

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY

“JnanaSangama”, Belgaum -590014, Karnataka.



## PROJECT WORK-3 REPORT on

### STUDENT CONNECT

*Submitted by*

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*Under the Guidance of*  
**Prof. Selva Kumar S**  
**Assistant Professor, BMSCE**

*in partial fulfilment for the award of the degree of*  
**BACHELOR OF ENGINEERING**  
*in*  
**COMPUTER SCIENCE AND ENGINEERING**



**B.M.S. COLLEGE OF ENGINEERING**

(Autonomous Institution under VTU)

**BENGALURU-560019**

**Sep-2020 to Jan-2021**

**B. M. S. College of Engineering,  
Bull Temple Road, Bengaluru 560019**  
(Affiliated To Visvesvaraya Technological University, Belgaum)  
**Department of Computer Science and Engineering**



**CERTIFICATE**

This is to certify that the project work entitled "**STUDENT CONNECT**" carried out by **NAMAN AGARWAL (1BM18CS057), NIMIT SAJAL (1BM18CS063) AND RUTAZEET RITIK ROUT (1BM18CS151)** who are bona fide students of **B. M. S. College of Engineering**. It is in partial fulfillment for the award of **Bachelor of Engineering in Computer Science and Engineering** of the Visvesvaraya Technological University, Belgaum during the year 2020-2021. The project report has been approved as it satisfies the academic requirements in respect of **Project Work-3 (20CS5PWPW3)** work prescribed for the said degree.

Signature of the Guide

Prof. Selva Kumar S

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Associate Prof.& Head, Dept. of CSE

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External Viva

Name of the Examiner

Signature with date

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

**B.M.S. COLLEGE OF ENGINEERING**  
**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**



***DECALARATION***

We, NAMAN AGARWAL (1BM18CS057), NIMIT SAJAL (1BM18CS063), RUTAZEET RITIK ROUT (1BM18CS151), students of 5th Semester, B.E, Department of Computer Science and Engineering, B. M. S. College of Engineering, Bangalore, here by declare that, this Project Work-3 entitled "STUDENT CONNECT" has been carried out by us under the guidance of Dr. Umadevi V, Associate Professor, Department of CSE, B.M.S. College of Engineering, Bangalore during the academic semester Sep-2020-Jan-2021

We also declare that to the best of our knowledge and belief, the development reported here is not from part of any other report by any other students.

Signature

NAMAN AGARWAL (1BM18CS057)

NIMIT SAJAL (1BM18CS063)

RUTAZEET RITIK ROUT (1BM18CS151)

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# INTRODUCTION

## Overview

- We are creating a fully functional and interactive App that creates a platform which is made for connecting students of different colleges, and there is no central authority governing the platform.
- The students aren't restrained from the college, as the college doesn't play any role in the platform thus making the platform "*for the students and by the students*".
- The students are encouraged to interact with fellow students from their college and from other college and share moments and information with them. Thus, allowing them to come closer and form bonds, which will be essential for their personal and professional life.
- Students can also connect with their alumni who would guide the student to achieve their dream placement or help them in funding of their startups.
- The student can make most of their college life by hosting and participating in their favorite events, thus making them cherish these moments for the rest of their lives and allowing them to learn valuable lessons of management. The students are recommended events based on their interests allowing them to sharpen their skills and pursue their dreams simultaneously.
- The students can also take up responsibility and sharpen their managerial skills by becoming an administrator of the college. The administrator is selected by an election among the candidates. The administrator is responsible for verifying the genuine events and conducting a free and fair election for their successor.

## Motivation

- Our main motivation is to help the students to connect with other students from their college or from other college. This connection could be built when the students interact with each other through social media and messaging app.
- The students also have the freedom of hosting small scale events for the students of their own college or massive events where the students from other college could also tag in. This not only deepens the bond among the student but also teaches them valuable teachings of leadership and personal responsibility which would be a plus point in their professional work.
- The students are recommended events based on their interests which allows them to cope up with their stressful college life and also make the most of this part of their life by making memories that they would cherish for the rest of their life before entering the cut throat competition present in the professional life.

## **Functionalities under Student login**

- i. Display the students with the current events happening in their college or in the other college.
- ii. Allow interaction between students from their college and the other colleges.
- iii. Messaging platform for the students to interact with their friends. The user can also like a particular message and can forward it too. The user is granted the ability to delete their own message.
- iv. Host events for other students with their friends or they can do it individually.
- v. The user can search for the other users from the search menu and thus the user can make new bonds with new users and keep up with their acquaintances.
- vi. Bond with their colleagues by sharing their thoughts and memories in the form of images.
- vii. Like a true social media, the user's friends can like/dislike the post and also comment on them.
- viii. The user can use the search option to search for colleges. The user is then provided with the college details of the searched college.

## **Functionalities under Administrator**

- i. Approve the events and give it approved badge, for the students to distinguish between the genuine college events and normal student events.
- ii. Hosting of polls for the selection of a new successor or continuation of the same administrator after a fixed interval.

# SOFTWARE REQUIREMENTS

## ❖ Hardware Requirements:

A Phone with the following or greater specifications:

- Snapdragon 800 chipset and above or Media tech Helio P-22 and above
- 2 GB RAM
- 16 GB ROM
- A stable internet connection (100 Kbps or higher)

## ❖ Software Requirements:

- Operating system: Android OS (Android 5.0(Lollipop) or above)
- Language: Kotlin, XML
- Technology: Google Firebase
- Integrated development environment (IDE): Android Studio

## ❖ App Size: 38 MB

## ❖ APIs and External Libraries Used

- Circular Image View – loads image in a circular fashion.
  - de.hdodenhof:circleimageview:3.1.0
- Picasso – image processing tool.
  - com.squareup.picasso:picasso:2.71828
- Glide – image rendering tool.
  - com.github.bumptech.glide:glide:4.11.0

- Zelory – image compressing tool.
  - id.zelory:compressor:3.0.0
- Shape Image View Library – to set image shape.
  - com.github.siyamed:android-shape-imageview:0.9.3@aar
- Justify text library – aligns the text in justified view.
  - me.biubiubiu.justifytext:library:1.1
- Styleable toast – builds custom toast view.
  - com.muddzdev:styleabletoast:2.2.4
- Card View – creates depth effect in the layout.
  - androidx.cardview:cardview:1.0.0
- Palette – extracts prominent colours from the image.
  - androidx.palette:palette:1.0.0
- Groupie View Holder – provides a ready-made adapter for recycler view.
  - com.xwray:groupie:2.8.1
- Android Play Services and Map Utils – provides map view and map functions.
  - com.google.android.gms:play-services-maps:17.0.0
  - com.google.maps.android:android-maps-utils-v3:1.3.1
  - com.google.auto.value:auto-value-annotations:1.6.5
  - com.google.android.libraries.maps:maps:3.1.0-beta

❖ [\*\*Wireframe/architecture link -\*\*](#)

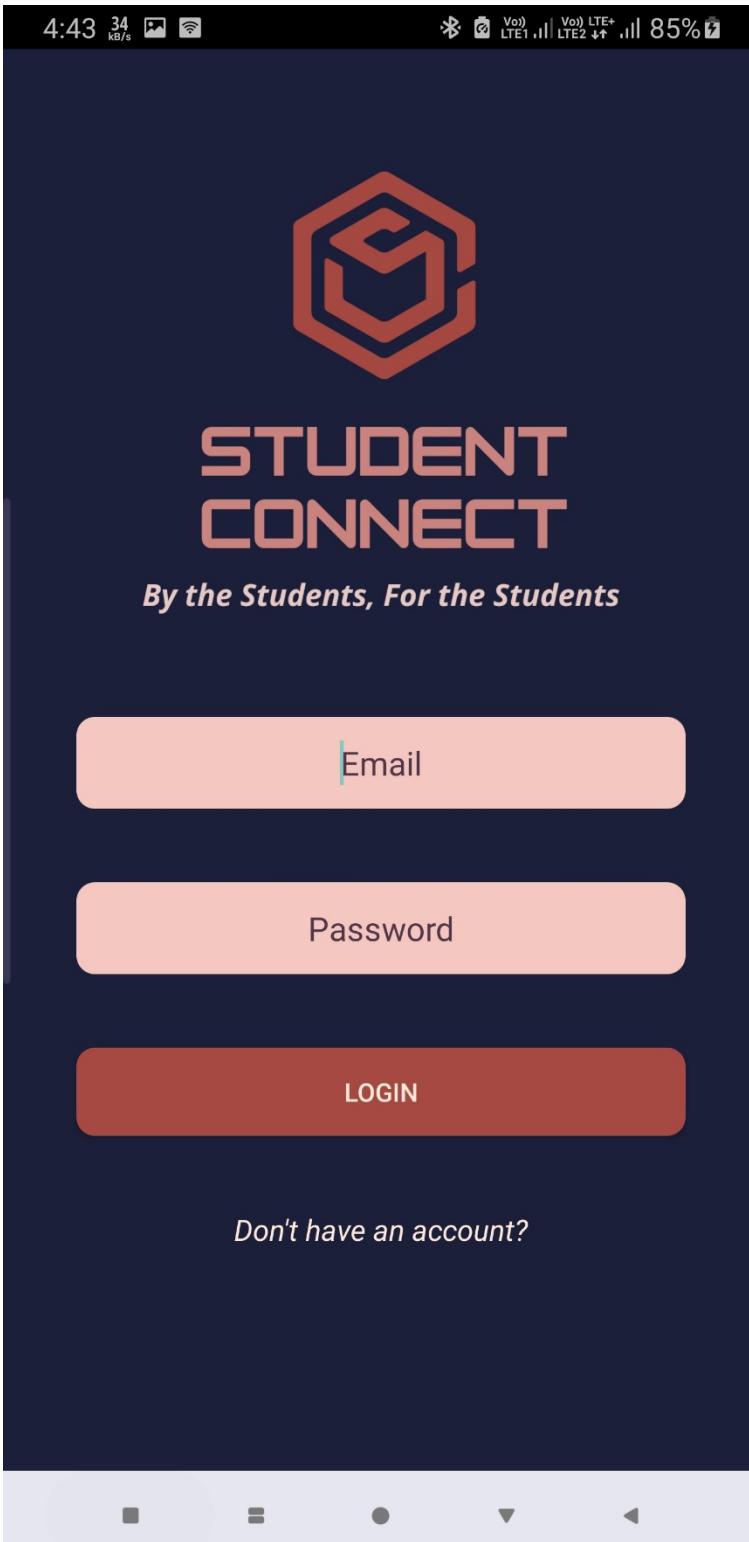
<https://whimsical.com/student-connect-2UYaPyhHSAyGvqvHFRGcRN>

## Design Layout:

### ❖ Login:-

The Login page authenticates the existing users and logs them in to their own feed. All the user information is validated and stored at the backend and all the passwords are hashed before storing into the database. The user logs in using their email id and password.

- The login page checks whether the user name or password is empty or incorrect and shows customized toast according to the error to enrich the user experience.
- The login page also remembers whether a user is already logged in and takes them directly to their homepage.
- If the user doesn't have an account the user can Sign Up as a new user by selecting 'Don't have an account?'



**LOGIN PAGE**

The login takes the email id and password from the user and authenticates it from the backend.

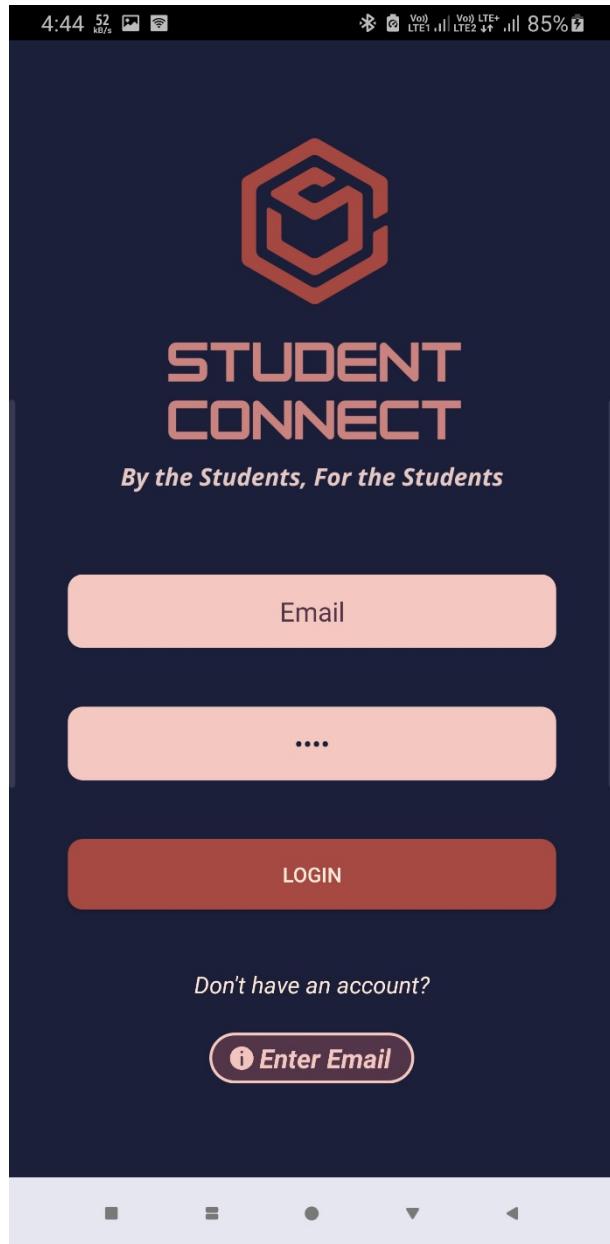
The screenshot shows the Firebase Authentication console under the 'Student Connect' project. The left sidebar has icons for Home, Authentication, Firestore, Storage, Functions, and Cloud Firestore. The main header says 'Authentication'. Below it are tabs for 'Users', 'Sign-in method', 'Templates', and 'Usage'. A banner at the top right says 'Prototype and test end-to-end with the Local Emulator Suite, now with Firebase Authentication' and 'Get started'. A search bar at the top says 'Search by email address, phone number, or user UID'. A table lists 8 users:

Identifier	Providers	Created	Signed In	User UID
nitin@gmail.com	Email	Dec 14, 2020	Dec 15, 2020	1aLTwK6PwpbXzysnP5WVXeGQRKE...
anubhav@gmail.com	Email	Dec 14, 2020	Dec 14, 2020	66rZ3SRs6T2X1j7ekoTOc7Kcjz1
pradyumn@gmail.com	Email	Dec 14, 2020	Dec 14, 2020	702b0pSy0FbS0X1Bd37GL0BAm6m2...
sankalp@gmail.com	Email	Dec 14, 2020	Dec 14, 2020	A9AyrC9KKnev5RPbRha28WM1LRJ2
oreo@gmail.com	Email	Nov 18, 2020	Nov 26, 2020	AZBt39UMzgPQD59EL7Z41T7SCN...
akash@gmail.com	Email	Dec 14, 2020	Dec 14, 2020	BXXkF7fzzpxfn3KDF0TugoC6TGR2
yuvraj@gmail.com	Email	Dec 14, 2020	Dec 14, 2020	BbL6KrZ54hNbVHmSz1PhkI7IWf62
abhinav@gmail.com	Email	Dec 14, 2020	Dec 14, 2020	EmndimzuYTNUi64BWwQQU2Jlus1

