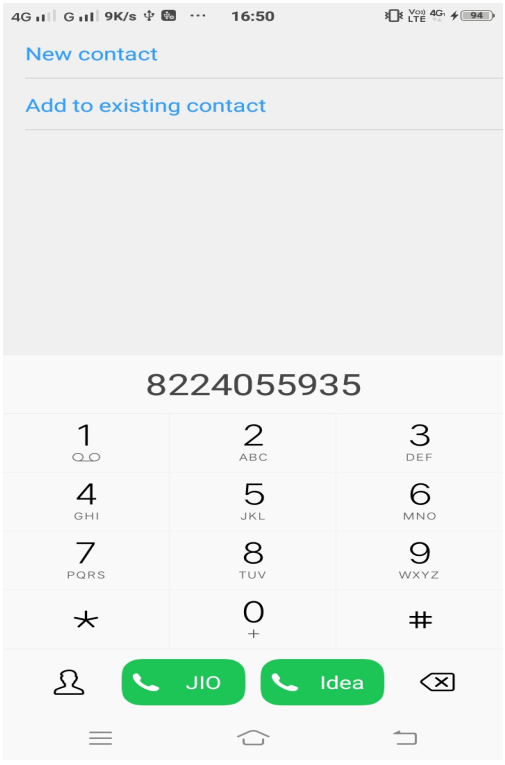


ii) On press - Venue

Using this screen, the user can see they event on google maps, which will help them in reaching the venue

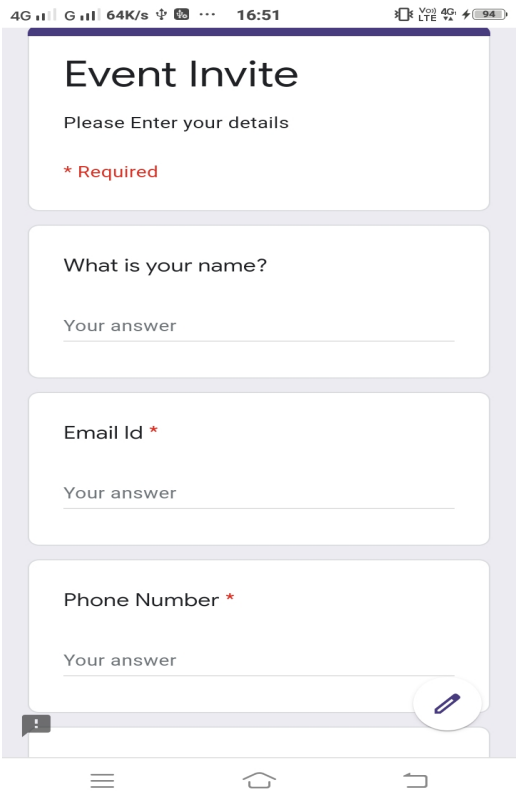
ii) On press - Contact Organizer

Using this screen the user can call the event organizer.



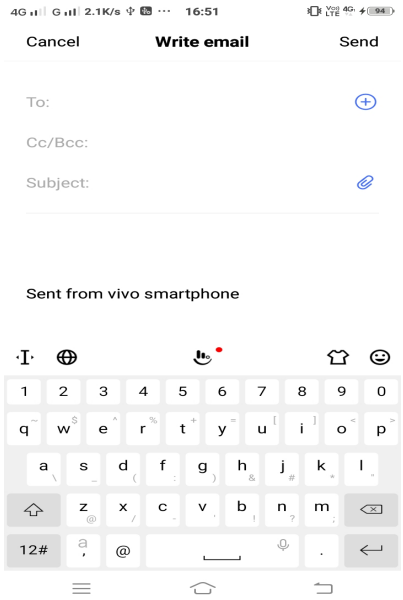
iii) On press - Register

Using this google form, the user can register for the event, and organizers will get the attendees details.



