

Batch B Grp2

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ALUM TRACK

A MERN Stack web application implementing Alumni Tracking System.

Overview

Overall description consists of background of the entire specific requirement. It also gives explanation about actor and function which is used. It gives explanation about architecture diagram and it also gives what we are assumed and dependencies. It also support specific requirement and also it support functional requirement, supplementary requirement other than actor which is used. It also gives index and appendices. It also gives explanation about any doubt and queries.



Once a student graduates from the institute, his/her professional life or career begins, with higher education playing an important role in establishing himself/herself in the profession. In respect of College, it has been our experience that from the very beginning, the alumni have maintained personal contacts with one another, rather than use the channel of Alumni Association. The advancements in information technology have certainly helped in creating new resources such as alumni web pages, list servers etc., so as to permit greater interactions between the alumni.

Features of the Online Alumni System

- Easy to use
- Easy to integrate with the existing website
- Simple registration process for the Alumni
- Admin / Moderator approval option
- Registered alumni can edit text, images
- Option to upload image files
- Enrolled member list display in the system
- Search option of alumni
- Search can be year wise, country wise, name wise, in case of India - state wise
- Form mail based communication and Real time chat method between the alumni
- Admin option to edit / delete / register new alumni
- Admin option to send common mailer to all alumni

Goals

1. **Better Management :** Alumni helps institutes strategically build and manage their alumni network, by facilitating engagement, community-building, networking, communications and giving back.
2. **Centralized data:** With alumni, your Alumni data can be centralized and combined with a host of exciting front-end member modules and time- saving, back-end administration tools.

Specifications

This system can be used as an application for the Alumni Information Database to manage the college information and student's information. The system is an online application that can be accessed throughout the organization and outside customers as well with proper login provided, which will give better service to the customers

Milestones

1. Scope

This system can be used as the Office of Alumni and College Relations seeks to protect the privacy of its alumni and friends, and thus, endeavors to safeguard the use of information in its custody. To that end, the Office of Alumni and College Relations provides constituent information to requestors only under the conditions.

2. Need for better Alumni Systems

Networking is and has been taking place all over the world since the existence of humans. Every person has a network; some recognize it and some do not. Nowadays networking has become easy because of the development of technology. People can interact with one another, share the ideas, and discuss their personal and professional lives without even moving from their desks. Existing alumni systems are usually developed to facilitate networking between the alumni and their respective universities, but most of these current systems are not being used by the majority of the alumni for many reasons.

TOOLS AND TECHNOLOGIES :

1. Node.js
2. Socket.io
3. MongoDB
4. Express

MongoDB is an open-source document database and leading NoSQL database. MongoDB is written in C++. This tutorial will give you great understanding on MongoDB concepts needed to create and deploy a highly scalable and performance-oriented database.

MongoDB is a cross-platform, document oriented database that provides, high performance, high availability, and easy scalability. MongoDB works on concept of collection and document.

Database

Database is a physical container for collections. Each database gets its own set of files on the file system. A single MongoDB server typically has multiple databases.

Collection

Collection is a group of MongoDB documents. It is the equivalent of an RDBMS table. A collection exists within a single database. Collections do not enforce a schema. Documents within a collection can have different fields. Typically, all documents in a collection are of similar or related purpose.

Document

A document is a set of key-value pairs. Documents have dynamic schema. Dynamic schema means that documents in the same collection do not need to have the same set of fields or structure, and common fields in a collection's documents may hold different types of data.

The following table shows the relationship of RDBMS terminology with MongoDB.

RDBMS	MongoDB
-------	---------

Database	Database
Table	Collection
Tuple/Row	Document
column	Field
Table Join	Embedded Documents
Primary Key	Primary Key (Default key <code>_id</code> provided by MongoDB itself)
Database Server and	Client
mysql/Oracle	mongod
mysql/sqlplus	mongo

Advantages of MongoDB over RDBMS

- Schema less – MongoDB is a document database in which one collection holds different documents. Number of fields, content and size of the document can differ from one document to another.
- Structure of a single object is clear.
- No complex joins.
- Deep query-ability. MongoDB supports dynamic queries on documents using a document-based query language that's nearly as powerful as SQL.
- Tuning.
- Ease of scale-out – MongoDB is easy to scale.
- Conversion/mapping of application objects to database objects not needed.
- Uses internal memory for storing the (windowed) working set, enabling faster access of data.

Why Use MongoDB?

- Document Oriented Storage – Data is stored in the form of JSON style documents.
- Index on any attribute
- Replication and high availability
- Auto-Sharding
- Rich queries

- Fast in-place updates
- Professional support by MongoDB

Where to Use MongoDB?

- Big Data
- Content Management and Delivery
- Mobile and Social Infrastructure
- User Data Management
- Data Hub

What is Node.js?

- Node.js is an open source server environment
 - Node.js is free
 - Node.js runs on various platforms (Windows, Linux, Unix, Mac OS X, etc.)
 - Node.js uses JavaScript on the server
-

Why Node.js?

Node.js uses asynchronous programming!

A common task for a web server can be to open a file on the server and return the content to the client.

Here is how PHP or ASP handles a file request:

1. Sends the task to the computer's file system.
2. Waits while the file system opens and reads the file.
3. Returns the content to the client.
4. Ready to handle the next request.

Here is how Node.js handles a file request:

1. Sends the task to the computer's file system.
2. Ready to handle the next request.
3. When the file system has opened and read the file, the server returns the content to the client.

Node.js eliminates the waiting, and simply continues with the next request.

Node.js runs single-threaded, non-blocking, asynchronously programming, which is very memory efficient.

What Can Node.js Do?

- Node.js can generate dynamic page content
 - Node.js can create, open, read, write, delete, and close files on the server
 - Node.js can collect form data
 - Node.js can add, delete, modify data in your database
-

What Socket.IO is

Socket.IO is a library that enables real-time, bidirectional and event-based communication between the browser and the server. It consists of:

- a Node.js server: [Source](#) | [API](#)
- a Javascript client library for the browser (which can be also run from Node.js): [Source](#) | [API](#)

Its main features are:

Reliability

Connections are established even in the presence of:

- proxies and load balancers.
- personal firewall and antivirus software.

Sending volatile messages

Sometimes certain messages can be dropped. Let's say you have an app that shows realtime tweets for the keyword `bieber`.

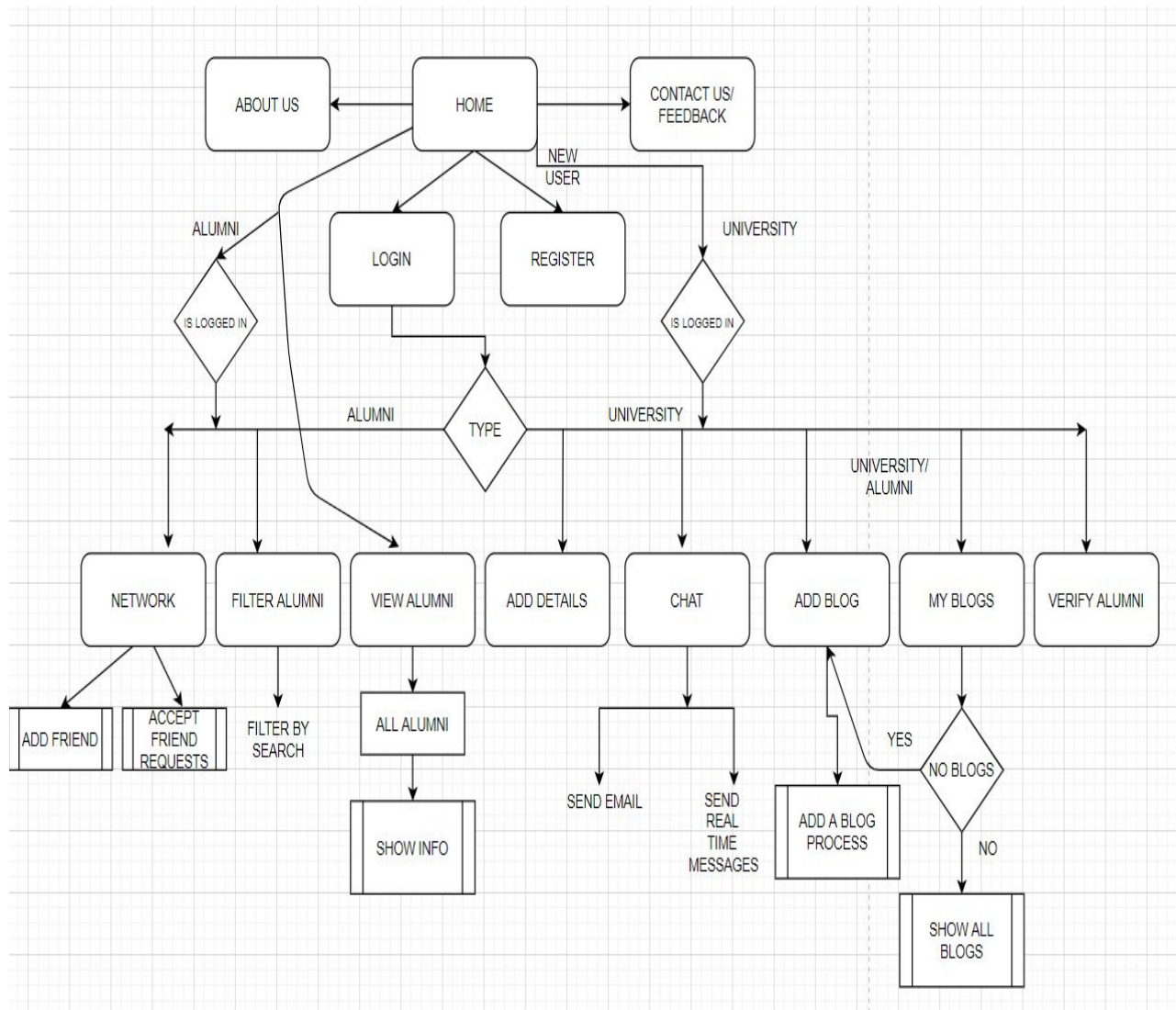
If a certain client is not ready to receive messages (because of network slowness or other issues, or because they're connected through long polling and is in the middle of a request-response cycle), if it doesn't receive ALL the tweets related to bieber your application won't suffer.