## BACKEND AUTHENTICATION AND VERIFICATION

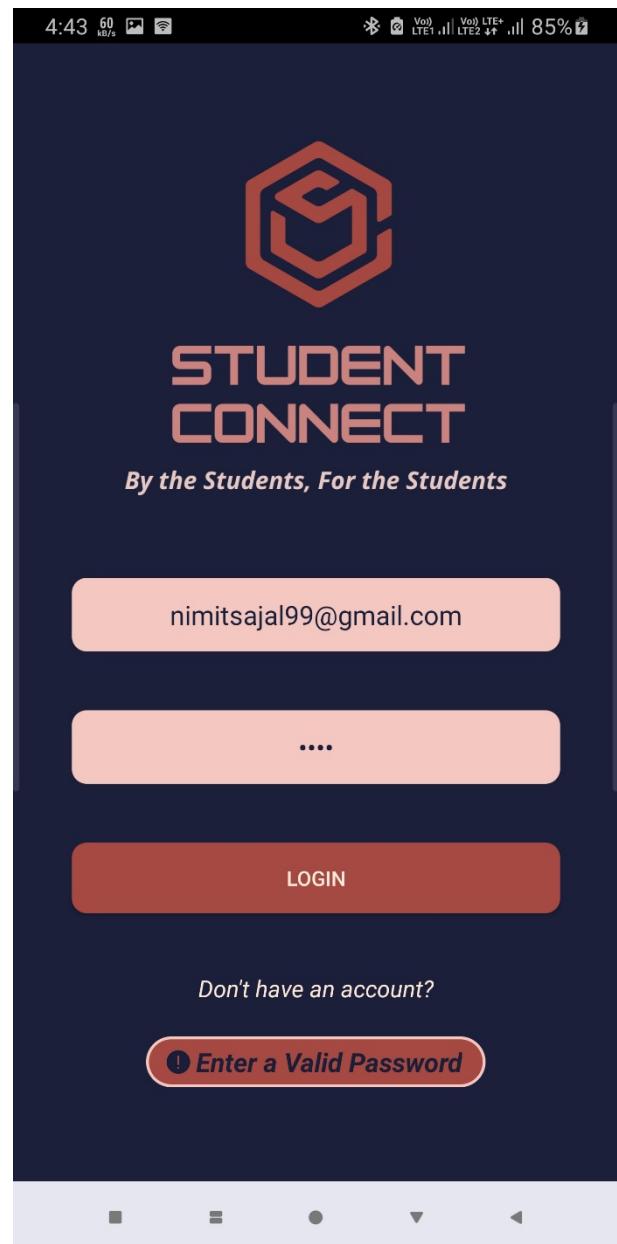
The screenshot shows the Cloud Firestore console under the 'Student Connect' project. The left sidebar has icons for Home, Authentication, Firestore, Storage, Functions, and Cloud Firestore. The main header says 'Cloud Firestore'. Below it are tabs for 'Data', 'Rules', 'Indexes', and 'Usage'. A banner at the top right says 'Prototype and test end-to-end with the Local Emulator Suite, now with Firebase Authentication' and 'Get started'. A search bar at the top says 'User Table > 1aLTwK6PwpbX...'. A table lists documents in the 'User Table' collection:

student-connect-b96e6	User Table	1aLTwK6PwpbXzysnP5WVXeGQRKE3
+ Start collection	+ Add document	+ Start collection
College Groups	1aLTwK6PwpbXzysnP5WVXeGQRKE3 >	+ Add field
Post	66rZ3SRs6T2X1j7ekoTOc7Kcjz1	Username : "JattNo1"
University	702b0pSy0FbS0X1Bd37GL0BAm6m2...	
User Table	A9AyrC9KKnev5RPbRha28WM1LRJ2	
Users	AZBt39UMzgPQD59EL7Z41T7SCNf2	
	BXXkF7fzzpxfn3KDF0TugoC6TGR2	
	BbL6KrZ54hNbVHmSz1PhkI7IWf62	
	EmndimzuYTNUi64BWwQQU2Jlus1	
	HTYJ3EPty9V2Eu1jKubrcRFuSRe2	
	K8ZFokZhCKSrD8aYWh81YdACCZ2	
	KVhabnRR6Be84jfuLN6I8UFvvEI3	
	N1yzPzVB9tQohH79VTq8Se6eoAL2	



CASE 1 – the app gives a toast if a field is left blank

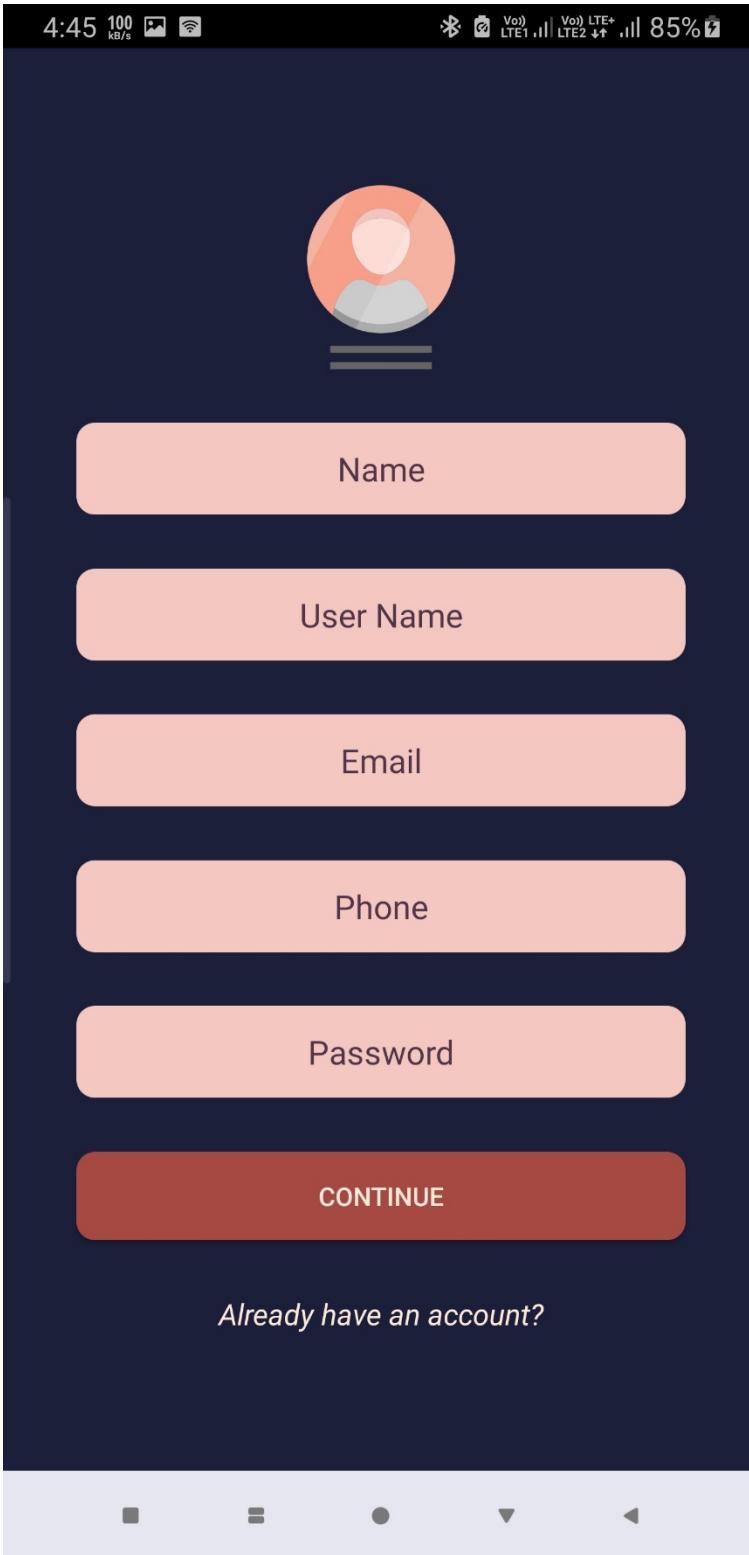
CASE 2 - The app gives an error toast if an incorrect email id or password is entered



## ❖ Sign-Up: -

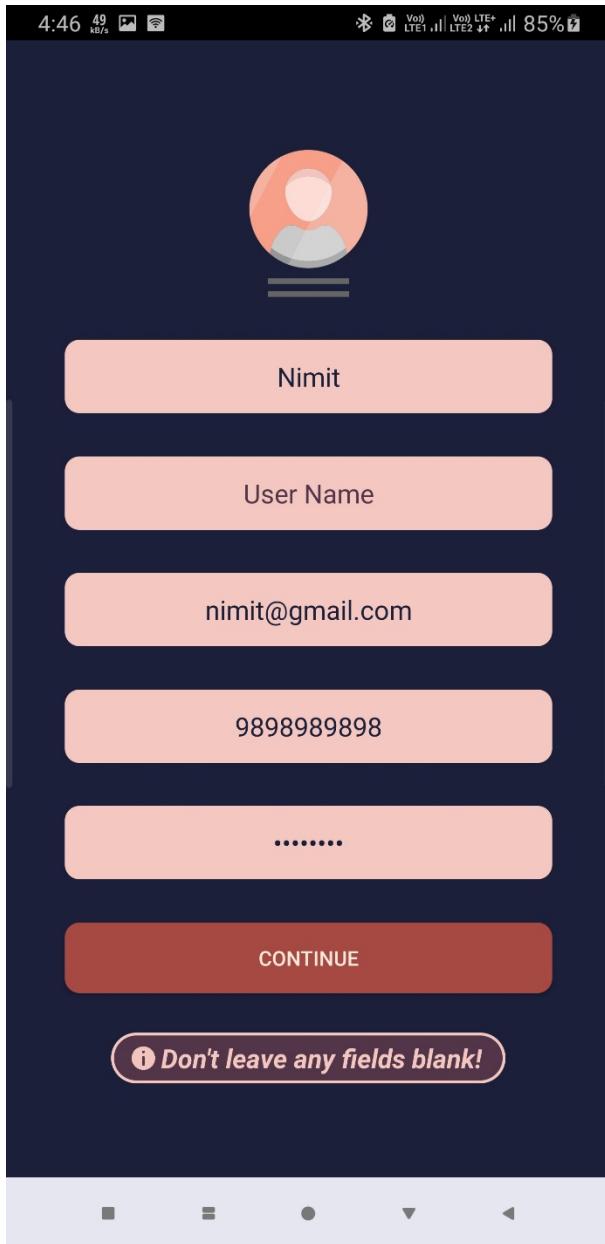
The Sign-Up page creates new users. All the user information is validated and stored at the backend and the password is hashed before storing into the database. The college details page allows users to select university, college, branch and semester using a drop-down menu and creates all the appropriate documents asynchronously and saves it in the backend.

- The email id and phone numbers are constrained for users to enter genuine and correct information.
- Customized toasts are applied to aid the user about any mistakes or blank field.
- The Sign-Up page ensures that there is no delicacy of username and thus all usernames are unique.
- The Sign-Up page also ensures that a strong password is used by the user which includes a special character, a number and has a minimum length of six characters.
- The can login in with or without a profile picture in such a scenario a default profile picture is added in its place.
- The college details page also checks if a given details is blank and notifies the user accordingly.
- The other drop-down menus are automatically refreshed if the preceding menu is changed.



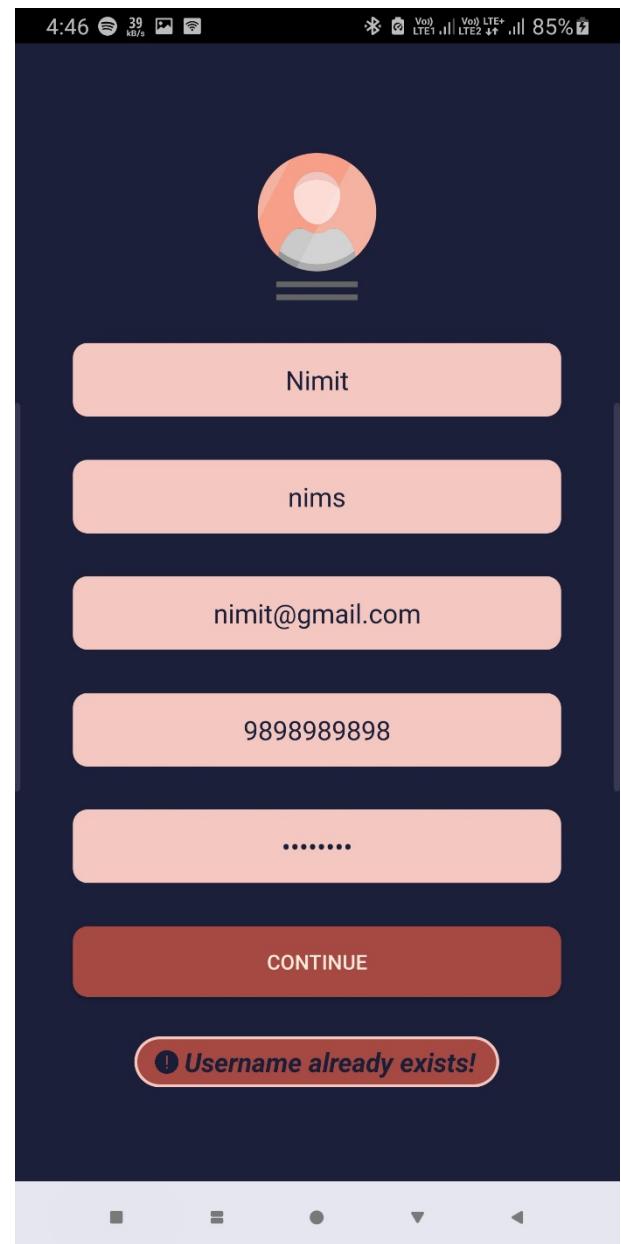
The sign-up page allows the user to register themselves into the app as new users. The new users fill up all the details and register.

