

# Assignment 3 – Android Project Report

“UniVents”

Group A/Lab 03:  
Sahaj Kishore Jain (32313152)  
Anna Mary Almeida (32313500)  
Aparna Lal (32191677)

**“UniVents”** is our proposed android application designed for students that want the entire university experience and not miss out on any events held in their universities. For this, we have created an application and tried to make it as user friendly as possible. The application allows students from different universities to sign up with their university accounts to be able to view events being hosted by various clubs in their universities and register for any events they are interested in.

The Login screen has three options – it allows pre-existing users to log in, new users to create an account and will allow for google sign up, which is an upcoming feature. We had initially planned to use Facebook login as well but chose against it as you cannot extract details regarding their university from it. During registration to the application, we have restricted the password such that it must contain at least 8 characters and include a numeric character as well. The email id has to contain “.edu”, “@”, “student” and must not be empty.

The create account screen has all the elements that were mentioned in our initial proposal. We have used a drop-down spinner which is populated with a list of universities to select from. We have also added a clear button to get the textboxes back to their original states. Every input has been validated in create account section. The first and last name only accepts alphabets and can not be left empty. The phone number only takes values that have ten characters and they are numeric and can not be empty. The email and password are similar to the login screen and confirm password checks if both the passwords are matching. Their university also has to be selected which will personalise the app experience to get events based on that. If any of these fail, the user is notified by a Toast stating the issues occurred.

We have added a few UI widgets like date pickers, spinners and other buttons to make it more user friendly.

After the user has logged in, he is directed to the home screen consisting of 4 buttons that represent the clubs present at their university like “Cultural”, “Educational”, “Sport” and “Religious” which are classified as event categories. There is also has a navigation drawer which consists of Home, Profile which is the user profile, Registration History, Help and Support and finally a logout.

On clicking any of these category buttons, it takes us to the Event Screen page where a list of events will be displayed. The user also has an option of selecting a particular date and the application will display all the events on that particular date. There is also a clear filter option that pops up when it is filtered which will allow us to go back to its older state with the whole list of events under that category. Each screen has a back button to go back to the previous screen. When we select a particular event option, a list of event details will be displayed and the user can further choose to register for the event. This will redirect you to a page that will display the map of the location and we also get an option to add the event to google calendar to stay updated. We have used Mapbox SDK to implement our map.

The Navigation menu has the page with event categories as its first option and allows the user to go to the event home screen from any navigation option/fragment that is selected.

In the Profile screen, the users’ details will be displayed and buttons to delete their account or do backup their details to the firebase database are provided.

The registration history will have the list of events that the user has confirmed and a button that goes to the reports screen which will display a bar and a pie chart that demonstrates the different events the user has been to. The different colours are used to signify the event categories.

The help and support option will lead you to the screen with a detailed explanation of how the app works, and also provides any assistance that may help the user.

And finally, logging out will log the user out and redirect the user back to the log in screen.

We have used Android Recycler View with Card View to display data from the Room DBs on the events screen and the event history fragment.

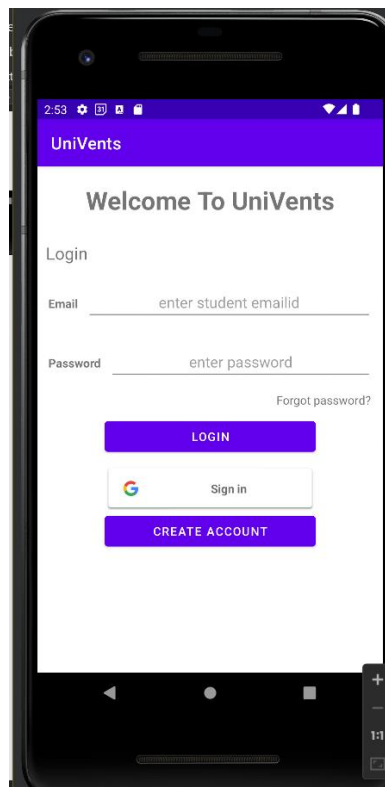
Some features that we have added to our implementation are,