Sending and getting data (acknowledgements)

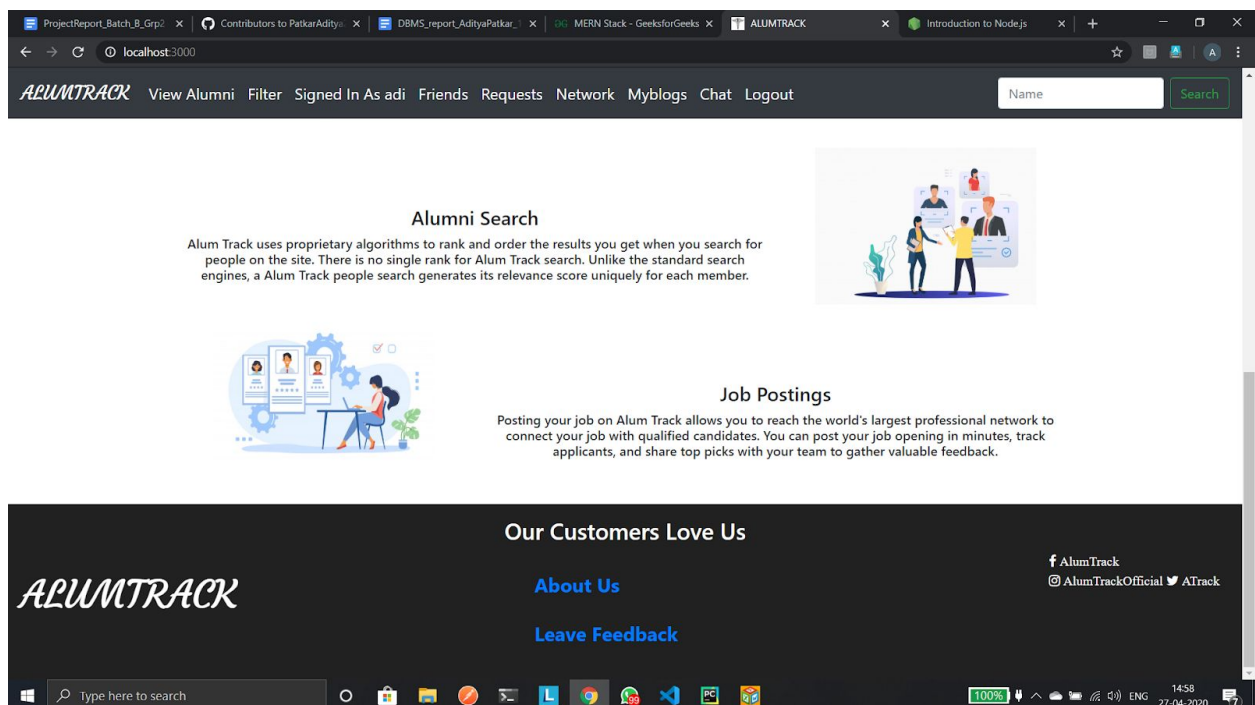
Sometimes, you might want to get a callback when the client confirmed the message reception.

To do this, simply pass a function as the last parameter of `.send` or `.emit`. What's more, when you use `.emit`, the acknowledgement is done by you, which means you can also pass data along:

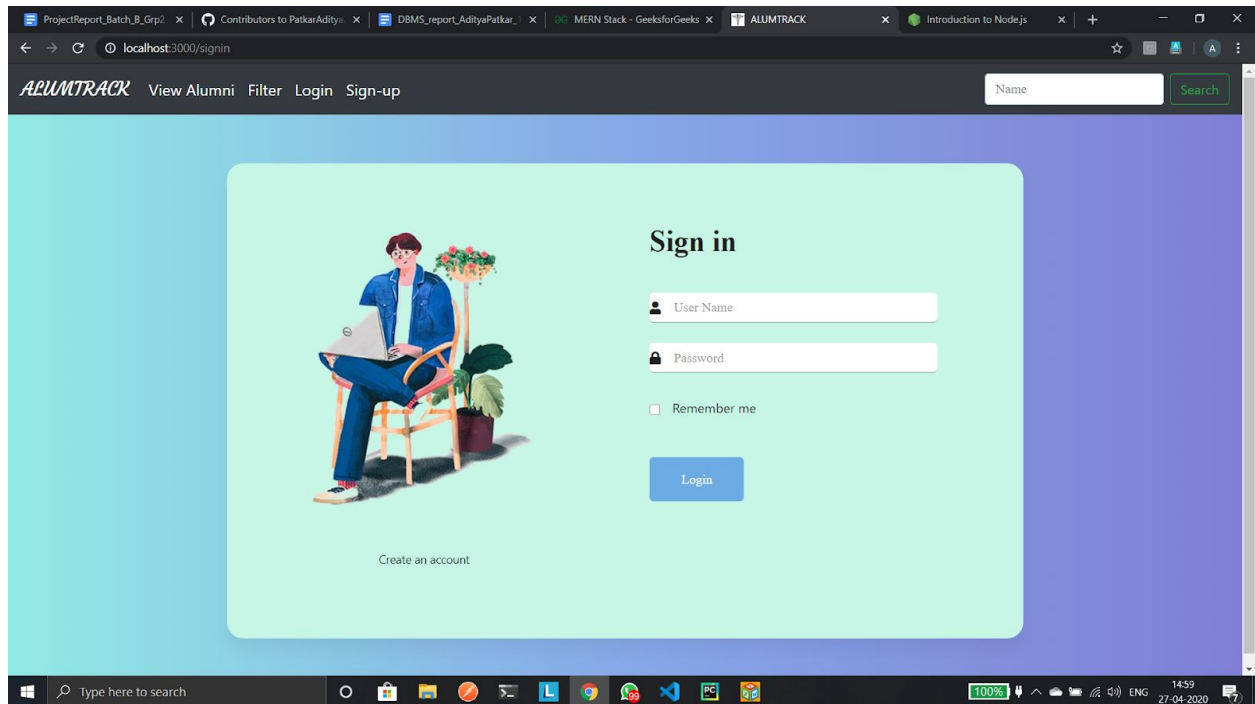
FLOWCHART :