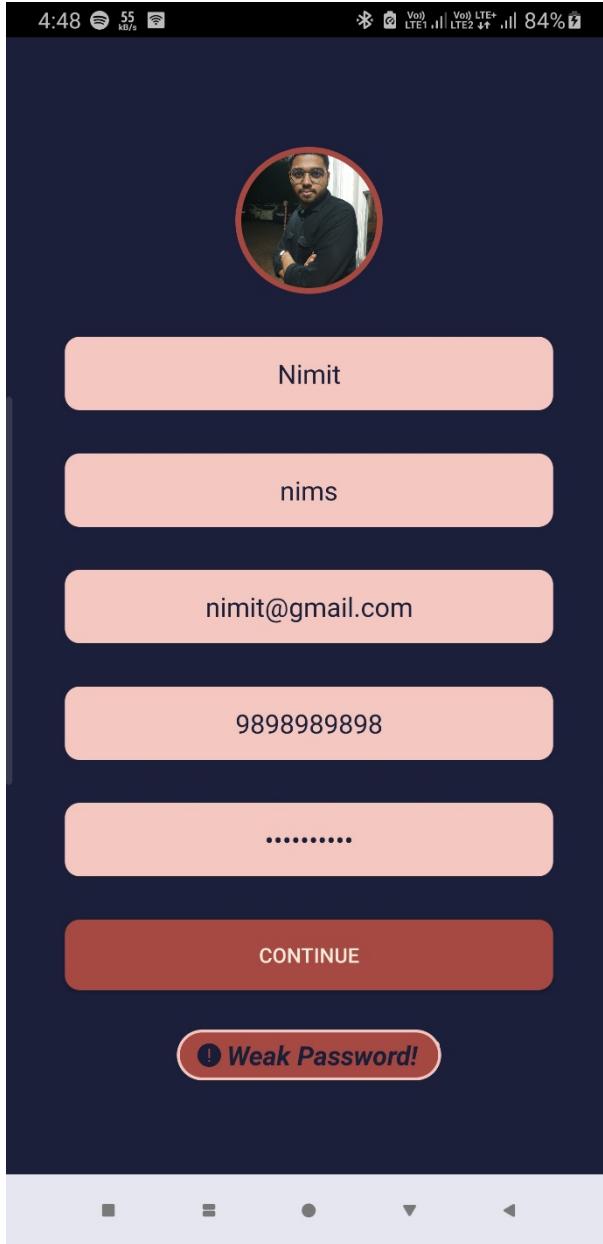
**SIGN-UP PAGE**



CASE 1 - the app gives a toast if a field is left blank

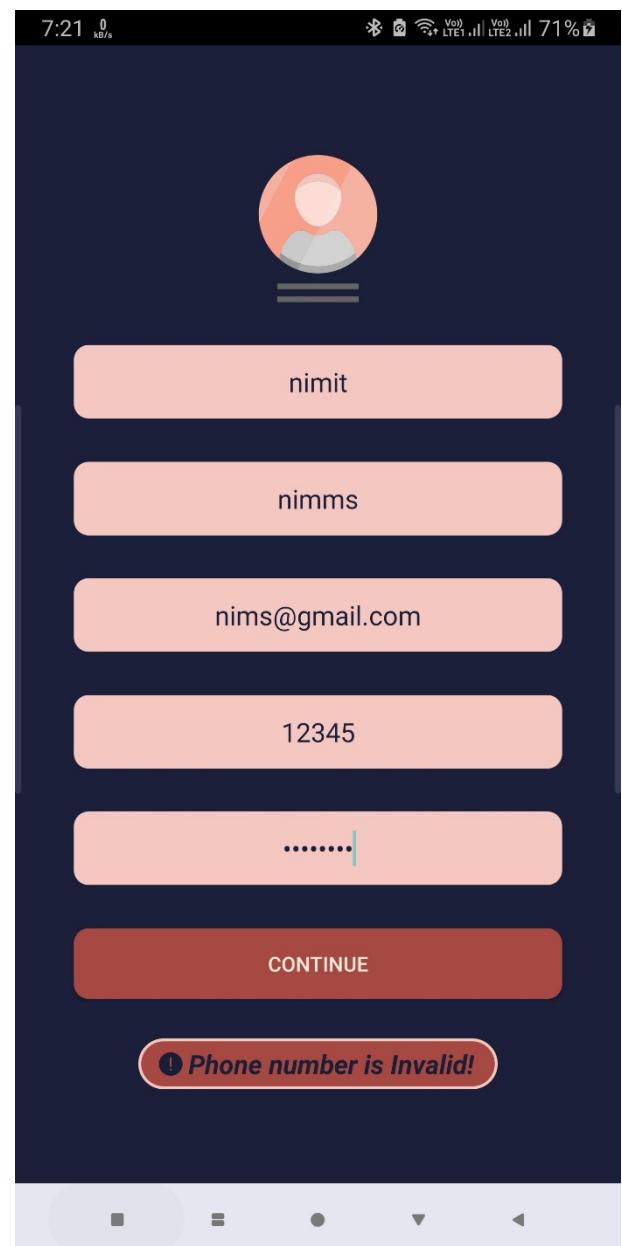
CASE 2 – the app gives a toast if the new user has the same username as any previously registered user. This helps make username unique, and thus no duplication of username





CASE 3 – The app displays a toast informing that the password is weak, if the user doesn't full fills basis constraints which includes length of 6 characters, a special symbol and a numeric value

CASE 4 – The app displays a toast informing that the phone number is invalid if the number doesn't satisfies as being a standard Indian phone number. Some of these constraints are number should be of 10 digits, it must start only with 9,8,7 or 6.



The screenshot shows the Google Cloud Storage interface under the 'Storage' tab. It lists files in the 'dp' folder at 'gs://student-connect-b96e6.appspot.com/images'. The files are:

Name	Size	Type	Last modified
Bhansali	60.5 KB	image/jpeg	Dec 14, 2020
a0e6951d-5ac5-452a-98c4-b862fed1cd2c	1.38 MB	image/jpeg	Nov 15, 2020
abhi	194.7 KB	image/jpeg	Dec 14, 2020
ashish	1.47 MB	image/jpeg	Nov 18, 2020
atom	1.09 MB	image/jpeg	Dec 14, 2020
e8b81965-a7f8-4b77-8b73-4b7d6c8c0f4b	339.1 KB	image/jpeg	Nov 15, 2020
hynthik	1.59 MB	image/jpeg	Nov 16, 2020
inosphere	26.61 KB	image/jpeg	Dec 14, 2020

## BACK END TO STORE USER PROFILE PICTURE

The screenshot shows the Google Cloud Firestore interface under the 'University' collection. A new document named 'RV Educational Institutions' is being created. The document structure is as follows:

- + Start collection
- + Add document
- + RV Educational Institutions >
- Ramaiah Group of Institutions
- BMS University
- Next
- PES University

The right panel shows the 'Student' collection.

**BACK END WHICH PROVIDES DETAILS IN THE DROP DOWN MENU, NEW USER CREATED HERE ACCORDING TO THEIR CHOICES.**

NOTE - A New user is created in User table shown in login page.

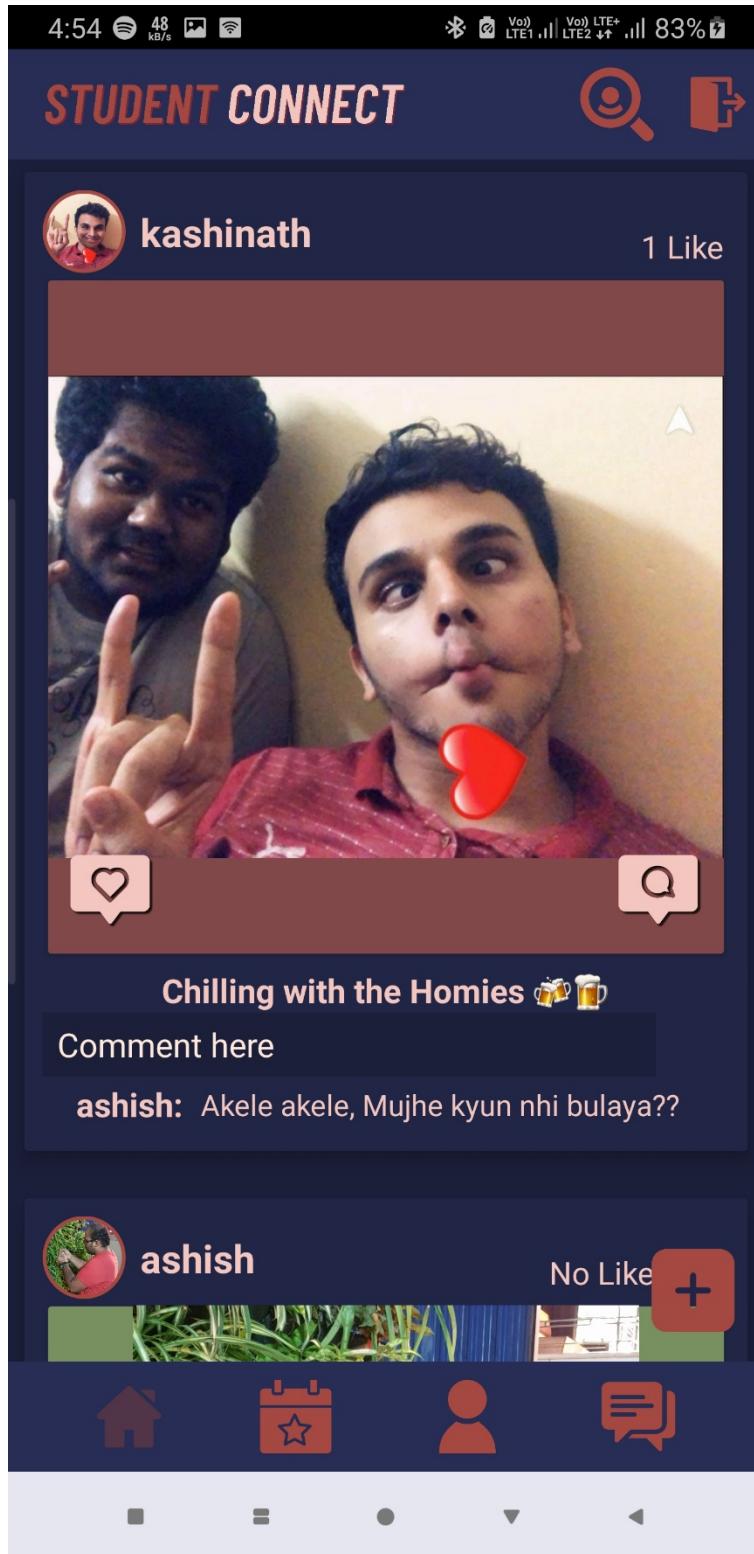
## ❖ User Feed:-

The User Feed is a personalized feed based upon the user's friend list and interests. It keeps them updated about all the activities of their friends. Like a genuine social media, they can give their opinions in the comment section and like the photo and can also use the search option.

### ○ Posts -

- The feed is made interactive by using real time system calls that is, all functions such as like and comments occur in real time and are designed to distinguish whether the user has liked or disliked the post.
- The comments appear in a drop-down format which the user can view or hide from his feed.
- The user can view the profile of a friend either by selecting the username or the profile picture in the post or the username in the comment section.
- For the convince of the user, the number of likes is rounded off shown up to two decimals for a large number, for example – 1.23K likes, 2.34M likes etc.
- API's are used to enhance the post, which smartly detects the second most dominant color of the image and loads background appropriately.

- The app is optimized for maneuvering accidental back press and is reconfigured to home button in this page.



## USER FEED

The user feed consists of post done by the user's friends. The user can like or dislike a post and can also comment in the comment section.

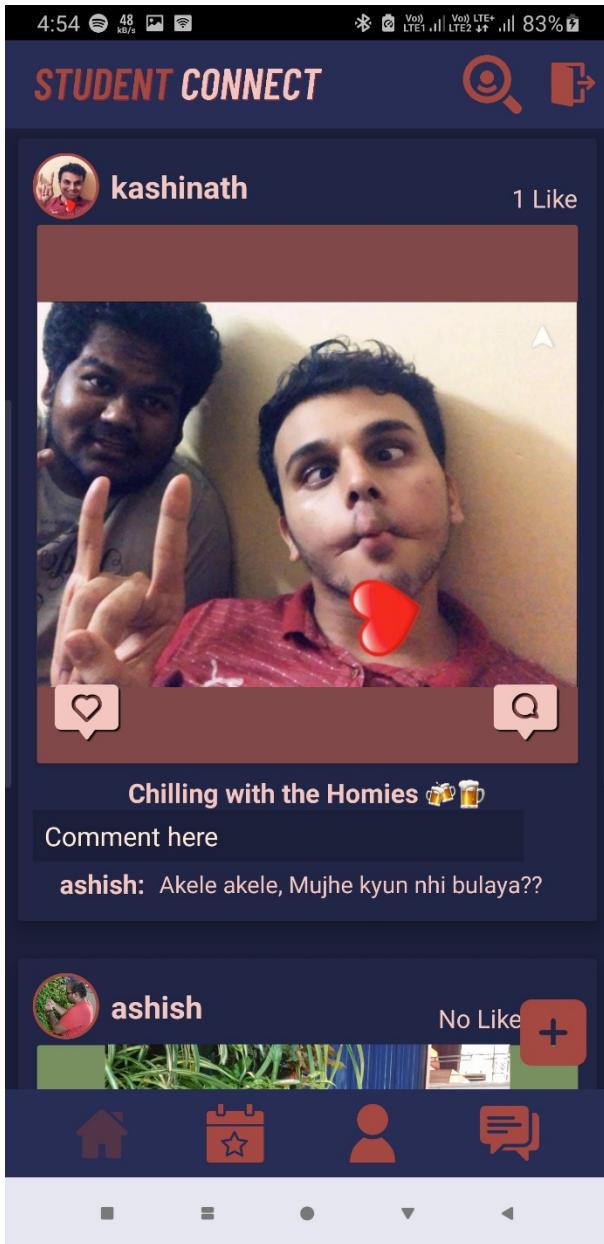
The screenshot shows the Cloud Firestore interface for a document named "Post". The document contains the following fields:

- Description: "today's motivation 🙏"
- Dp: "https://firebasestorage.googleapis.com/v0/b/student-connect-b96e6.appspot.com/o/images%2Fdp%2Fkart?alt=media&token=5666760c-69e4-4607-8eb3-9473f5504498"
- From: "kart"
- Likes: 2345678
- Picture: "https://firebasestorage.googleapis.com/v0/b/student-connect-b96e6.appspot.com/o/images%2Fuploads%2Fkart%2F83cc69ae-2ee7-4d50-89e5-963dfdb883c987?alt=media&token=a8c73e77-183e-4000-8000-000000000000"

## BACK END of user's FEED

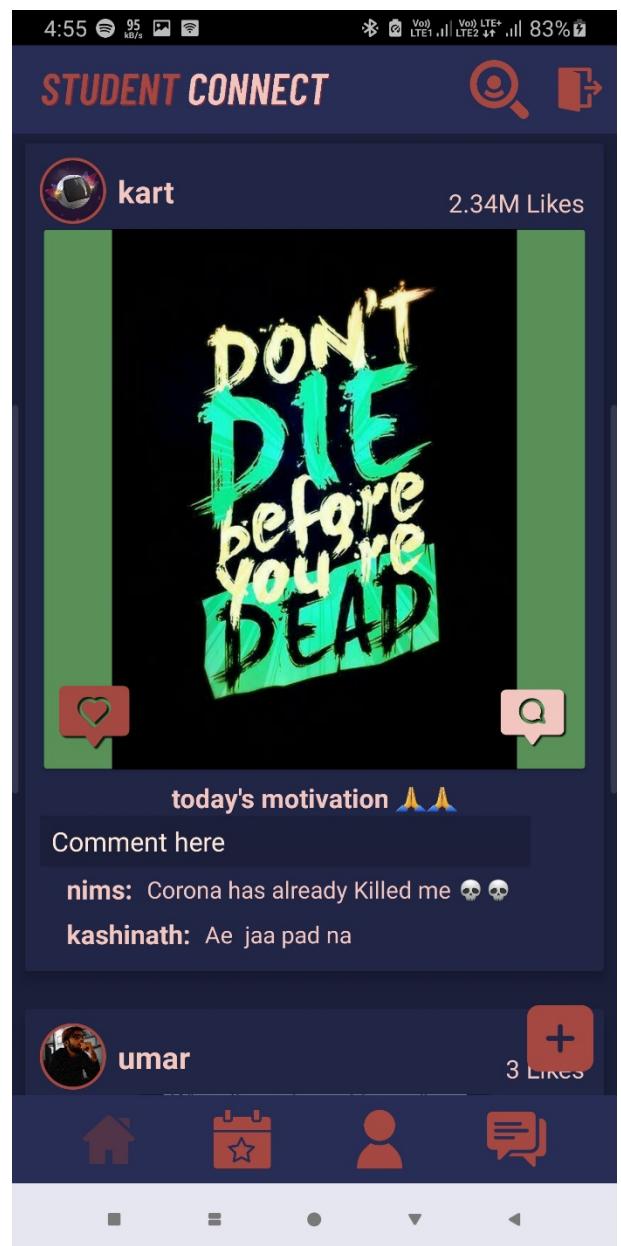
The screenshot shows the Cloud Firestore interface for a user document named "naman". The "My Feed" collection contains the following documents:

- 9PR5uEvFNseGnd2gKtzv
- GmW3p3wRd91otpxbc0hB
- Info
- WbXUAupZH4SsYOF1P2rc
- af1UiB0nrdrVbadloVzz
- bmtz0cN0erIdJ2ZetW3A
- hexXCK9U5opJMjVCZ1oS
- kX7RPqa3kRWTrcYJ9MgE
- xKfDrlhkbff2uZuekv20



CASE 1 – for user's convince, the like counter is optimized to show whether there are no likes or 1 like