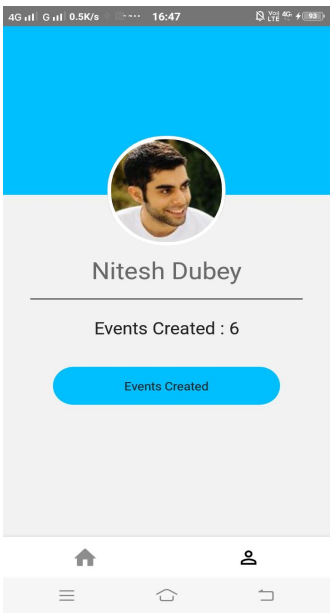
iv) On press - Mail

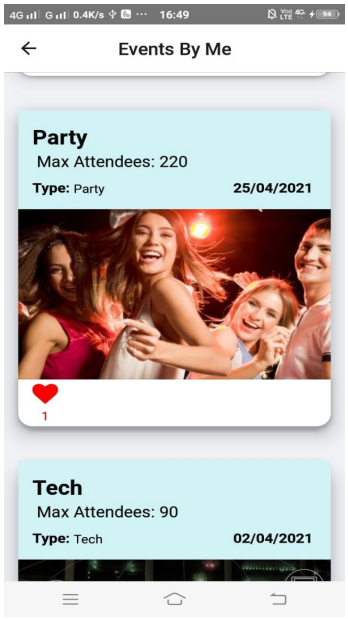
Using this screen, the user can contact the organizer via email.



6.3) Profile Screen

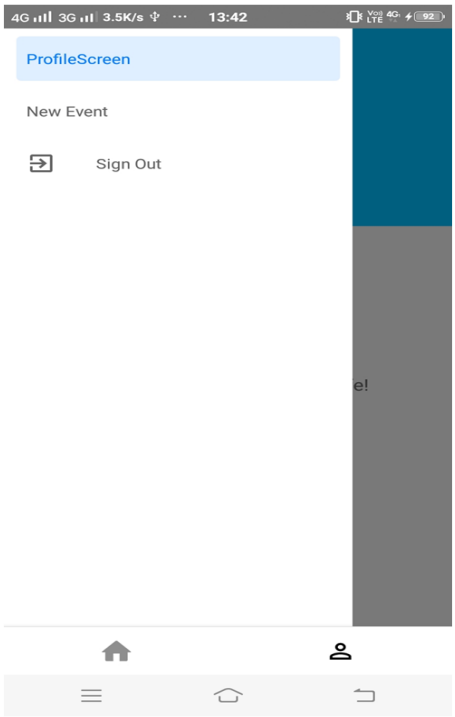
Details such as profile picture, name of the user and the number of events created by the user would be displayed in the profile screen. Events Created button would lead to the list of events created by the user.