- A button to clear the data in 'create account'
- A reports screen with a bar graph and pie chart
- A clear button for the filter to remove the dates on the event screen
- A backup button to save the data onto the firebase database

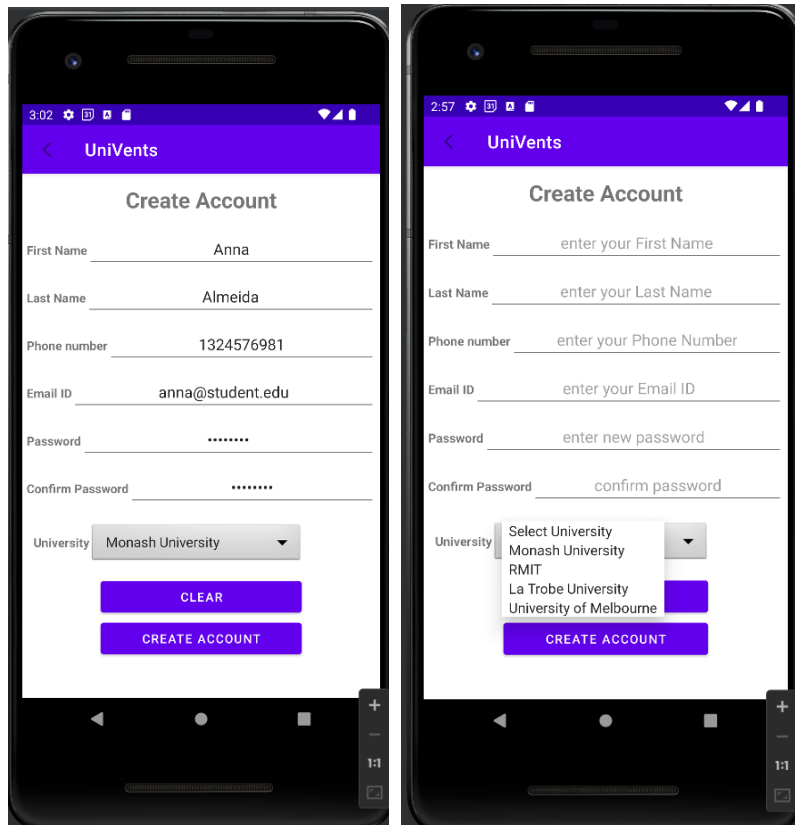
Web APIs used

- MapBox (<https://docs.mapbox.com/api/overview/> )
- Firebase Authentication (<https://console.firebase.google.com/> )
- Firestore Database (<https://firebase.google.com/> )

Screenshots of main screens with a brief description.