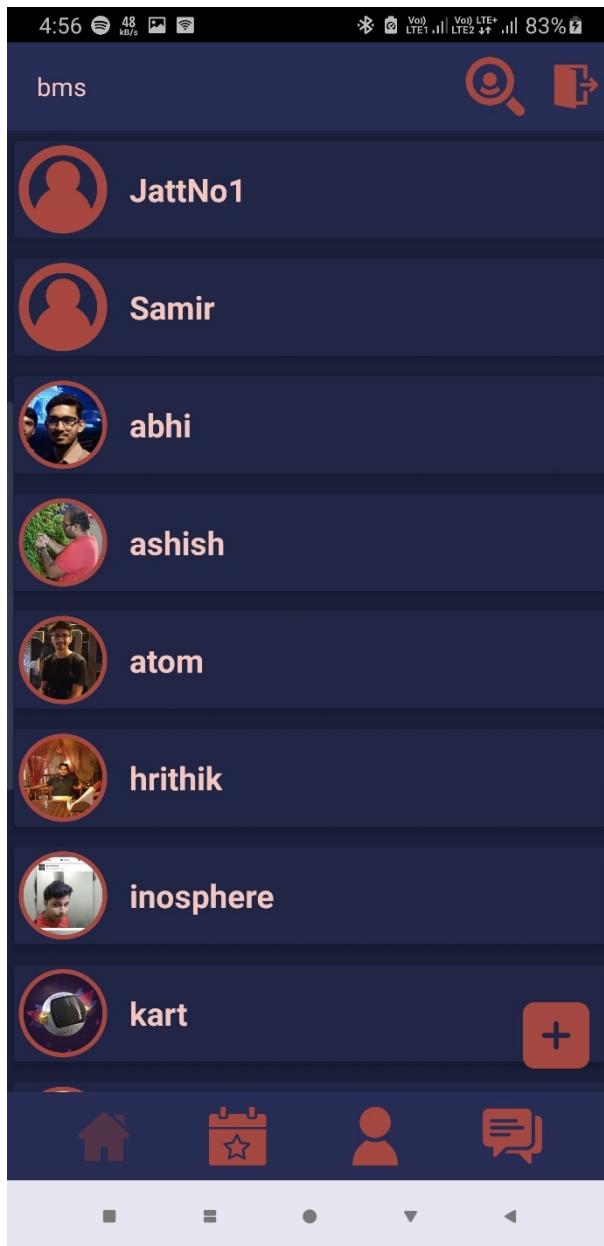
CASE 2 – for user's convince and readability, the like counter is optimized to round off the number of likes to the nearest thousand or millions along with two decimal digits like 1.05K or 2.98M



## ○ Search –

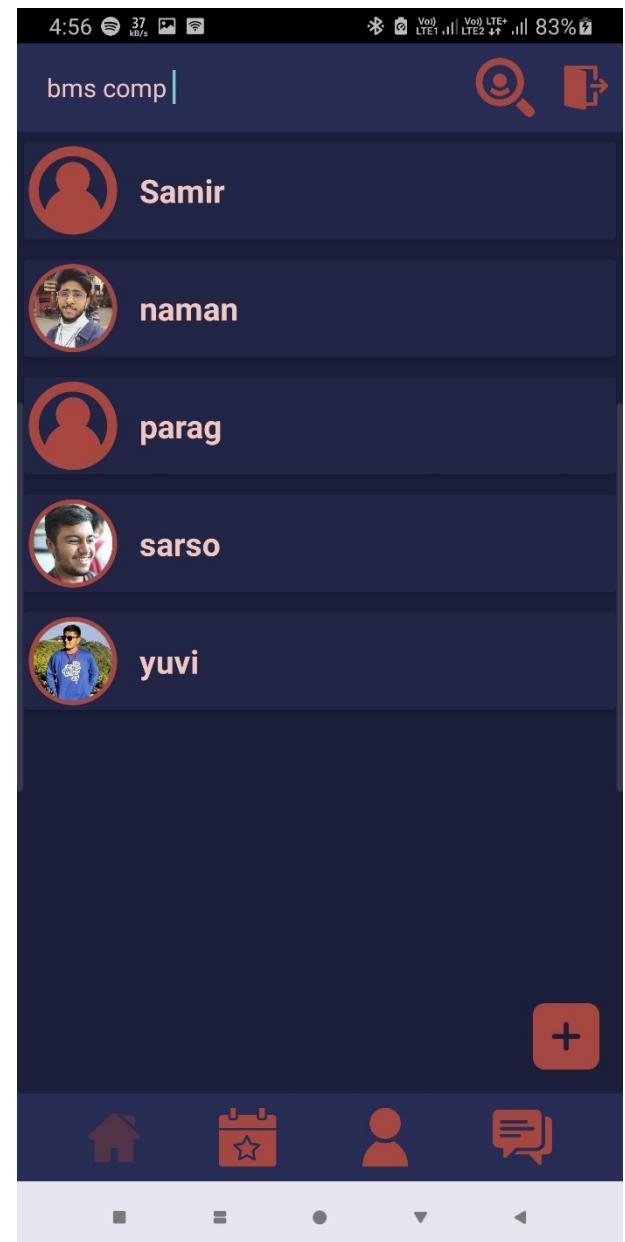
- The user is granted the ability to search other users or search any college for information.
- Real time multi-word search is used to get the desired outcome, the search bar not case sensitive.
- The search uses highly advanced search algorithm, that enables the user to dynamically search the word even with a morpheme/ phrase (part of word) and display results appropriately.
- The user can take the benefit of a highly advanced search algorithm, which allows the user to compares the given morpheme/phrase form all the domains provided and gets the desired outcome. These domains include college, branch, year, username, full name etc.
- For increasing usability, the user can directly get the search option by using swipe down gesture. The feed is reloaded as soon as the user clears the search bar.
- The user can search college pages and access it by using a '@' symbol before entering other details.

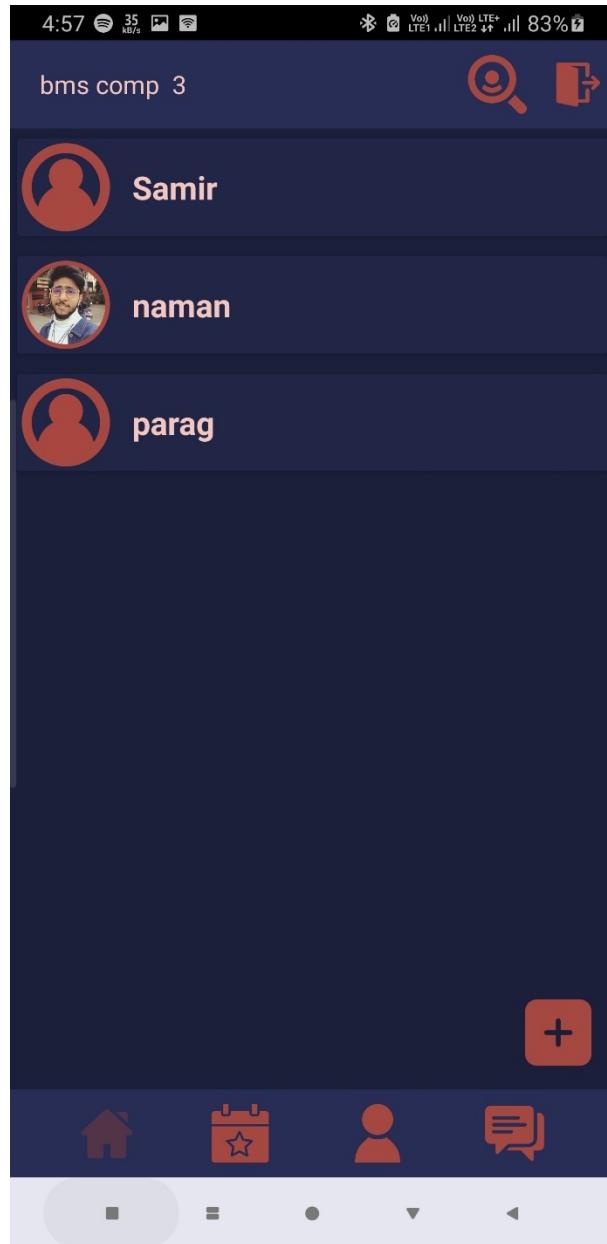
# USER SEARCH EXAMPLE



EXAMPLE 1 – the phrase provided is ‘bms’ this displays users with bms in any domain (all the users displayed here are student of some bms college)

EXAMPLE 2– phrase ‘bms comp’ displays users with bms comp in any domain i.e., bms in one domain and comp in another (all the users displayed here are student of some bms college in computer science branch)



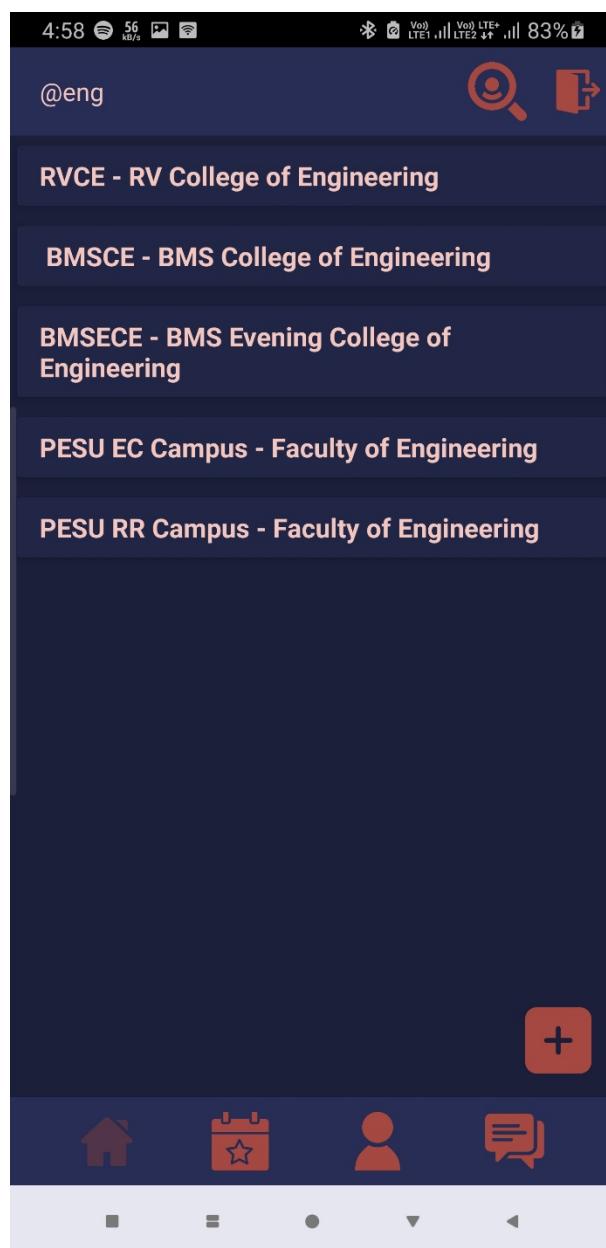


EXAMPLE 3– phrase ‘bms comp 3’ displays users with bms comp 3 in three different domains (all the users displayed here are student of some bms college in computer science branch and in 3<sup>rd</sup> year)

EXAMPLE 4– phrase ‘bms comp 3 agarw’ displays users with bms comp 3 agarw in four different domains (the user displayed here is a student of some bms college in computer science branch, in 3<sup>rd</sup> year and has a surname Agarwal)



# COLLEGE SEARCH EXAMPLE



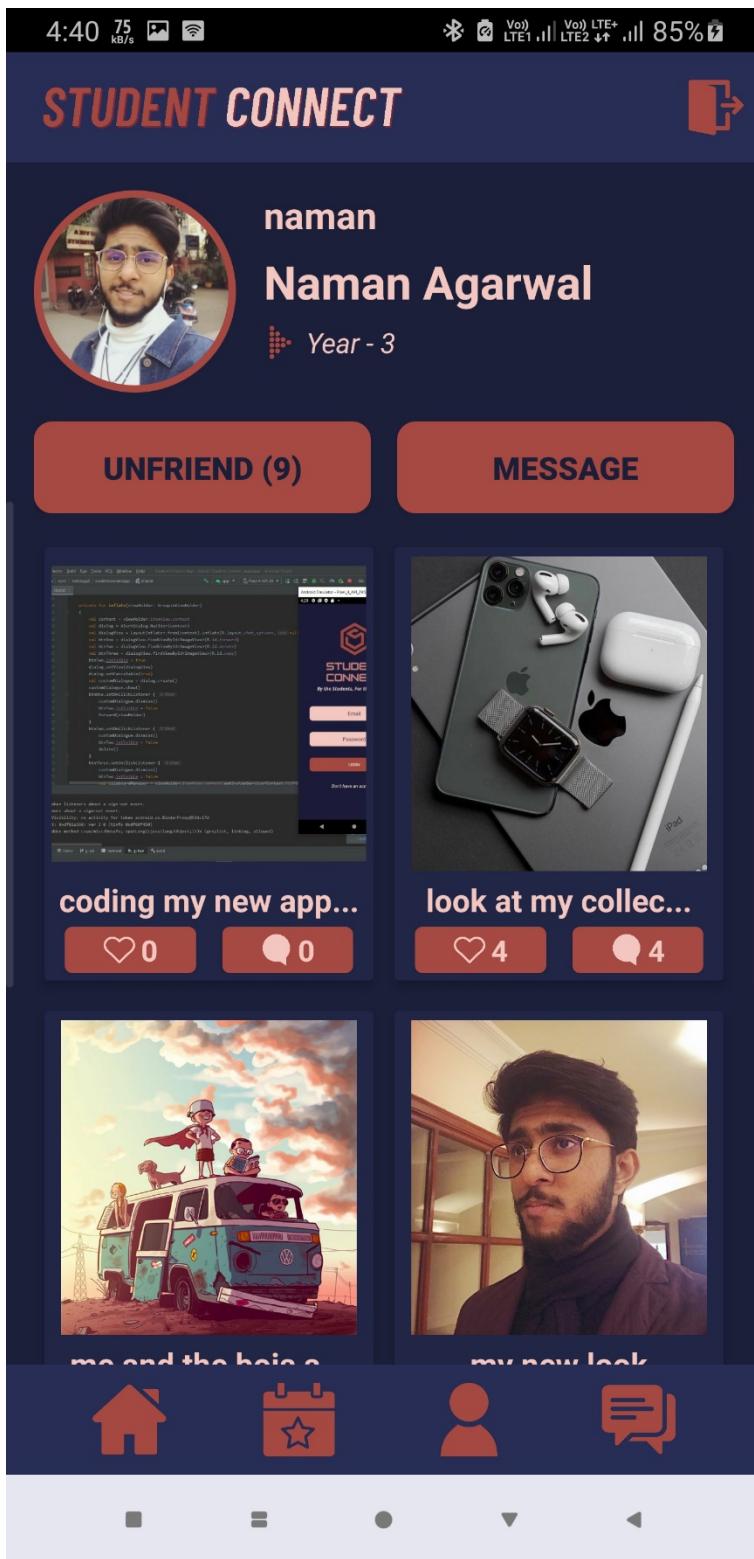
EXAMPLE 1 – phrase ‘eng’  
displays all the colleges with the  
morpheme ‘eng’ in it. (all the  
engineering colleges are  
displayed)

EXAMPLE 2 – phrase ‘eng bms’  
displays all the colleges with the  
morpheme ‘eng bms’ in it. (all  
the bms engineering colleges  
are displayed here.)



