MINI PROJECT- II

(2020-21)

MERN Stack Based Application

"GEEK SEEK"

PROJECT REPORT

Institute of Engineering & Technology

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Technical Trainer
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DECLARATION

I hereby declare that the work which is being presented in the Mini Project-II "**Geek Seek**", in partial fulfillment of the requirements for Mini-project Lab is an authentic record of my own work carried under the supervision of **Mr. Anand Kr. Gupta**, Technical Trainer.

Rohan Bhardwaj

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CERTIFICATE

This is to certify that the project entitled "**Geek Seek**", carried out in Mini Project-II Lab, is a bonafide work by Rohan Bhardwaj (181500589), Shashank Kumar Pandey (181500654), Shivani Chauhan (181500678), Vanshika Mahle (181500781), and Vimal Mishra (181500792) and is submitted in partial fulfillment of the requirements for the award of the degree Bachelor of Technology (Computer Science & Engineering).

Signature of Supervisor:

Name of Supervisor: Mr. Anand Kumar Gupta

Date: 22/04/2021

ACKNOWLEDGEMENT

It gives us a great sense of pleasure to present the report of the B. Tech Mini Project undertaken during B. Tech. (Third Year). This project in itself is an acknowledgment of the inspiration, drive and technical assistance contributed to it by many individuals. This project would never have seen the light of the day without the help and guidance that we have received.

Our heartiest thanks to **Dr. (Prof). Anand Singh Jalal**, Head of Dept., Department of CEA for providing us with an encouraging platform to develop this project, which thus helped us in shaping our abilities towards a constructive goal.

We owe a special debt of gratitude to **Mr. Anand Kumar Gupta**, Technical Trainer, for his constant support and guidance throughout the course of our work. His sincerity, thoroughness, and perseverance have been a constant source of inspiration for us. He has showered us with all his extensively experienced ideas and insightful comments at virtually all stages of the project & has also taught us about the latest industry-oriented technologies.

We also would not like to miss the opportunity to acknowledge the contribution of all faculty members of the department for their kind guidance and cooperation during the development of our project. Last but not the least, we acknowledge our friends for their contribution to the completion of the project.

Rohan Bhardwaj

Shashank Kr. Pandey

Shivani Chauhan

Vanshika Mahle

Vimal Mishra

ABSTRACT

React combined with industry-tested, server-side technologies, such as Node, Express, and MongoDB, enables you to develop robust real-world full-stack web applications. In this project, we build a simple social network application with MVP features implemented: user authentication, profile viewing, posting, commenting developed using React, Node, Express and MongoDB.

As a user, one can create an account, log into it, view and create posts, delete and edit posts, like/unlike a post, comment on a post, view other users profiles, edit his own profile, add education and experience to the profile.The idea was to make a platform where people can share their posts, comment on each others posts and can discover what the fellow user are learning and creating by viewing their profiles.

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INTRODUCTION

It was very difficult years ago to communicate with friends or family living in distant and far off places, thanks to technology that is not a problem anymore. Social networking is growing big in India and rest of the world with more and more users joining it every minute.

On these types of networks we meet up familiar persons or complete strangers whom we share similar interest with. If the earlier trend was making associations and groups physically, the present generation believes in making online communities and forms to discuss issues related to various and diverse topics.

The present system is developed such that a registered user maintains his/her own profile and could also search other similar peer profiles over the application.

The key purpose of developing a Social Networking Site for developers is to reach out to others around the world and share knowledge, educational material, etc. This includes regular social networking material, such as accounts, images, emails, and forums, and video sharing, posts, etc. developers can create accounts, exchange and gain information, teach related lessons, etc. also by using this network, users can share information, educational books, questions/answers, and everything else.

1.1 Motivation And Overview

Geek Seek is a full stack social network application for developers to be developed using Node.js, React, Redux, MongoDB, along with Express.

The platform will be developed in two parts – Front-end development and Back- end development. We will be building an extensive backend API using Node.js & Express and JWT will protect the endpoints. We will use Postman for testing our backend API and to handle requests. The front-end will be integrated with the backend in an elegant way to create a great workflow. For application state management, we will use Redux and create reducers and actions for our resources. Also, we will test our application using Redux Chrome extension. The application will be deployed to Heroku using Git.

Technologies Used:

- MongoDB
- Express
- React
- Node.js
- Redux
- VS Code Editor
- JWT (JSON Web Tokens)
- Git
- Postman

1.2 Objective

The project aims to build a full stack social network application for geeks which includes user authentication, user profiles and forum posts. The platform will be developed using MongoDB, Express, Node.js, Redux and React technologies.
The platform allows geeks to create their profile, update it or add additional details about them. They can also link their GitHub profiles by providing their GitHub username. The geeks can view profiles of other users and get connected with each other. They can post their views in the forum section, like other's posts and put comments too.

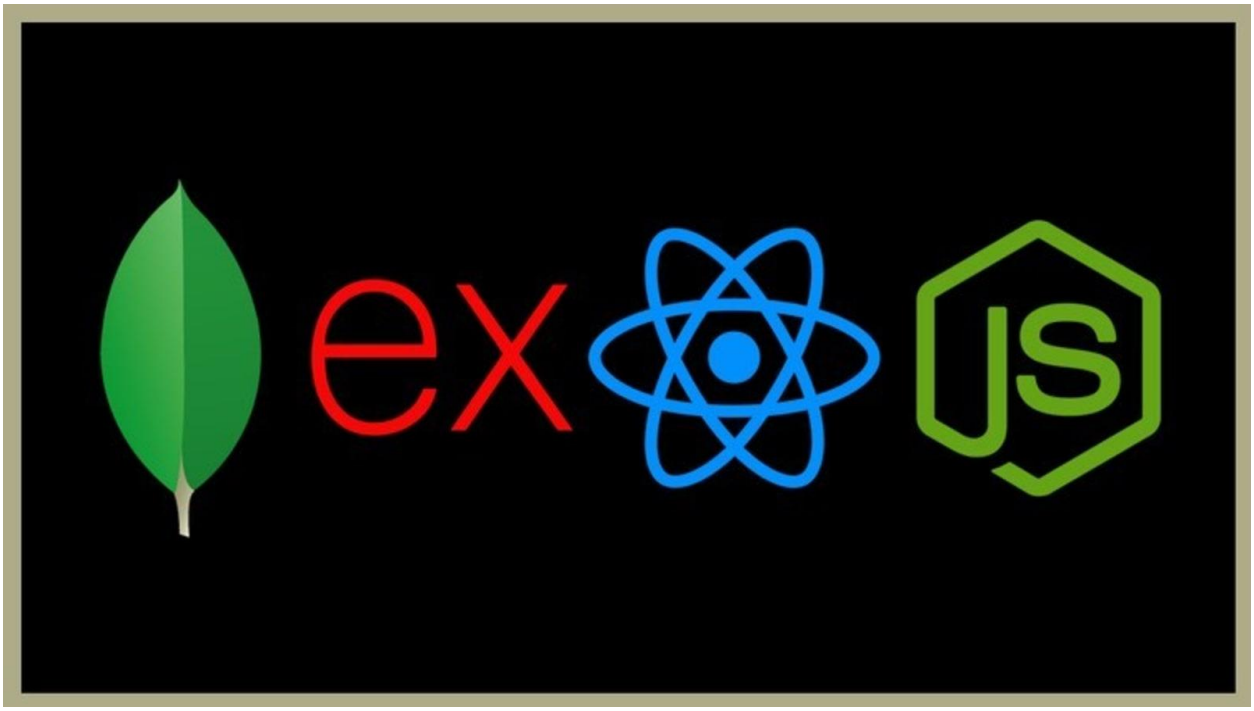
1.3 Features

• New users can create a profile and register themselves
• Authentication for existing users
• Viewing profiles of geeks without logging in to the account and connect
• Add additional details to the profiles and edit them
• Link GitHub accounts by providing the GitHub username
• View five latest git repositories in the user profiles
• Add posts in the forum
• View and Like posts of other geeks
• Comment on the posts of other geeks

Implementation and User Interface

We have used MERN Stack technology for our project :

MERN Stack is a Javascript Stack that is used for easier and faster deployment of full-stack web applications. MERN Stack comprises of 4 technologies namely: MongoDB, Express, React and Node.js. It is designed to make the development process smoother and easier. Each of these 4 powerful technologies provides an end-to-end framework for the developers to work in and each of these technologies play a big part in the development of web applications.



MongoDB:

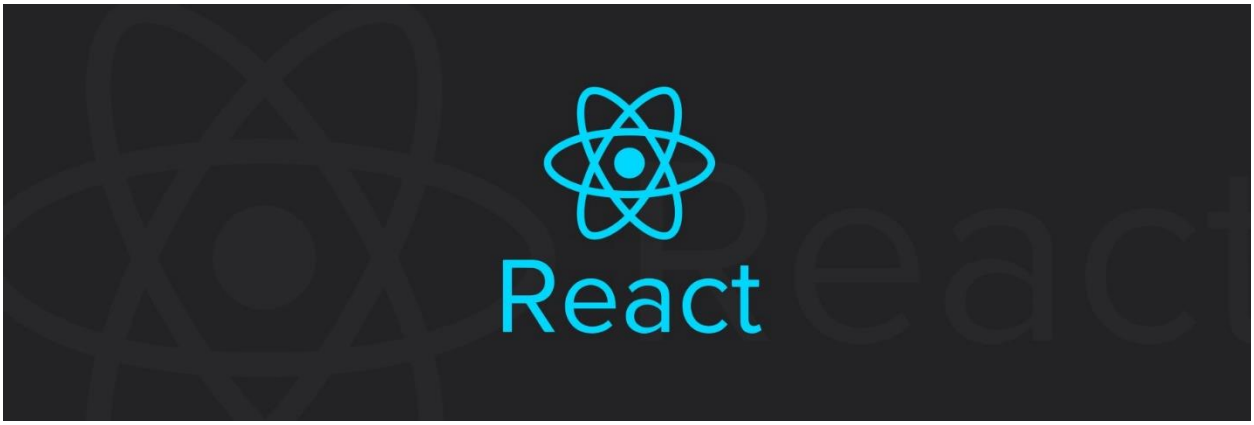
MongoDB is an open-source NoSQL database under the document database category, created in 2007 in the U.S by Dwight Merriman, Eliot Horowitz and Kevin Ryan. In MongoDB data is stored in a binary JSON format, commonly referred to as BSON. One entry in the database is consists of a single JSON object called a document. The database contains multiple groupings of documents called collections. JSON, or JavaScript Object Notation is a format commonly used with browsers, which makes MongoDB an excellent fit for storing data for web applications, since the same JSON data can be transported between the browser and the database without having to be converted into another format between them, as is the case with SQL. Although these conversions are made easier by ORM tools, some extra operations are nonetheless required from the software.

Express:

Express.js was originally created and initially released in 2010 by TJ Holowaychuk, an open source mass-contributor and guru. In June 2014, the ownership of the GitHub repository for Express.js was sold by Holowaychuk to StrongLoop. Express.js is an unopinionated open source web server framework written purely in JavaScript, designed specifically to be used with Node.js. Due to its reliability and widespread use Express has become the de facto standard server software for Node.js Express in relation to Node.js can be considered analogous to what Ruby on Rails is to Ruby. Express is optimized for performance and is minimal by nature, placing only a thin layer on top of Node.js base level web features. Due to its lightweight design and standardized status, Express acts as the foundation for several other server-side JavaScript frameworks that incorporate it such as Feathers, KeystoneJS, Kraken and Sails, which are more tailored to specific types of applications as opposed to Express, which only provides a robust implementation of more general server-side functionalities such as routing, HTTP caching and view templating.

React :

React.js is a JavaScript library maintained by Facebook designed for building user interfaces for web services. React was originally created by a Facebook employee called Jordan Walke [53] and was first used inside Facebook in 2011 when it was used in the design of the Facebook app's newsfeed [54]. According to Walke, the framework was inspired by and started out as a JavaScript port of XHP, an augmentation of PHP also developed at Facebook aimed at creating reusable HTML components for browser applications. XHP, however, still suffered from being forced into many roundtrips to the server during application use in regular PHP fashion [53]. React.js emerged as a solution to the problem, delivering the application components in an initial JavaScript bundle and then efficiently managing renders to the DOM, allowing for easily reusable and customizable HTML views.



