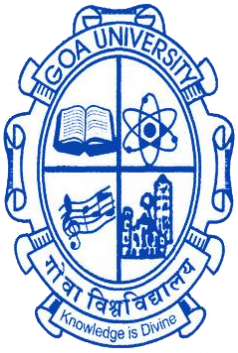
# GuMCA Report

GuMca

Connecting talent with opportunity




Submitted To

## Goa University

Taleigao – Goa

In Partial Fulfilment Of the

## Master of Computer Applications

By

**S.Y.M.C.A**

Under the Guidance of

**Mr. Hanumant Redkar**

2022-2023

# DECLARATION

We here by declare that the project GuMCA is an effort experience by which concepts of web application and practical issues in implementation are imbibed and carried out under the supervision of Mr. Hanumant Redkar, Associate professor (Dept of Computer Science and Technology), Goa University.

**Class: S.Y.M.C.A (Computer science)**

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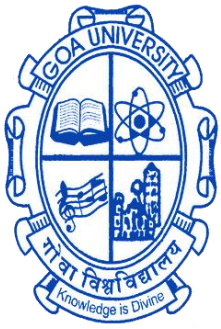
# ACKNOWLEDGEMENT

It gives us immense pleasure in presenting the project of “GuMCA”. We owe a deep depth of gratitude to all those who have contributed greatly towards the successful completion of this project.

We express our gratitude to our guide **Mr. Hanumant Harichandra Redkar** for his valuable guidance, motivation and inspiration right from the time of the conception of our project.

We would like to thank our parents, project mates (S.Y.M.C.A.) and our supporters for their help, innovative ideas and appreciable co-operation.

Lastly, a special thanks to all the teachers of the MCA department for their encouragement, guidance and valuable suggestion during the project, which helped us in enhancing our working.




# CERTIFICATE

This is to certify that the project report “GuMCA” submitted to Goa university in Modern development platforms for the degree in Master of Computer Applications. It is a project carried out by the class of second year MCA students under my guidance and supervision.

Place: Taleigao – GOA

Date:

_____

Mr. Hanumant Harichandra Redkar
(Associate Professor & Project Guide)

# Table of Content

# 1. Introduction

# 1.1.About

GuMCA.in is a website which will help MCA students at Goa University to connect with their classmates and alumni's. It will also help companies to check profiles of the MCA students. There can be exchange of ideas and sharing important notes, documents, video, links and other resources necessary for students currently studying.

# 1.2. Types of Users:

There are different types of users:

## 1. Admin:

Admin looks after the website, monitors the database, monitors the student profile / company profiles, gets in contact with more companies and connects with them.

## 2. Students:

Students can login into their accounts, connect with classmates and alumni, connect with company executives and share their posts.

## 3. Company:

Companies can view the student profiles, connect with students, check if any alumni are working in their company.

## 1.3. Objective

GuMCA.in website allows users to connect with our classmates and alumni and helps in placements where companies can go through student's profiles. It is very easy to use and can work on any platform.

# 2. System Analysis

## 2.1. Existing System and Limitations

# Existing System:

LinkedIn is a website/application which allows users to search wide varieties of job opportunities by connecting with business contacts and industry by entering the user details and resumes.

# Limitations of Existing System:

1. Incomplete Profile
2. Tons of spam messages
3. Premium package can be expensive

## 2.2. Features and Proposed System

1. Login using google account:

   Users have to login to the site before using the website for better functionality.

2. Post user content:

   Users are allowed to post their information, images, videos, links, resume and other documents.

3. List job options:

   Companies can browse to student profiles and can also provide better job opportunities to students to start their career.

4. EDA of S.Y.M.C.A. (Exploratory Data Analysis)

   Exploratory Data Analysis (EDA) is an approach to analyze the data using visual techniques. It is used to discover trends, patterns, or to check assumptions with the help of statistical summary and graphical representations.

5. Search for jobs

   Students can browse to the website to look for any job opportunities for their placements.

6. Search for students/companies

   Students search for companies for their career opportunities and companies search for students to hire good, talented and skilled employees for their good will.

7. Responsive

   GuMCA website is responsive, it can be viewed on any device without degrading its UI

# 2.3. Stakeholder Requirements

## Functional Requirements

In the scope:

## Admin perspective-

A) Admin must register the student profile to the site.
B) Look after the website.
C) Monitors the database
D) Monitors the student/ company profile
E) Get in contact with both

## Student perspective-

A) Students have to login to the site.
B) Students can browse the website.
C) Search for a company for job opportunities, other student's profiles.
D) Connect with company executives
E) Chat
F) Share their posts.

## Company perspective-

A) Company can view the student profiles
B) Browse student's profile and connect with students

# Non-Functional Requirements

A) User friendly
B) 24*7 online service
C) Safe and secure
D) Work on multiple platforms

# 2.4. Feasibility Study

Feasibility study is an evaluation and analysis of the potential of the proposed project which is based on investigation and research to give full comfort to decision makers. Feasibility study aims to objective and relationally uncover the strengths and weaknesses of existing business of proposed website. This helps us to find what new we can add for our project, whether to proceed or not.

## Technical Feasibility

This is done by specifying equipment and software that can successfully satisfy the user requirements. The technical needs of the system may vary considerably. The technical needs of system include:

- Facility to produce information in given time.
- Response time under certain conditions.

## Operational Feasibility

It's related to human organizational and political aspects. It measures how well the proposed project solves the problem and takes advantage of the opportunities identified in the requirements analysis phase of the system. This website will give detailed information.

## Schedule Feasibility

The project should be time consuming; a project will fail if it takes too long to be completed before it is useful. Typically, this means estimating how long the project will take to develop and if it can be completed in each time period. Time is an

important constraint for completing the project as we finished it before the time.

## Resource Feasibility

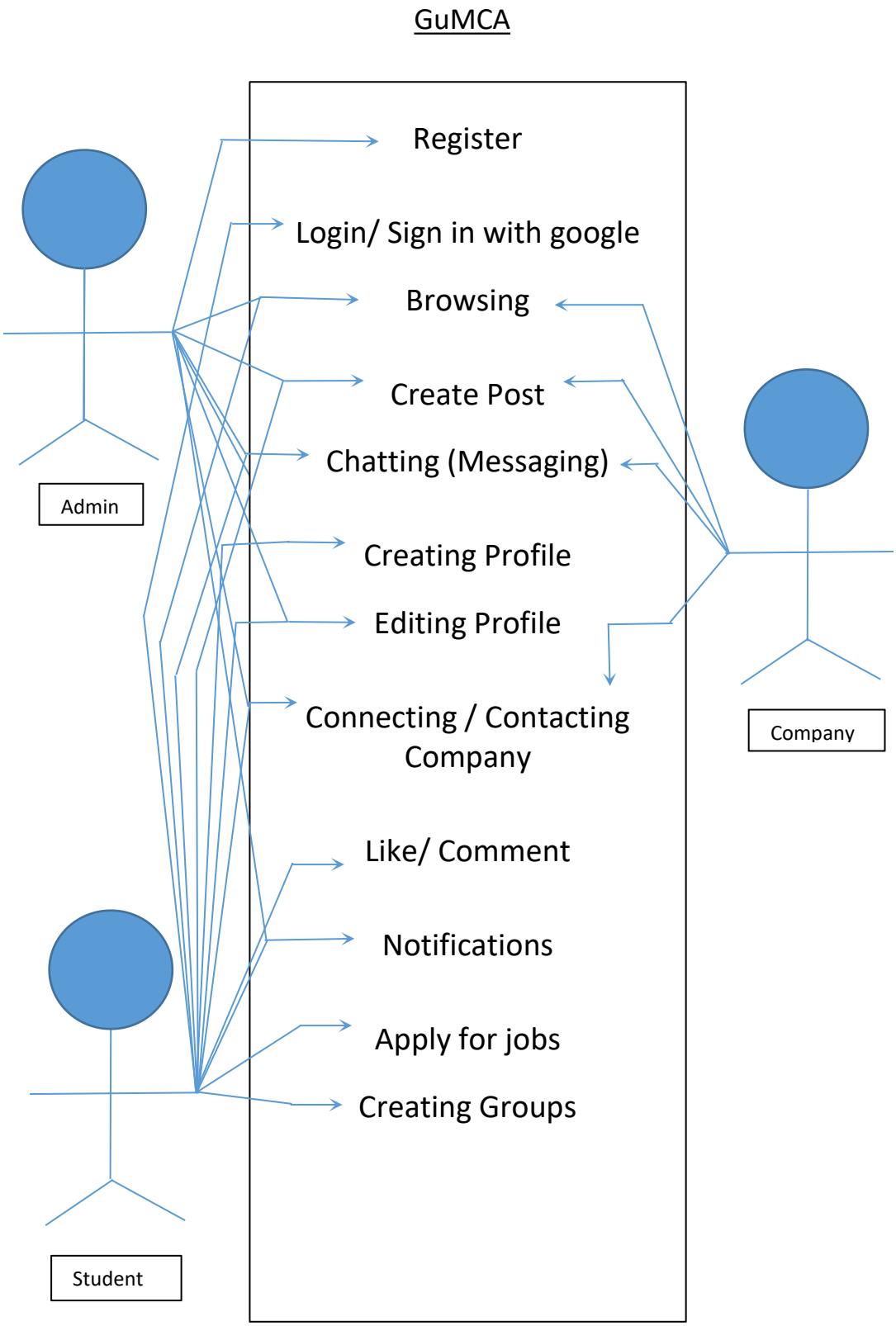
This involves questions such as how much time is available to build the new project when it can be built, whether its interface is normal business operations, type and number of resources required dependencies.