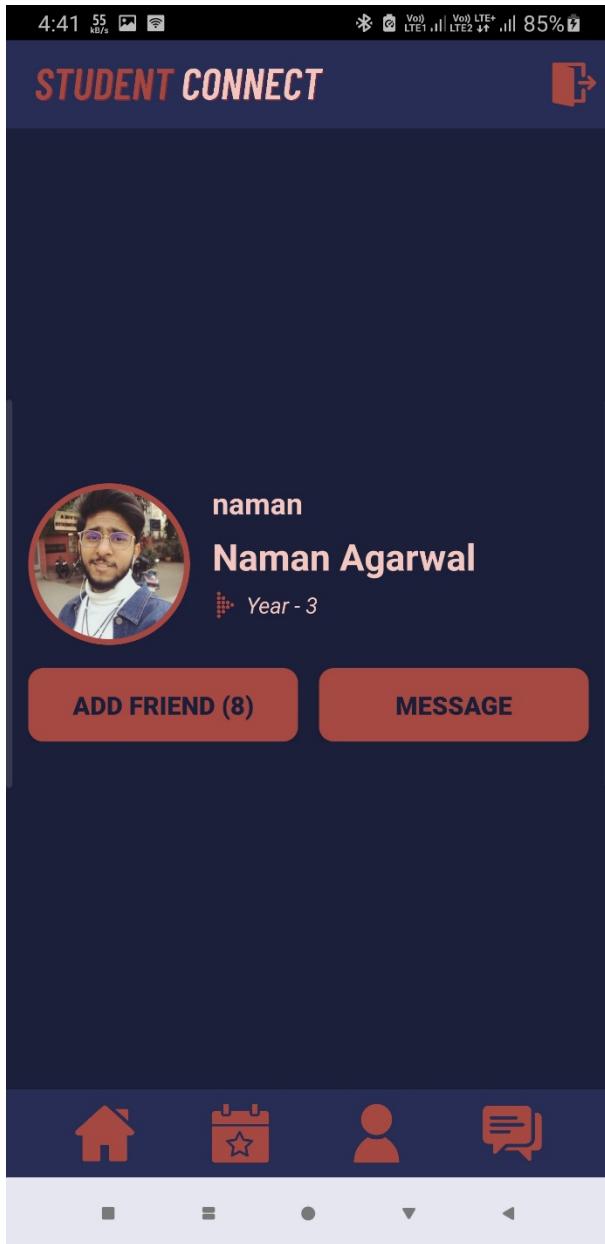
## o Other User's Profile –

- The user can open this page either by searching for the corresponding user or by selecting the username/profile picture in their own feed.
- Even if both the users aren't friends with each other they can still see basic information about them i.e., username, profile picture and can also access the slider which includes information about the user.
- The user must be a friend of the other user to see their posts but still can message them. In such a case a system prompt occurs requesting the sender to add the receiver as a friend. The receiver also gets a system prompt notifying that the sender isn't a friend of his.
- The user can also unfriend the other user from here. In this case the user has no access to the posts of the unfriended user.



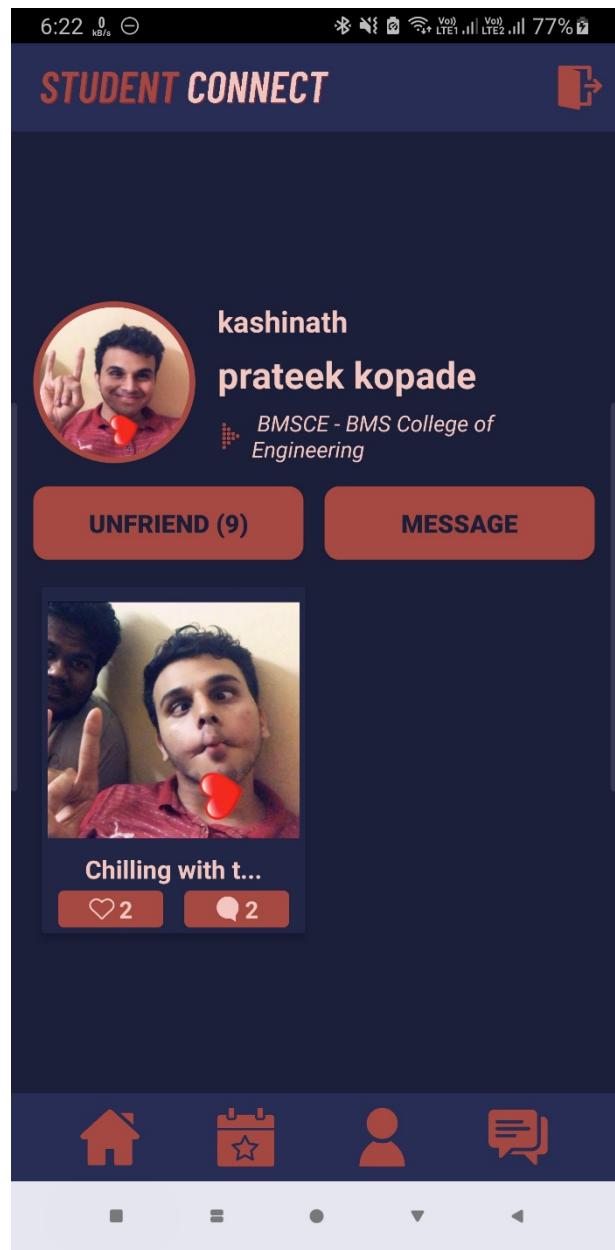
## OTHER USER'S PROFILE

Other User's profile displays username, post and other basic information. The user can friend or unfriend from here or can message the person.



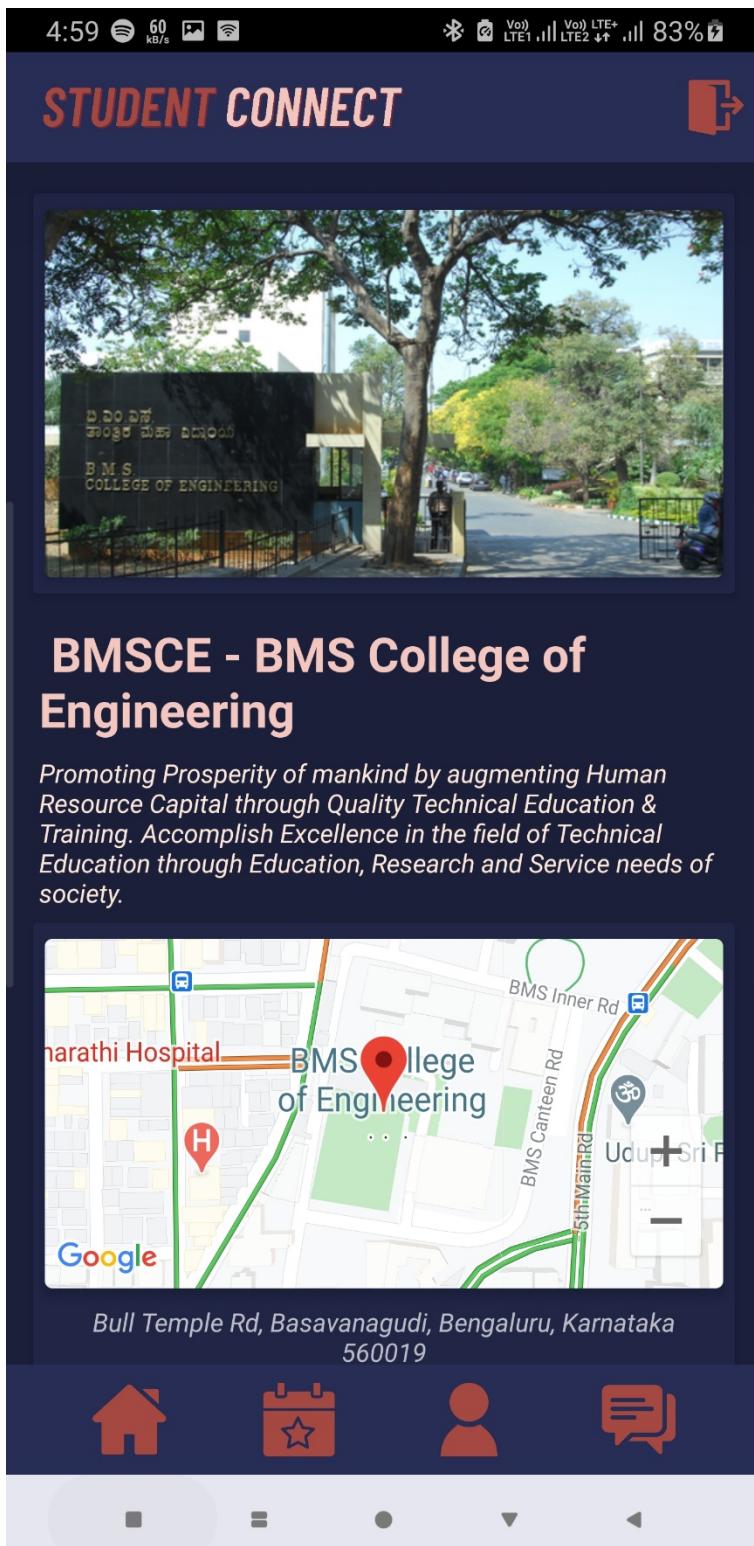
CASE 1 – the user can only see basic information about the other user and can access the slider view as they aren't friends. The user can also message the user from here, but a system prompt would warn the receiver that the sender isn't a friend. This case can only occur when user profile is opened from search bar

CASE 2 - the user can see all the information which can be seen by a user who isn't a friend, in addition to that the user can also like the post. This can occur if the user comes from feed or search bar. No such warning occurs here when message button is pressed.



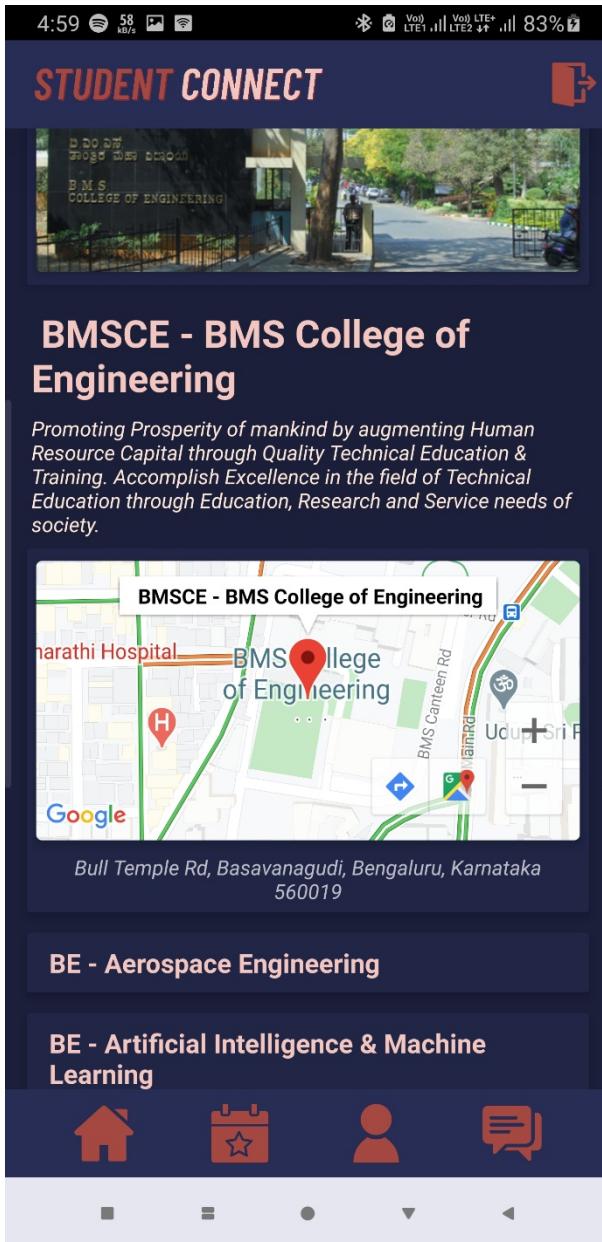
## ○ College Profile –

- The user can access the college profile page only from the search menu, searching the name of the college after applying a '@' symbol before search.
- The college profile displays the image of the college, motto and about the college, a map showing the exact location of the college and the courses offered by the college.
- Google map API is used enhance the map applications. The user can see real-time traffic, see the surrounding area, zoom in and out of the map or just directly go to the google map application. This enriches the user experience allowing them to avoid the hassles caused due to a static unresponsive map.
- For improved user experience, the exact address of the college can be copied from the page by long tabbing the address.



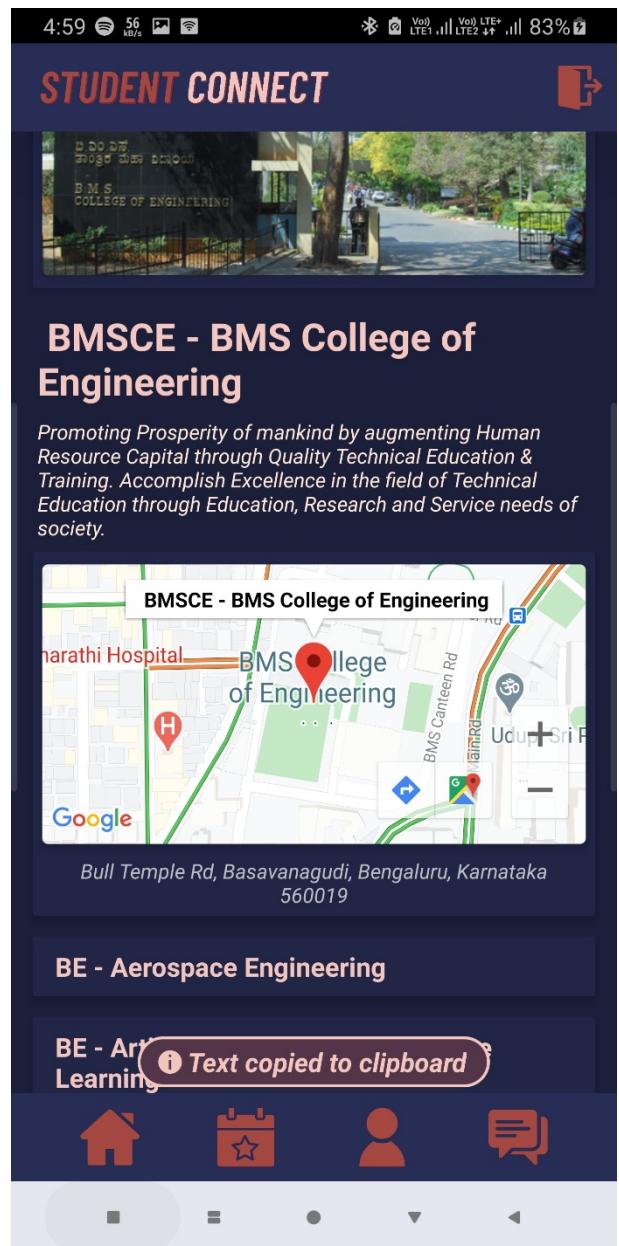
## **COLLEGE PROFILE PAGE**

The college profile page displays the college name, a short description which includes the motto of the college, a picture of the college, a map along with the college address and the courses offered by the college.