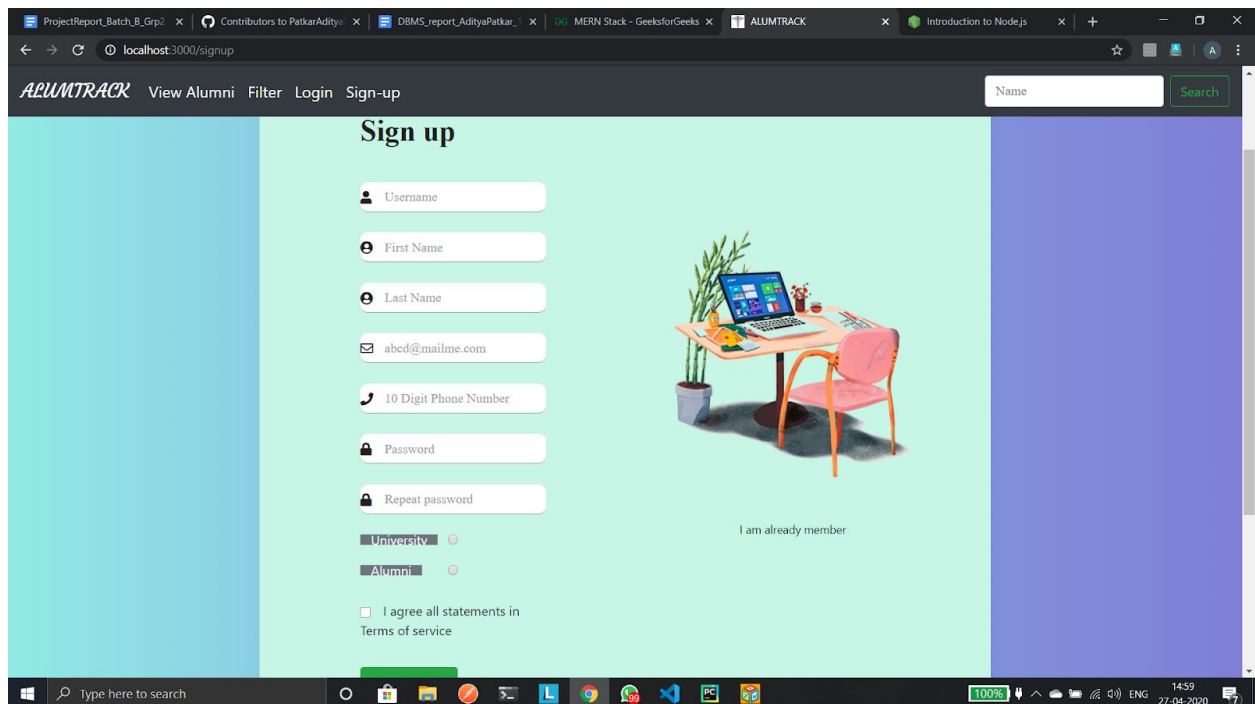
SCREENSHOTS : HOME PAGE



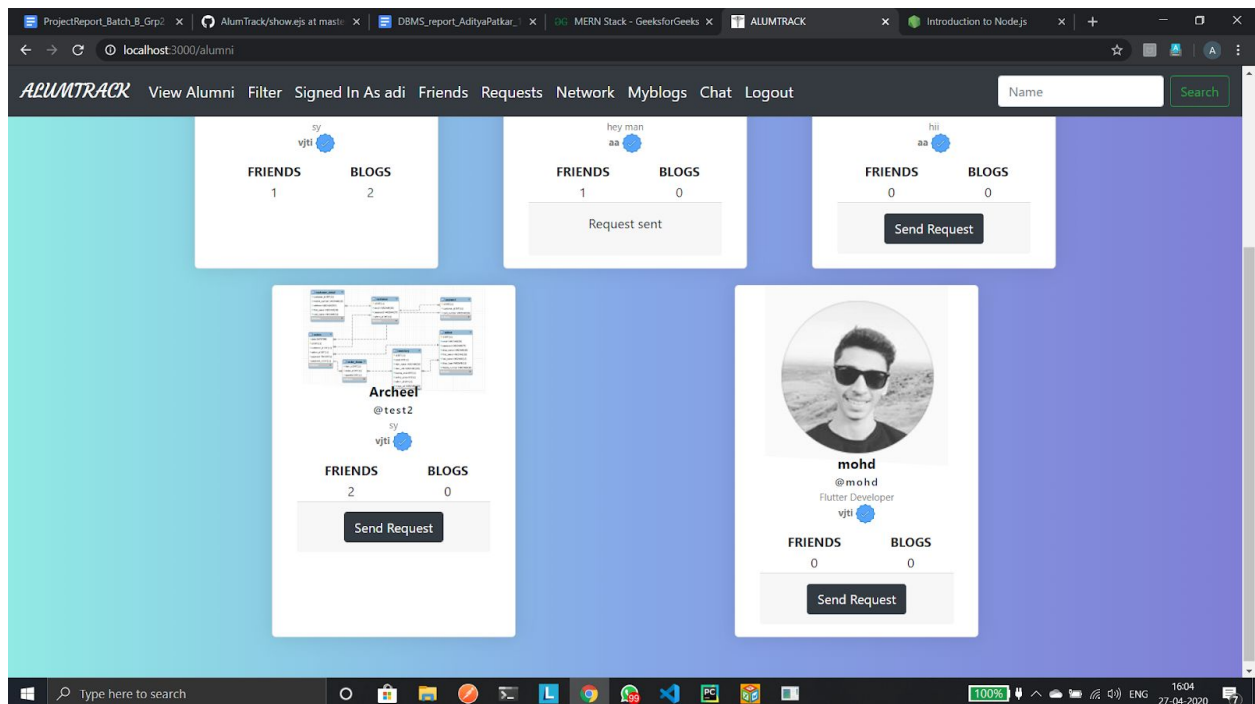
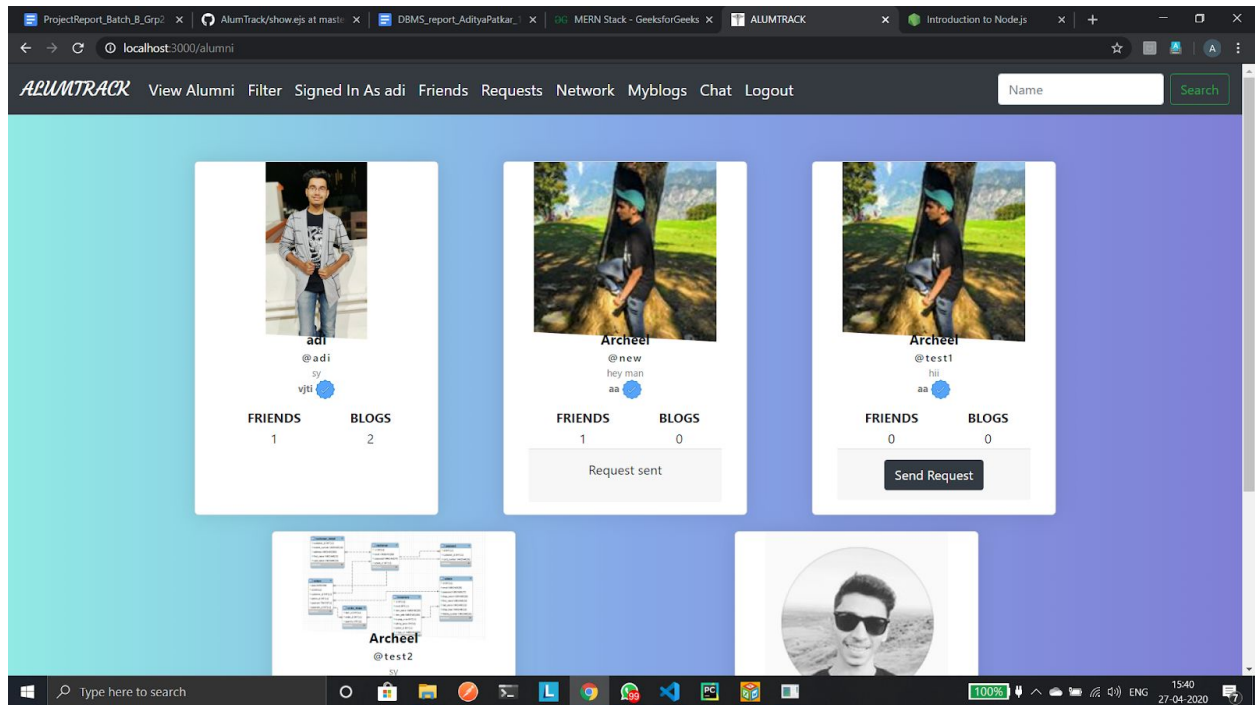
LOGIN :



REGISTER



VIEW ALL ALUMNI



ALUMNI PROFILE

The screenshot shows the ALUMTRACK web application interface. The top navigation bar includes links for View Alumni, Filter, Signed In As adi, Friends, Requests, Network, Myblogs, Chat, and Logout. A search bar is present on the right. The main content area displays the profile of 'adi adi' with a circular profile picture and a 'Change Photo' button. Below the photo are buttons for 'Update Profile' and 'Send Email'. The 'About' section shows the following details:

- RANKINGS : 8/10
- User Id: adi
- Name: adi adi
- Email: adi@gmail.com
- Phone: 1234567890
- Description: sy
- Address: borivali

