

STUDENT-ALUMINI NETWORK

A minor project report,
submitted in partial fulfillment of the requirement for the award of
B.Tech. degree in computer science and engineering

By

JAT AJAY LALARAM (2018BCS-023)

Under the supervision of:

Prof. Rajendra Sahu

Dr. Vishal Vyas



विश्वजीविनामृतं ज्ञानम्

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CANDIDATES DECLARATION

We hereby certify that the work, which is being presented in the report, entitled Student-Alumini Network, in partial fulfillment of the requirement for the award of the Degree of Bachelor of Technology and submitted to the institution is an authentic record of our own work carried out during the period August 2020 to september 2020 under the supervision of Prof. Rajendra Sahu and Dr. Vishal Vyas. We also cited the reference about the text(s)/figure(s)/table(s) from where they have been taken.

Date:

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Signatures of the Research Supervisors

ABSTRACT

An Alumni student Network app is an app with the chatting functionalities (Personal Chatting) and full calendar utilization for keeping a track of all the activities(tasks) whether completed or are in the progressive state and a list of alumni's filterable according to their field (machine learning, frontend developer). The app mainly focuses on setting tasks achievable over a period of time by taking guidance from the alumni's in the field in which students are interested in or want to work as a professional in future. For interacting with the alumni's users can directly message the alumni's and ask their queries or doubts. Full calendar gives all the flexibilities to the users of deleting ,resizing ,updating and creating the events which are stored and maintained in the databases. On every successful login sessions users's can see their events, for identifying or visualization users can set different colors to the different events which makes the full calendar even more effective. Full calendar maintains all the previous and the future events along with their dates and timing details. It also provides the features to use the month, day and week part of the month. We can see the events on a monthly basis or weekly or simply today's events basis. The app is very useful for scheduling the tasks and prioritizing them according to their priorities.

Keywords: Full Calendar, real time Chatting , Alumni section.

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(Jat Ajay Lalaram)

TABLE OF CONTENTS

ABSTRACT

LIST OF TABLES

LIST OF FIGURES

1	Introduction	1
1.1	General.	1
	1.1.0.0.1	1
1.2	Objectives.	2
	1.2.0.0.1	2
1.3	Salient Features of the Report	3-4
	1.3.0.0.1	3-4
2	Architecture	5
2.1	System Architecture.	5-7
2.2	Tools and Technologies	8
3	Requirements Analysis and Specification	9
3.1	Software Requirement	9
	3.1.0.0.1	9
3.2	Hardware Requirement	9
	3.2.0.0.1	9

3.2.0.0.2	9
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4 System Design, Project Description and Methodology

4.1	System Design	10
4.1.0.0.1		11
4.2	System Activites	12
4.2.0.0.1		12
4.2.0.0.2		12
4.3	Database Design	12
4.3.0.0.1.		12
4.4	System Implementation	12
4.4.0.0.1.		12

5 Screenshots of Project with Descriptions

5.1	Homepage	13-16
5.2	Network Route	13-16
5.3	User section	13-16

6 Conclusion and Future Scope

6.1	Conclusion	17
6.1.0.0.1		17
6.2	Scope For Future Work	18
6.2.0.0.1.		18

References	19
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LIST OF FIGURES

Figure no	Title	page no.
2.1.1	Use case of Users and Admin.....	5
2.1.2	Data flow diagram of overall architecture.....	6
2.1.3	password authentication using hashing.....	6
2.1.4	Design flow diagram.....	7
4.1	System overview design.....	10
5.1	Homepage.....	13
5.2	Network Route.....	14
5.3	User Section.....	15-16