## Economic and Social Feasibility

Economic feasibility is also known as cost/benefits analysis. This is the most frequent technique to evaluate the effectiveness of the proposed website. This determines the benefits and savings that are expected from the proposed system and compares it with the cost. We have used only Notepad to perform coding which is freely available and chrome browser to run the code both are free of cost and easy to use.

# 3. System Design

# 3.1. Use-case diagram

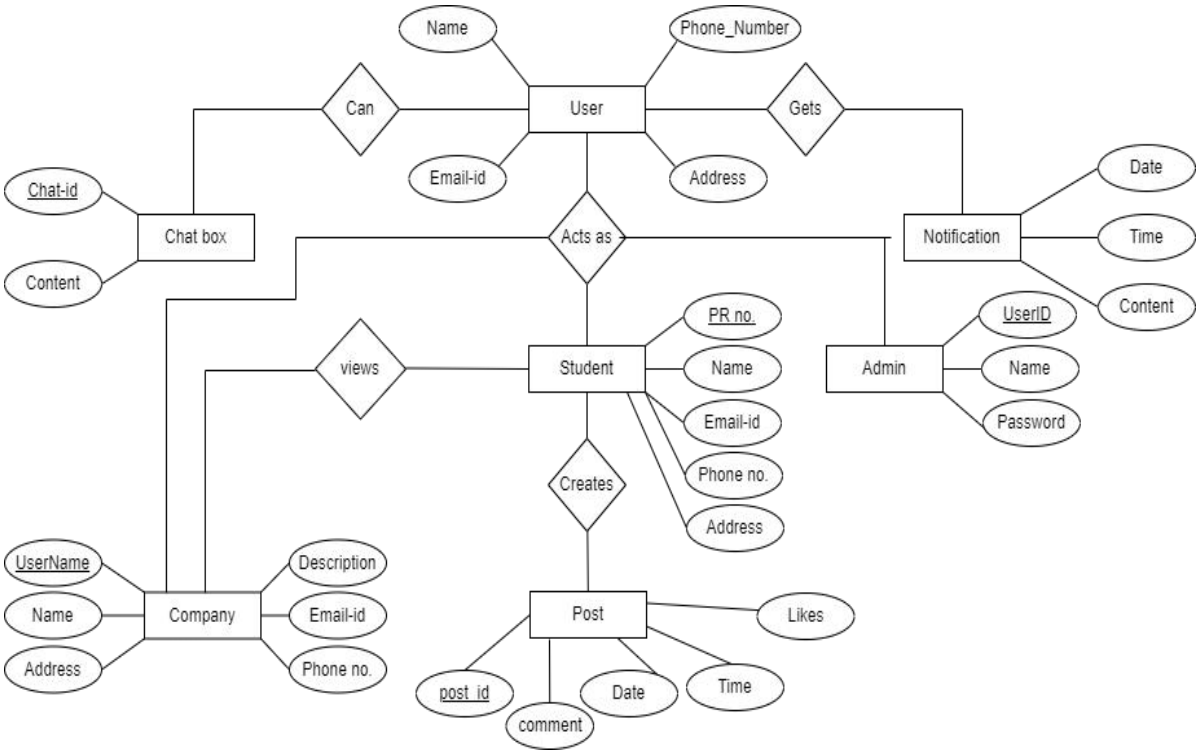


# 3.2. User Stories

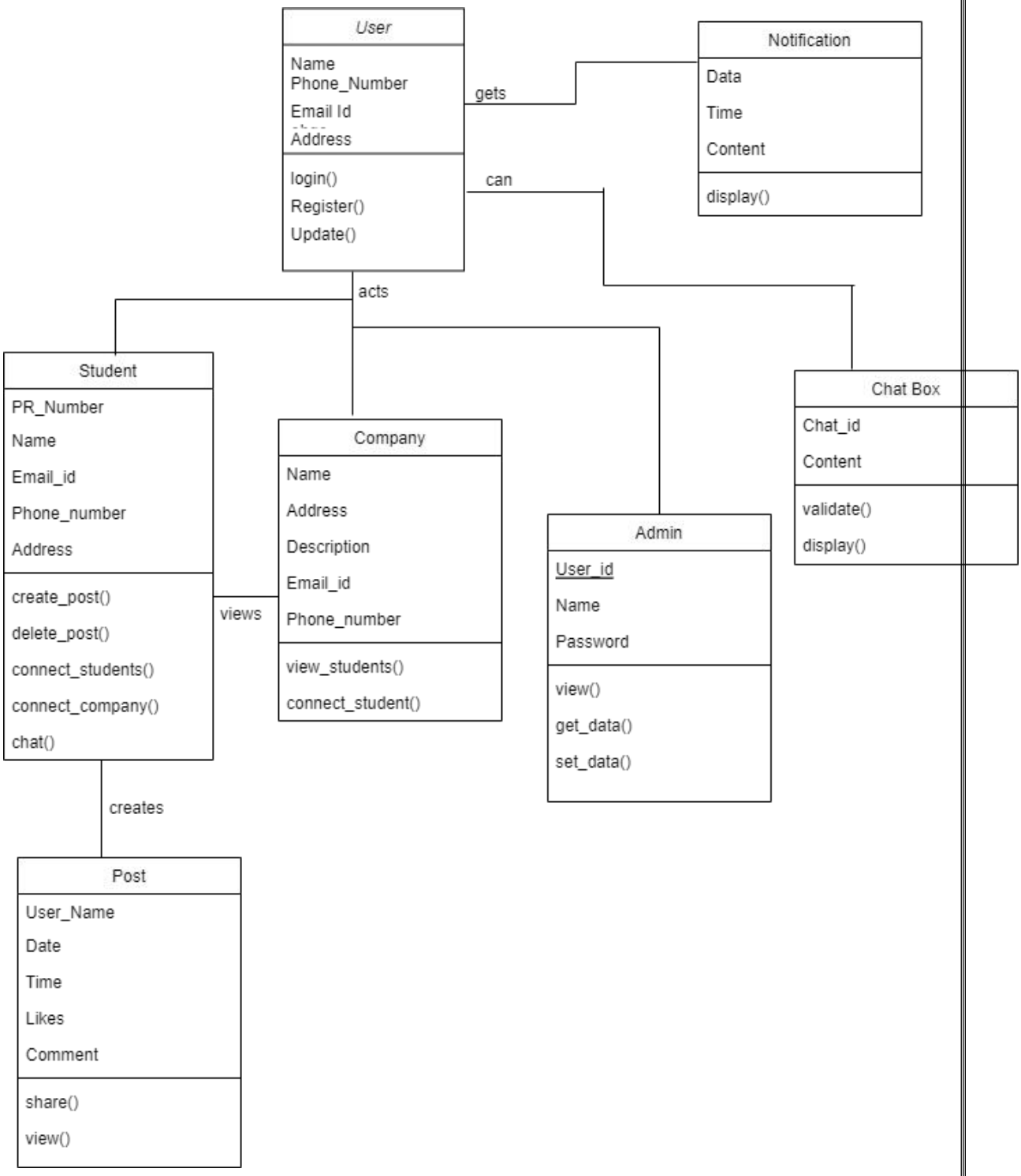
| Sr. No. | Project Feature | Actor *(as a _____)* | Action *(.., I want to _____)* | Goal (..., so that _____) | Acceptance Criterias |
|---|---|---|---|---|---|
| **1** | Opening the website | Student/Registerd User/Admin | view the site in any browser | I can use the browser that I have installed on my computer | 1) Users should be open the site in Google Chrome browser 2) Users should be open the site in Safari browser 3) Users should be open the site in Internet Explorer browser 4) Users should be open the site in Firefox Mozilla browser 5. Users should be open the site in **ANY** browser |
| **2** | Registration | Student | register myself on "gumca" | I can use the services provided by the "gumca" | 1)Able to create an account manually (filling out the sign-up form) 2) Able to create an account via Facebook 3) Able to create an account via Google 4) Able to create an account via LinkedIn 5)User will get a **"YOUR ARE RGISTERED"** Mesage |
| **3** | Login | Student | log into the "gumca" | I can use the services provided by the "gumca" | 1) Able to log in with username and password 2) Log in via Facebook 3) Log in via Google |
| **4** | Landing Page | Student/Registerd User/Admin | go to the landing page of the "gumca" | I can learn more about "gumca" | 1) Page should have an About Us tagline 2)**"Register"!** button that prompts students to the Registration Form 3 )Links at the bottom of the page that offer additional information on **"gumca website". @About** : Some info about the website and founders/partners **@Contact**:Contact information for Customer Service **@Legal**: Terms & Conditions (Will habe information about the deposit need to kept before using the service which then will be retured) **@review**: Reviews posted by the users |
| **5** | Delete Account | Student | delete my account from the website | my data is deleted from the website database | 1)Given that the user in logged in 2)Will be asked to confirm deletion of the |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | account 3)All data will be lost |
| **6** | Feedback | Student | give feedback | that the owner knows if changes are needed/how good the service was etc | 1) Only of user has used the service 2)Will get a option to type message 3)Submit button to send |
| **7** | Review | Student | give review | the other users are aware of the service being provided | 1) Only if user has used the service 2)Will get a option to type message 3)Submit button to post the review |
| **8** | Contact Us | Student | contact the particular authority | my issues are resolved | 1)User should click on Contact Us button 2)Information will be displayed |
| **9** | Search Bar | Student/Registerd User/Admin | search within the website | I can quickly/easily search for and find what I need on the website | 1)Search bar should be on the top 2)Will have a search button |
| **10** | Progress bar | Student | see a progress bar as I create an account | I can see how close I am to finish the registration process | 1)It will have steps numbered as you go on with the registration process |
| **11** | Login | Admin | log into the "gumca Website" as an admin | I can go through the website and do the needed work | 1) Able to log in with username and password |
| **12** | Edit Details | Admin | Edit Contact us/About/Legal pages etc pages | it is easier for the user to use the services | 1) Admin should be logged in 2)Should click confirm button after editing anything |
| **13** | Read Feedback | Admin | read feedback to know how user has felt using the service | I can do better as a service provider | 1)At the end, will text user accordingly via Email, Phone Number etc |
| **14** | Connect with students | Company (HR) | review the feedback of the students | I can find potential emplyees for my company | 1)Contact the student directly via the chat and communicate the needful |
| **15** | Schedule Appointment | Company (HR) | schedule an appointment with the student | I can allocate timeslots for interview | 1)The students skills matches the requirements of the company |
| **16** | chat | Student/Registerd User/Admin | carry out a chat session with the required party | I can chat personally | 1) user creates a room and sends the room id to the other party. |