Node js:

Node.js is an open source platform that utilizes Google Chrome's JavaScript runtime V8 Engine [23]. Node.js can be characterized as being to JavaScript what the JRE is

to java. Node.js compiles and executes JavaScript code inside of a VM (Virtual Machine) and thereby enables JavaScript code to be run on the server side [23]. This makes JavaScript a viable alternative to other server-side languages like PHP, ASP or Java, and most importantly enables the use of JavaScript every layer of the web stack – server, transportation format (JSON), and the client. Node.js comes with an NGINX-like base library of modules related to the most common requirements such as file management, HTTP, SSL, DNS, compression and cryptography [24]. The basic modules are aimed at making the Node.js process into a functional web server [23] in only a few lines of code, but Node.js is also highly customizable through the Node Package Manager, also known as “npm”, which enables Node.js users to install packages from among over 600 000 (and growing) [25] open-source blocks of code to suit their purposes.

Software Requirement Analysis

2.2.1 Visual Studio Code:

Visual Studio Code is a free source-code editor made by Microsoft for Windows, Linux and macOS. Features include support for debugging, syntax highlighting, intelligent code completion, snippets, code refactoring, and embedded Git. Users can change the theme, keyboard shortcuts, preferences, and install extensions that add additional functionality. Microsoft has released Visual Studio Code's source code on the VSCode repository of GitHub.com, under the permissive MIT License, while the compiled binaries are freeware. In the Stack Overflow 2019 Developer Survey, Visual Studio Code was ranked the most popular developer environment tool, with 50.7% of 87,317 respondents reporting that they use it.

2.2.2 Git and Github:

Git is an open-source, version control tool created in 2005 by developers working on the Linux operating system; GitHub is a company founded in 2008 that makes tools which integrate with git. You do not need GitHub to use git, but you cannot use GitHub without using git. There are many other alternatives to GitHub, such as GitLab, BitBucket, and “host-your-own” solutions such as gogs and gittea. All of these are referred to in git-speak as “remotes”, and all are completely optional. You

do not need to use a remote to use git, but it will make sharing your code with others easier.

2.2.3 Web Browser:

A web browser (commonly referred to as a browser) is a software application for retrieving, presenting, and traversing information resources on the World Wide Web. An information resource is identified by a Uniform Resource Identifier (URI/URL) and may be a web page, image, video or other piece of content. Hyperlinks present in resources enable users easily to navigate their browsers to related resources. Although browsers are primarily intended to use the World Wide Web, they can also be used to access information provided by web servers in private networks or files in file systems.

2.3 Hardware Requirement Analysis:

♠ Processor: Intel CORE i3 (8th Gen)

♠ RAM: 4GB

♠ Cache Memory: 512 KB

♠ Monitor: 14-inch Color Monitor

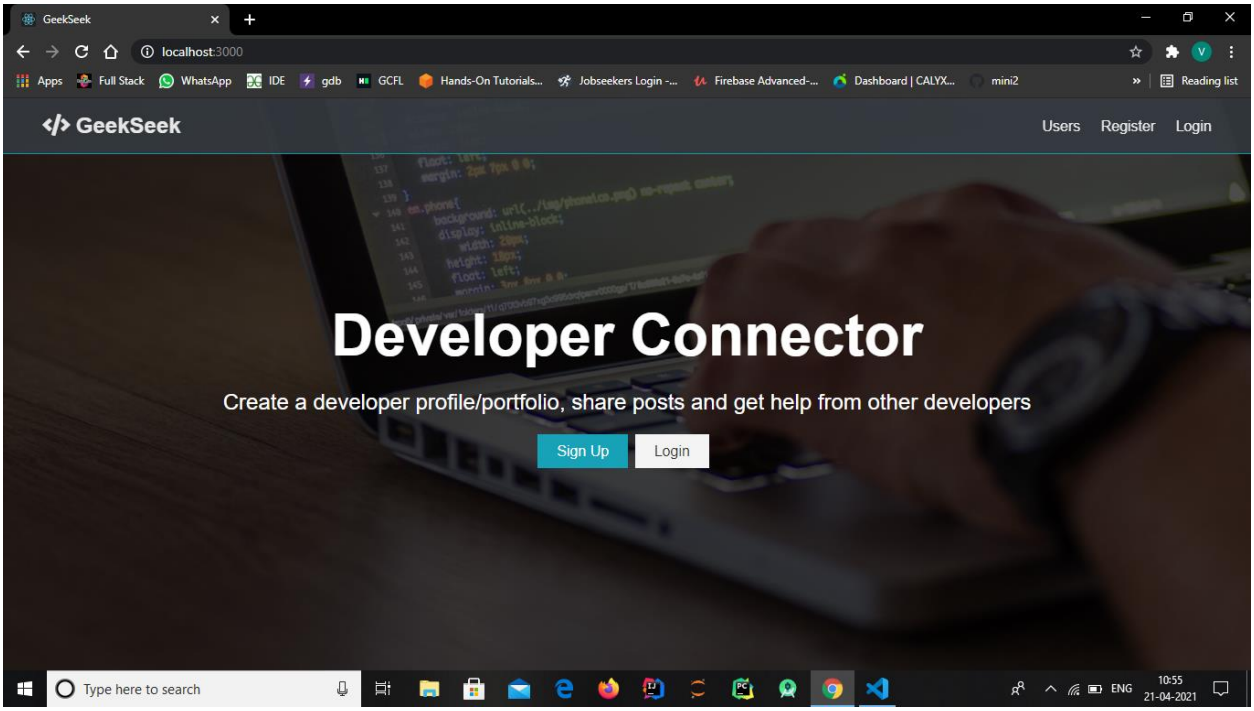
♠ Keyboard: 108 Keys

♠ Mouse: Optical Mouse

♠ Hard Disk: 160 GB

Frontend Screenshots –

Landing page -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localhost:3000
Apps
Full Stack
WhatsApp
IDE
gdb
GCFL
Hands-On Tutorials...
Jobseekers Login -...
Firebase Advanced-...
Dashboard | CALYX...
mini2
Reading list
GeekSeek
Users
Register
Login
Developer Connector
Create a developer profile/portfolio, share posts and get help from other developers
Sign Up
Login
Type here to search
ENG
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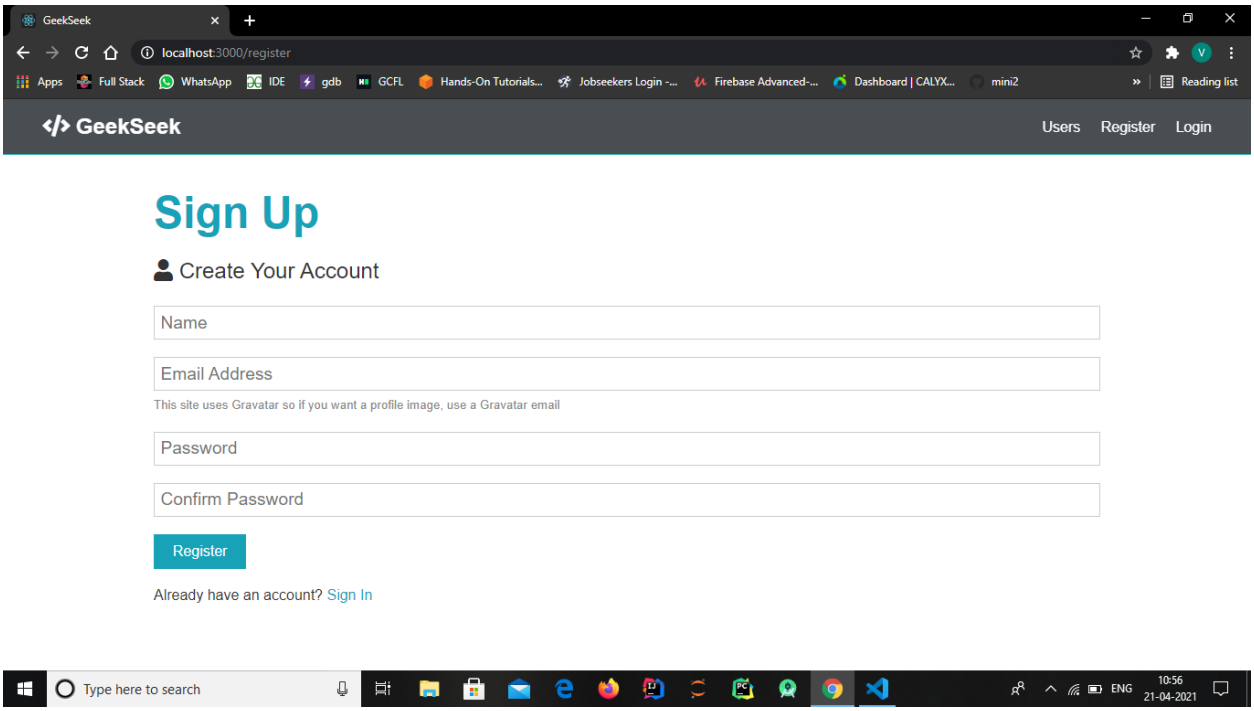
21-04-2021