Introduction

1.1 General

There's no doubt that the Coronavirus (COVID-19) has affected everyone in one way or another and that we all know that this virus that has shut down most of the world at one point or another isn't going to go away anytime soon. As you can imagine, with such a huge worldwide pandemic happening, each and every individual are suffering mentally as well as with all the aspects of the social living. The mental problems facing by the students is due to the isolations. Students are not being able to cope up with the day to day activities, which in turns leads to the piles of the pending activities or the skills to be learned . The Alumini Student Network is a app which fulfills all the needs of the students concerns whether it may be the guidance or the schedulizing the activities according to their priorities. The app will gain importance as students may feel weird directly contacting the seniors, the soul purpose of the app is to make users comfortable with the app and moreover the apps production or development purpose is to take guidance from others and setting tasks which can be easily done by the full calendar. Full calendar is a very useful tool to keep track of the events on the monthly , weekly or every day basis in which the events can be created ,updated ,resized or deleted. In this way the app is a ideal platform for directly reaching the seniors and setting tasks and accomplishing them.

1.2 Objectives

1.2.0.0.1

- It helps in finding the alumini/senior according to their fields . The alumini section contains the profiles of the alumini's filterable according to their fields. On clicking the profile their will be a pop up describing the details of the alumini/senior.
- It helps in real time chatting and getting familiar with a strong network. A real time Chatting feature will provide a platform for the users to get their queries/doubts cleared. The chats are saved in the database and are maintained on every successful login sessions.
- It helps in using the full calendar tool which will reduce efforts to manually create or to set tasks and maintain them. Full Calendar is a useful tool for setting tasks and accomplishing them on time. If there is an interruption in between any task the full calendar gives the flexibilities to update the same event for other days.
- The full calendars events can be used to resize, update, delete and create events or tasks according to the user's requirements.
- The full calendar helps in easy identification of the events. The events can be colored which works as an easy identification of the tasks or activities according to the user convenience.

- It helps in keeping track of the previous events set or accomplished which adds to the features of the app.
- It helps in creation of the users or the aluminis by the admin section which gives the freedom to add accordingly.

1.3 Salient Features of the Report

1.3.0.0.1

- You can keep track of everybody in the institution with their full descriptions.
- You can avail the real time chatting feature of the app.
- You can set tasks on the monthly weekly or daily basis and can see them on the same basis.
- You can easily identify them according to the color property given to the events for the identification purpose.
- You can create the event in the calendar.
- You can update the already created event .
- You can drag the already created event in the place where the calendar is not filled.