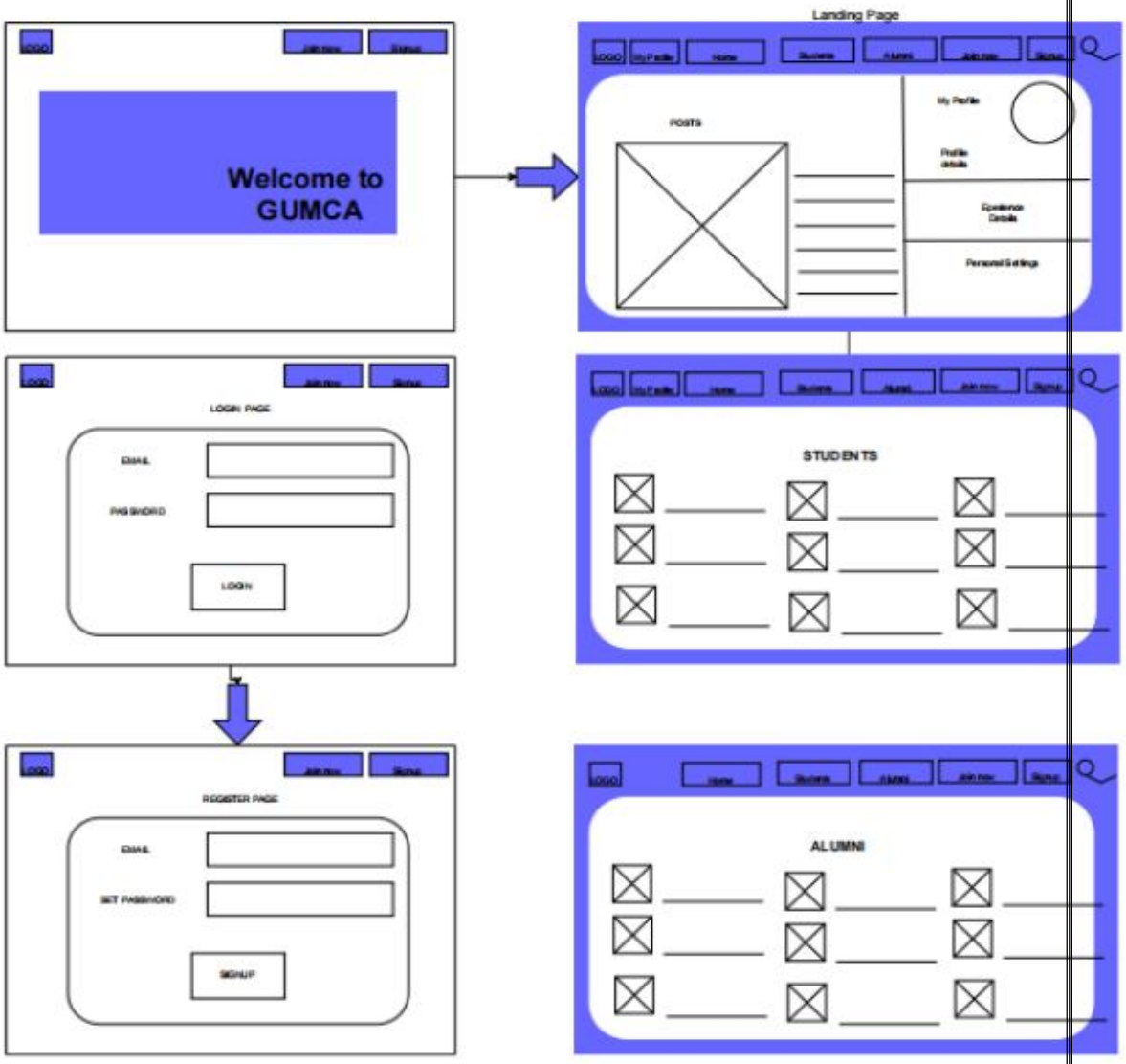
# 3.3. ER Diagram



# 3.4. Class Diagram



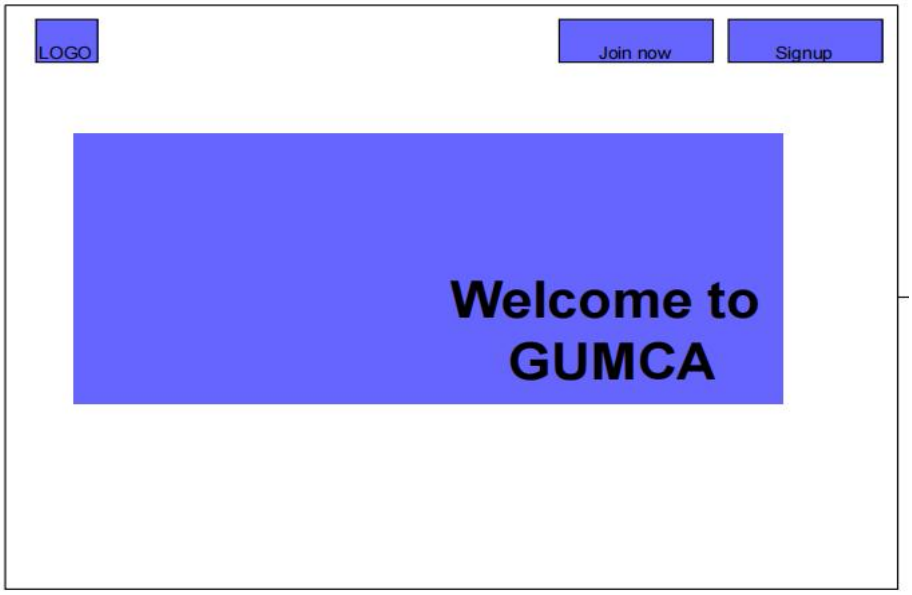
# 3.4. Wireframe



Page 1:

Welcome Page of GUMCA

Here there is a logo on the top left corner and join now and Sign-up option on top right corner.

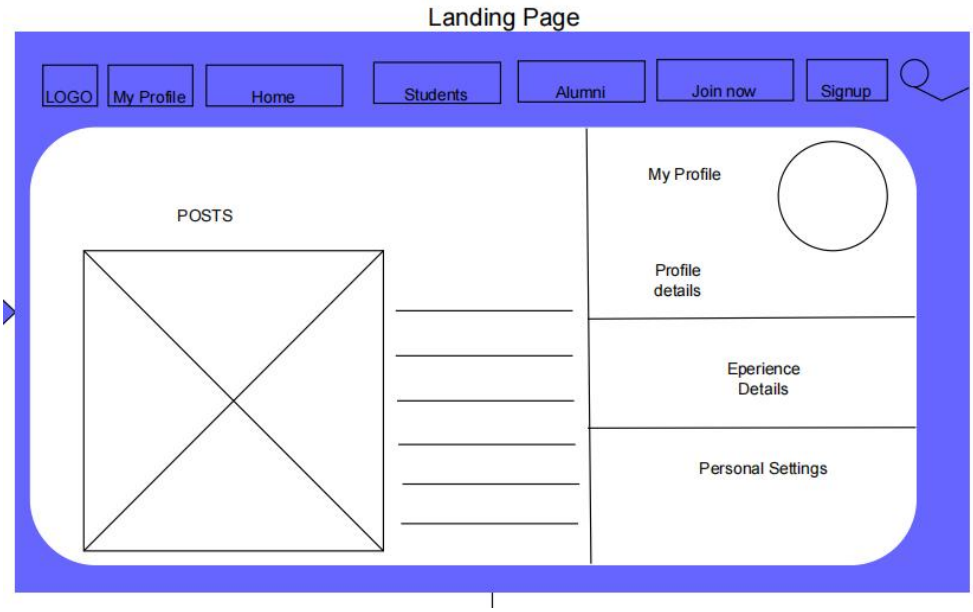



Page 2:

Home Page/Landing Page