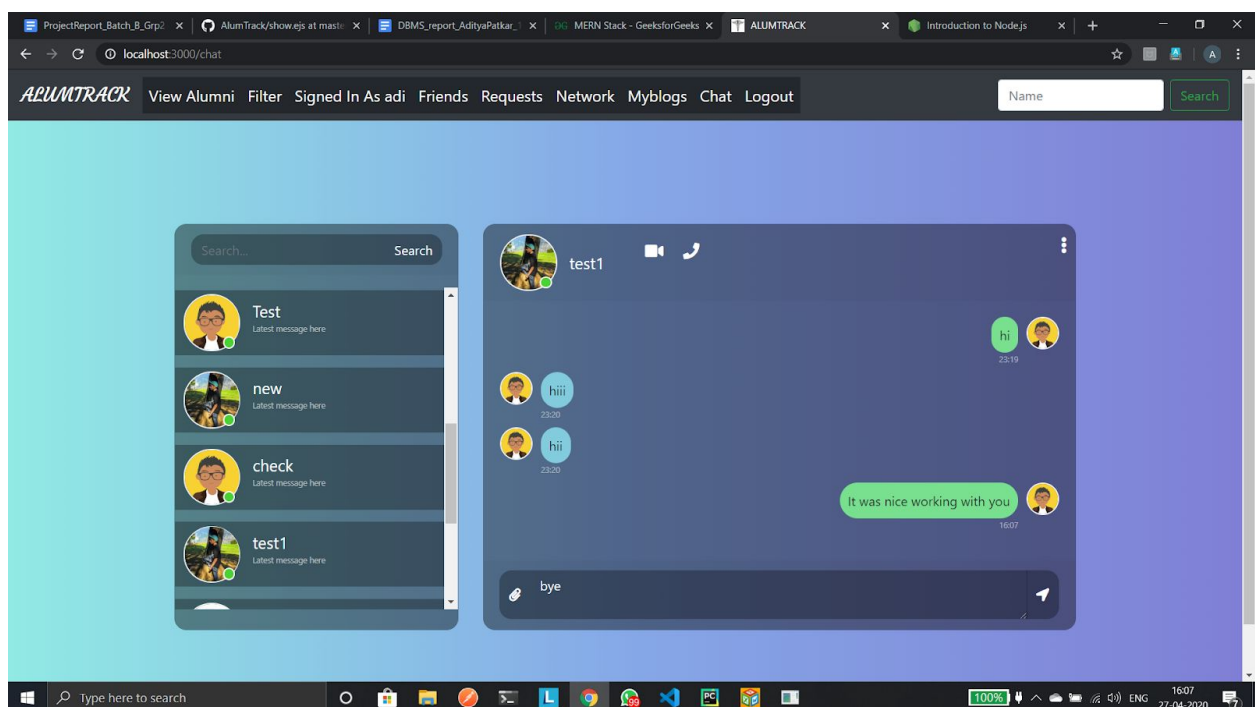
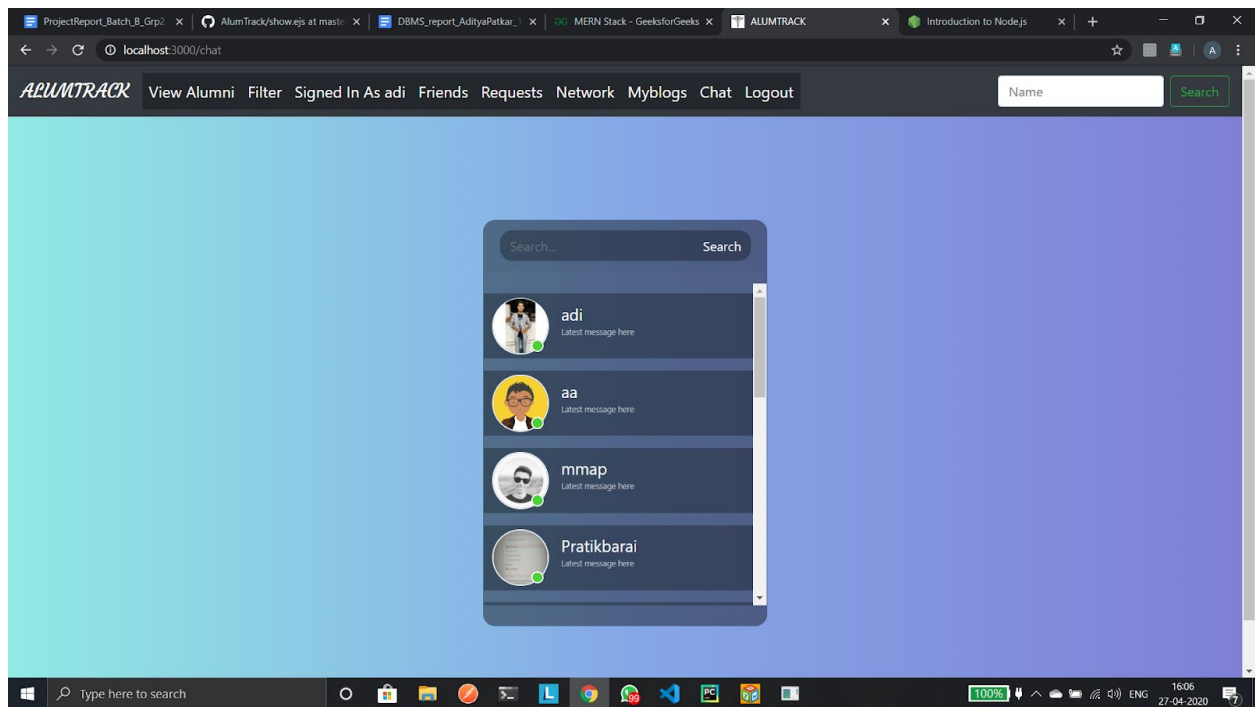
A map snippet is visible below the address, showing coordinates 19°13'60.0"N 72°51'00.0"E and the location 6RMX+8X Mumbai, Maharashtra. On the left sidebar, there is a 'SKILLS' section listing web, cpp, java, android, and js, and a 'Recommendations' section.

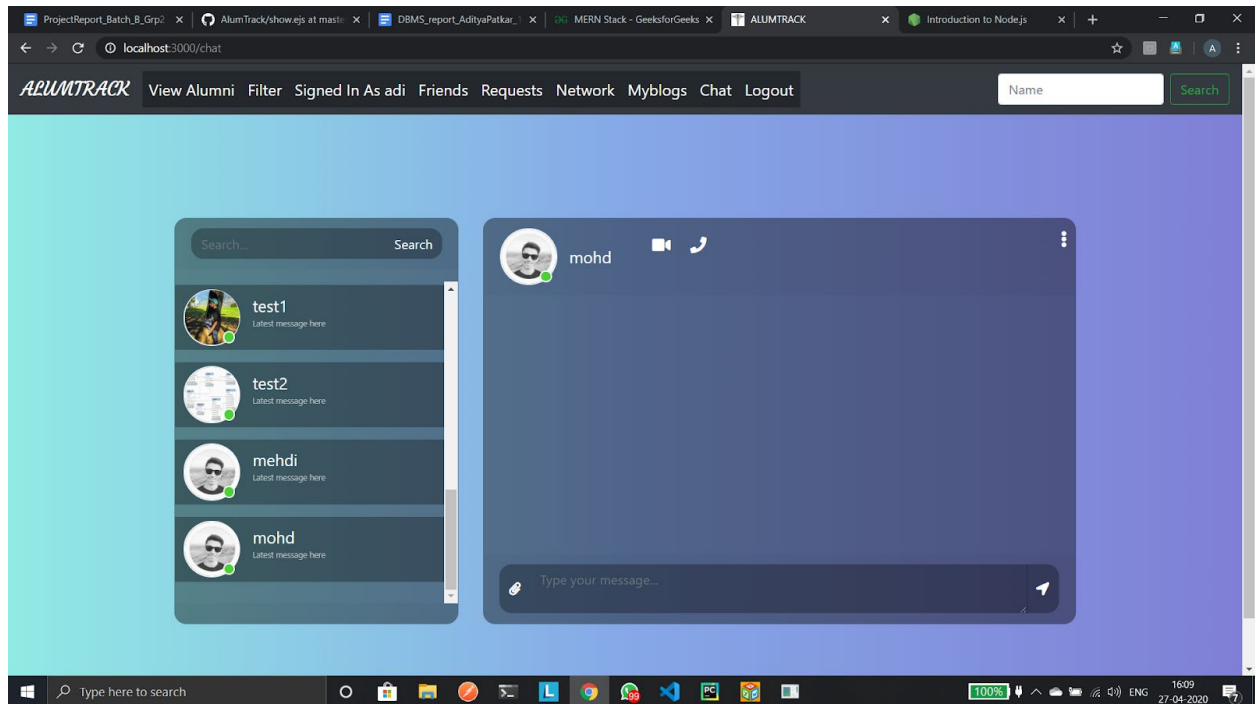
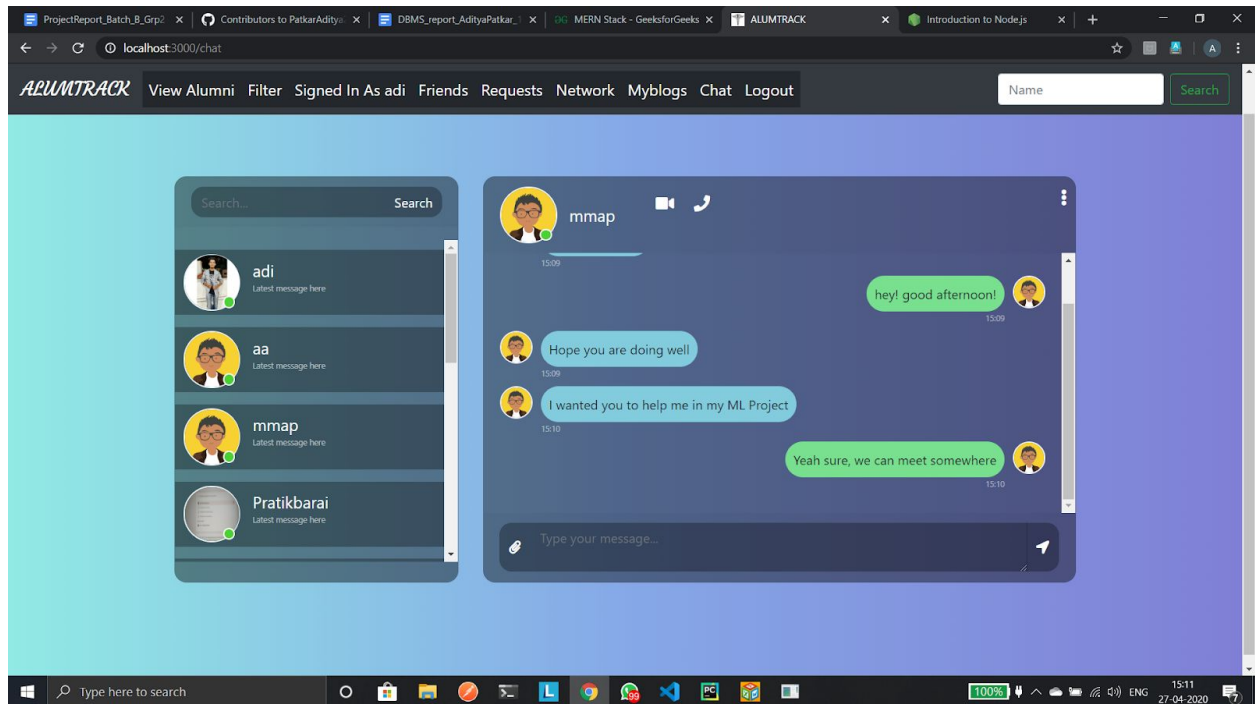
This screenshot shows the 'Update Profile' form in the ALUMTRACK application. The form is divided into several sections:

- Update Profile**: Contains buttons for 'Update Profile' and 'Send Email'.
- SKILLS**: A list of skills (web, cpp, java, android, js) with checkboxes.
- Recommendations**: A section for adding recommendations, including fields for 'University Name' (veer), 'Graduation Year' (2022), 'Branch' (cs), and 'Skill' (python). There are buttons for 'Add University' and 'Add Skill'.
- Institute**: A dropdown menu showing 'vjti'.