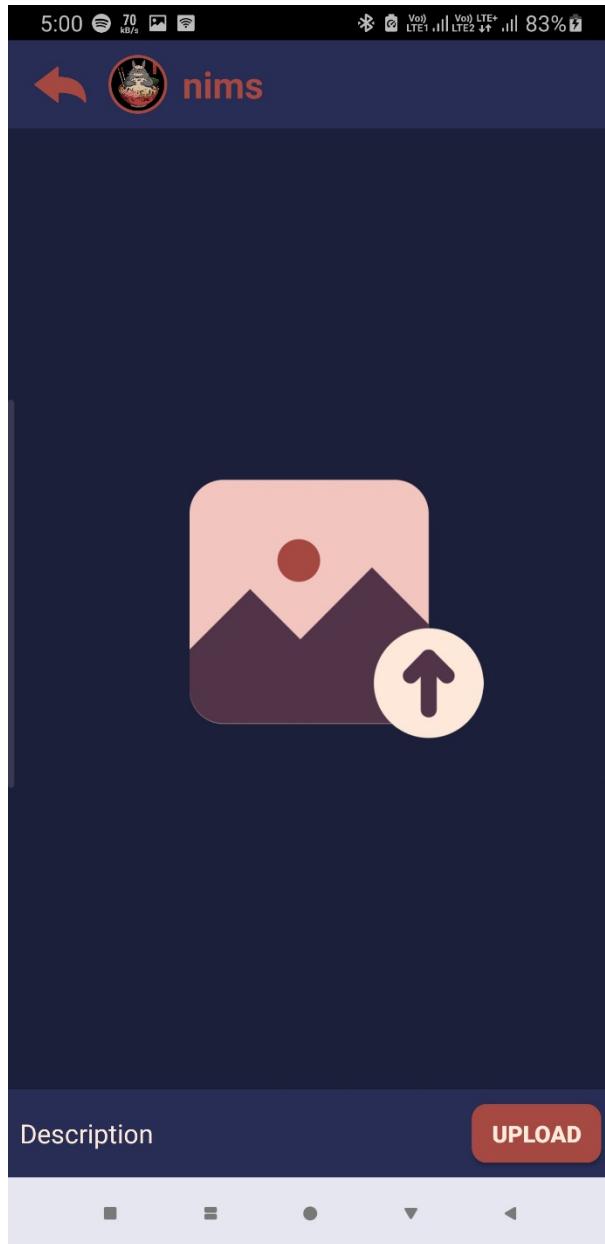
**FUNCTIONALITY 1 –** the user can tap on the map to unlock its functionalities like zoom in and zoom out, see the surrounding in real time or open the map application. The courses offered by the college are listed below the map.

**FUNCTIONALITY 2 –** the user can long tap the address to copy the address. A toast occurs which indicates the completion of the process



## ○ Upload Post –

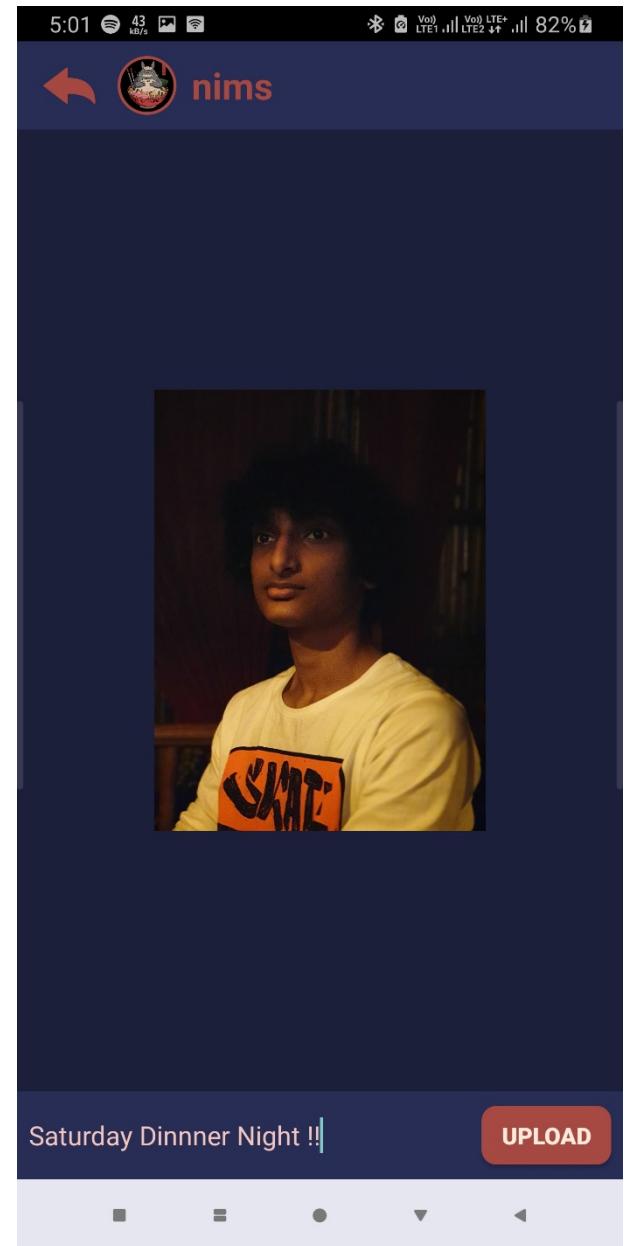
- The user can upload a post by selecting the floating upload icon present in the main feed.
- The image icon opens up the user's gallery and allows them to select an image and loads it up in the upload screen.
- API's are used to enhance the post, which smartly detects the second most dominant color of the image and loads background appropriately.
- The post uploaded by the user can seen only in the users profile page.
- The app makes asynchronous calls to upload the selected image. During this time interval a progress bar appears to notify the user.



## UPLOAD POST

The user can upload a post from here. The image icon opens up the gallery of the user and they can upload the image.

After selection of image the user can give a description of the image and then upload it.



The screenshot shows the Google Cloud Firestore interface. On the left, there's a sidebar with various icons. The main area shows a tree view of collections and documents. Under the 'Users' collection, there are documents for users like 'ashish', 'atom', 'gamefreak', 'hrithik', 'inosphere', 'kart', 'kashinath', 'kumu', 'naman', 'nim', 'oreo', 'parag', 'paya', and 'sars'. Under the 'nim' document, there are sub-collections: 'Friends', 'Medals', 'My Feed', and 'My Posts'. The 'My Posts' collection contains a single document with the ID 'AtEym7kdqBJZts3MPOS5'. This document has fields: 'Info' (with ID 'YgbQzuxv1gsHaA5nHneN'), 'Branch: "BE - Computer Science and Engineering"', 'College: "BMSCE-BMS College of Engineering"', 'Semester: "3"', 'University: "BMS University"', and 'Description: "😊 - Experiencing life just to die in the end 😊 - 17.10.00 📚 BMSCE"'. At the bottom, it says 'Cloud Firestore location: nam5 (us-central)'.

## BACK END FOR UPLOADING POST

The screenshot shows the Google Cloud Storage interface. On the left, there's a sidebar with various icons. The main area shows a tree view of buckets and folders. Under the 'gs://student-connect-b96e6.appspot.com' bucket, there are sub-folders: 'images' and 'uploads'. The 'uploads' folder contains sub-folders for each user: 'Samir', 'ashish', 'hrithik', 'inosphere', 'kart', 'kashinath', 'naman', and 'nim'. At the top right, there's a blue button labeled 'Upload file'.

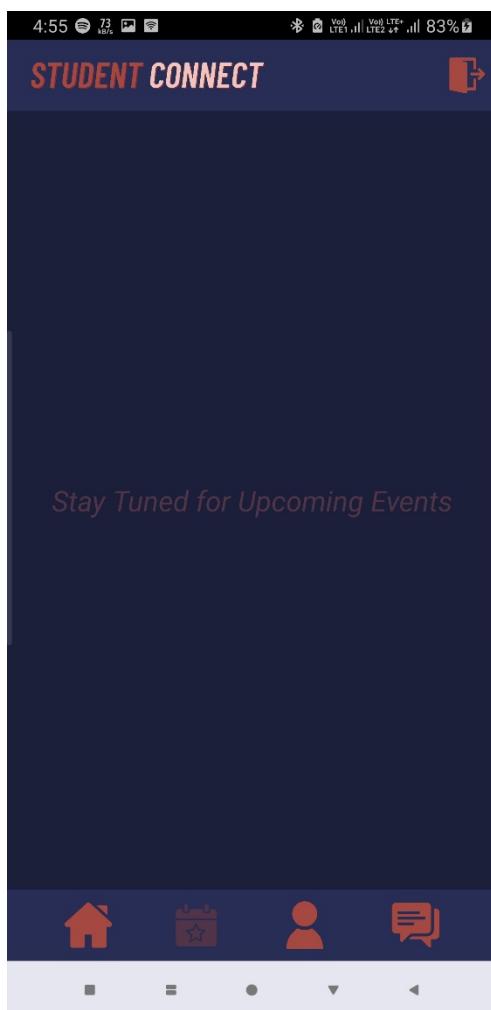
**NOTE – new posts are created in the post which is already shown in the feed**

## ❖ Events: -

The events page is currently under development. The page would include events held by different college's or people and the user would be recommended these events based upon their interests using 'Artificial Intelligence'.

The user can also host events which would be reviewed by the administrator. The verification by the administrator legitimizes the event and distinguishes it from the other non-verified events which may not be a cent percent authentic.

The user can also rate an event tag the event in their posts.



## EVENTS

The events page recommends user with events based on their interests using artificial Intelligence. Currently this page is under development

## ❖ User Profile: -

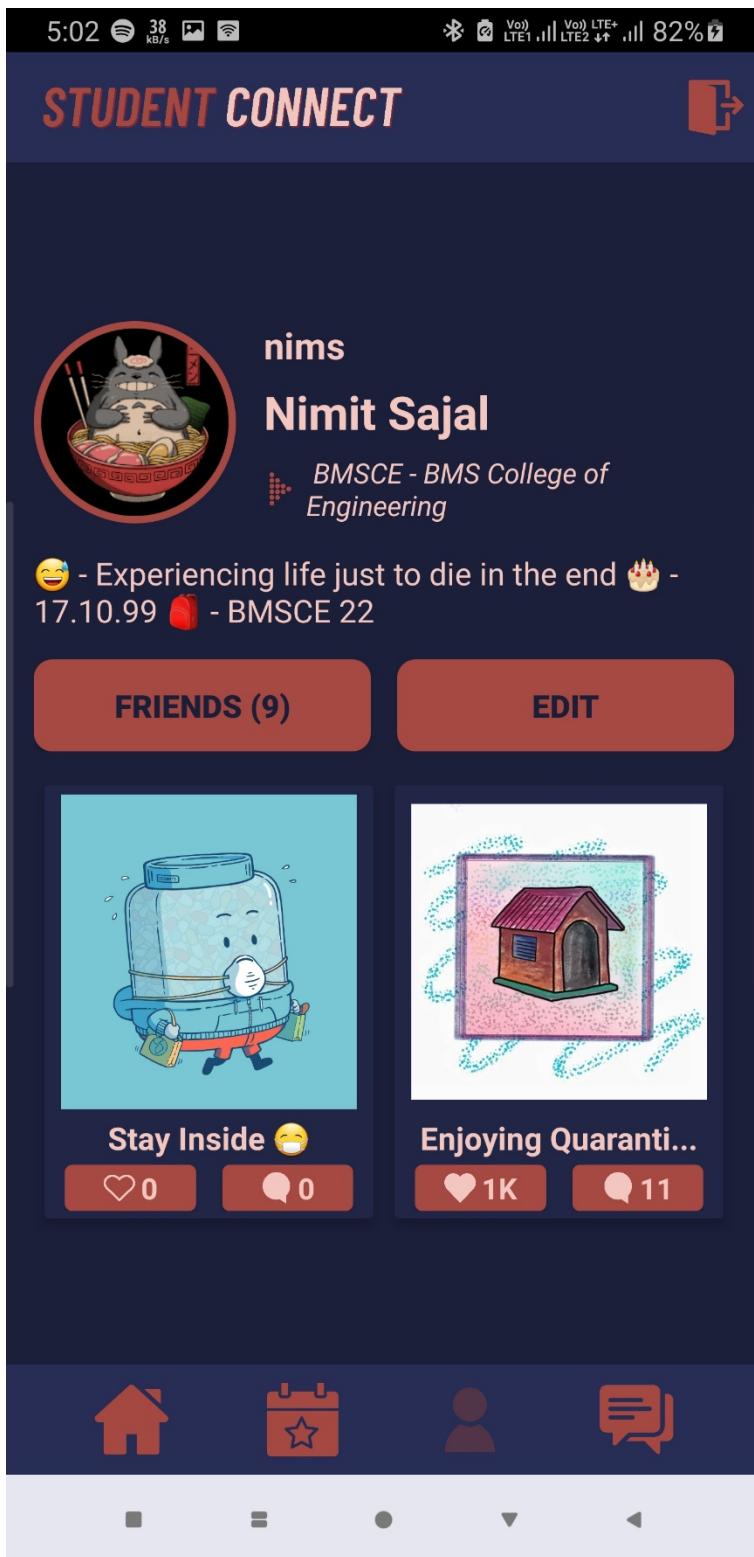
The user profile is a complete description of the user that displays the profile photo, the name, user name, and a slider displaying their branch, year and college. It also displays the description provided by the user and posts uploaded by them. The user can also edit these details according on their convince.

- The user can access details such as college name, course enrolled in and year by using the slider, which allows them to slide to see the next information.
- The user can see the number of friends and user name of each friend by selecting the friends' button. They can directly go to the friends account by selecting the friend to whose account they wish to go. This opens up the others' profile page.
- For enhancing user experience, a grid view is present the bottom of the user profile which presents a tiny sneak peak of the post. The miniature canvas displays the rounded of number of likes and comments (1K, 1M) and also presents a description preview of the post.
- The user can like or dislike this post from here and a long press of the image opens up the post which displays the actual number of likes and all the

comments on the post. The user can also delete the post from here.

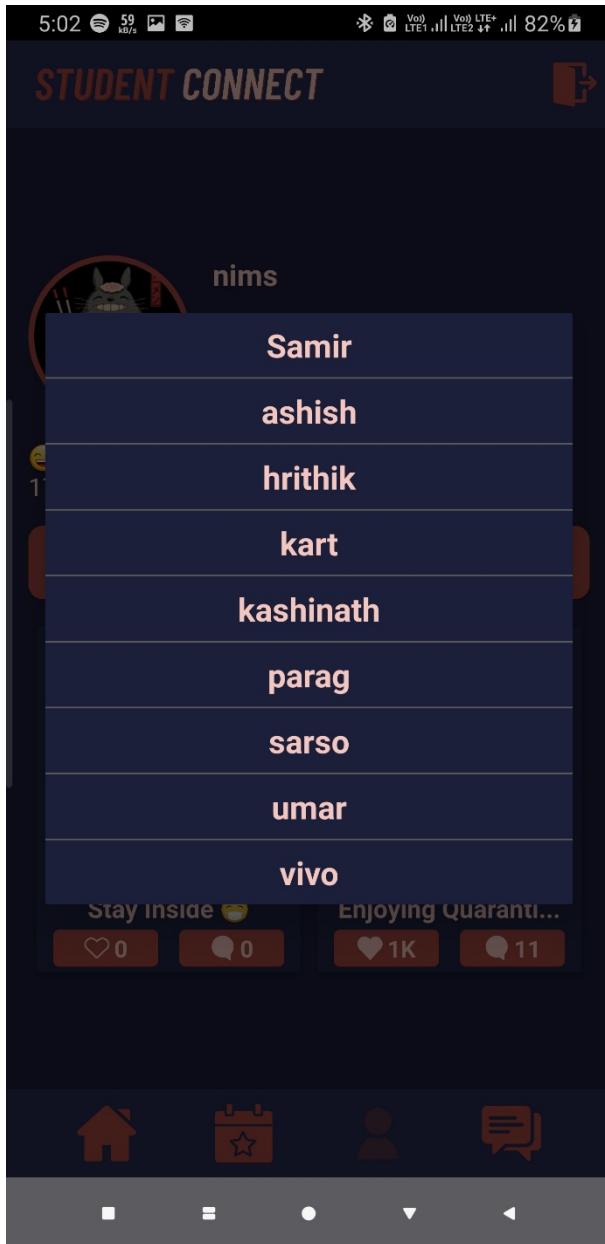
- Edit Profile –

- The user can access this page by selecting the edit button or can double tap the information to be changed.
- The user can change phone number or change profile picture. The user can either change the profile picture or can completely remove it.
- After changing the phone number, a set of code is implemented which verifies the phone number and notifies the user if the number is invalid.
- The user can save the changes by selecting the save button or discard all the changes by selecting the exit button.