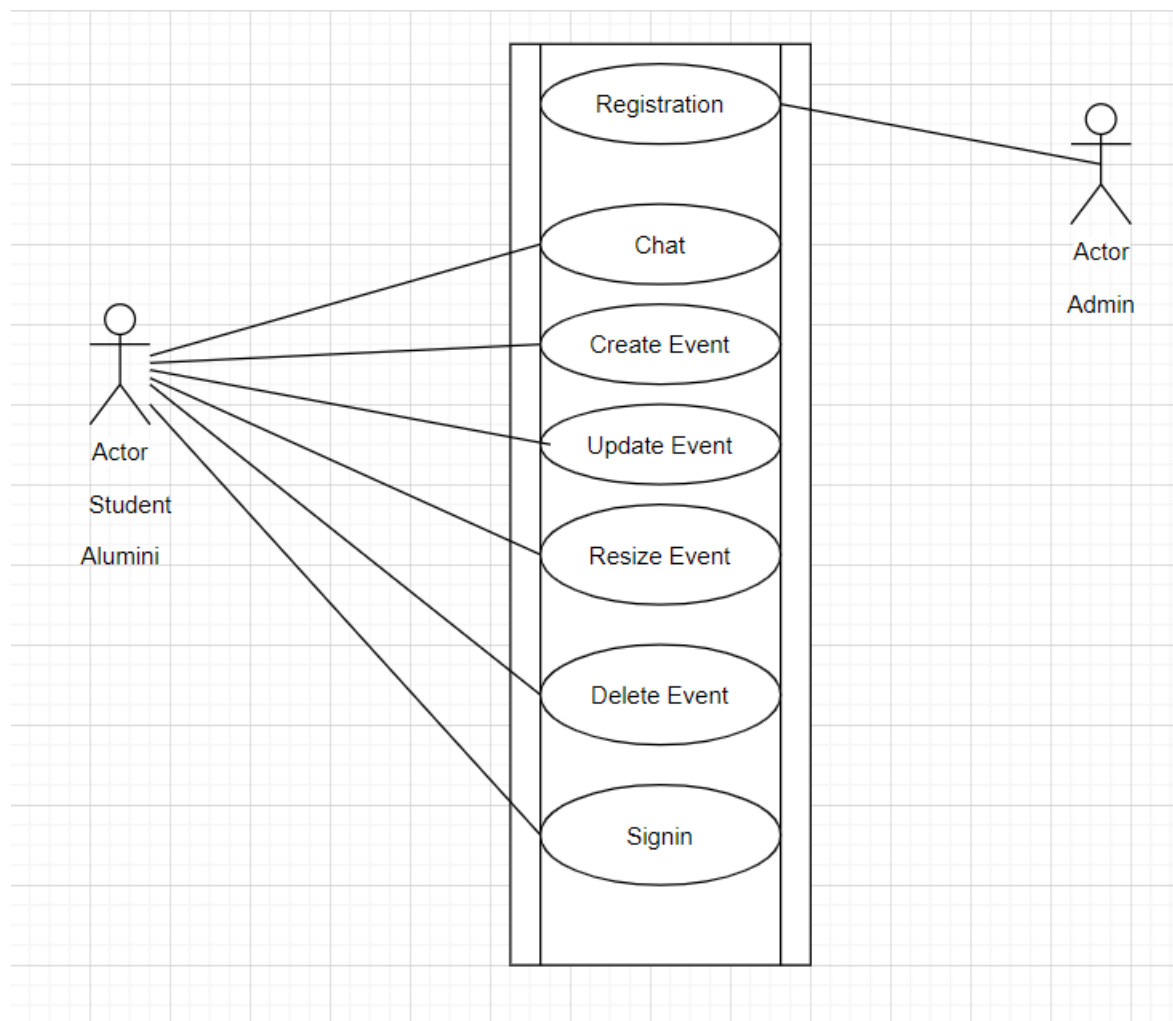
- You can resize any event or task according to the interruptions you face.
- You can delete events on accomplishments or simply creating wrong events.
- In the all events section you can see today's events with their timing so that it reminds you to be free for the time task is assigned for the day.
- You can keep track of almost everything using the app.
- Reduce manual work of setting Schedules on paper and maintaining them and following them and updating them on any interruptions.
- As this app for official purpose seeing the mental problems in covid-19 period or generally you will not be ignored.