Sign Up Page –


GeekSeek
localhost:3000/register
Apps
Full Stack
WhatsApp
IDE
gdb
GCFL
Hands-On Tutorials...
Jobseekers Login -...
Firebase Advanced-...
Dashboard | CALYX...
mini2
Reading list
GeekSeek
Users
Register
Login
Sign Up
Create Your Account
Name
Email Address
This site uses Gravatar so if you want a profile image, use a Gravatar email
Password
Confirm Password
Register
Already have an account? Sign In
Type here to search
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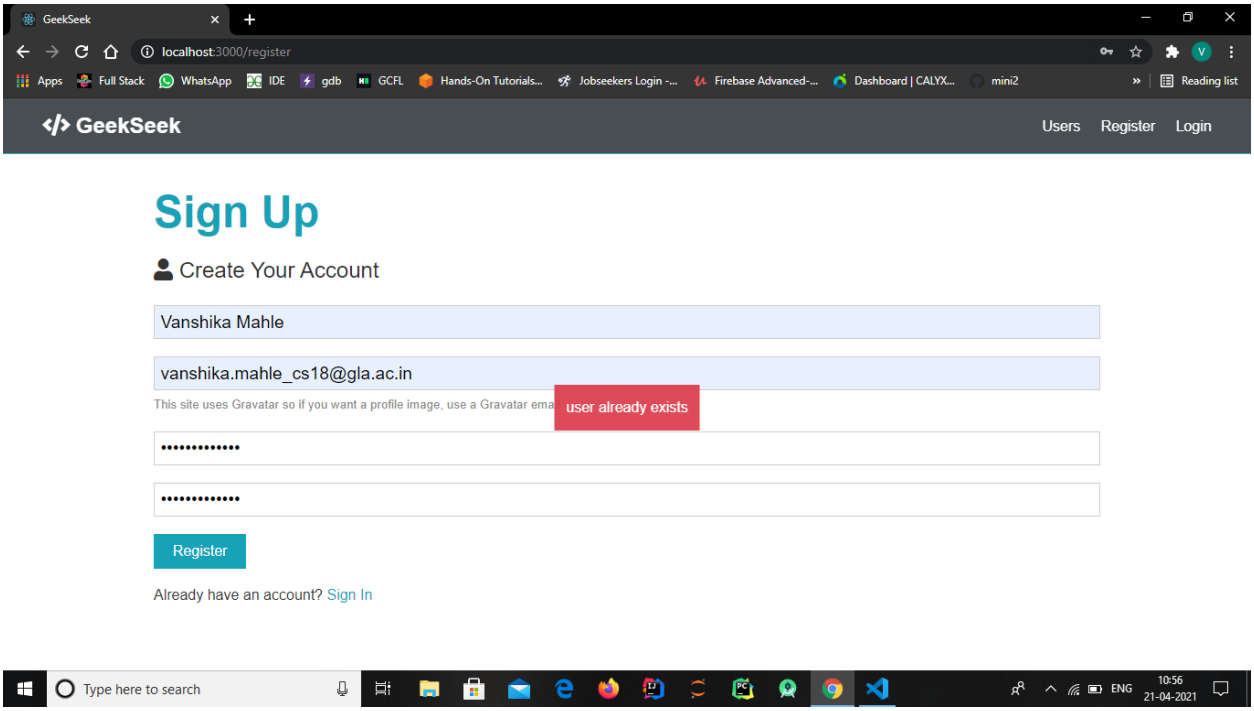
GeekSeek
localhost:3000/register
GeekSeek
Users
Register
Login
Sign Up
Create Your Account
Vanshika Mahle
vanshika.mahle_cs18@gla.ac.in
This site uses Gravatar so if you want a profile image, use a Gravatar ema
user already exists
Register
Already have an account? Sign In
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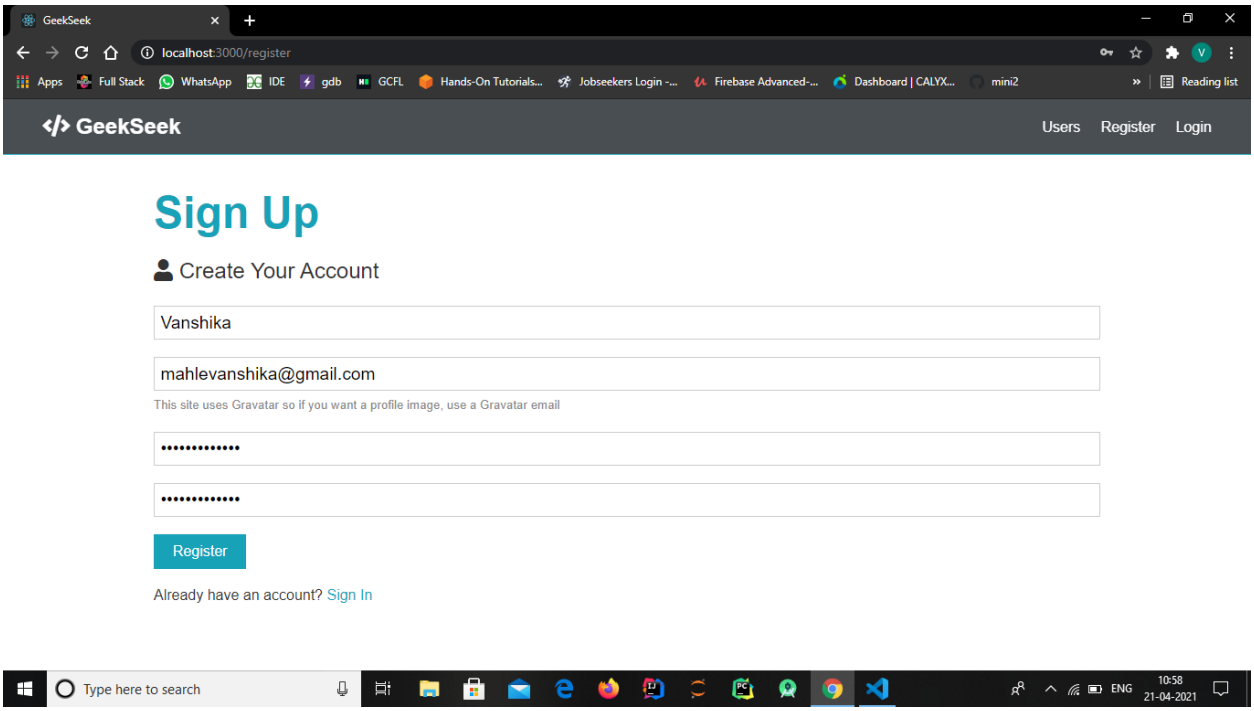
GeekSeek
localhost:3000/register
GeekSeek
Users
Register
Login
Sign Up
Create Your Account
Vanshika
mahlevanshika@gmail.com
This site uses Gravatar so if you want a profile image, use a Gravatar email
Register
Already have an account? Sign In
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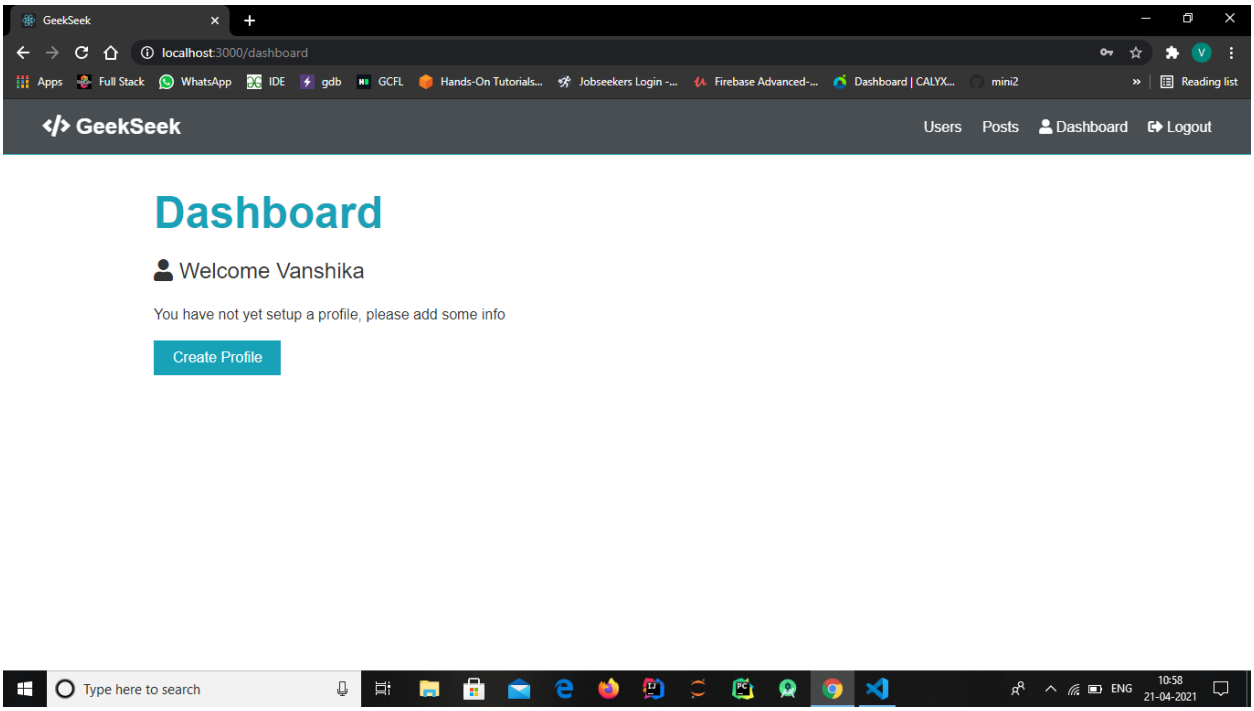
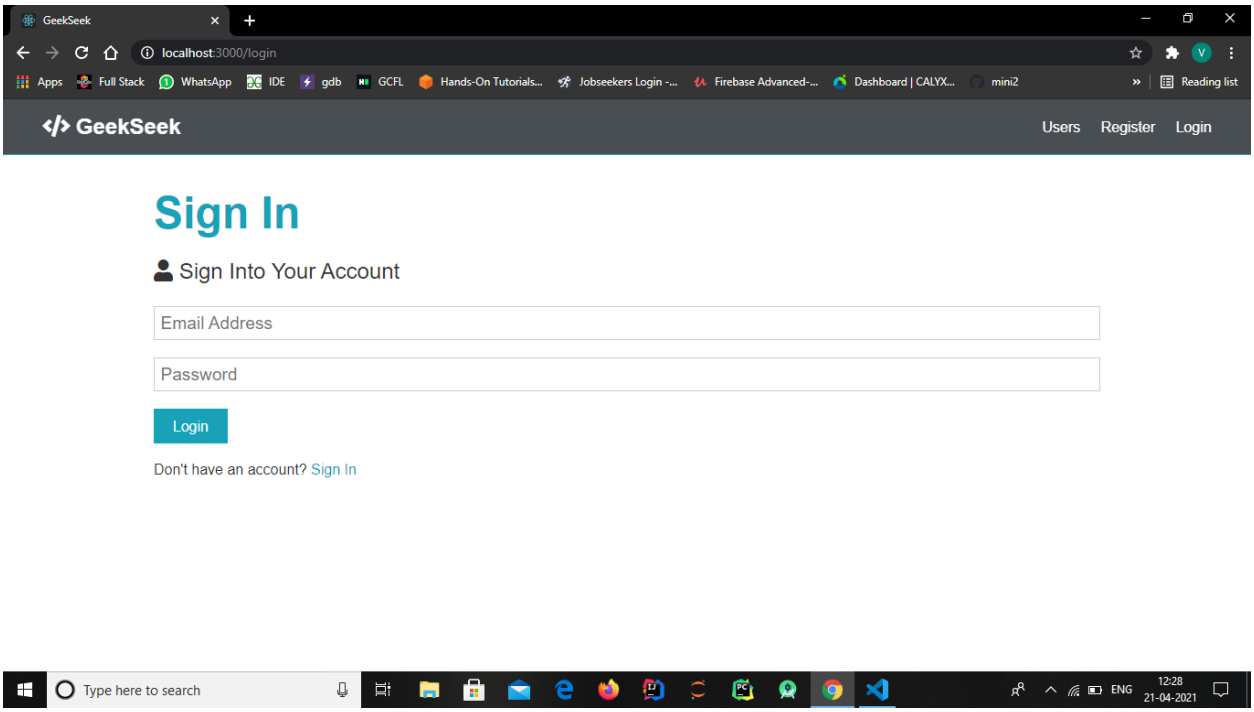
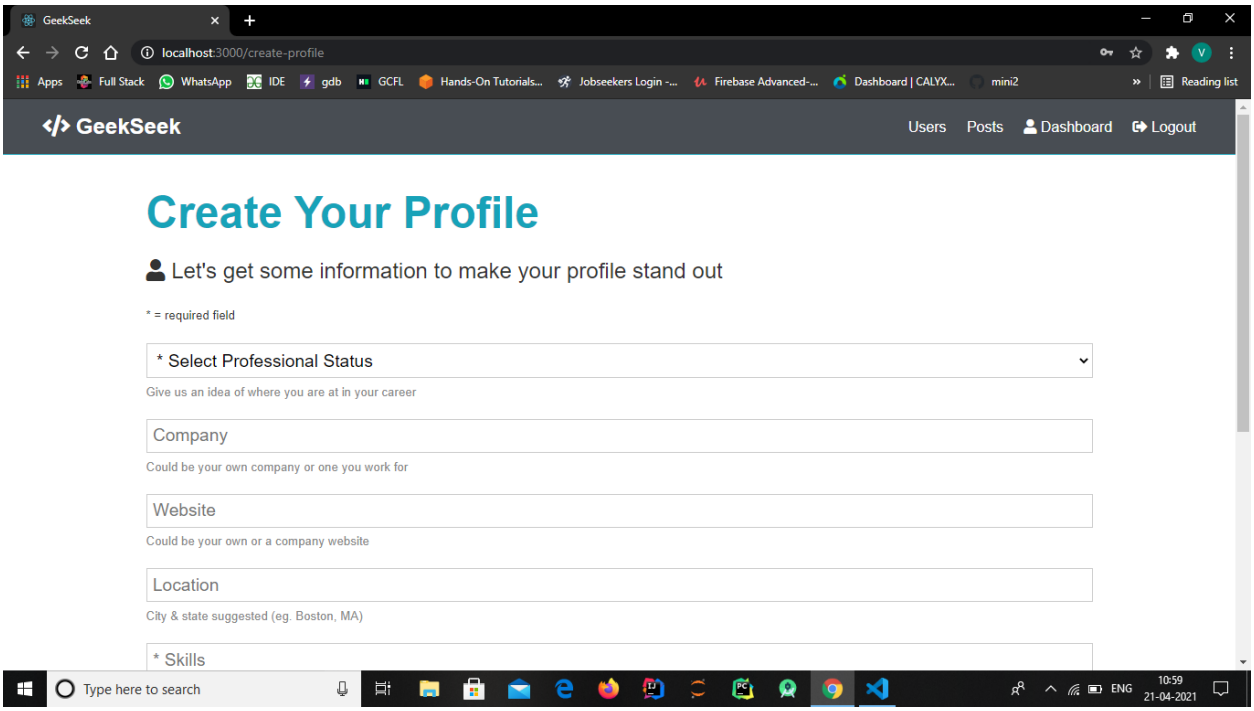
Dashboard -