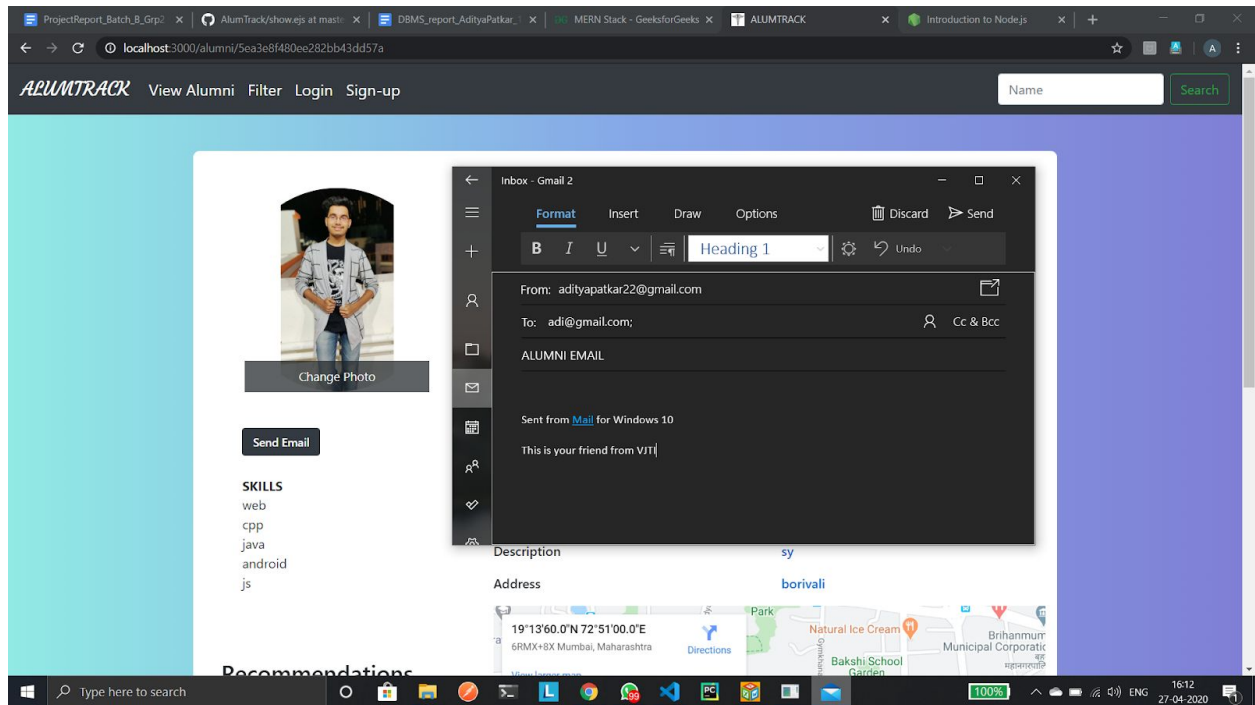
The right side of the form displays the user's current profile information, including Name, Email, Phone, Description, and Address, along with a map snippet showing the location in Borivali, Mumbai.

CHAT (REAL TIME WHAT'S APP)

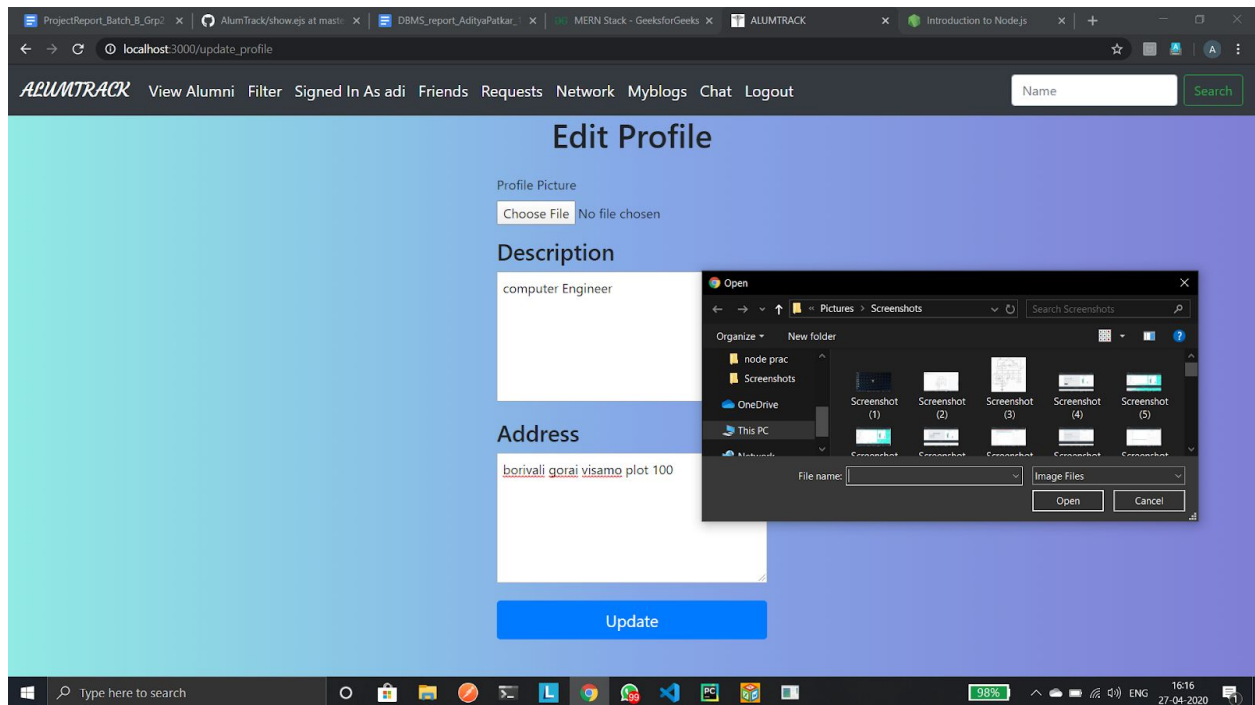




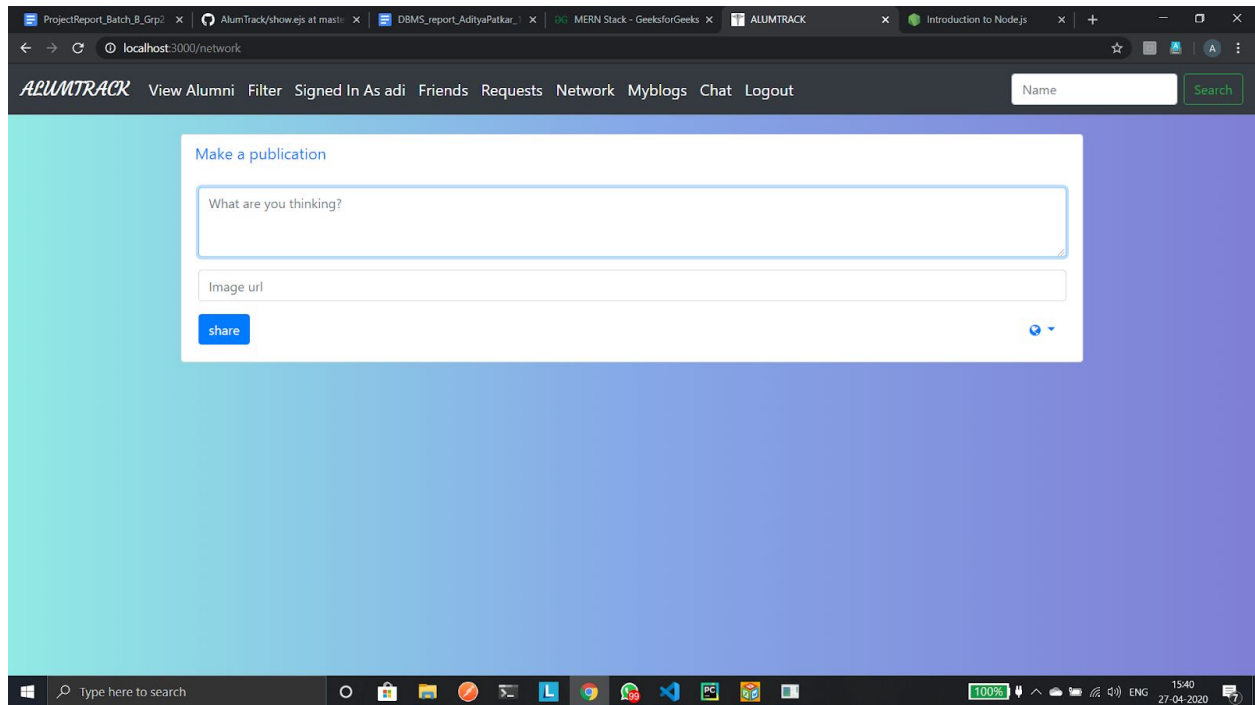
SEND EMAIL :