CHAPTER 2

Architecture

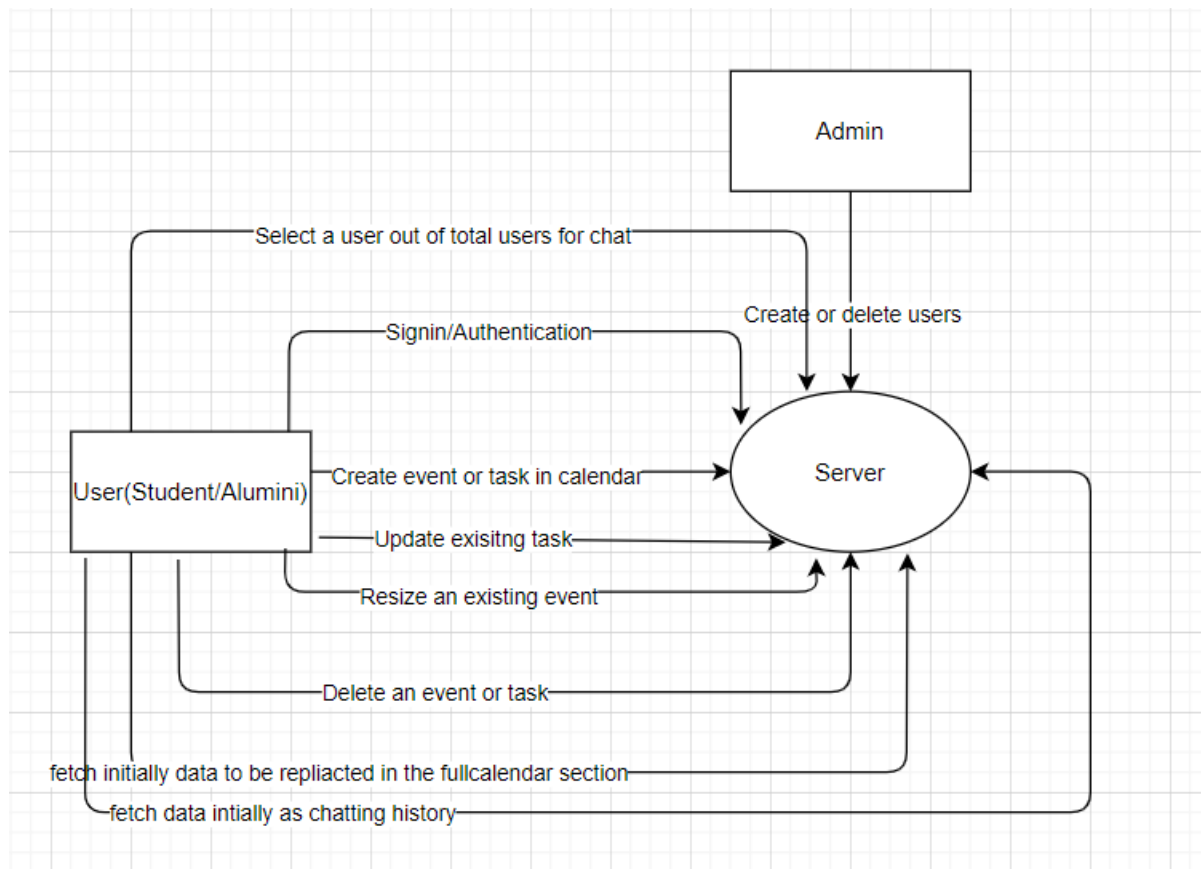
System Architecture

2.1.1 Use case diagram of user and admin



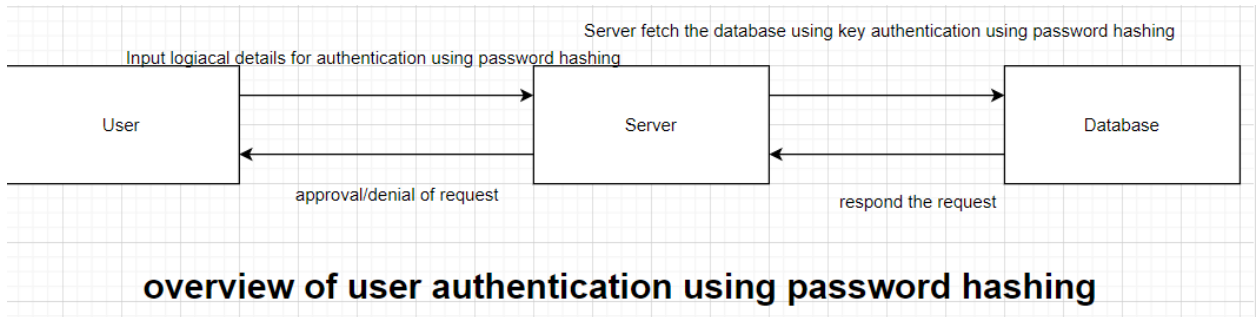
Use Case of Users and Admin 5

2.1.2

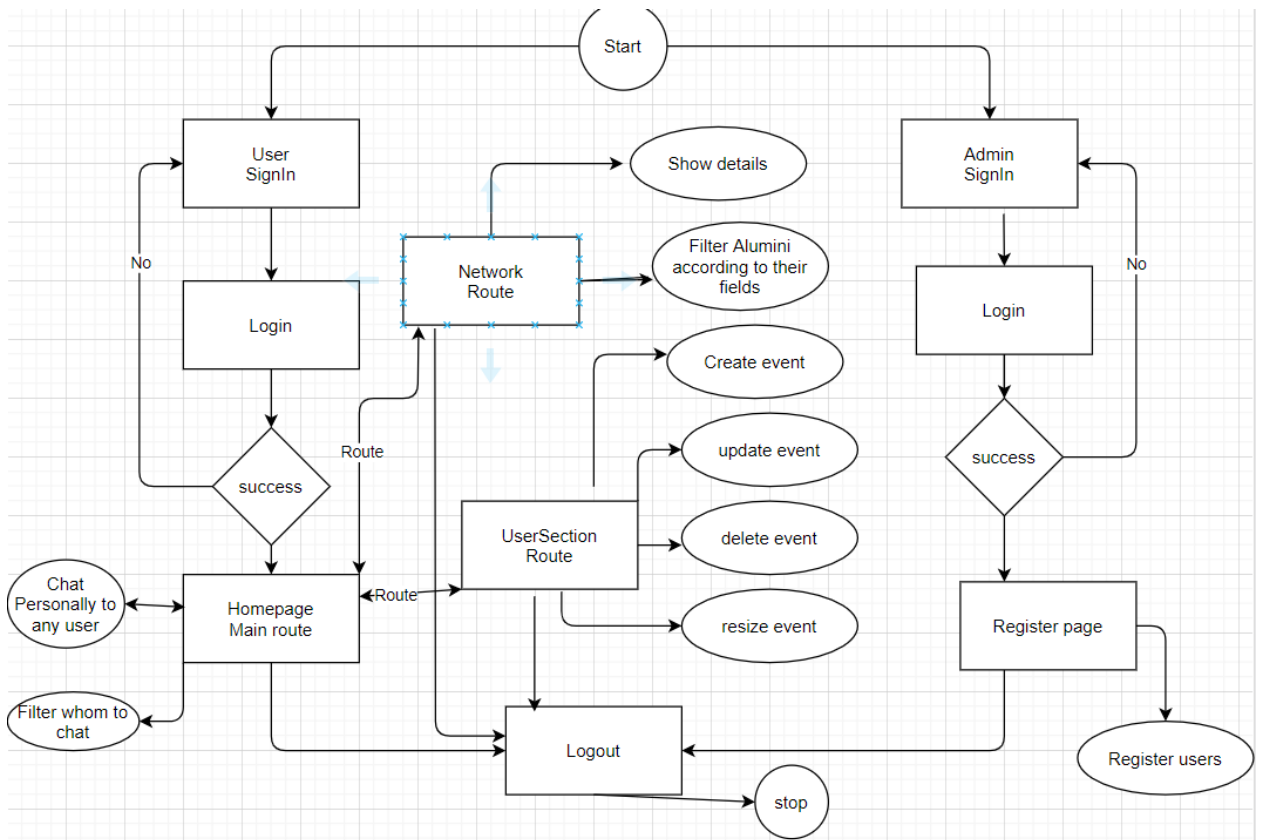


Data flow Diagram of overall Architecture

2.1.3



2.1.4



Design flow Diagram

2.1.1 Use Case

Actors are Alumini/Students and Admin

Their defined roles are mentioned in the diagram like a student/alumini can manage chat and events and a admin can create the actors students/alumini

All can manage database.

It helps us to visualize the functional requirements of the system that will translate into design choices and development priorities.

2.1.2 Overall Architecture

Overall Architecture from the flow diagram is pretty much explanatory whether it may be admin or the user part of the actors.

Admin: Create users.

Users: Can chat, set events, manage events, search for aluminis.

2.1.3 User Authentication Architecture

User while signing in passes email id and password to the server at the backend.

The backend then processes the data, creates **Hashes** for every passwords and stores hashes in the databases. It is **hashes** which are compared according to their values while processing. So the password authentication through hashing technique is secure.

2.2 Tools and Technologies

Reactjs for Frontend.

Nodejs, Expressjs for backend.

Mongodb for database.

FullCalendar.