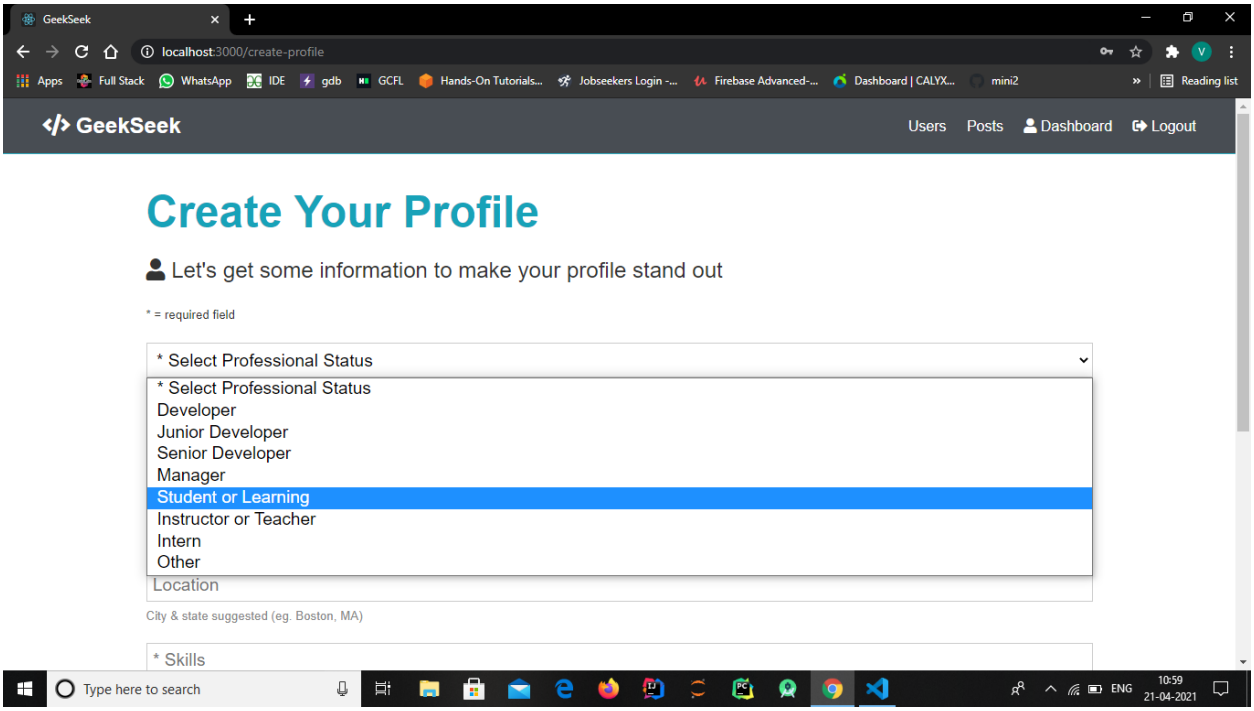


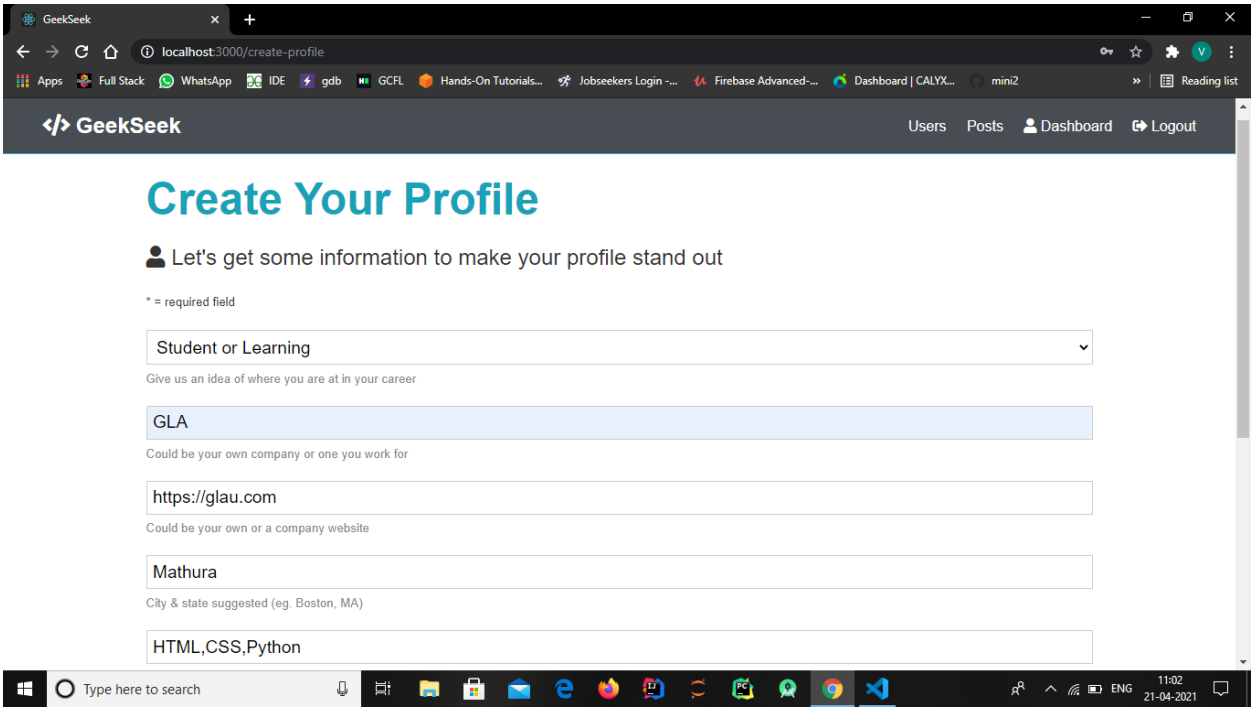
Sign in –



Create your Profile -






GeekSeek
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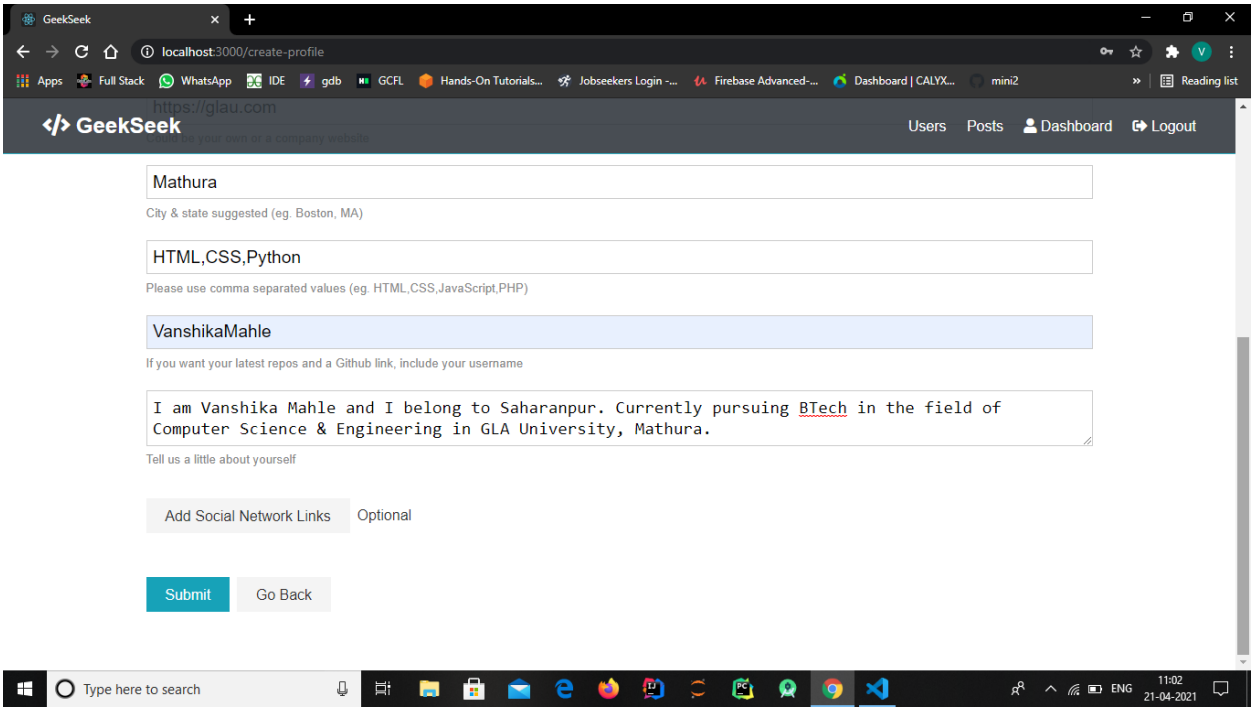
GeekSeek
Users
Posts
Dashboard
Logout
Create Your Profile
Let's get some information to make your profile stand out
* = required field
Student or Learning
Give us an idea of where you are at in your career
GLA
Could be your own company or one you work for
https://glau.com
Could be your own or a company website
Mathura
City & state suggested (eg. Boston, MA)
HTML,CSS,Python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GeekSeek
Users
Posts
Dashboard
Logout
Mathura
City & state suggested (eg. Boston, MA)
HTML,CSS,Python
Please use comma separated values (eg. HTML,CSS,JavaScript,PHP)
VanshikaMahle
If you want your latest repos and a Github link, include your username
I am Vanshika Mahle and I belong to Saharanpur. Currently pursuing BTech in the field of Computer Science & Engineering in GLA University, Mathura.
Tell us a little about yourself
Add Social Network Links
Optional
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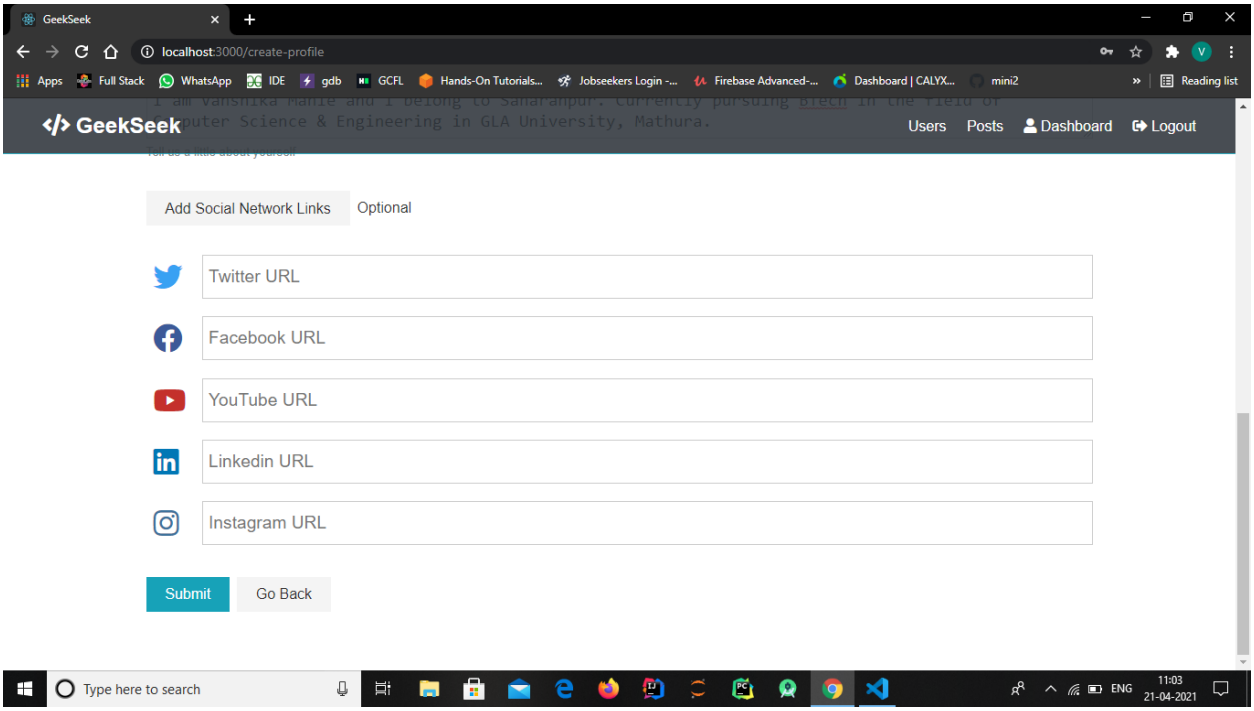
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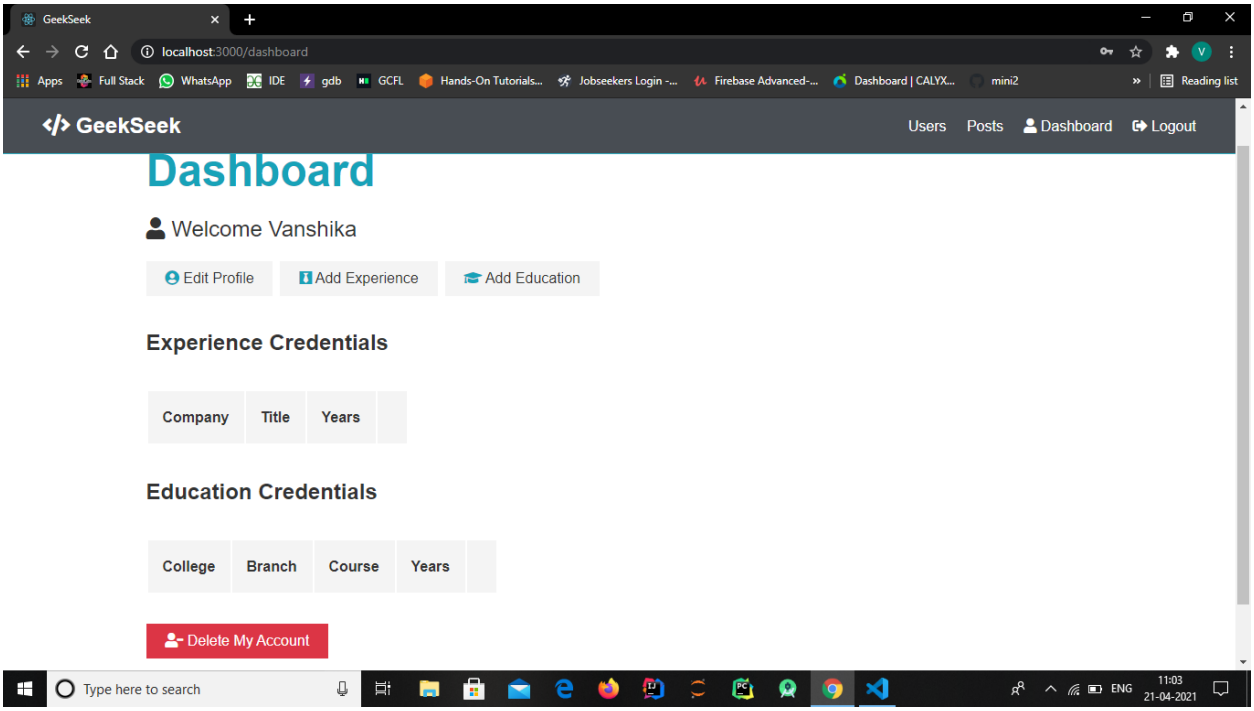
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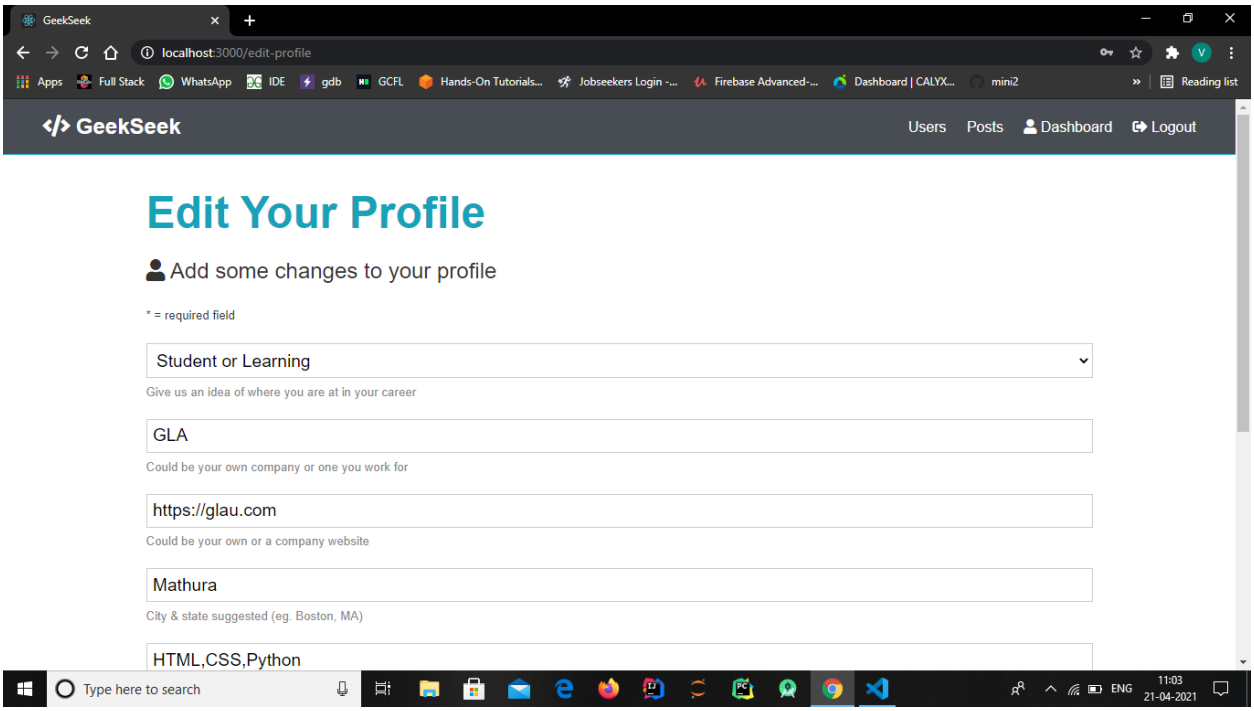
GeekSeek
Users
Posts
Dashboard
Logout
Dashboard
Welcome Vanshika
Edit Profile
Add Experience
Add Education
Experience Credentials
Company
Title
Years
Education Credentials
College
Branch
Course
Years
Delete My Account
Type here to search