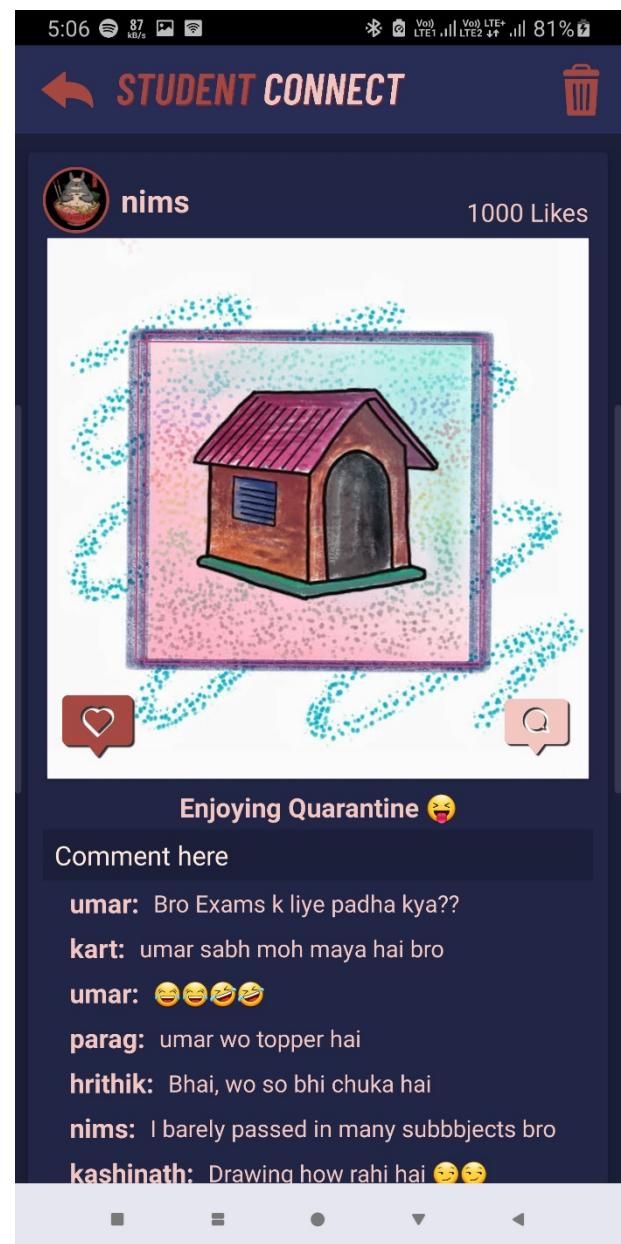
The user profile page is the complete description of the user. It includes profile picture, posts, friends and the option to edit the profile.

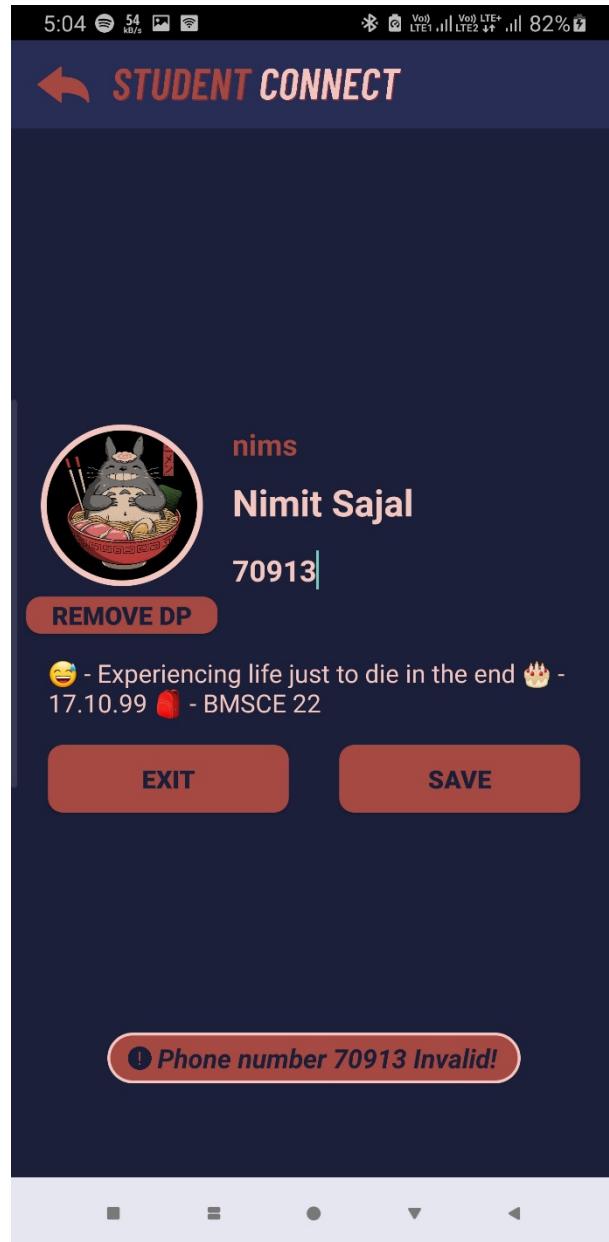
**USER PROFILE**



**CASE 1 -**The user can see the number of their friends, present on the friends button the user can see the list by pressing this button. The user can directly go to their friends account by selecting their name

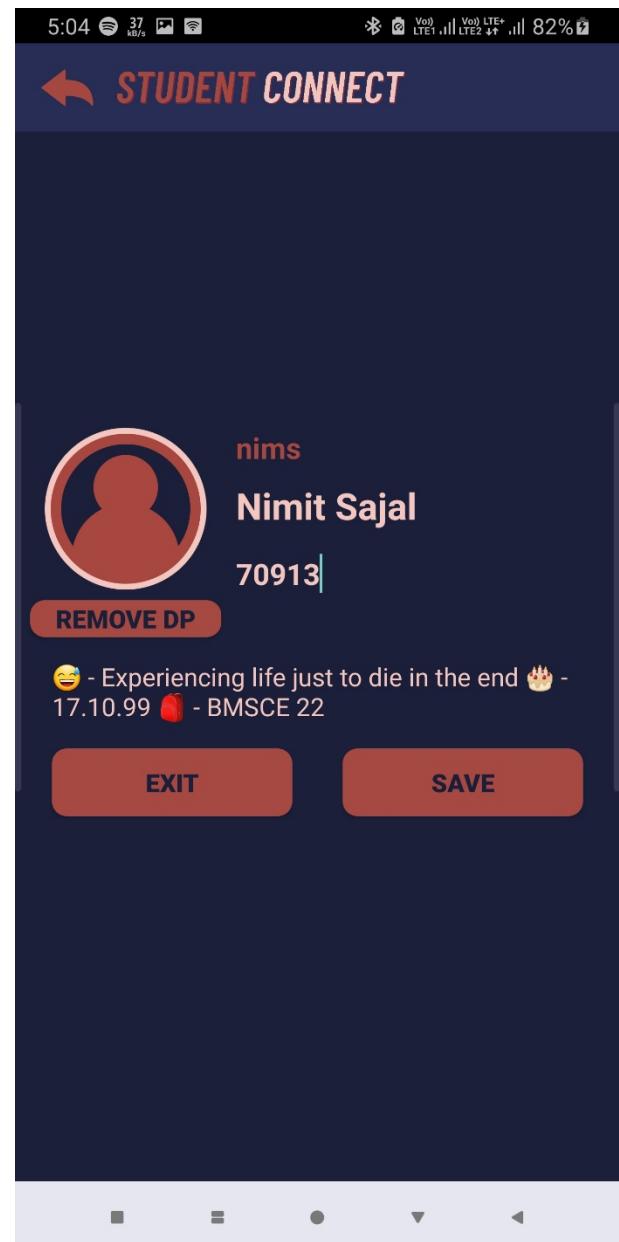
**CASE 2 –**the user can have only a small glimpse of the post and description in grid view. To see the complete details, the user can open this by long tapping the post's card view. The user can like and comment here and also delete the post





CASE 1 – the user can directly open the edit option by selecting the button or by double tapping the information to be changed. The phone number validations are applied even here, to avoid saving invalid phone a toast appears warning the user of invalid phone number

CASE 2 – the user can also remove the profile picture and save the changes. In such a scenario a default profile picture is applied as profile picture.



The screenshot shows the Cloud Firestore interface under the 'Data' tab. The left sidebar lists users: Kasminath, kumu, naman, nims, oreo, parag, paya, sarsos, saymediode, shanky, tank, umar, and vinn. The main view shows the document structure for 'naman'. Under 'naman', there is a 'Friends' collection containing documents for 'Info', 'Samir', 'ashish', 'atom', 'hrithik', 'inosphere', 'kart', 'kashinath', 'parag', and 'umar'. A modal window is open at the top right, titled 'Cloud Firestore' with tabs for 'Data', 'Rules', 'Indexes', and 'Usage'. It displays the path: Home > Users > naman > Friends. The modal also includes a 'Get started' button and a close 'X' button.

## BACK END SHOWING USER'S FRIENDS

The screenshot shows the Cloud Firestore interface under the 'Data' tab. The left sidebar lists users: Kasminath, kumu, naman, nims, oreo, parag, paya, sarsos, saymediode, shanky, tank, umar, and vinn. The main view shows the document structure for 'naman'. Under 'naman', there is a 'My Posts' collection containing documents for 'Info', 'J4HcvxVYHYpPxO0wrWpB', 'au6Jf0T01vE0X2Two5Lo', 'b5IUTjLZ315mUwsSIySL', and 'tGMFzc9Ljjj0BeEDLhaEq'. A modal window is open at the top right, titled 'Cloud Firestore' with tabs for 'Data', 'Rules', 'Indexes', and 'Usage'. It displays the path: Home > Users > naman > My Posts. The modal also includes a 'Get started' button and a close 'X' button.

## BACK END SHOWING USER'S POSTS

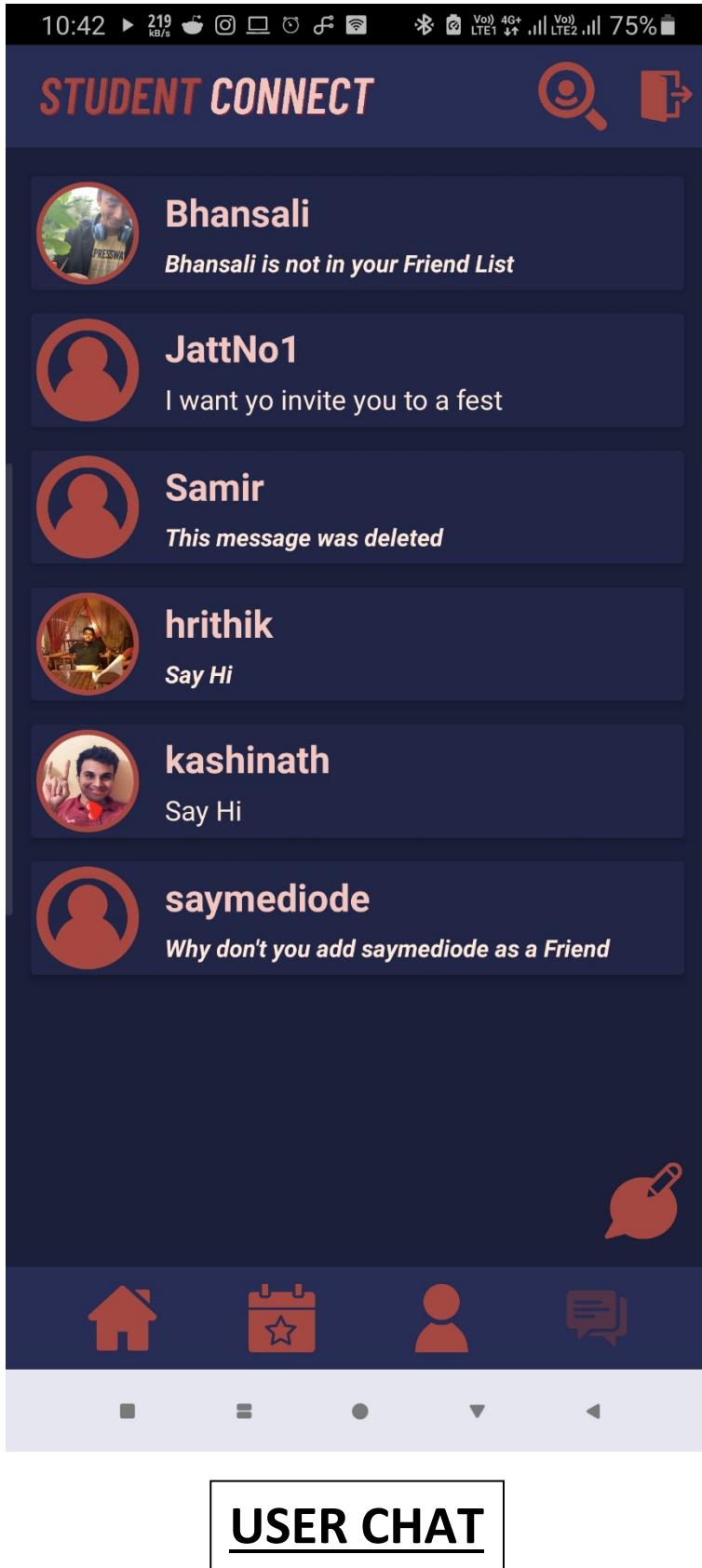
## ❖ User Chat: -

The user chat screen displays all the people with whom the user already had a conversation . The user can search for other users or friends using the search button present at the top bar. The User can select any user and a new chat window opens from which the user can chat with the selected person.

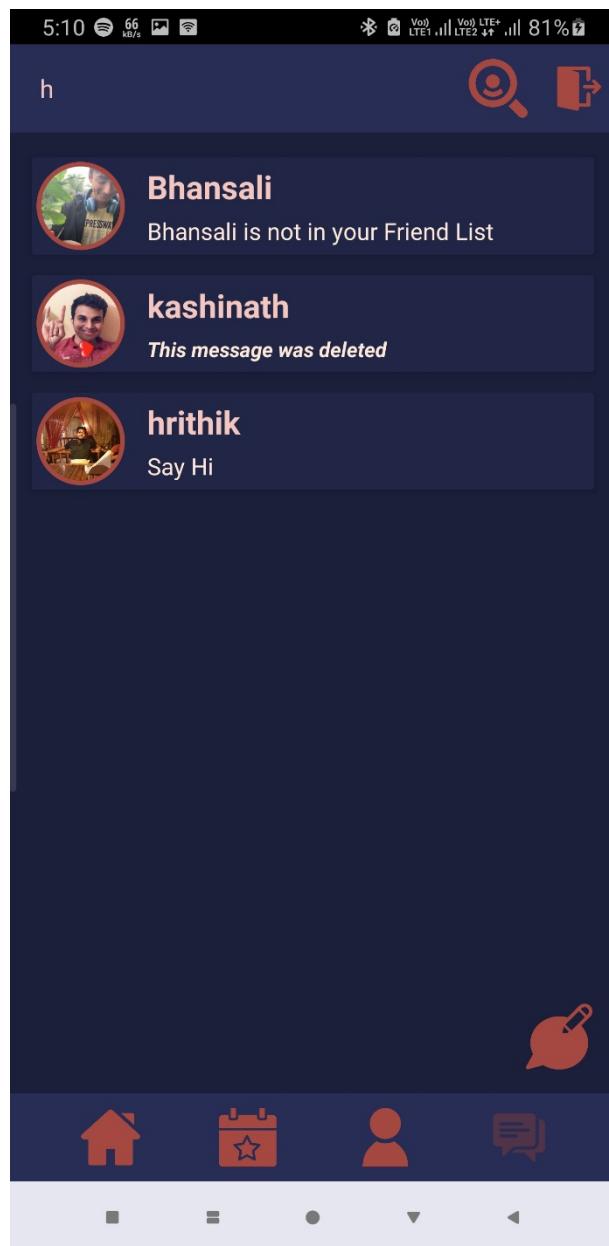
- The user chat displays all the current chats available (including both friends and not friends). The list also gives a preview of the last message with the other user.
- The user can use the search bar to open the chat room page with a person who already had a conversation with the user.
- The new chat floating icon lists all the user's friend irrespective of the fact, if they had a conversation with them. A new chat room is opened with a toast indicating this with a friend with whom the user didn't have any conversation, conversely it opens the same chat room with the person who already had a conversation with the user. The user can also use the search feature provided here.