Here we have many options to operate the site. Options available are My profile, Home, Students, Alumni, join now and sign up.

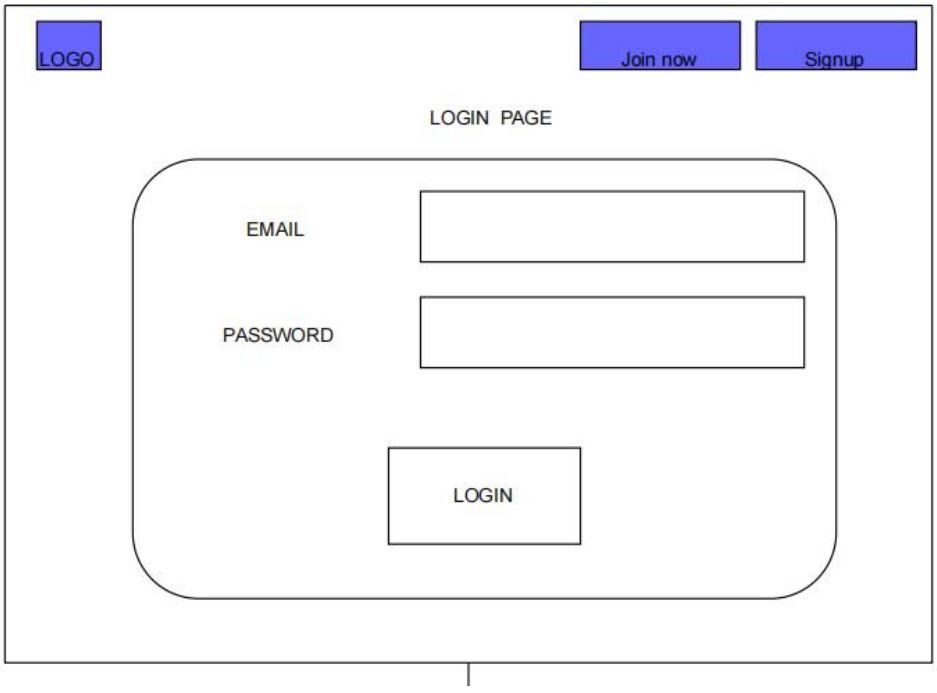
In this page you can also view the posts and user profile details and settings.




# Page 3:

## Login Page

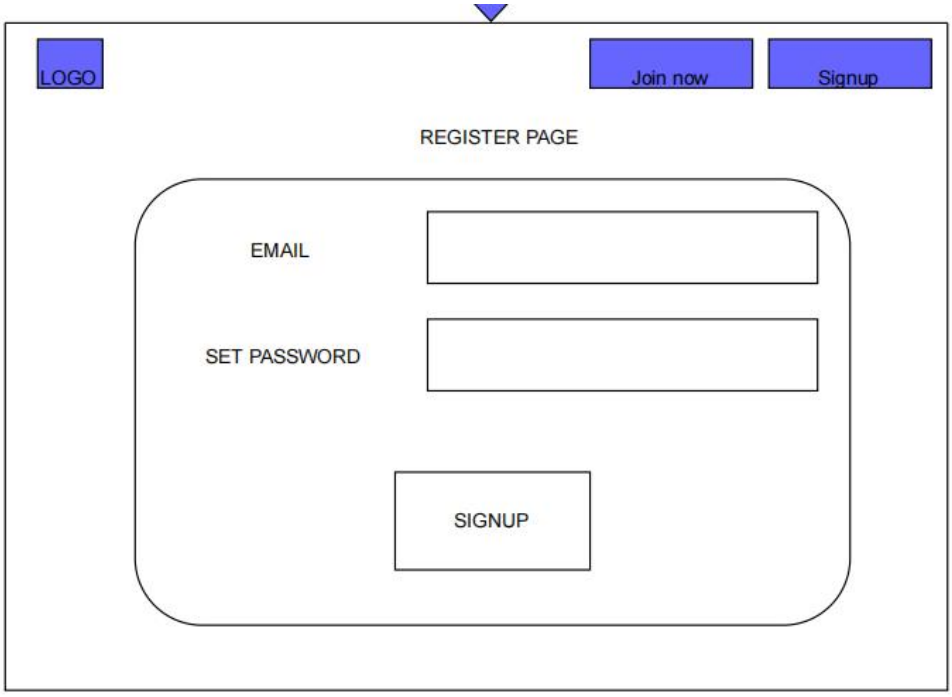
Here we have to login with the registered email id and password. If the user is not registered, then first the user must register himself/herself.