Edit your profile -



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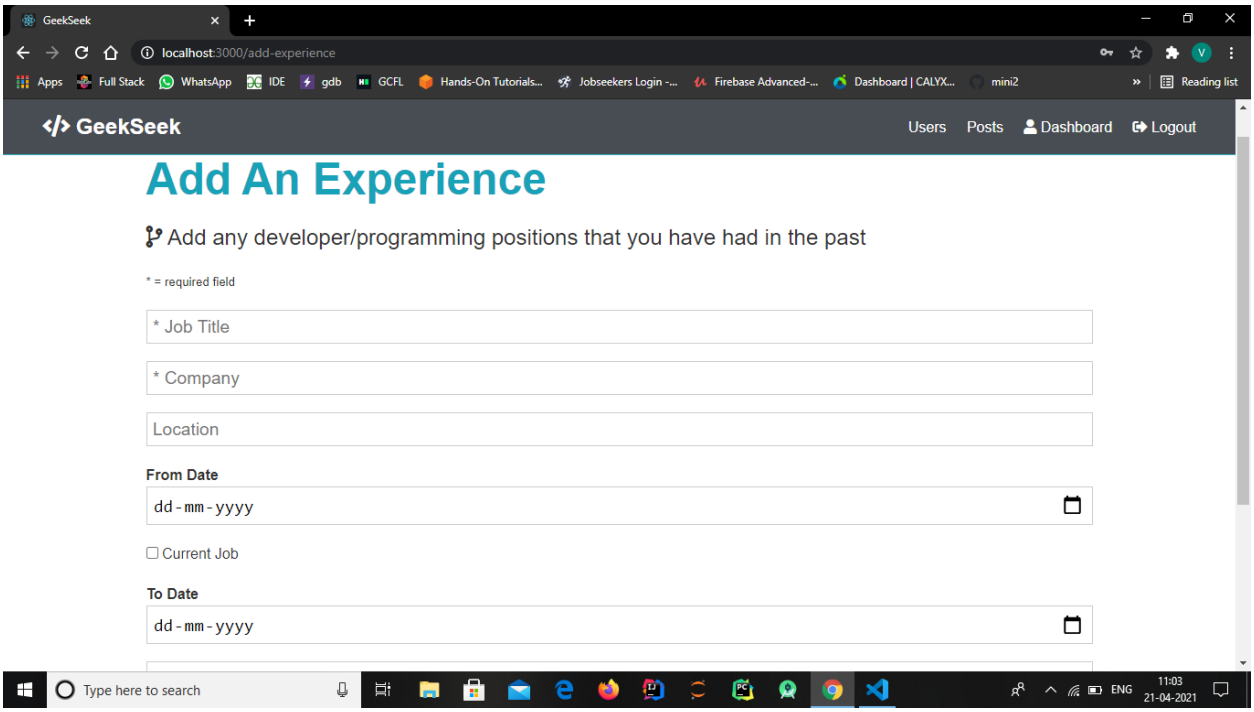