Socket.io for Real time chatting

8

CHAPTER 3

Requirements Analysis and Specification

3.1 Software Requirement

3.1.0.0.1 OPERATING SYSTEM :

- windows xp ,7,8,10
- FRONT END : visual studio code
- BACK END : node.js , express.js
- DATABASE : MongoDB Compass

3.2 Hardware Requirement

3.2.0.0.1 CLIENT SIDE:

- PROCESSOR : Pentium 2.0 and above
- RAM : 256MB HARD DISK
- HARD DISK : 10GB free space

3.2.0.0.2 SERVER SIDE:

- PROCESSOR : Pentium 2.0 and above
- RAM : 1GB HARD DISK
- HARD DISK : 20GB free space
-

9

CHAPTER 4

System Design, Project Description and Methodology

4.1 System Design

4.1.0.0.1 The alumini-student network system uses client/ server architecture. At the client by using a web browser can connect via internet or local host with the server where node.JS and mongodb in the server side are responsible for the Signin, Registration, Creation, Updation, Deletion, Resize of events and maintaining and fetching the alumini's, chat and the events processes and save and return data from database .

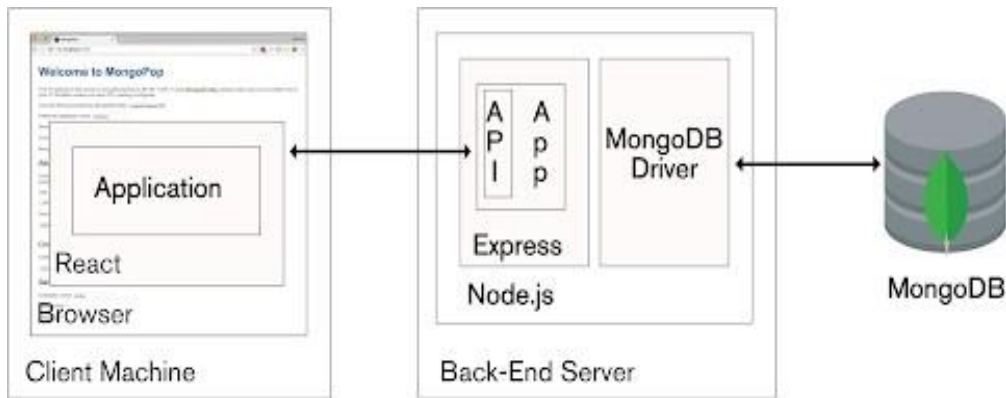


Figure 4.1: System Overview Design

4.2 System Activities

4.2.0.0.1 Login As User

By using already Registered Students and alumni a user can sign in. Password Hashing is done for the encryption and security of passwords from intruders or the hackers.

There are 3 routes starting with the homepage which contains the chatting feature there is a network route which contains the details of the alumni's or the seniors. And the last is the userSection which contains the full calendar part and is the crucial part of the app along with the chatting part (i.e homepage).

Events Management

- Adding Events: Events can be added in month, week or day section of calendar. At the same time color can be selected for the event.
- Updating Events: Already created events can be dragged and updated to the spots where calendar is not filled or empty.
- Resize Events: If at the middle of the events anyone feels like that the

time span is not sufficient to accomplish task or if there is any interruption he/she can resize the events accordingly.

- Delete Events: Events can be deleted by simply clicking on the created events.

Chat Management

- On selecting an alumini from a list of alumini's message bar will open which will show previous messages.
- Emojis can be used for the easy for describing emotions easily.
-
- Real time chatting can be experienced by seeing the quick reply and responses.

4.2.0.0.2 Login As Admin

Student activities contain the above operations:
Alumini section contains the operations of creating the users whether it may be students or aluminis and deleting users if they are not serious or committing unprofessional deeds.

4.3 Database Design

4.3.0.0.1 In order to fully use MongoDB server technology, it is essential to make sure that the database is well designed. The files names chosen to label all the tables created within the database attempt to reflect the table's purpose and, therefore, contribute to well-design system. The intimal step in designing was to decide, according to the requirements and specifications of the project, which tables should be created, and what type of information each one should hold. The

final design had taken from as explained in figure(2).