- Chat Room –

- This page is unlocked when a user clicks message icon on another users' profile or opens a new chat with a friend from the new chat menu.
- The user can directly go the other person's profile page by selecting their username/ profile picture.
- Chat between the users occurs in real-time and the users can concurrently have a conversation.
- A lot of features such as liking or disliking, forwarding of messages and deletion of messages can be done by long tapping the message, which opens up a dialog box with the mentioned options.
- The user can also reply to both the sender's as well as the receiver's message. In such a scenario a pop up appears with a small preview of the message which is being used in reply.
- For enriching the user experience, for the reply of a long message, the reply dialog box is trimmed down to present a small preview and so both the users can read the message without much scrolling.

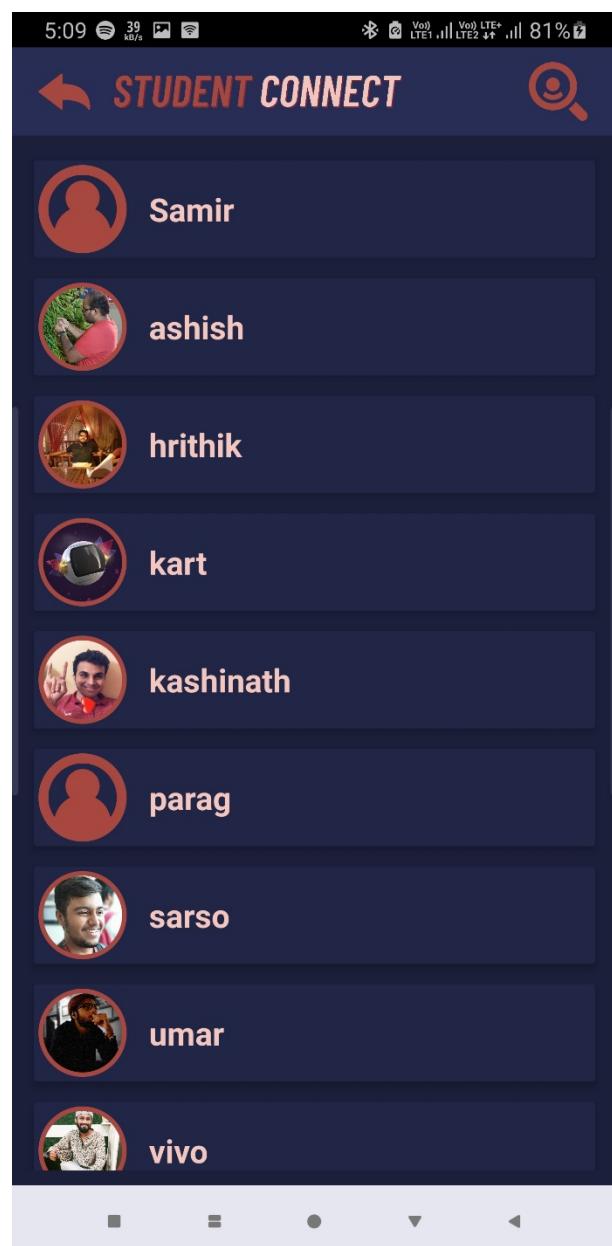


The user chat screen displays all the people with whom the user already had a conversation. The user can search another user using the search option or start a new chat using new chat button. For user convince system messages are in italics. The user is also informed whether the sender is a friend or not



The user can use the search feature by selecting the search icon, this allows the user to only search other users with whom they already had a conversation.

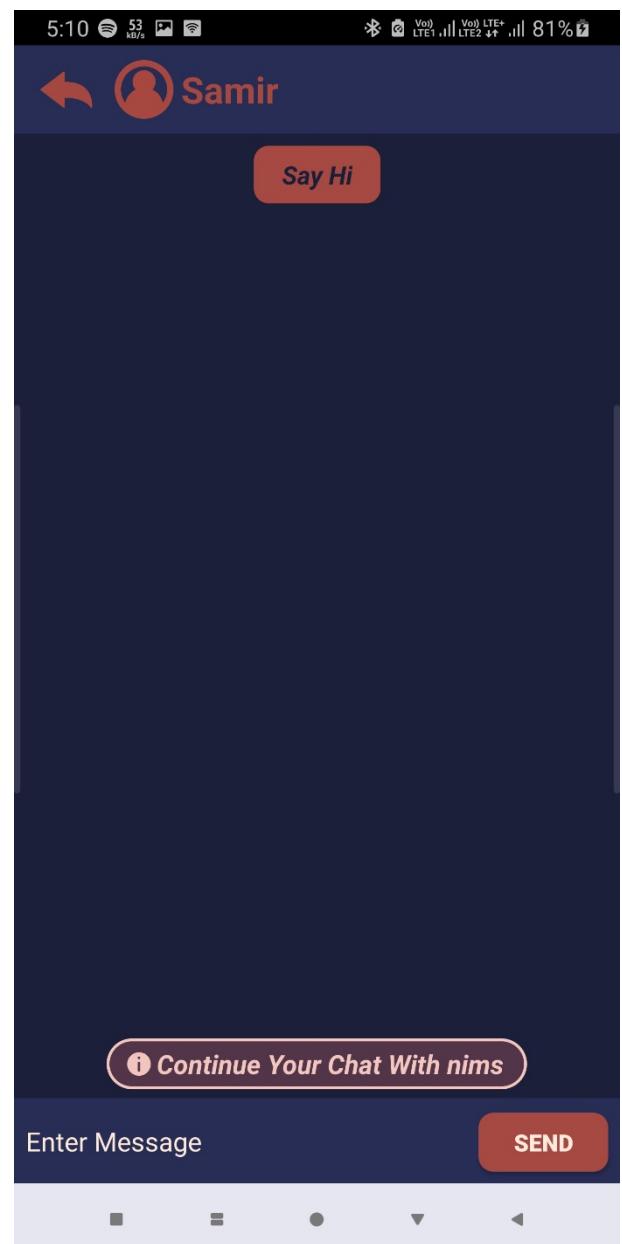
The user can create a new conversation room with a friend who did not have a conversation with the user. The search option here only searches among the user's friends





Case 1 – when the user is in new chat option, if the user hasn't had a conversation with the friend a new chat is created toast would occur

Case 2 – when the user is in new chat option, if the user has already had a conversation with the friend a continue your chat toast would occur





The Users chatroom is a platform where two users come together and have a conversation. The chatroom provides a lot of functions such as reply to text, like text, copy text, forward text and delete text.

**USER CHATROOM**



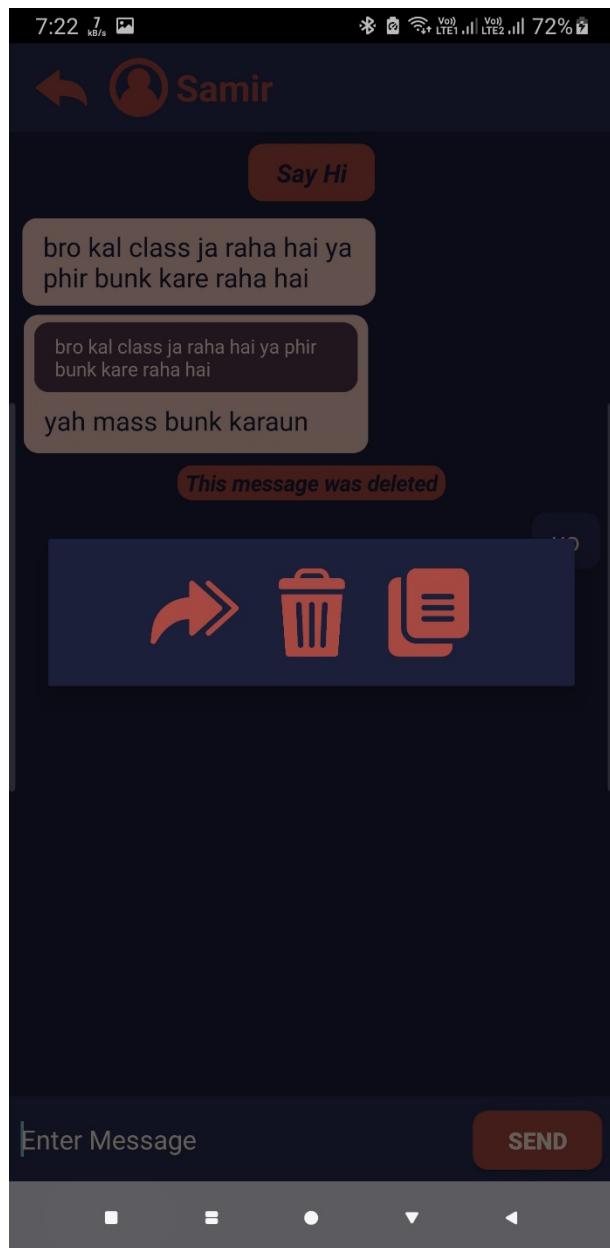
**FUNCTION 1 – the user can open the like/dislike, forward and copy option when they long press the receivers (another person's) message. The user can like the message in this case. The image shown depicts the current state.**

**FUNCTION 2 –The user can dislike the message in this case. The image shown depicts the current state, which shows that the image is already liked.**





**FUNCTION 4 – the user can open the delete, forward and copy option when they long press the sender's (user's) message. This allows the user to delete a text for both the users concurrently.**

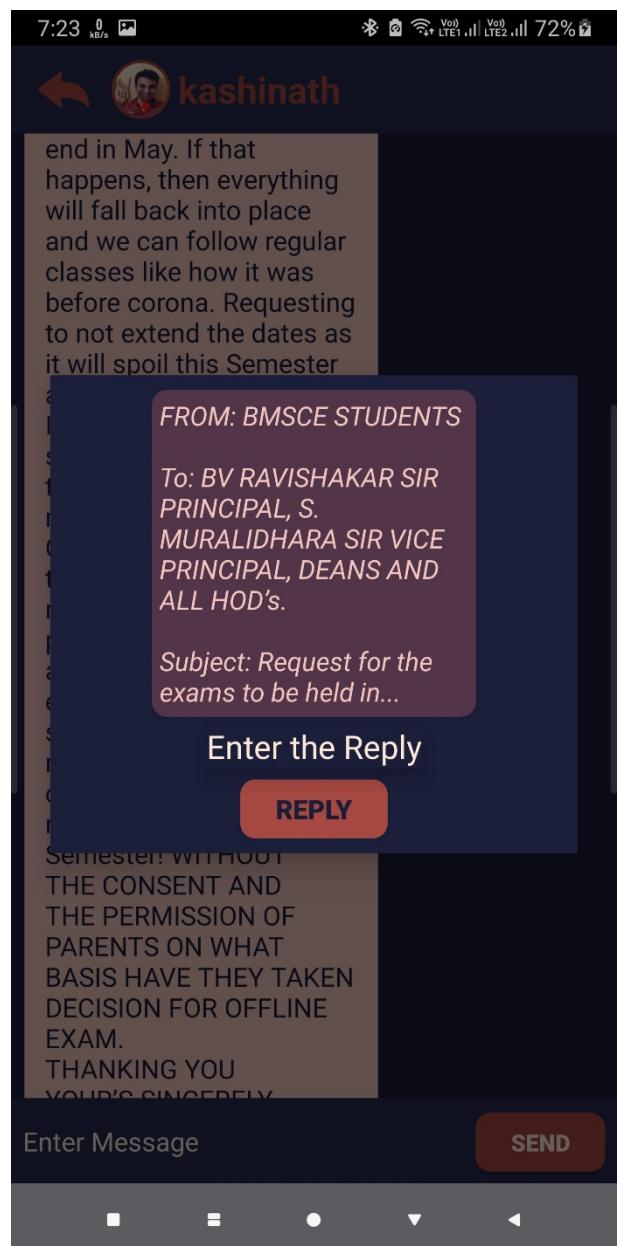


**FUNCTION 3 – the user can use copy option when they long press either the sender's or the receiver's i.e., any message. Once the message has been copied the user is notified by a customized toast. The user can forward this message, here a screen is loaded displaying all the user's chat, and the user can send them this message.**



**FUNCTION 5 – the user can use reply option when they double tap either the sender's or the receiver's i.e., any message. The dialogue box shows a small preview of the message and the user can type in it and send it by selecting the reply option**

**FUNCTION 6 – when a long message is used for reply, the preview present during reply creates a small snippet of the actual message and increases readability.**



The screenshot shows the Google Cloud Firestore interface. The path is `Users > nims > Chats > JattNo1`. The left sidebar shows the user's profile and navigation icons. The main area displays a list of chats under the 'Chats' collection. A specific document named 'JattNo1' is selected, showing its details:

From:	JattNo1
ID:	1D1prkh6fhnc5WjbnBR
Name:	JattNo1
Text:	I want yo invite you to a fest
Time:	December 15, 2020 at 4:12:06 PM UTC+5:30
To:	nims

Below the document details, there is a note: "Cloud Firestore location: nam5 (us-central)".

## BACK END USER CHAT

The screenshot shows the Google Cloud Firestore interface. The path is `... > kashinath > Chats > naman > Next`. The left sidebar shows the user's profile and navigation icons. The main area displays a list of chats under the 'Chats' collection. A specific document named 'Next' is selected, showing its details:

From:	kashinath
ID:	g14Lep3VL2BM4AkfEGwn
Name:	naman
Text:	Mai kya bahan hi rahun?
Time:	December 15, 2020 at 3:56:31 PM UTC+5:30
To:	naman

Below the document details, there is a note: "Cloud Firestore location: nam5 (us-central)".

## ❖ Additional features: -

These features have been enabled for user convince and helps the user in the usage of the app. These features include button mapping, swipe gestures and buttons enriching user experience.

- Logout button is present in every page and can be accessed easily from any particular page. Logging out would take the user to the login page.
- Swipe gestures are enabled in the app which allows the user to switch in between pages by using swipe gestures.
- The back button is reprogrammed to the home button in the main feed which closes the app when activated, thus ending the possibility of accidental touches.
- A well devised color scheme is used to make the app appealing and the color code are matched to avoid confusion among the users.
- Transitions and progress bars are used to make the app more appealing and make it feel snappier.
- The application remembers the user even if the user has removed the app from the task manager. The application directly logs-in the user into their own account (the one they have logged in the phone).

## **Result and Conclusion:**

- We have created a fully functional and interactive App that creates a platform which is made for connecting students of different colleges.
- Our project encourages the students to interact with fellow students and alumni from their college or from other college through posts and messages which makes our app a complete social media package.
- Our portal enables the student to interact with peers by allowing them to like/dislike a post and give their opinion in the comment section. The user can also upload their own post and write a brief caption.
- The portal also allows the user search for new friends, get information about a particular college and also message people even users who aren't in our friend list.

## **Future Enhancements:**

- To implement the events page which is currently under development. The page would include events held by different college's or people and the user would be recommended these events based upon their interests using 'Artificial Intelligence'.
- To create an administrator for every college who would verify the events and certify its authenticity. Holding polls to select the successor of the current administrator and ratings of events.
- Using faster servers to bump up the speed of the application, and decrease delay caused due slower server.
- Allow sharing of small videos and Graphics Interchange Format (GIF) in post and better connectivity between feed and messenger.
- Provision for enabling dark mode throughout the application.