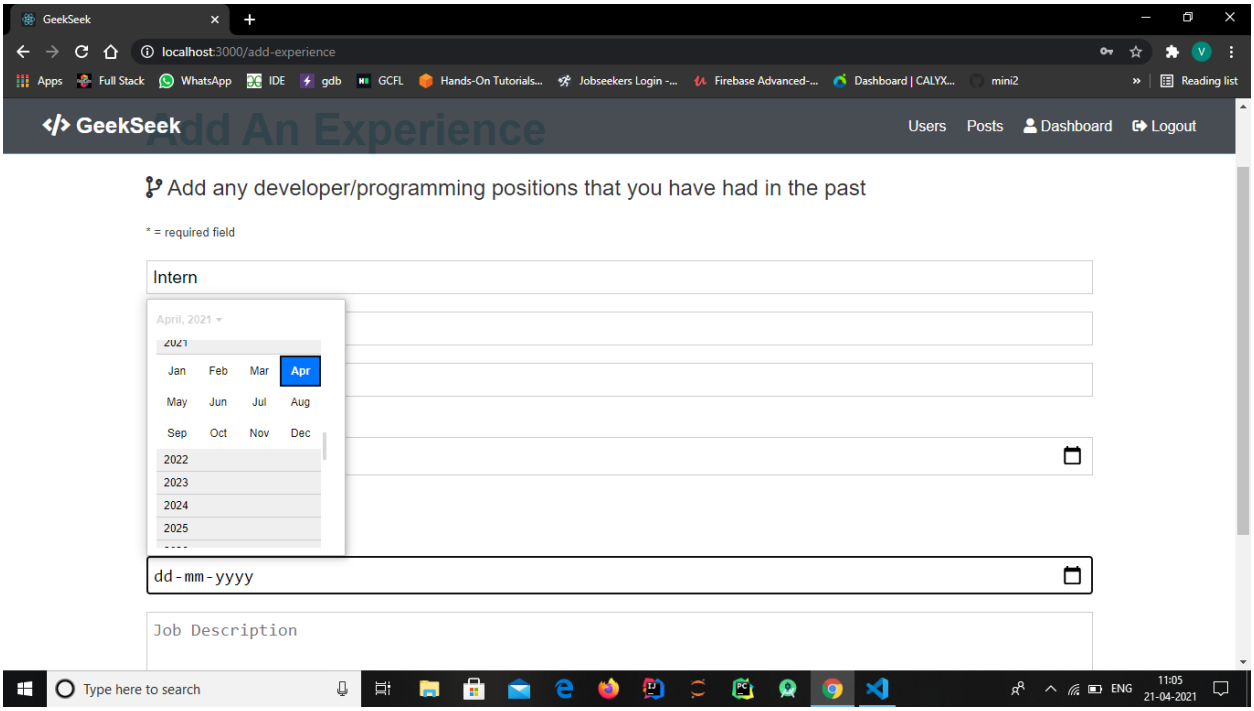
GeekSeek
localhost:3000/add-experience
GeekSeek
Users
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Dashboard
Logout
Add any developer/programming positions that you have had in the past
* = required field
Intern
April, 2021
2021
Jan
Feb
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Apr
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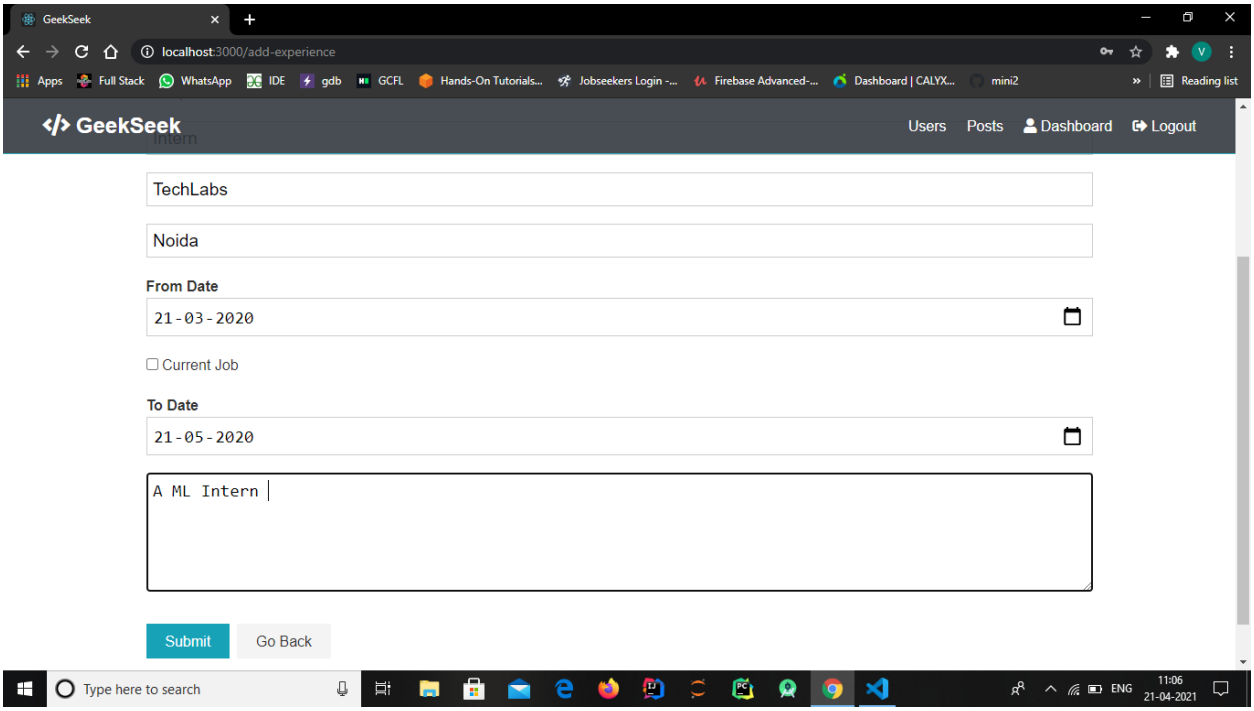
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Noida
From Date
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Current Job
To Date
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A ML Intern
Submit
Go Back
Type here to search
ENG
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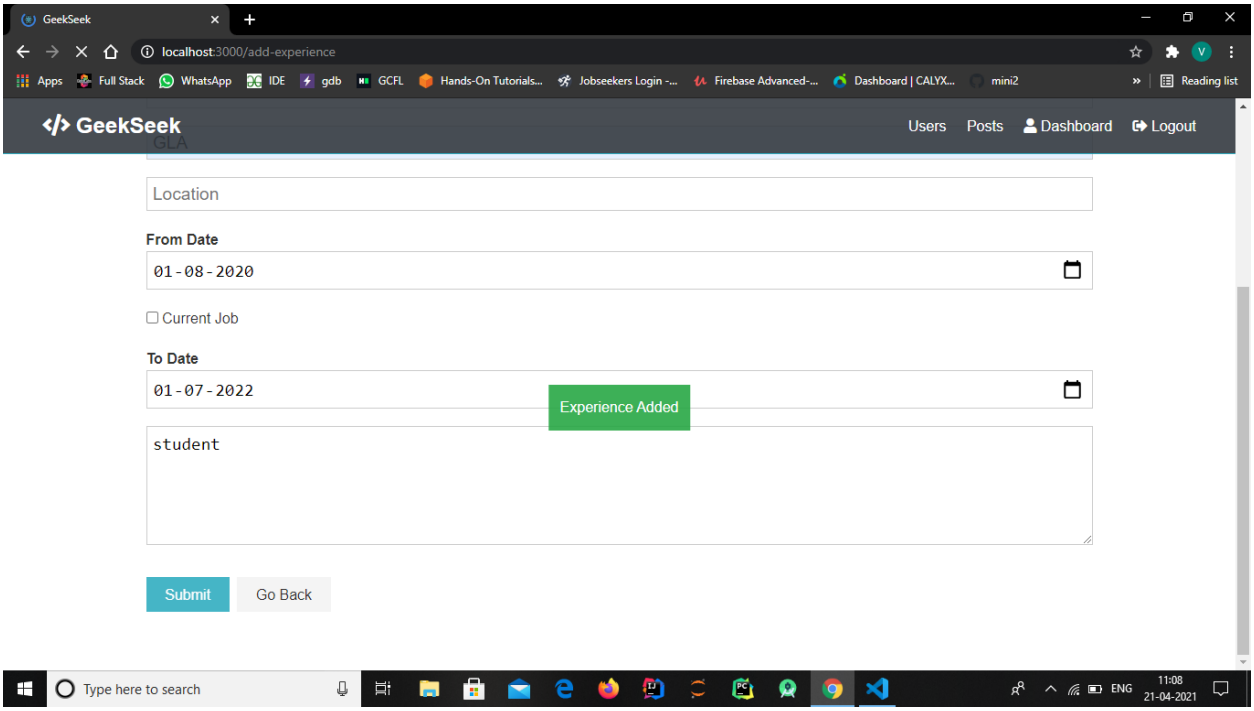

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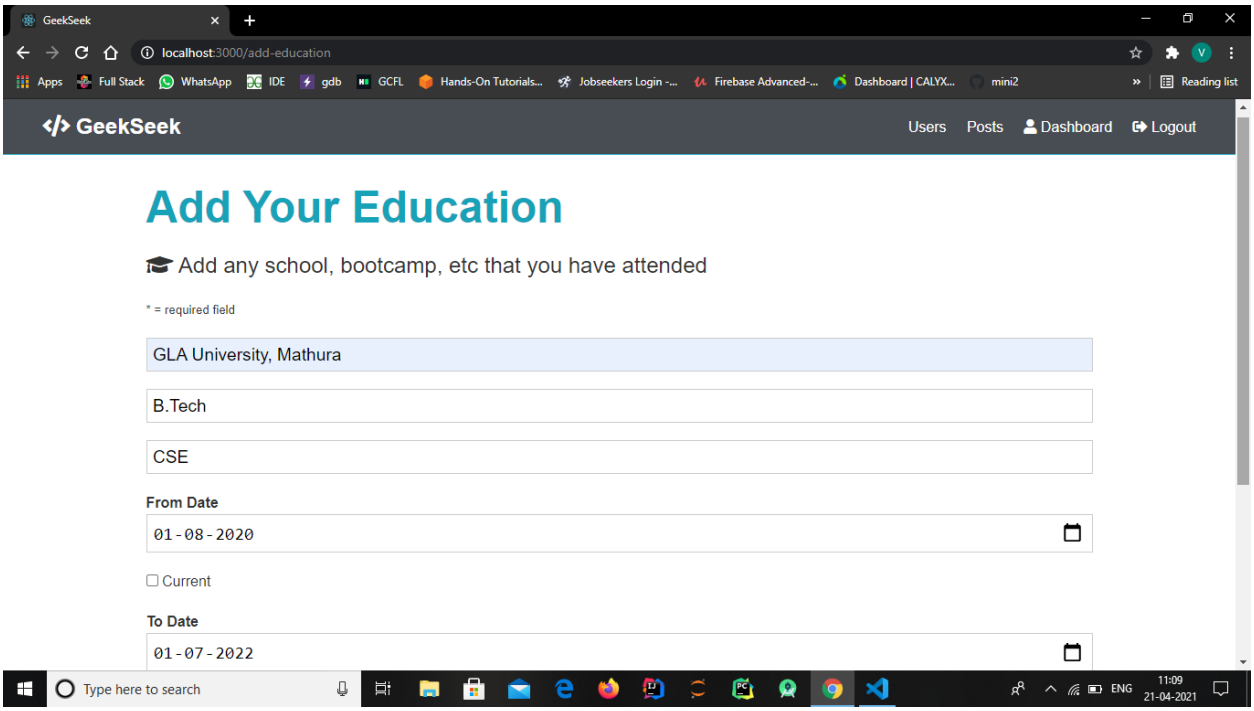

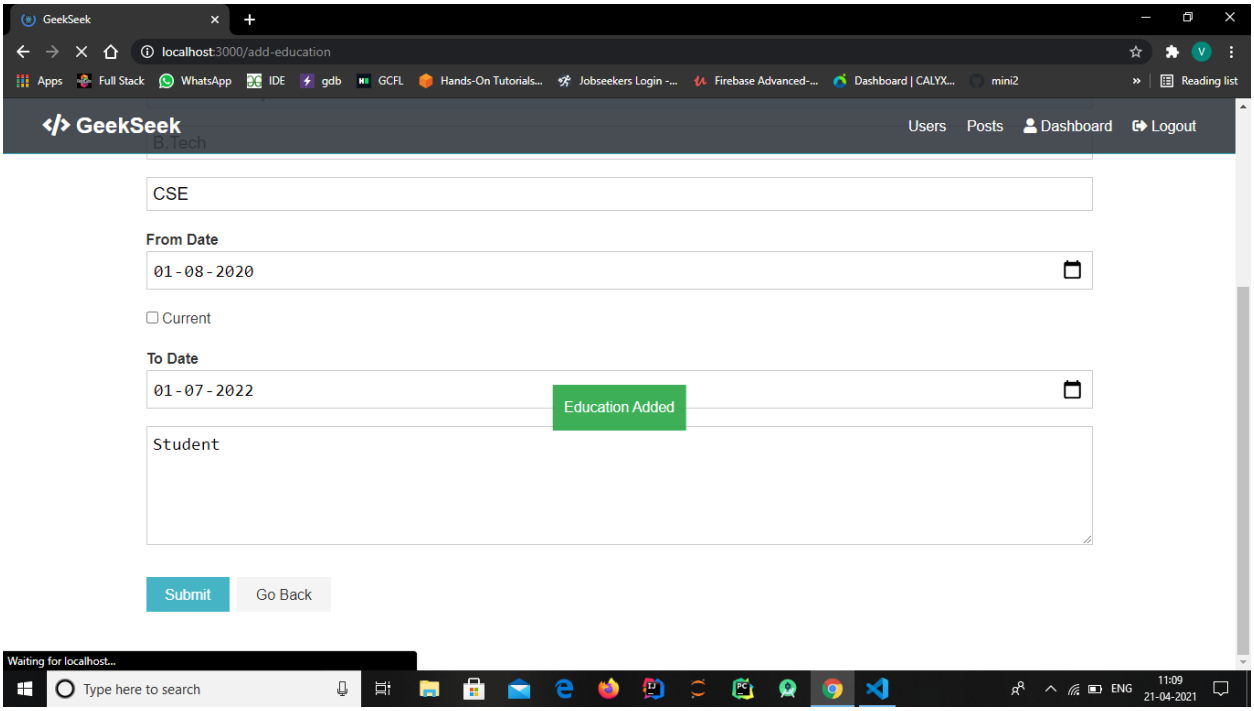

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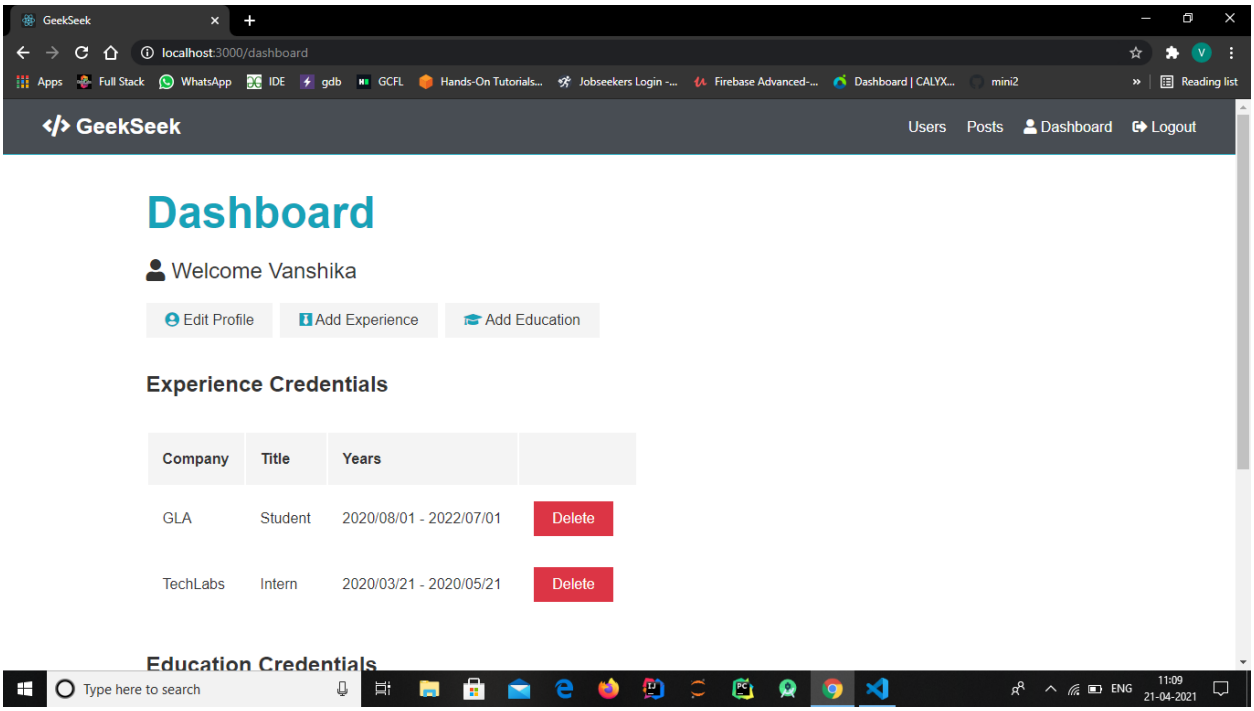