## Page 4:

Register Page

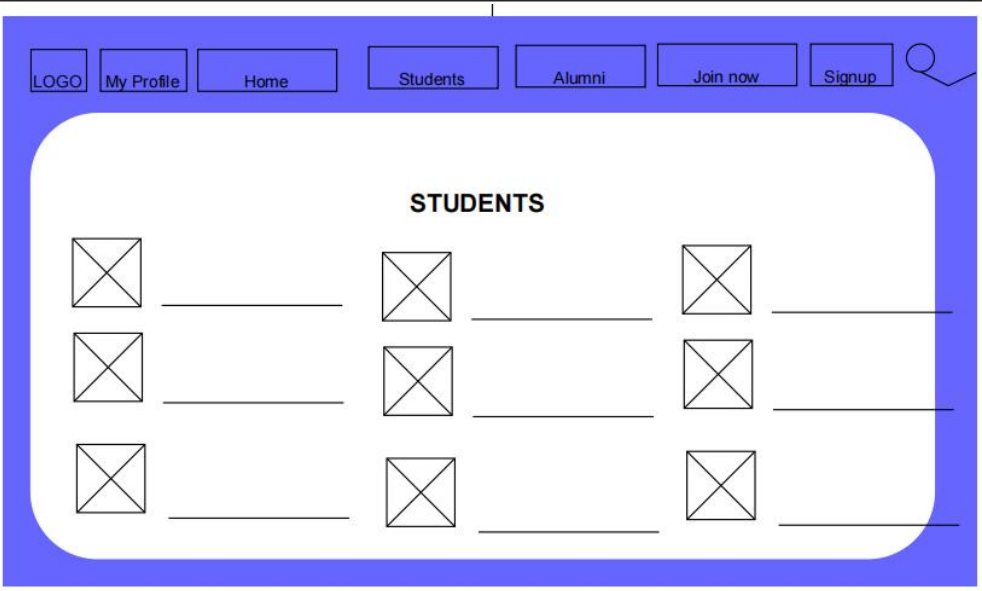
Here the user must register with an email id and password.




## Page 5:

Students' details

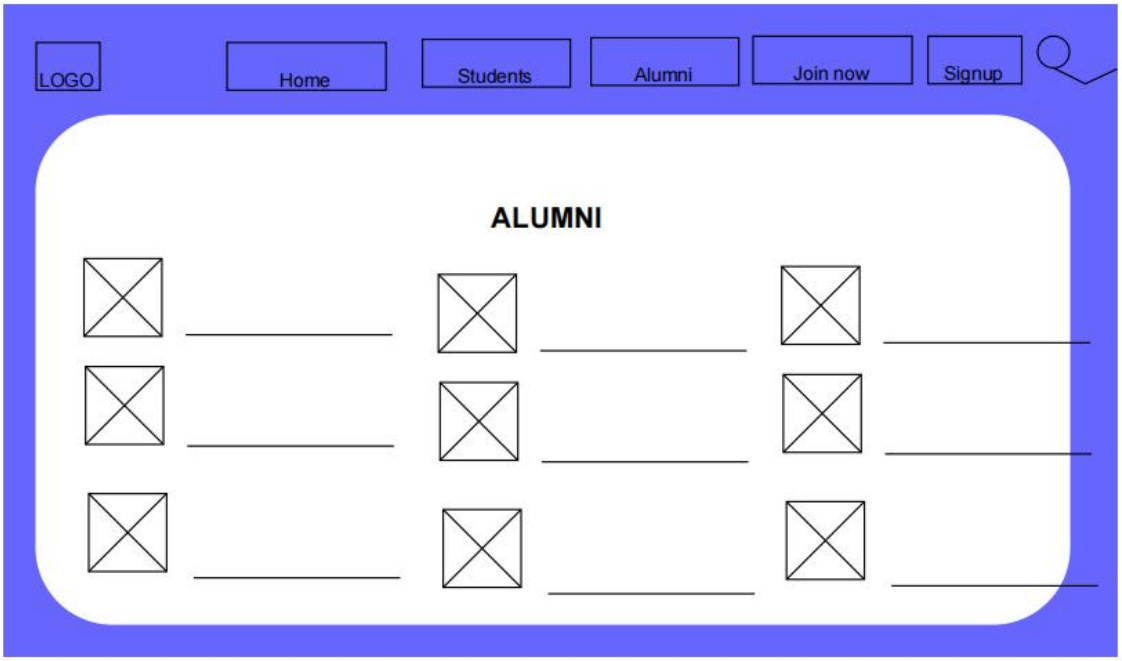
Here we have details of students to view. Details like Name, Qualifications, school/college info, marks, achievements, interest and much more.




Page 6:

Alumni Details

Here we have details of Alumni.



# 4. System Implementation

# 4.1. Backend Software tools

## 1. NodeJS

An open-source, cross-platform, back-end JavaScript runtime environment that runs on a JavaScript Engine (i.e. V8 engine) and executes JavaScript code outside a web browser, which was designed to build scalable network applications. Node.js lets developers use JavaScript to write command line tools and for server-side scripting running scripts server-side to produce dynamic web page content before the page is sent to the user's web browser.


## 2. Firebase

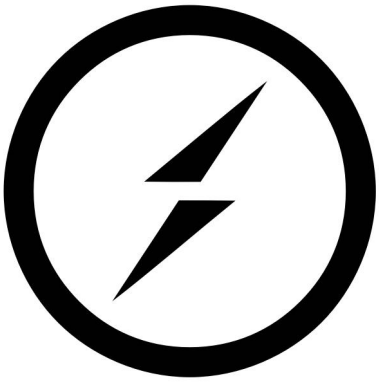
Firebase is a set of hosting services for any type of application. It offers NoSQL and real-time hosting of databases, content, social authentication, and notifications, or services, such as a real-time communication server.


## 3. Express.js

Express.js, or simply Express, is a back-end web application framework for building RESTful APIs with Node.js, released as free and open-source software under the MIT License. It is designed for building web applications and APIs.


## 4. Socket.io

Socket.IO is a library that enables low-latency, bidirectional and event-based communication between a client and a server. It is built on top of the WebSocket protocol and provides additional guarantees like fallback to HTTP long-polling or automatic reconnection.

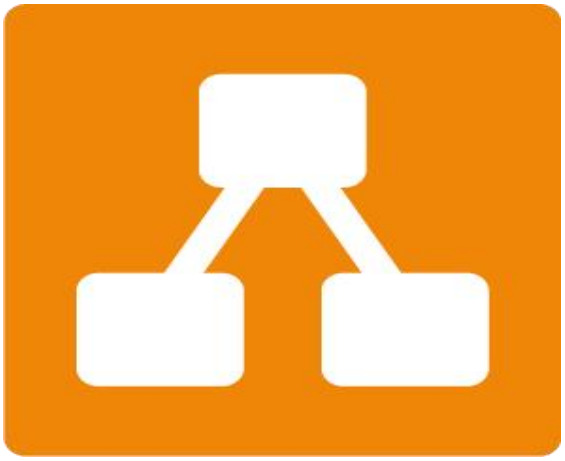


# 4.2. Middleware software tools

## Wireframe

### 1. Draw.io

**draw.io** is proprietary software for making diagrams and charts. The software lets you choose from an automatic layout function or create a custom layout. They have a large selection of shapes and hundreds of visual elements to make your diagram or chart one-of-a-kind. The drag-and-drop feature makes it simple to create a great looking diagram or chart. Draw.io has options for storing saved charts in the cloud, on a server or network storage at a data center, depending on your needs.



### 2. Microsoft Internet Explorer

Windows internet explorer is a series of graphical web browsers developed by Microsoft and included as part of the Microsoft Windows line of operating system starting in 1995. It has been the most widely used web browser since 1999, attaining a peak of about 95% usage share during 2002 with IE5 and IE6.

## 3. Google chrome

Web browser used for displaying HTML, CSS and JavaScript documents. It's a freeware web browser by Google.

## 4. WPS Office

WPS Office is an office suite for Microsoft Windows, macOS, Linux, iOS, Android, and HarmonyOS developed by Zhuhai-based Chinese software developer Kingsoft. It also comes pre-installed on Fire tablets. WPS Office is made up of three primary components: WPS Writer, WPS Presentation, and WPS Spreadsheet.