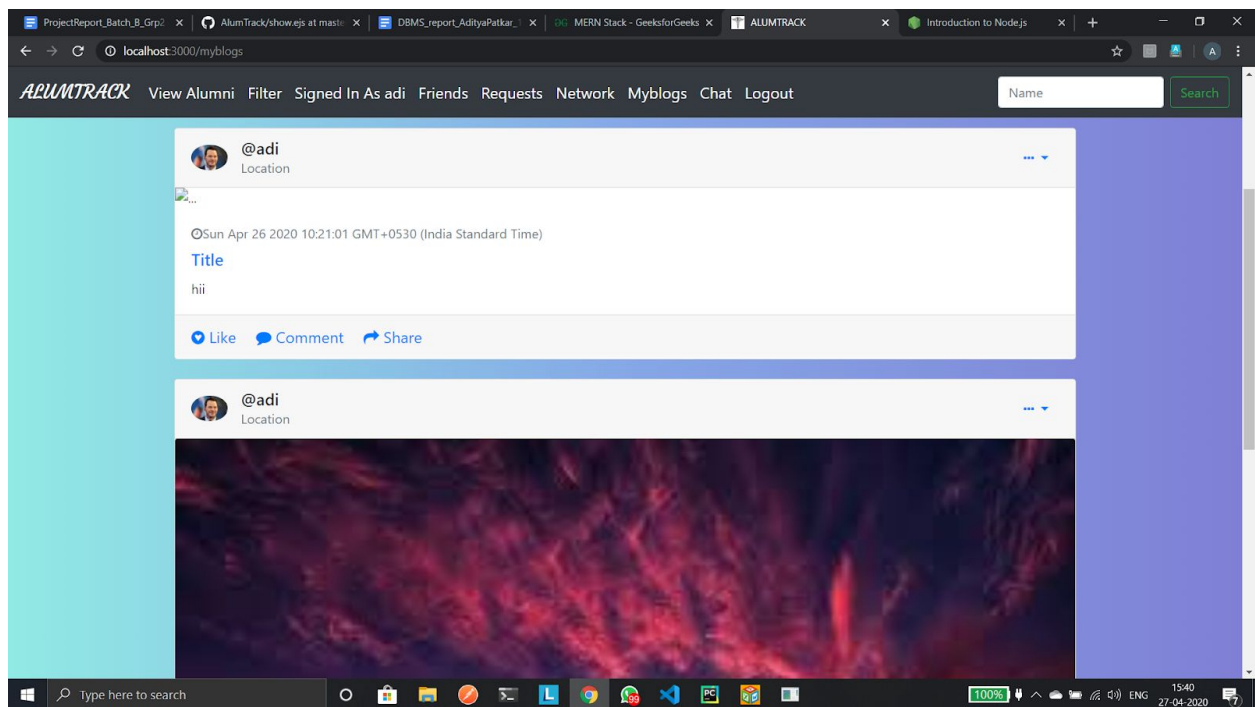
UPDATE PROFILE :



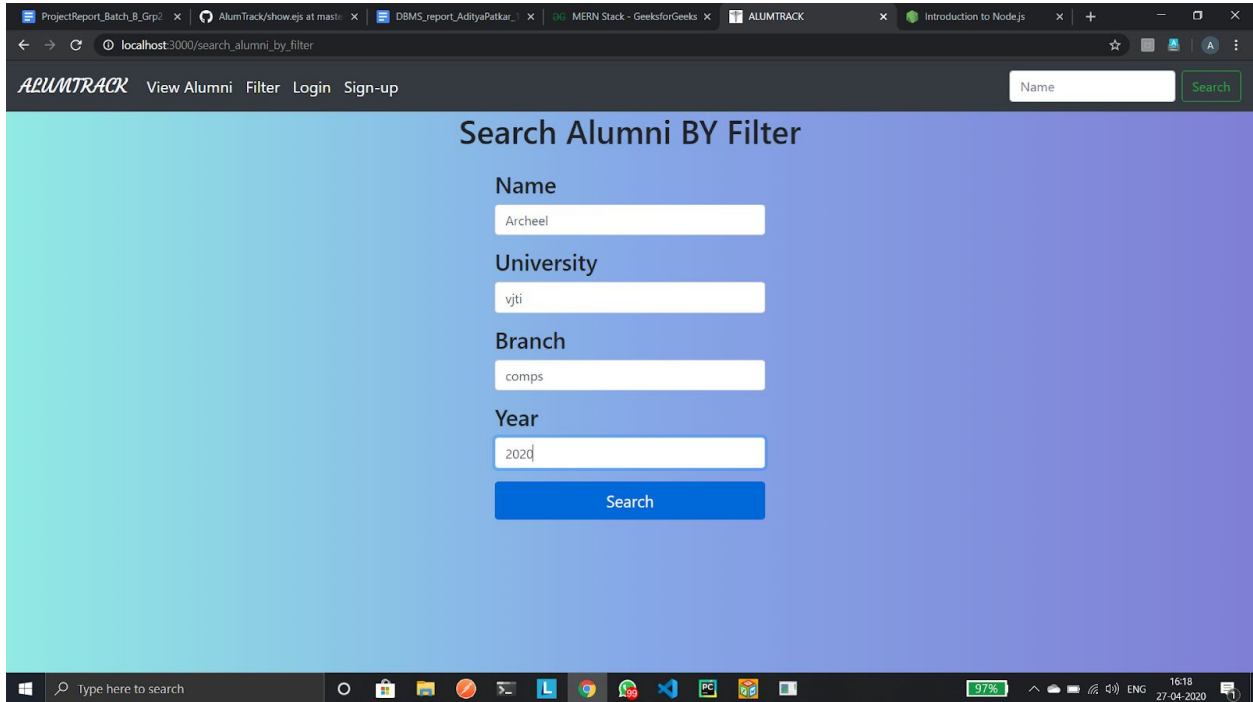
ADD BLOGS :



MY BLOGS :