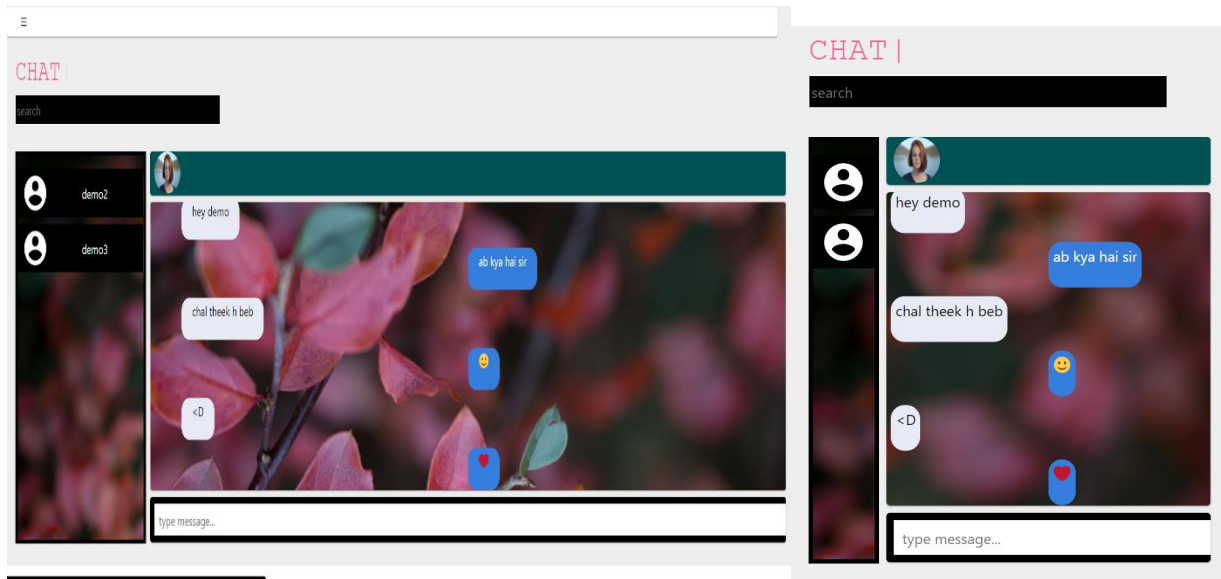
4.4 System Implementation

4.4.0.0.1 There is a different database for the real time chatting and a different database for registered users and different for Events/tasks part. The data are fetched from the databases through a unique id (in our case it is email id). Every operation is based upon the unique id.