## 5. VsCode

Visual Studio Code, also commonly referred to as VS Code, is a source-code editor made by Microsoft with the Electron Framework, for Windows, Linux and macOS. Features include support for debugging, syntax highlighting, intelligent code completion, snippets, code refactoring, and embedded Git.

# 4.3. Frontend Software Tools

## 1. HTML

The Hypertext Markup Language or HTML is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as Cascading Style Sheets (CSS) and scripting languages such as JavaScript. Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages. HTML provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items.

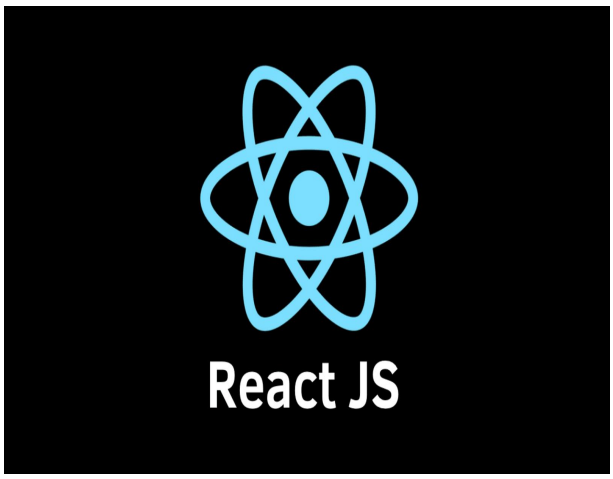

## 2. CSS

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language such as HTML or XML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript. CSS is designed to enable the

separation of presentation and content, including layout, colors, and fonts.

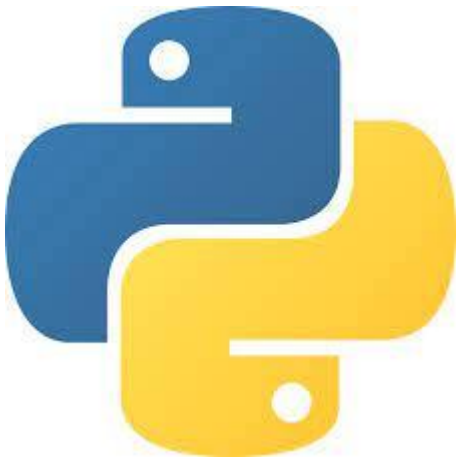

## 3. ReactJS

React (also known as React.js or ReactJS) is a free and open source front-end JavaScript library for building user interfaces based on UI components. It is maintained by Meta (formerly Facebook) and a community of individual developers and companies. React can be used as a base in the development of single-page, mobile, or server-rendered applications with frameworks like Next.js.



## 4. Python

Python is a high-level, general-purpose programming language. Its design philosophy emphasizes code readability with the use of significant indentation. Python is dynamically typed, and garbage collected. It supports multiple programming paradigms, including structured, object-oriented and functional programming.

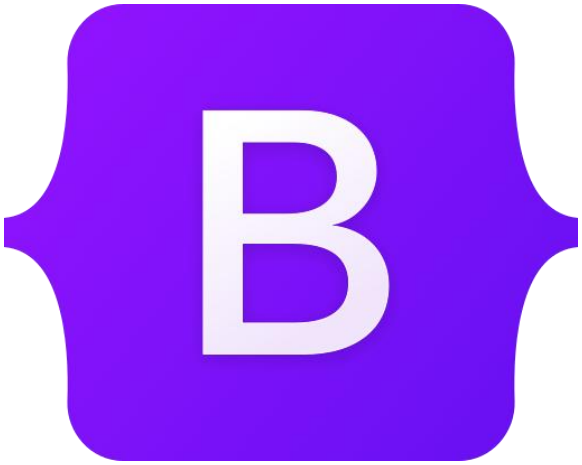


## 5. Streamlit

Streamlit is an open-source app framework in Python language. It helps us create web apps for data science and machine learning in a short time. It is compatible with major Python libraries such as scikit-learn, Keras, PyTorch, SymPy(latex), NumPy, pandas, Matplotlib etc.

# 6. Bootstrap

Bootstrap is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains HTML, CSS and JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components.



# 4.4 Deployment tool

## 1)Heroku

Heroku is a cloud platform as a service supporting several programming languages. One of the first cloud platforms, Heroku has been in development since June 2007, when it supported only the Ruby programming language, but now supports Java, Node.js, Scala, Clojure, Python, PHP, and Go.

# 5. Testing

# 5.1. Validation Report

## 1. Validation for login

| **Test case no** | **UTC-01** |
|---|---|
| Functionality | Testing for incorrect username and password. |
| Environment | GuMCA home page > Login |
| Steps to execute/ procedure | 1. Open Login page.<br>2. Enter the “Incorrect Password/Name”.<br>3. Click on Login. |
| Expected result | GuMCA should display the error message “Username and Password. Is incorrect.” |

## 2.Validation for Register

| Test case no | UTC-02 |
|---|---|
| Functionality | Testing for registration. |
| Environment | GuMCA home page > Login > Register |
| Steps to execute/ procedure | 1. Open Registration page.<br>2. a) Enter the “Incorrect Confirm Password or Password”.<br>b) Enter “Username and Password which are already Registered”.<br>3. Click on Register. |
| Expected result | a) GuMCA should display an error message “Password is not correct.”<br>b) GuMCA should display error “User record is already taken.” |

# 5.2. Unit Testing Report

| Test Case | Test Description | Test Data | Expected Result | Actual Result | Pass/ Fail |
|---|---|---|---|---|---|
| 1 | Check if login functionality through Google account works for user/company | Login credentials can be any user logged in account in browser | log in successful. | logged in successfully. | Pass |
| 2 | Check if logout functionality through Google account works for user/company | - | log out successful. | Logged out Successfully. | Pass |
| 3 | check if user/company can post content | - | Content Posted successfully. | Content Posted successfully. | Pass |
| 4 | check if user/company can like the post | - | Post is liked. | Post is liked. | Pass |
| 5 | check if user/company can comment on post | Comment data(text) | Comment is available. | Comment is posted. | Pass |
| 6 | check if user/company can share the post | - | Post shared successfully. | Post shared successfully. | Pass |
| 7 | check if the user/company can view others profile | - | Profiles are visible. | Profiles are visible. | Pass |
| 8 | check if user/company can message each other | Message Data.(text) | Message sent successfully | Message sent successfully | Pass |
| 9 | check if profile picture can be changed | Profile picture. (.jpg) | Profile picture changed | - | Fail |
| 10 | check if skills and cv be added | Skills & Info (Coding, Development, etc) | Skills/CV posted successfully | - | Fail |
| 11 | check if eda can be performed from the site data dynamically | User Skill data generated | EDA visible to user | EDA visible to user | Pass |
| 12 | check if user/company can follow each other | - | User followed | User followed | Pass |
| 13 | check if company can search for particular candidate | Candidate Name. | Candidate is searched. | - | Fail |
| 14 | check if user can search for specific role. | Specific Role Data (DevOps Engineer, Tester, Developer, QA, etc) | Specific role candidate searched. | Specific role candidate searched. | Pass |
| 15 | check if use can search for specific company to | Company Name(TCS | Specific company can be searched. | - | Fail |

| | | | | | |
|---|---|---|---|---|---|
| | apply | etc) | | | |
| 16 | check if user/company can view the notifications | Notification Data. | Notification sent successfully. | - | Fail |

# 5.3. System Integration Testing

## 1. Unit Testing:

All throughout the project, it was quite good, interesting working with my teammates, and a little difficult when it came to coding and working on it.

We had decided many more things to execute but it was not matching with code. So, we had to change some things. We had given our best.