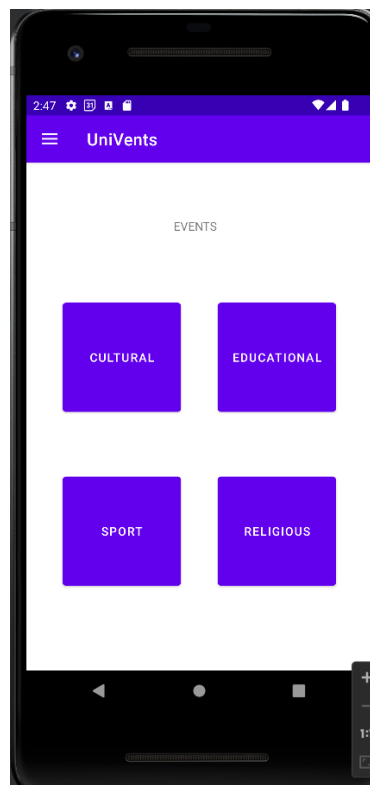


Login Page

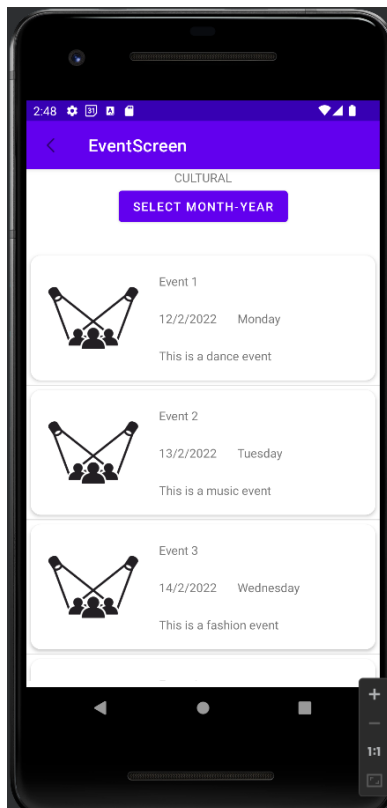


Create Account Screen

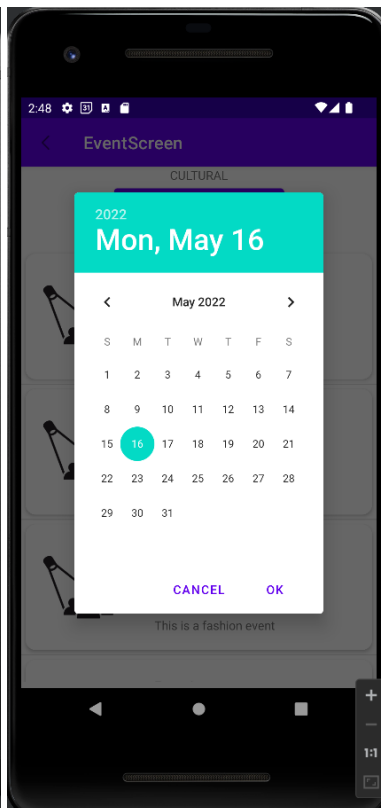
Spinner for Universities



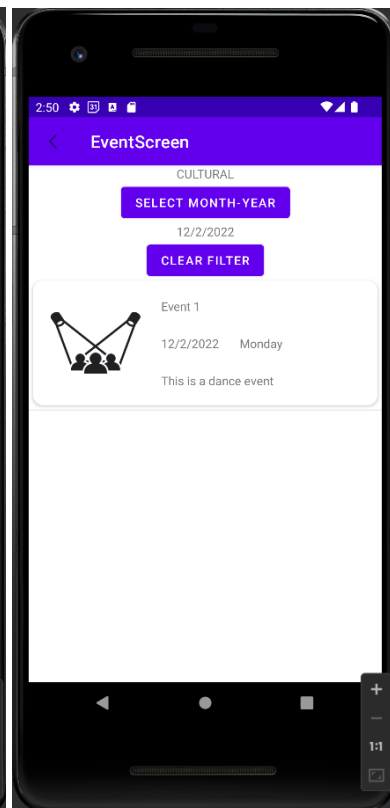
Home screen showing the different categories