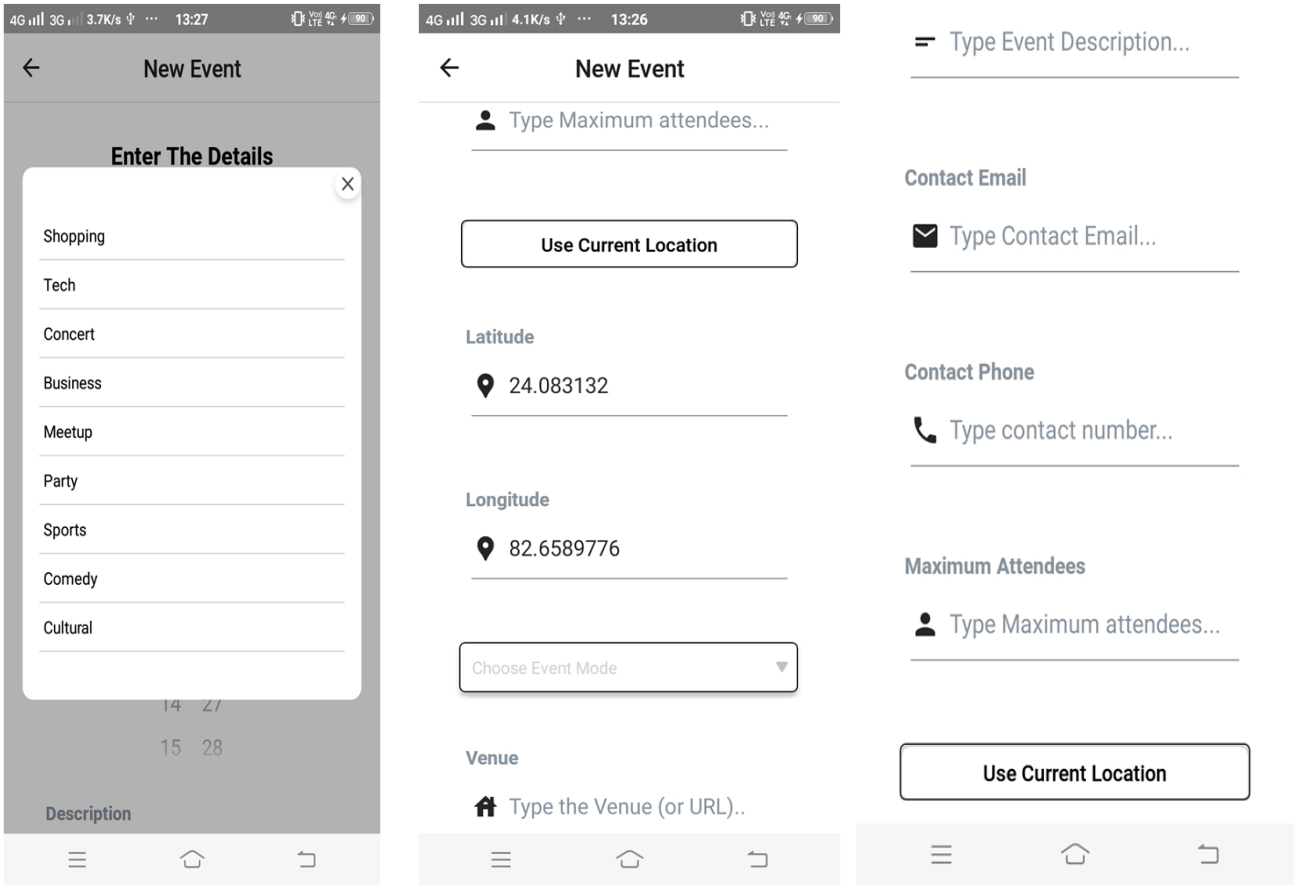
6.4) Drawer Navigation

Drawer navigation opens when the user swipes through the right of their screen. It consists of Sign Out and New Event buttons. Sign out button enables users to log out of the application and the New event button directs them to the Create New Event screen.



6.5) Create Event Screen

1) Users can create a new event by entering the required details.
2) When the user clicks on the Use Current Location button, it uses Geolocation Service to find the current latitude and longitude of the device. The users can also input Lat long by themselves manually.
3) After the user is done entering the details, they can press on the Create Event Button, which will create a new event in the firestore.



7. Testing The App for user Inputs

Many tests for user input have been performed on the app. Here is the list of outputs during testing.

1. Login Screen

Input : Null strings in email or password.

Output : Alert -> Please Enter the details Correctly.

Input : Invalid strings in email or password

Output : Alert -> Please Enter the details Correctly

2. **Create New Account Screen**

Input : Null invalid strings in email, password, confirm password or name

Output : Alert -> Please Enter the details Correctly.

Input : input such that password and confirm password do not match

Output : Alert -> Passwords do not match.

3. **Create New Event Screen**

Input : Null strings or invalid value of any input fields (or combination of them)

Output : Alert -> Please enter the details of the event correctly (Event Not created)

Input : Mobile number (Eq class : <10 digits, 10 digits, >10 digits

Output : Alert - > Mobile number field requires 10 digits

8. Advantages for Users

1) **Quality Time:** Spending time effectively by finding the right events that suit them quickly.
2) **Registrations:** Registering for events easily using the App.
3) **Assistance:** Getting assistance from events organizers through their contact details and mail id's.

9. Advantages for Event Organizers

1) **Reachability :** The event organizers will be able to reach more audience and attract them to their events.
2) **Marketing with lower cost:** Event hosts can market their paid events/webinars to a wider audience with cheap cost using our app, which will enable them to earn more profit. Paid Events feature will be added in future.

10. Software tools

1) **Client Side:** React Native App
2) **Server Side:** Firebase
3) **Development Tools:** Visual Studio Code, Android Virtual Device, Android Device

4) **Programming Language:** JSX.
5) **Tested on :** Android Device, Android Emulator

11. Deployment

1) **Operating System:** Android 8+

12. Hardware Specifications

1) **Device :** Android Phone
2) **Ram :** 2GB+

13. Future Works

1. Personalized Recommendation.
2. Adding reminders for events.

14. Conclusion

The era of mobile technology opens the windows to android apps. Our app would successfully help you to spend your leisure time on events based on your interests. Currently, our app can handle 100 users (free tier limit) and show events around our area.

15. Contributions

1. **Nitesh Kumar Dubey (1801115) :**
    a. Project Proposal, SRS, Use case diagram, db design
    b. Project Implementation : Backend (using Firebase),User Authentication, Signin and Signup screen UI, App Navigation and State Management, Geolocation Services implementation, EventScreen UI and Backend, Create New Event Screen, Event Detail Screen, Likes feature Implementation, Profile Screen (added Events created by me)
    c. Report.

2. **Thirumurugan R. (1801185) :**
    a. Project Proposal, SRS, DFD, db design
    b. Project Implementation: Profile Screen UI, Event screen UI, Event details UI using dummy data, google maps api in detail page, black box testing of App.
    c. Report and PPT