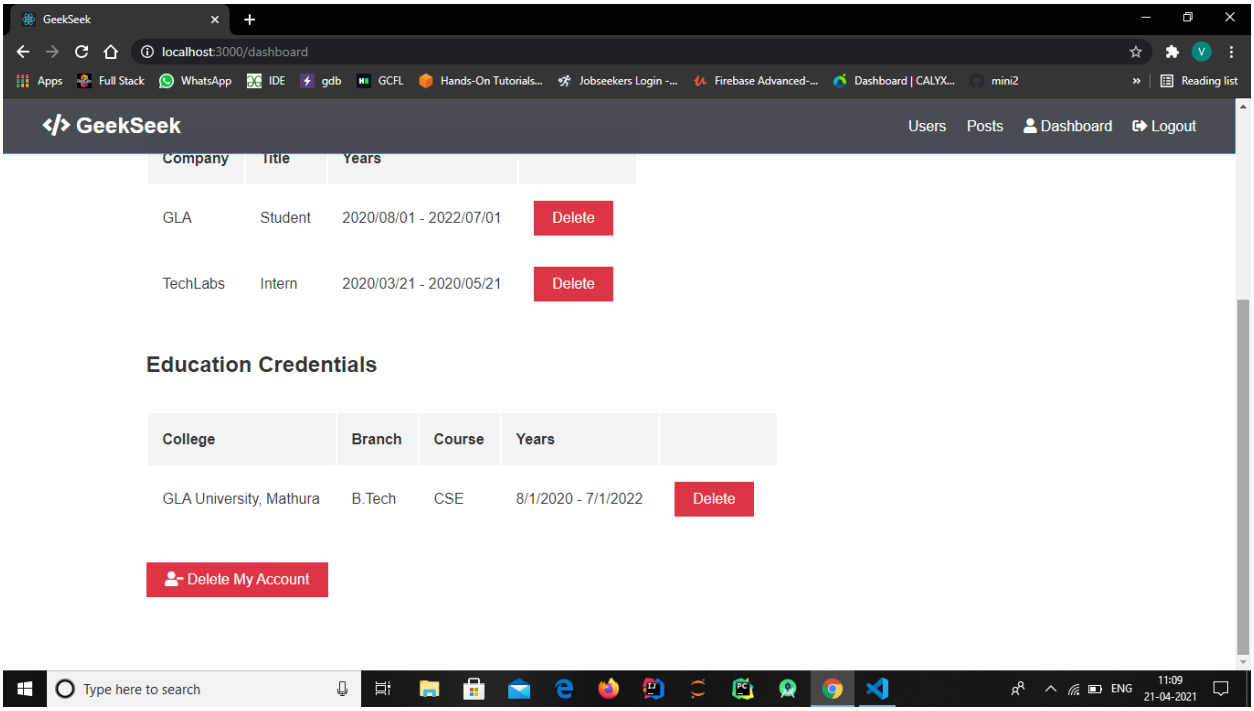
GeekSeek
localhost:3000/dashboard
GeekSeek
Users
Posts
Dashboard
Logout
Company
Title
Years
GLA
Student
2020/08/01 - 2022/07/01
Delete
TechLabs
Intern
2020/03/21 - 2020/05/21
Delete
Education Credentials
College
Branch
Course
Years
GLA University, Mathura
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CSE
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Delete
Delete My Account
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ENG
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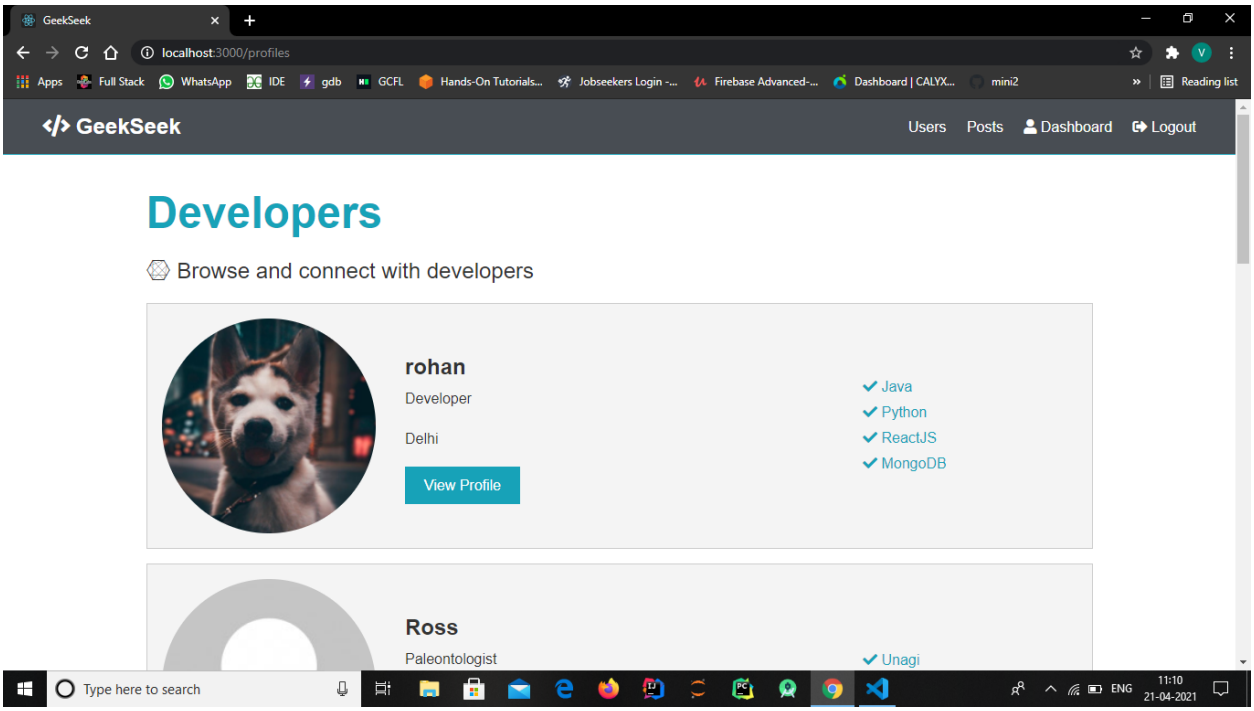
21-04-2021