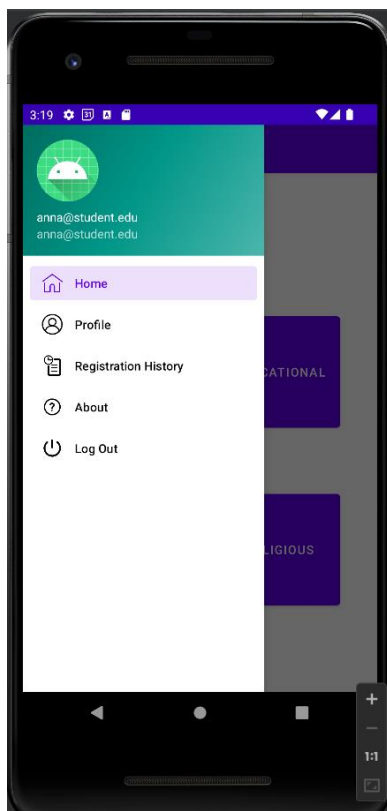
Screen with list of events



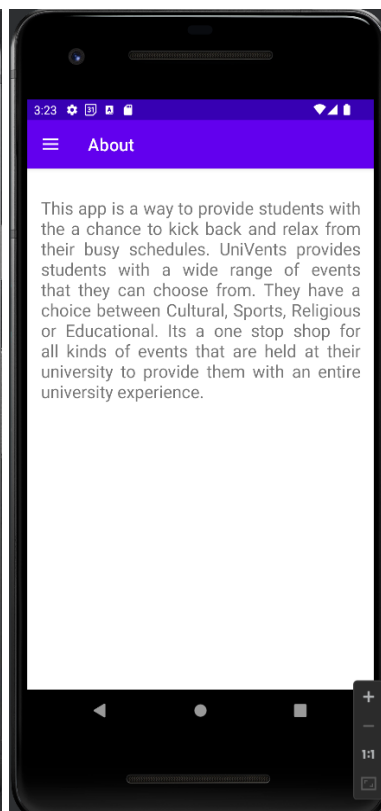
A date picker used to filter



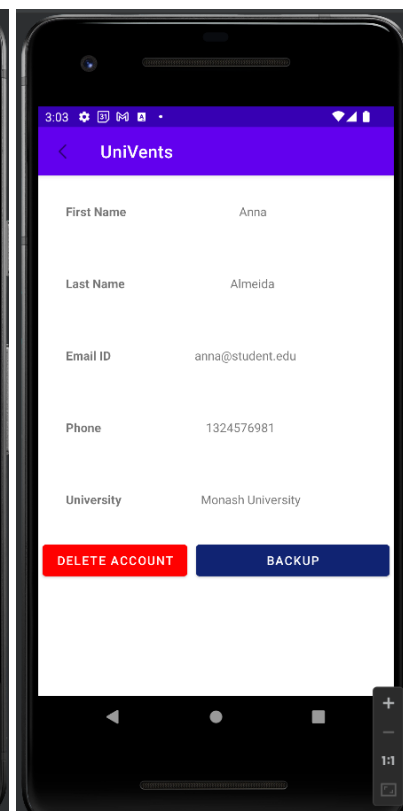
Filtered list of events



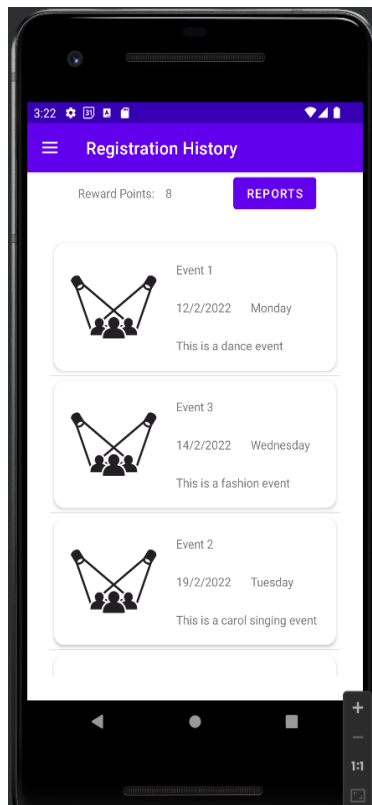
Navigation drawer