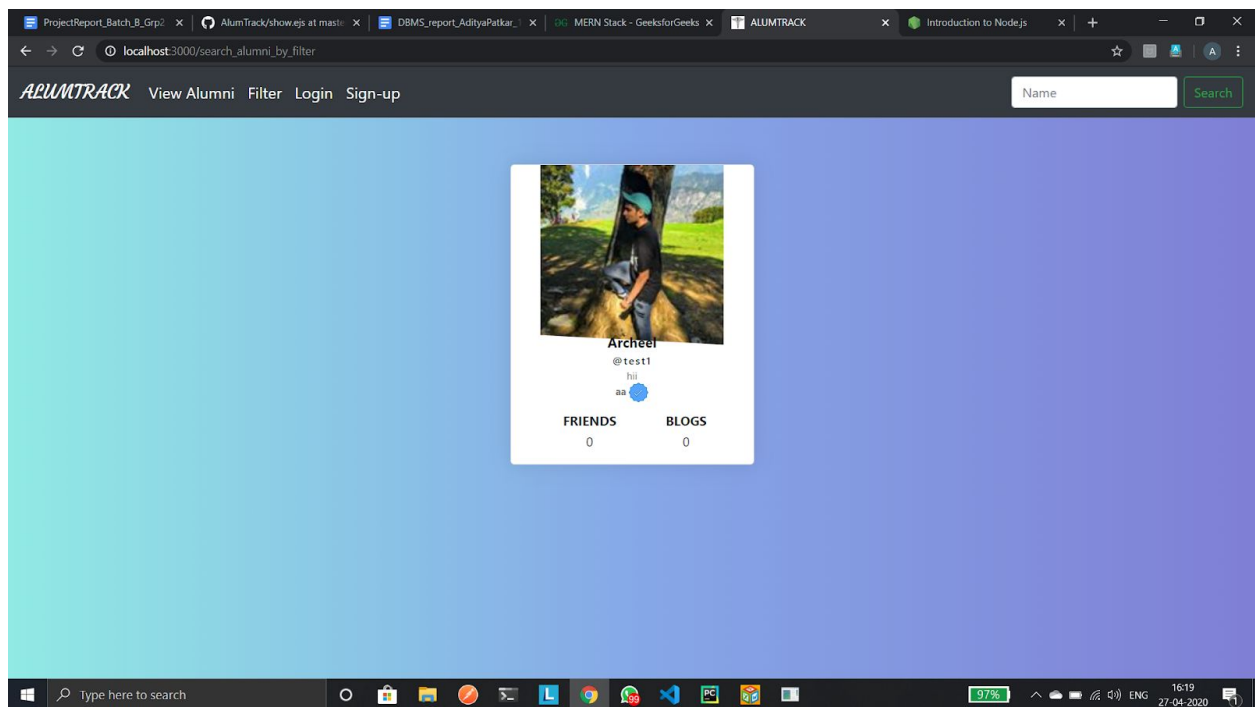


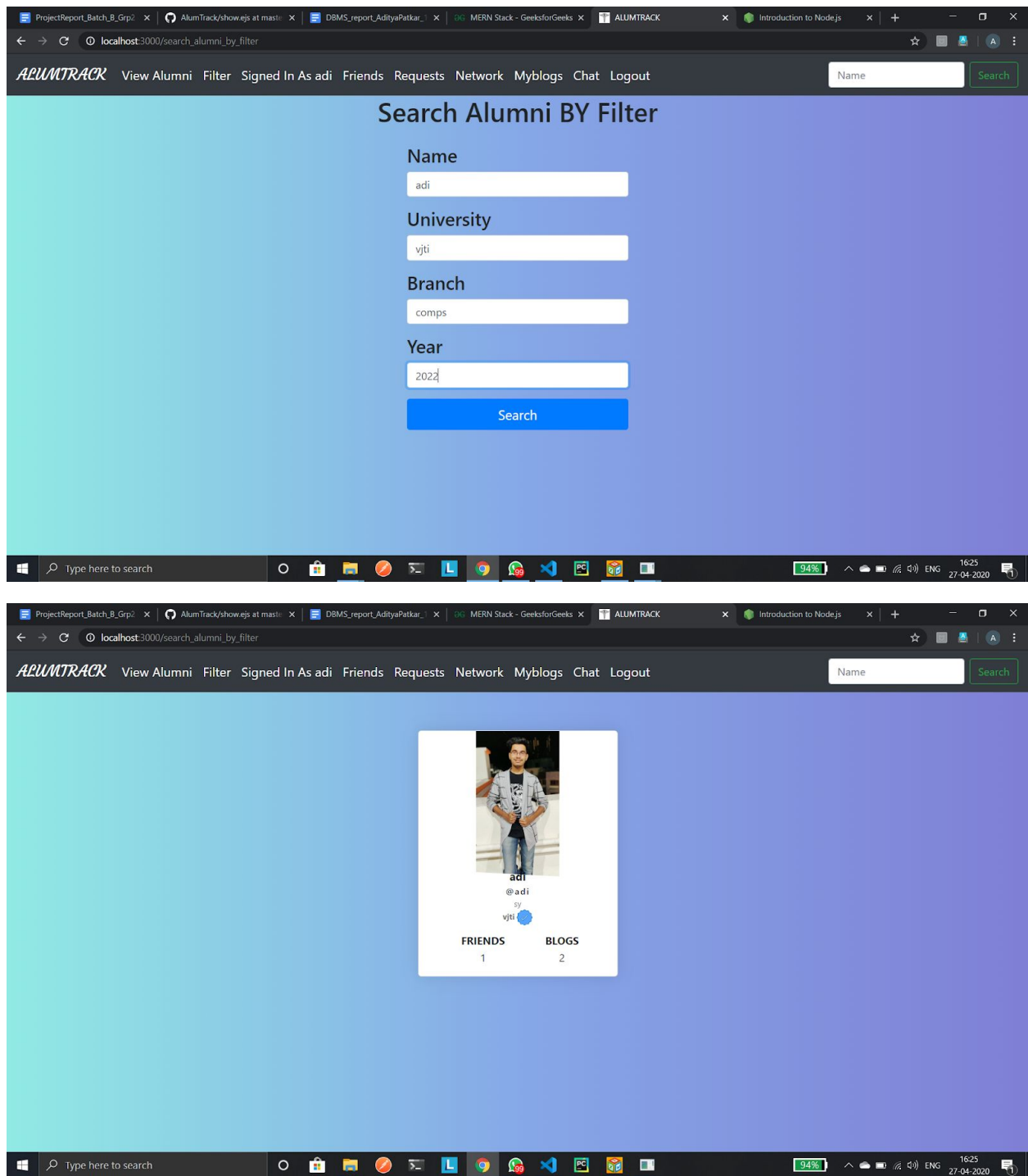
SEARCH ALUMNI BY FILTER :



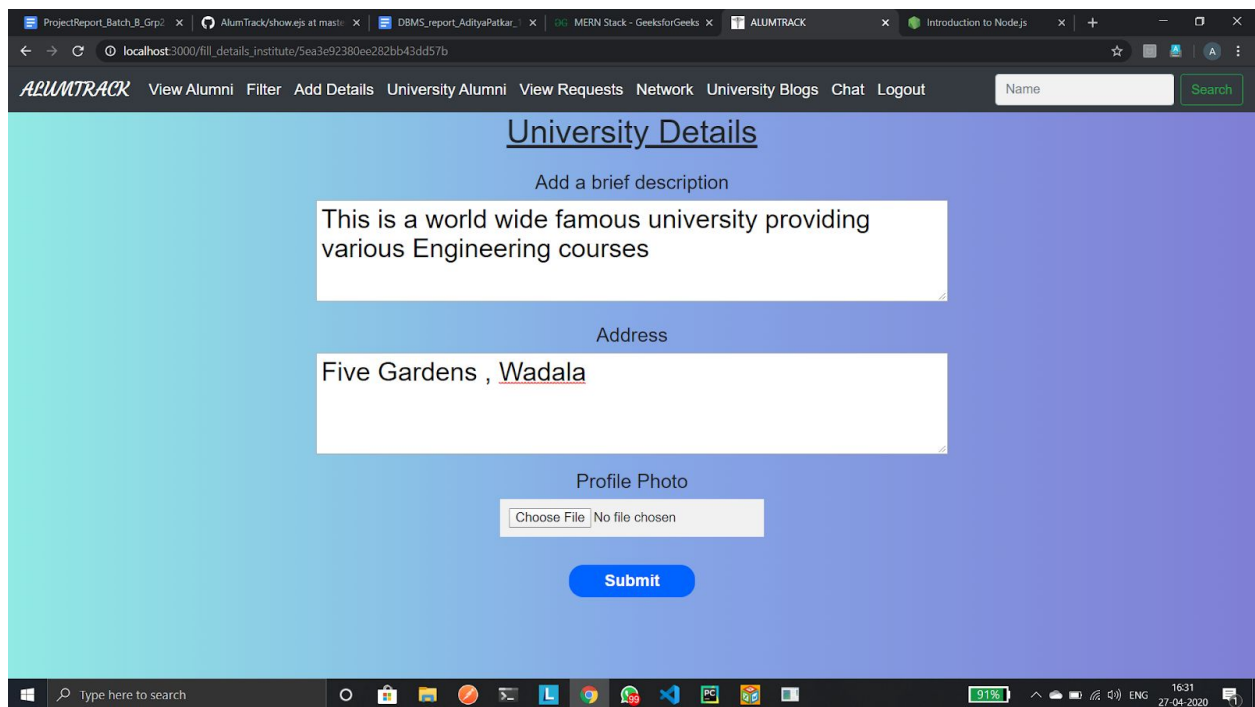
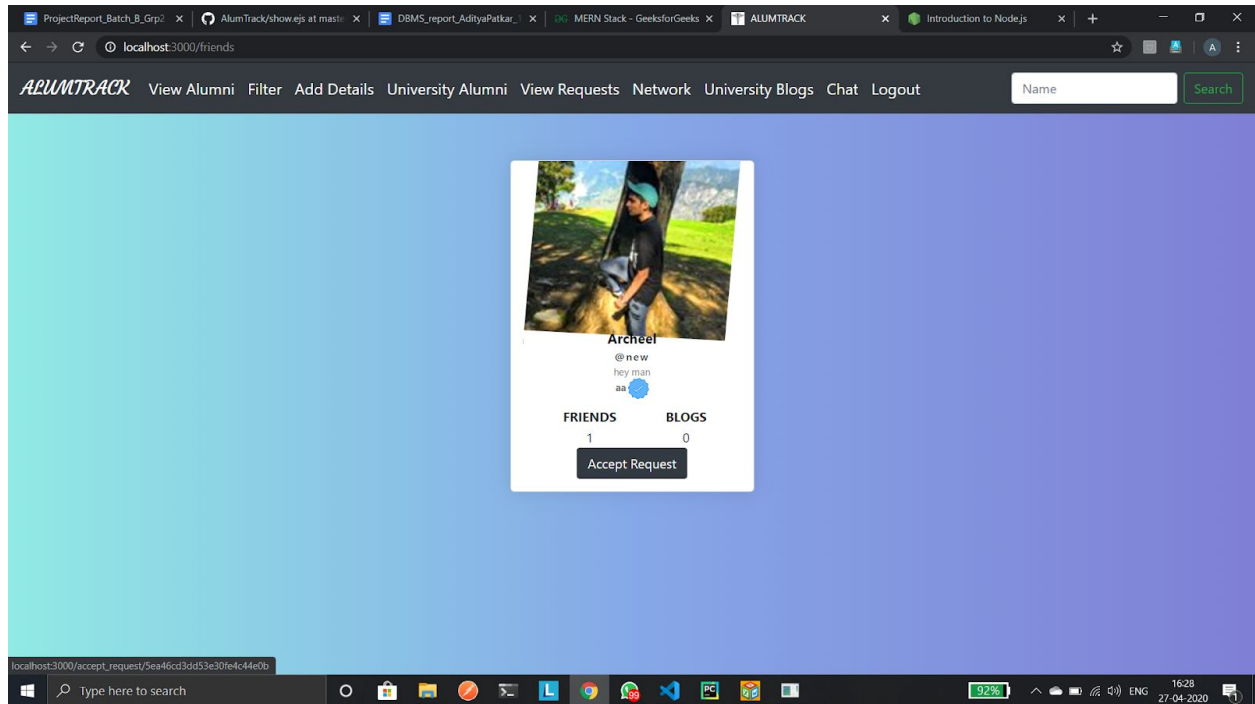
The screenshot shows a web browser window with the URL `localhost:3000/search_alumni_by_filter`. The page title is "ALUMTRACK". The navigation bar includes "View Alumni", "Filter", "Login", and "Sign-up". A search bar in the top right corner contains the text "Name" and a "Search" button. The main content area is titled "Search Alumni BY Filter" and contains four input fields: "Name" (Archeel), "University" (vjti), "Branch" (comps), and "Year" (2020). A blue "Search" button is located below the input fields. The Windows taskbar at the bottom shows the time as 16:18 on 27-04-2020.