CHAPTER 5

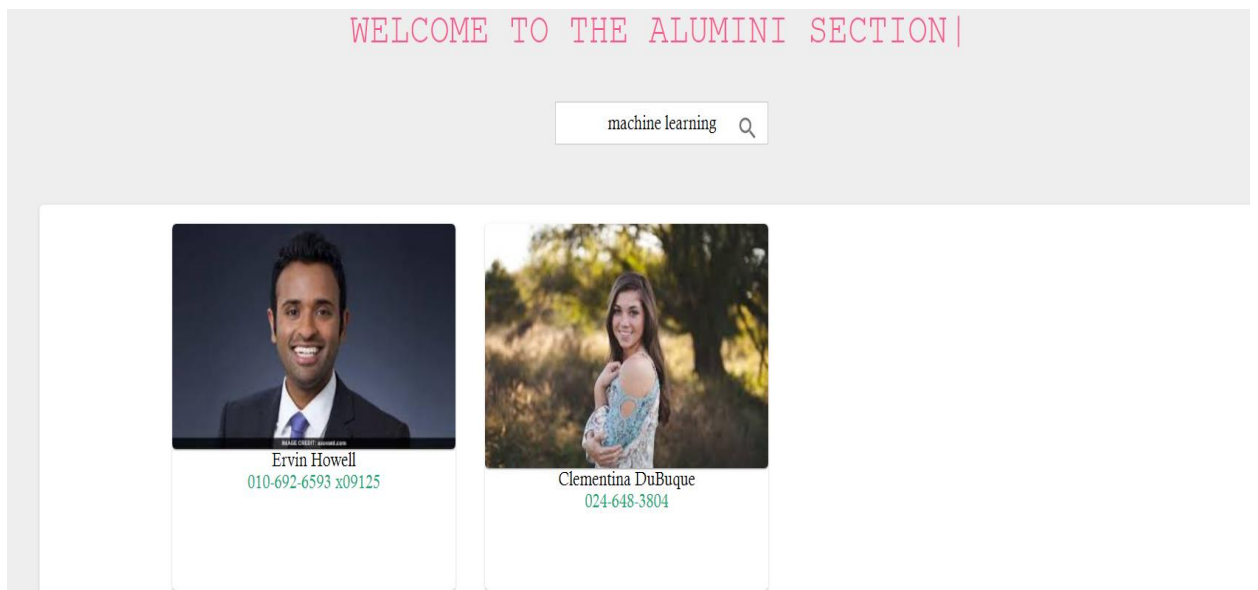
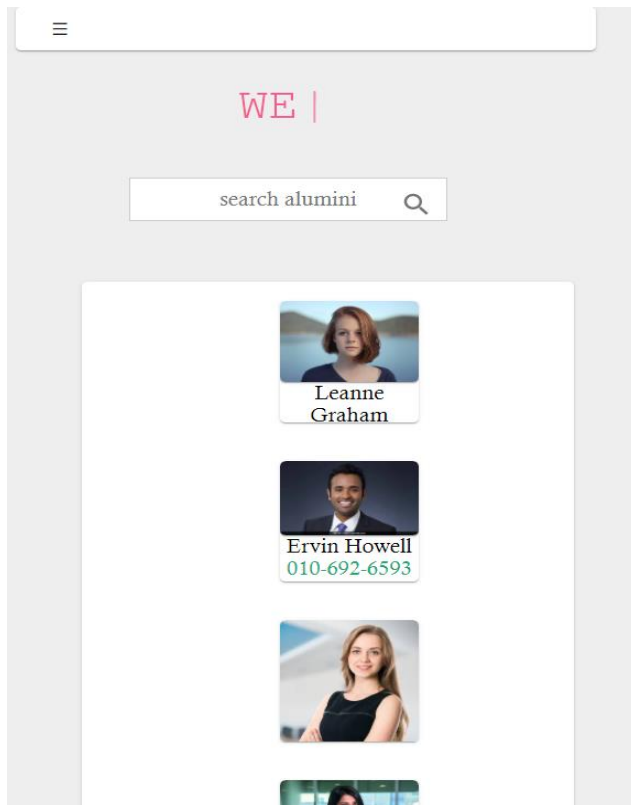
Screenshots of Project with Descriptions

5.1 Homepage (Fully responsive for all windows, ipads and androids)



13

5.2 Network route(Filterable alumini's section)



14

5.3 User Section(Full calendar)

CHAPTER 6

Conclusion and Future Scope

6.1 Conclusion

6.1.0.0.1 The app has many sailent features of full calendar functionalities integrated with the chatting functionalities. The app can be developed a lot and can be used for the day to day working or working progressively over a period of time. The app has many events and functionalities which are crucial in balancing the mental health issues of the students for unexpectational times, even for regular uses. It will help in not piling up of work, through a detailed analysis of the day to day working. A system like this has a scope in future if it is made used for the learning experiences and task accomplishments.

6.2 Scope For Future Work

6.2.0.0.1 Every software may have some cases of bugs, errors, security related problems or system faults

- Video calling can be integrated with chatting .
- Implementation can be done on Cloud Server
- Support Feature for Multimedia
- Learning Material can be Integrated
- Full calendar and Chatting features can be integrated and used with Artificial Intelligence.
- Other Chatting features can be added.

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