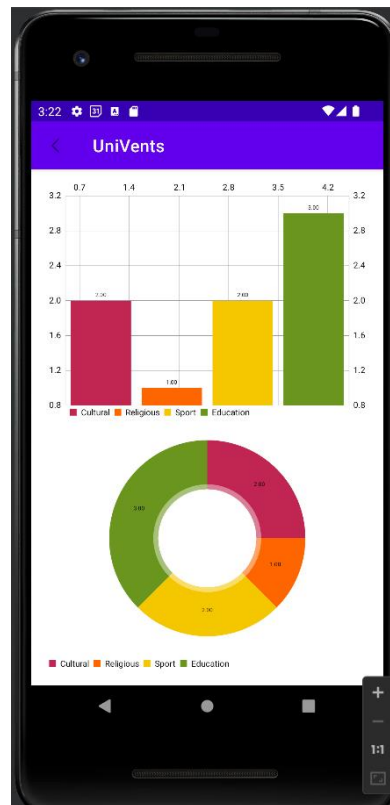
About screen



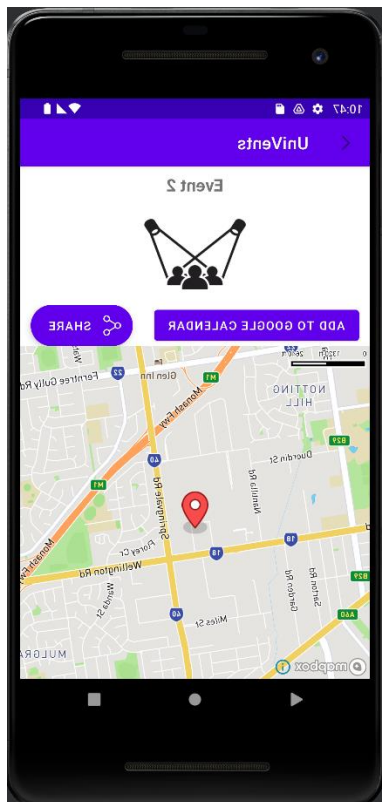
Profile details



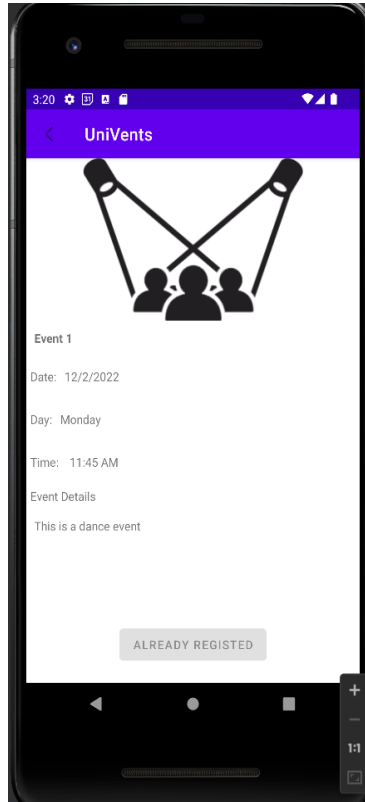
Page showing past events



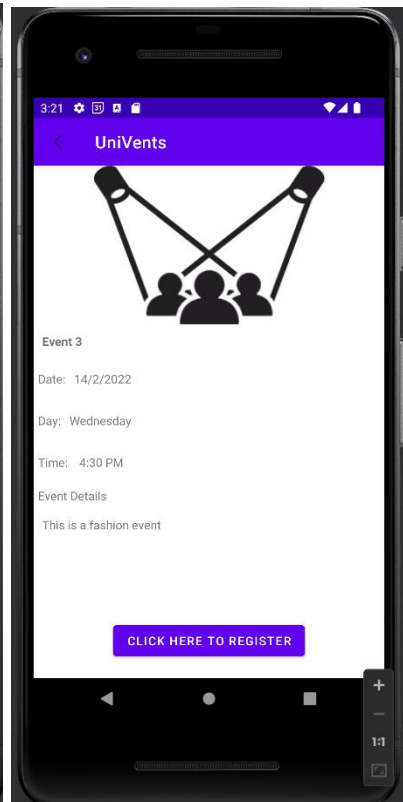
Detailed graph for history



Map for event



Registered activity



Activity details