FILTERED OUTPUT :





UNIVERSITY SIDE :



PROFILES OF OTHER ALUMNI'S :

The screenshot displays the ALUMTRACK web application interface. The top navigation bar includes links for View Alumni, Filter, Signed In As adi, Friends, Requests, Network, Myblogs, Chat, and Logout. A search bar is present on the right. The main profile section for 'mohd patel' shows a circular profile picture, a 'Change Photo' button, and a 'Send Request' button. Below these are 'Send Email' and 'SKILLS' sections. The 'About' section lists the following details:

User Id	mohd
Name	mohd patel
Email	mohd@gmail.com
Phone	1234567890
Description	Flutter Developer
Address	Dongri, Mumbai

A map snippet shows the location in Mumbai, India, with coordinates 18°57'36.8"N 72°50'15.8"E. The left sidebar contains a 'Recommendations' section with an 'Add Recommendation' button. The bottom of the browser window shows the Windows taskbar with various application icons and a system clock indicating 16:23 on 27-04-2020.

The screenshot displays the ALUMTRACK web application interface for the profile of 'Archeel Parekh'. The top navigation bar is identical to the previous screenshot. The main profile section shows a circular profile picture, a 'Change Photo' button, and a 'Request sent' status. Below these are 'Send Email' and 'SKILLS' sections. The 'About' section lists the following details:

User Id	new
Name	Archeel Parekh
Email	samd@gmail.com
Phone	0315 304 8382
Description	hey man
Address	maha


A map snippet shows the location in Bihar, India, with coordinates 25°13'48.8"N 86°21'05.0"E. The left sidebar contains a 'Recommendations' section with an 'Add Recommendation' button. The bottom of the browser window shows the Windows taskbar with various application icons and a system clock indicating 16:23 on 27-04-2020.

ABOUT US :

The screenshot displays a web browser window with multiple tabs open, including 'ProjectReport_Batch_8_Grp', 'AlumTrack/showejs at masli', 'DBMS_report_AdityaPatkar', 'MERN Stack - GeeksforGeeks', 'ALUMTRACK', and 'Introduction to Nodejs'. The address bar shows 'localhost:3000/about'. The website's navigation bar includes the 'ALUMTRACK' logo and links for 'View Alumni', 'Filter', 'Signed In As adi', 'Friends', 'Requests', 'Network', 'Myblogs', 'Chat', and 'Logout'. A search bar with the placeholder 'Name' and a 'Search' button is also present.


About Us

Welcome to Alum Track, India's largest professional network with nearly 10+ million users in more than 8 states in India.



Vision

Create economic opportunity for every member of the global workforce.

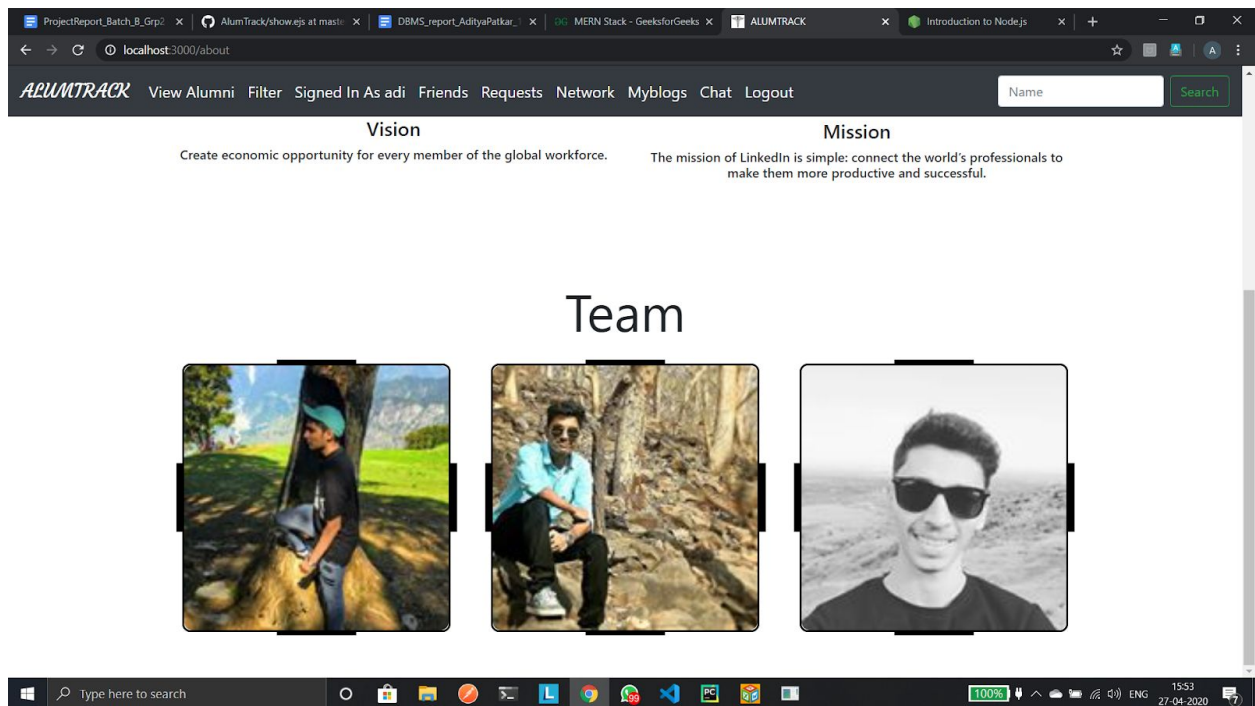


Mission

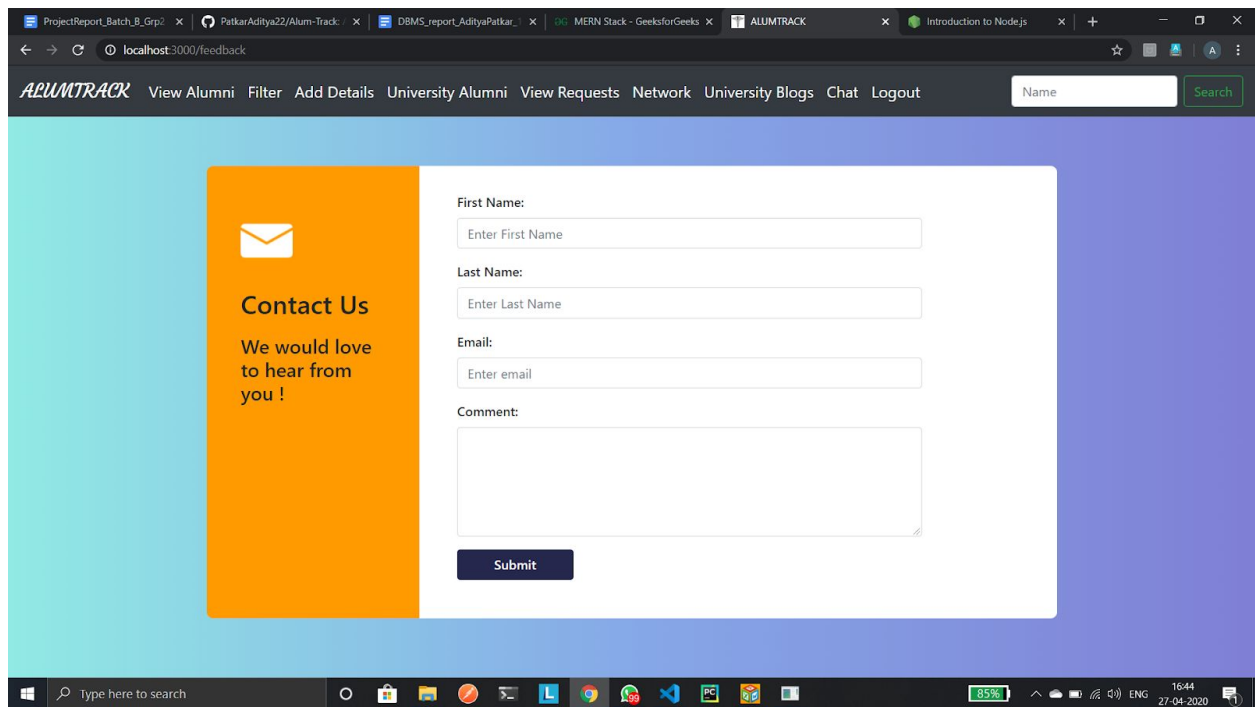
The mission of LinkedIn is simple: connect the world's professionals to make them more productive and successful.

Team

The bottom of the screenshot shows a Windows taskbar with various application icons, a search bar, and system tray information including the date '27-04-2020' and time '15:53'.



CONTACT US :



GITHUB LINK : <https://github.com/PatkarAditya22/Alum-Track>

CONCLUSION :

So the Alumni Information Database is mainly used to share the views between the users of the application which is very useful to upgrade the knowledge of everyone. The application is also serve as a useful site to know what is going on in our in our college and can also know about the various opportunities of the outer world. The application can be further expanded by following the future Enhancements mentioned above.