## 2. Integration Testing:

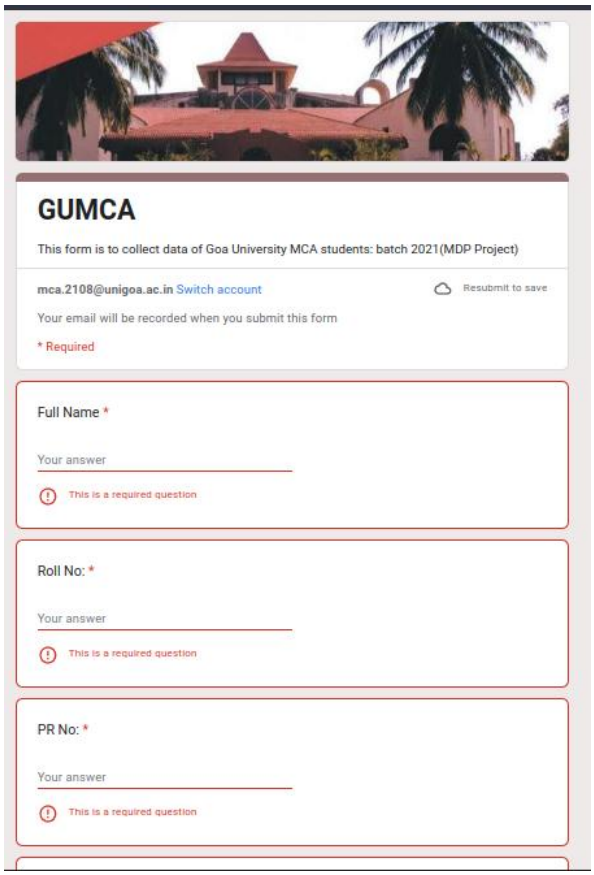
Integration testing (sometimes called integration and testing, abbreviated I&T) is the phase in software testing in which individual software modules are combined and tested as a group. While working with the website we integrated all the unit test cases.

## 3. System Testing:

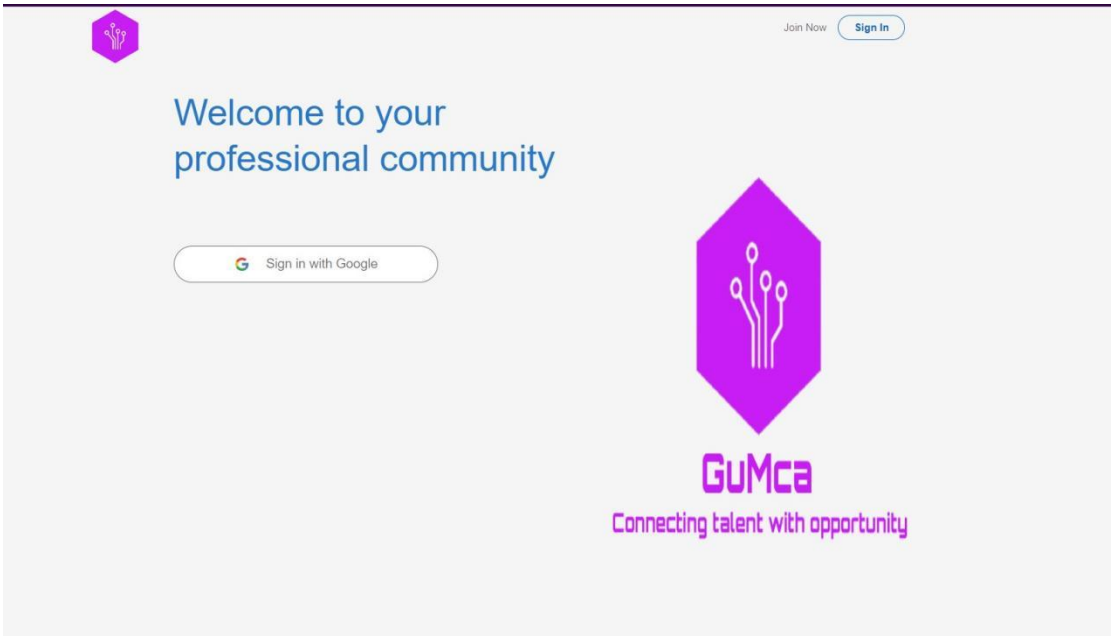
Some codes were giving errors starting but as time goes, we had managed to solve all the errors and now the whole website is working smoothly and correctly.

# 6. Output

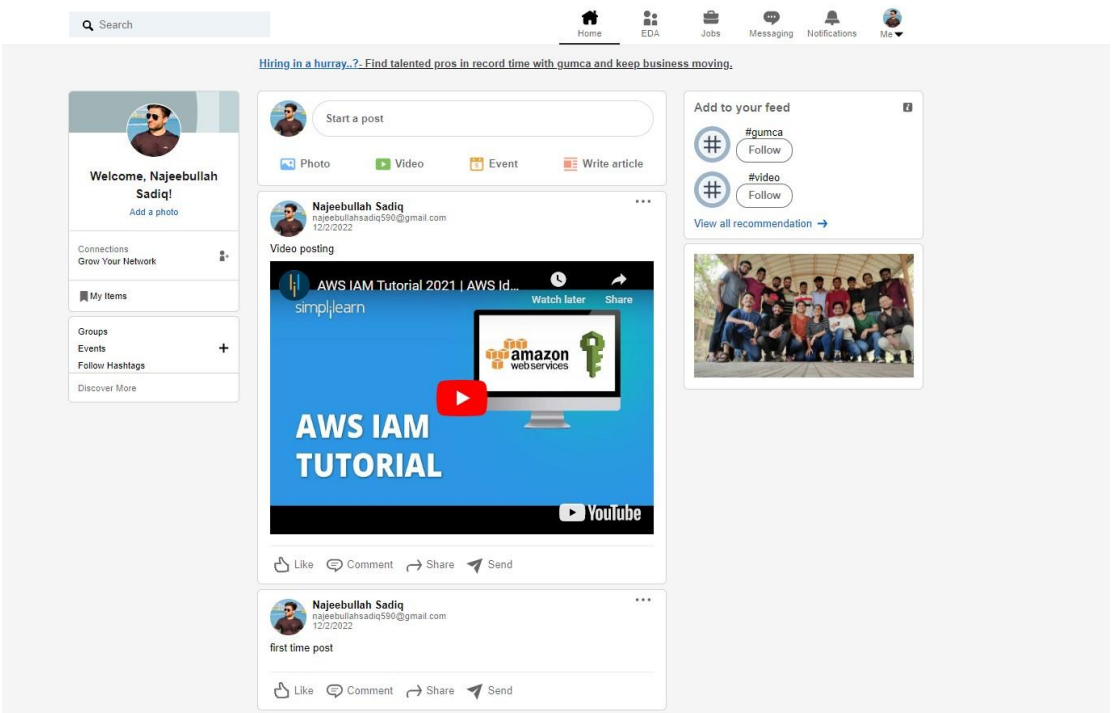
# 1. Data Collection Form:



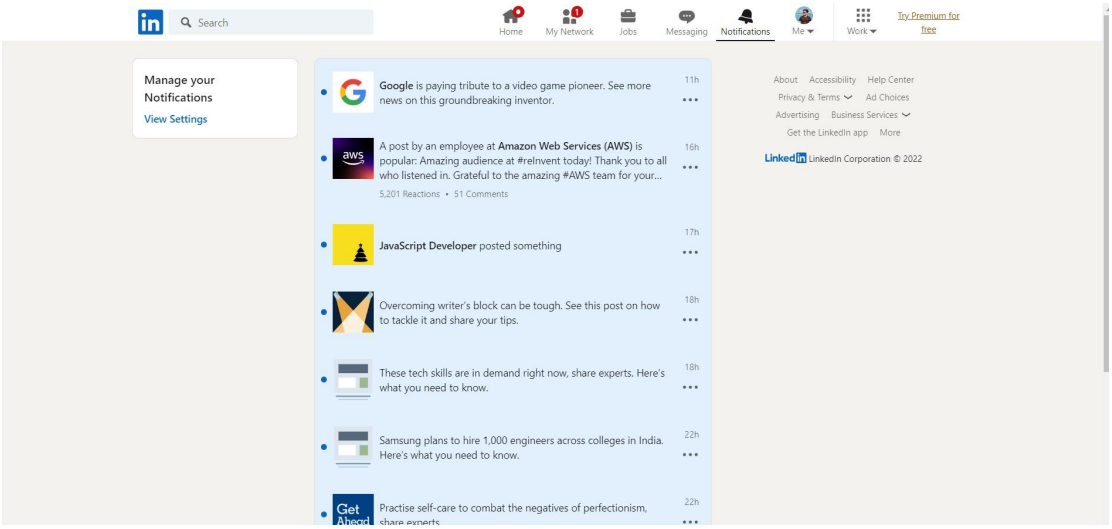

# 2. Login Page:



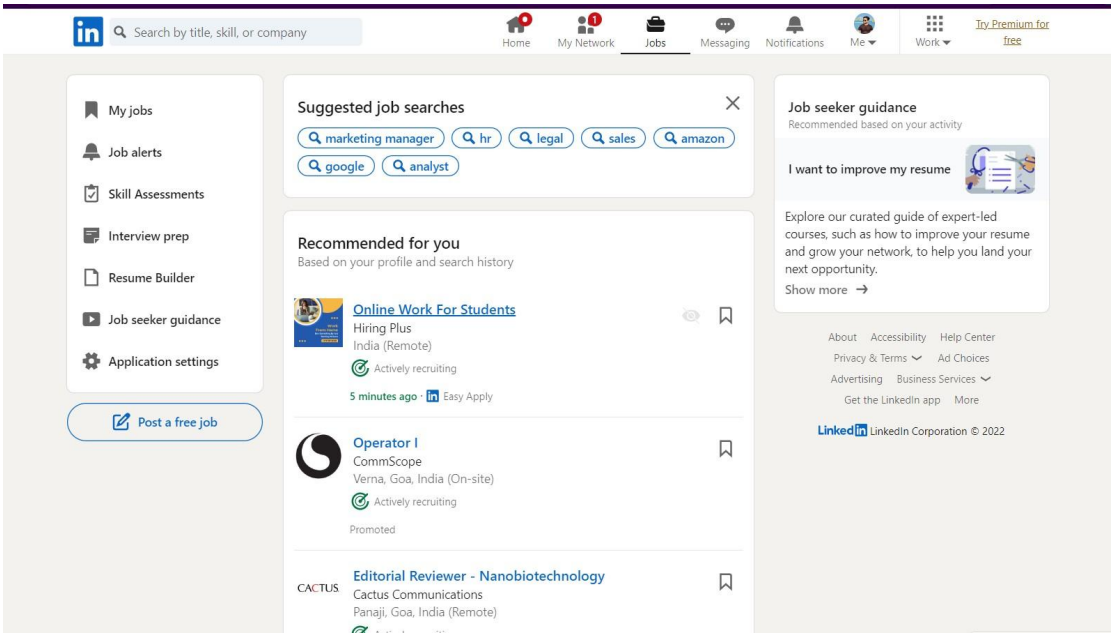
# 3. Main Page:



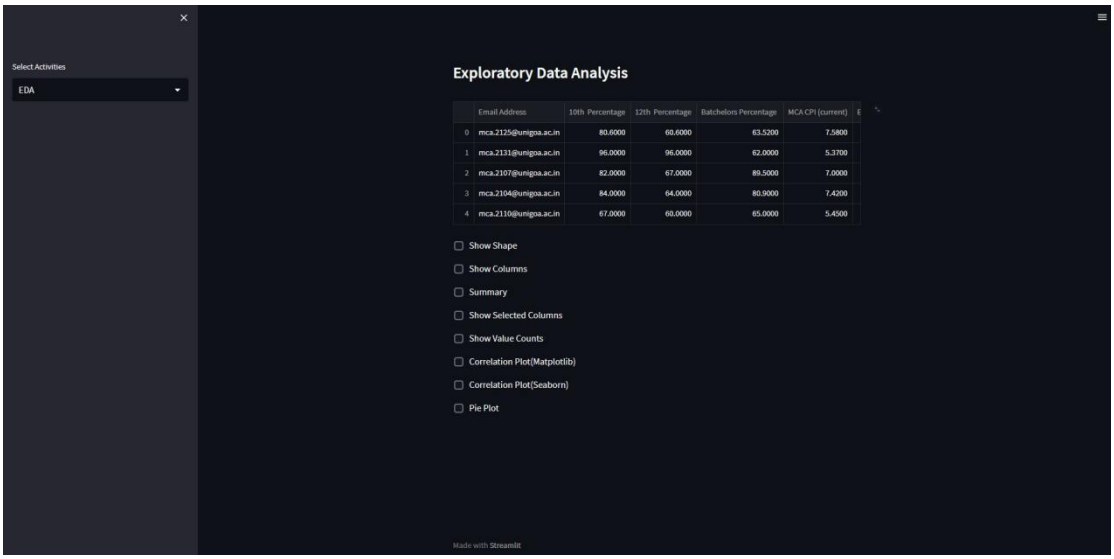

# 4. Notification Page:



# 5. Job Page:




# 6. EDA Page:



# 7. Future Enhancement

1. We will allow only the university students to enroll into the platform.

2. Tagging - students will be able to tag people in their connection.

3. Live video chat with customer service.

4. Endorsement - users will be able to verify that people in his connection have the skills that they claim.

5. Quiz - based on the skills the user selects, the platform provides a quiz on that niche and provides a certificate for completing the quiz.

6. Reactions - adding more reactions for post like - laughing emoji, thumbs up, etc.

# 8. Timeline Report

| Sr.No. | Title | Members | Start date | End date |
|---|---|---|---|---|
| 01 | Data collection | Poojan Naik | 11-10-22 | 10-11-22 |
| 02 | EDA | Ankit Mishra & Atul Nilloji | 15-11-22 | 25-11-22 |
| 03 | Documentation & Presentation | Namita Mahale & Disha Malvanker | 11-10-22 | 30-11-22 |
| 04 | Chat app | Dinesh Gawas, Rohan Vishwakarma & Sahil Asolkar | 20-11-22 | 25-11-22 |
| 05 | Logo & Wireframes | Suraj Pandey & Nasratullah Mirzai | 10-10-22 | 11-10-22 |
| 06 | Database Connection | Omkar Savoikar | 15-11-22 | 20-11-22 |
| 07 | Firebase | Yasin Honnalli & Varad Prabhugoankar | 20-11-22 | 28-11-22 |
| 08 | Notification & Testing | Ramjeet Faldessai | 25-11-22 | 28-11-22 |
| 09 | Post Page | Najeebullah Sadiq & Aftab Saeedi | 25-11-22 | 29-11-22 |
| 10 | Login Page & Jobs Page | Avin Naik, Mohammad Saeed & Varad Kamat | 15-11-22 | 20-11-22 |
| | | | | |

# Member Distribution

## Frontend & Design Team Members
Najeebullah Sadiq  and Varad Prabhugoankar (Team Lead)
Aftab Saeedi
Mohammad Saeed
Nasratullah Mirzai
Ramjeet Faldessai
Varad Kamat
Avin Naik

## Chat App Team Members
Rohan Vishwakarma (Team Lead)
Sahil Asolkar
Dinesh Gawas

## Backend Team Members
Aftab Saeedi & Najeebullah Sadiq (Team Lead)
Rohan Vishwakarma
Yasin Honnalli
Omkar Savoikar
Varad Prabhugoankar
Suraj Pandey

## EDA Team Members
Ankit Mishra (Team Lead)
Atul Nilloji
Poojan Naik

## Database Team Members
Omkar Savoikar
Yasin Honnalli
Varad Kamat

## Testing Team Members

Ramjeet Faldessai (Team Lead)
Varad Kamat
Varad Prabhugoankar

## Documentation Team Members

Namita Mahale
Disha Malvanker

# 9.Conclusion

This website will work for the comfort of every user of the site. The main objective of our project is to provide every user the level of ease to work with the features and leave a lasting image to revisit us. And to provide job opportunities to every student at Goa University by making companies communicate with the site to go through the profiles of the student and look for the best suitable candidate for the company.

# 10. Reference


https://reactjs.org/docs/getting-started.html

https://nodejs.org/en/docs/

https://firebase.google.com/docs?gclsrc=ds&gclsrc=ds&gclid=CNCU-Kux1fsCFUrJ1AodTBUMUQ

https://expressjs.com/en/guide/

https://docs.streamlit.io/

https://getbootstrap.com/docs/5.2/getting-started/introduction

https://devcenter.heroku.com