Users -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Developers
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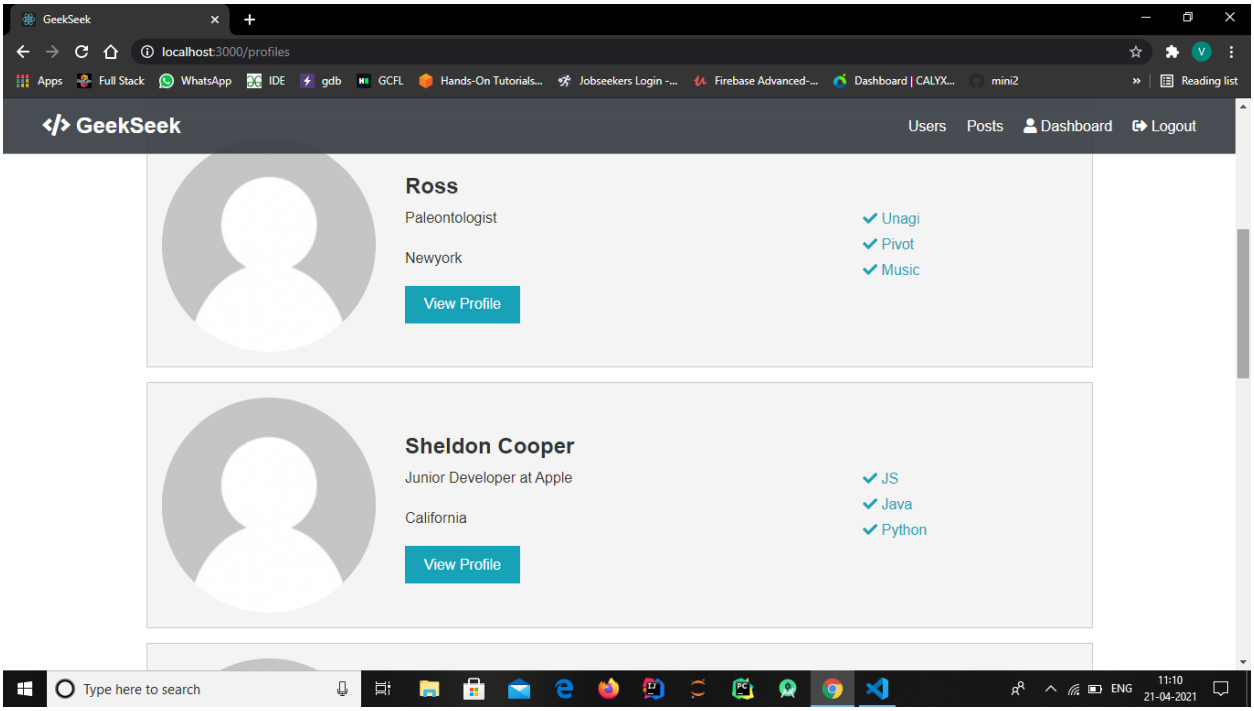
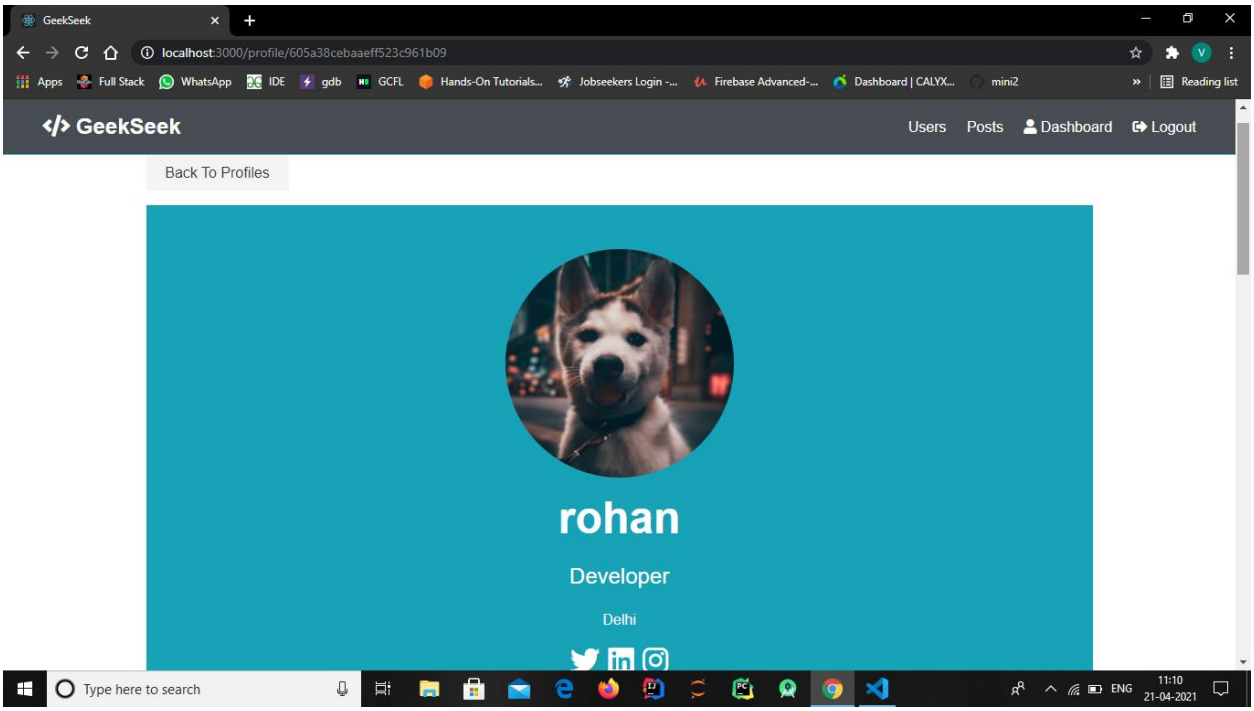
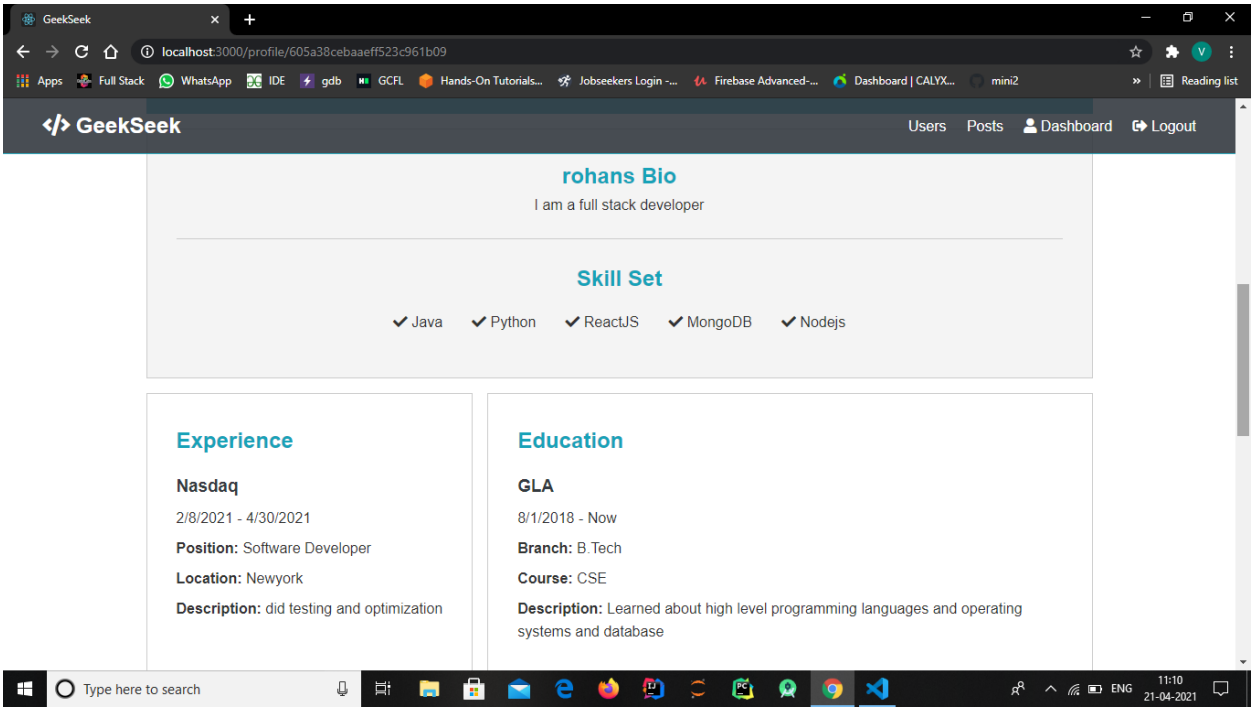
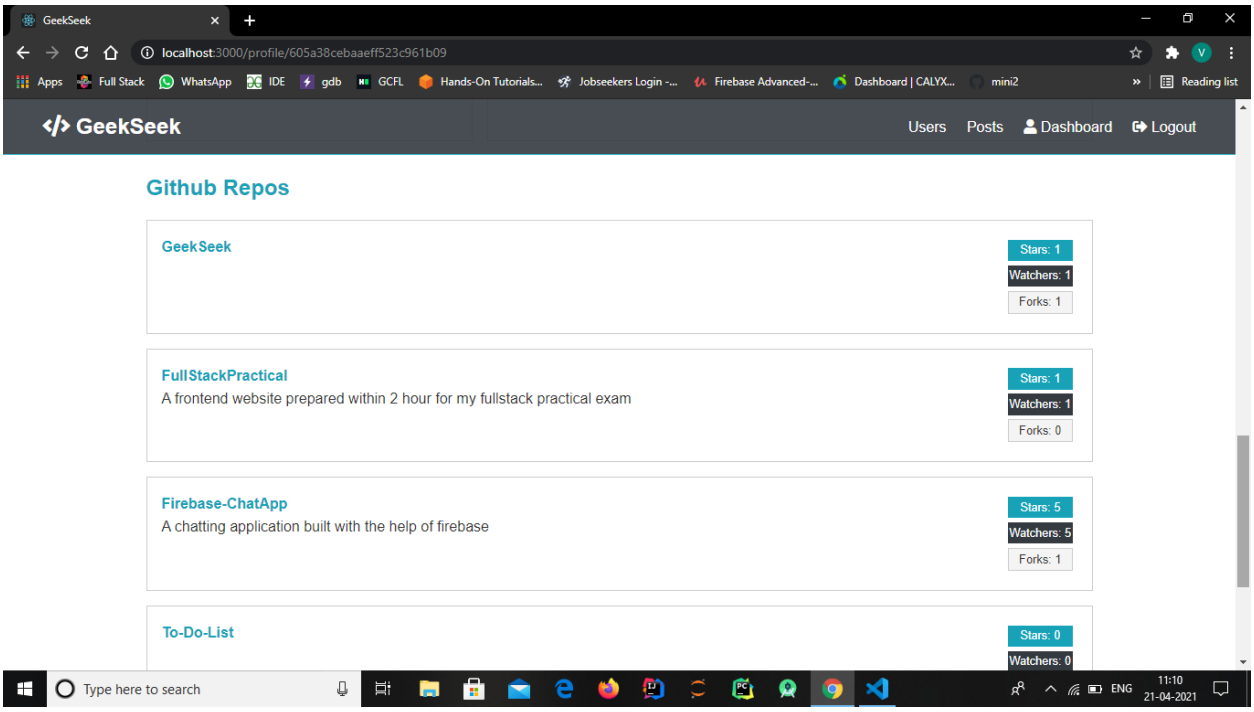
Type here to search
ENG
11:10
21-04-2021

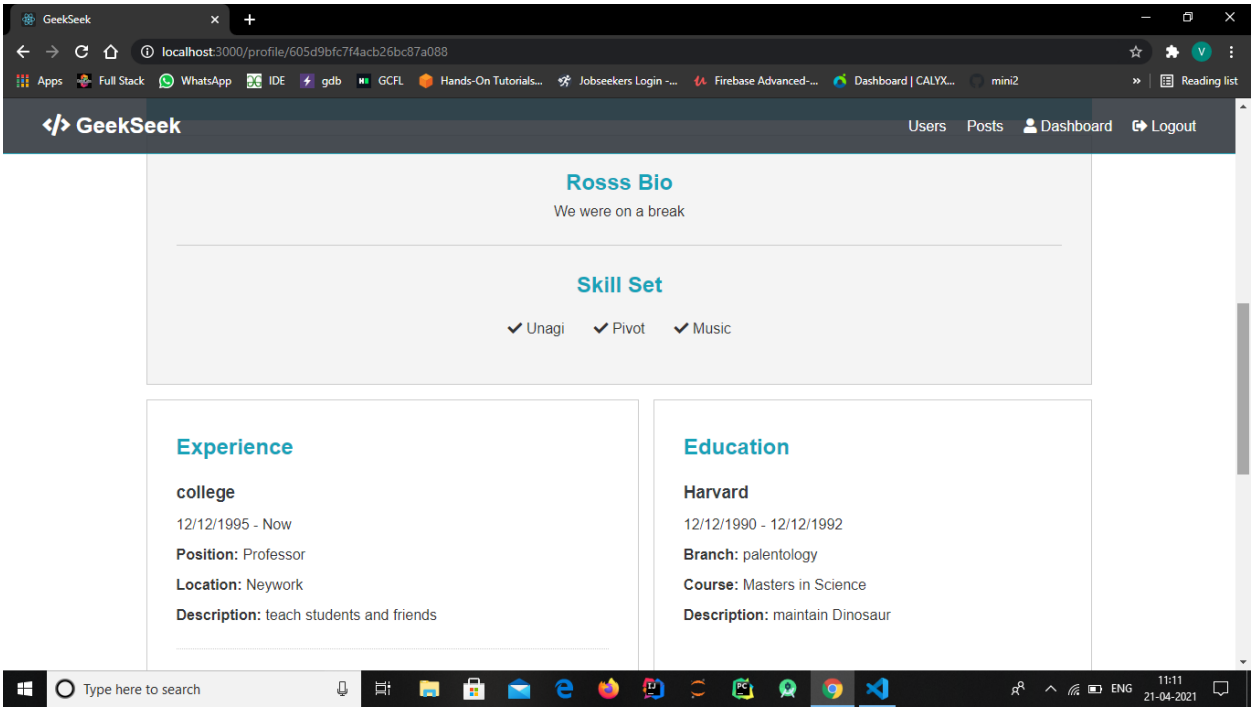


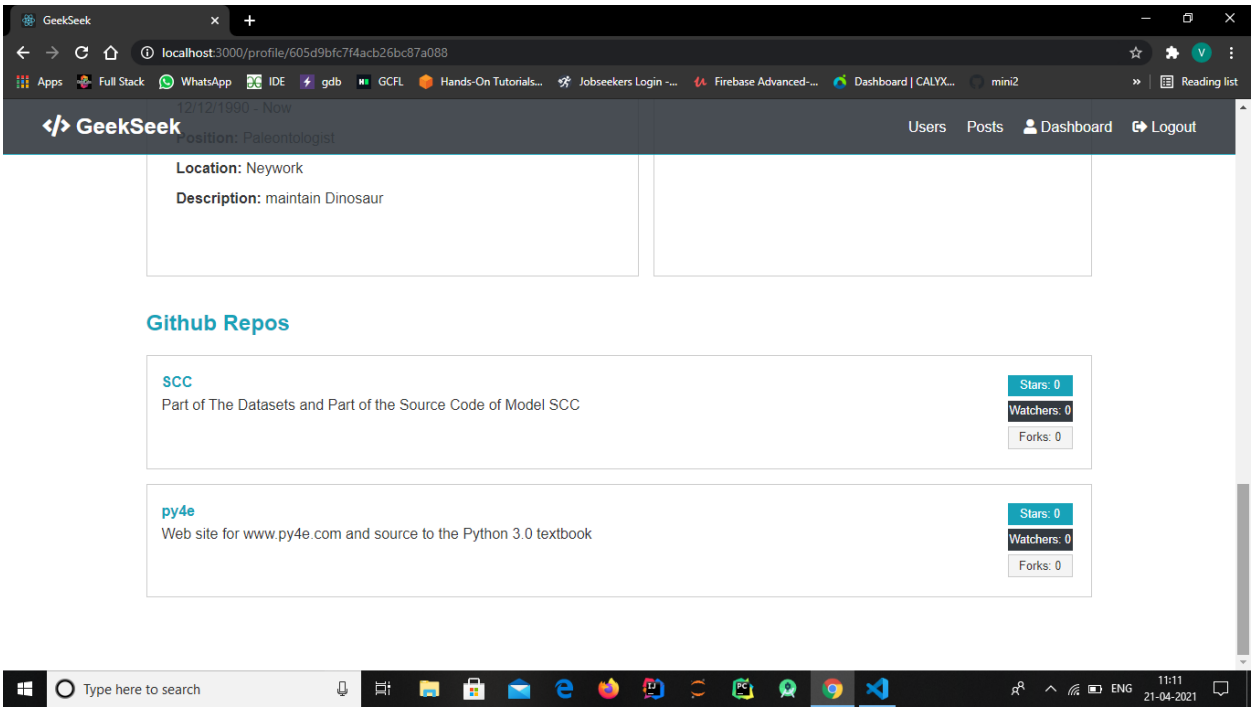
User Profile -



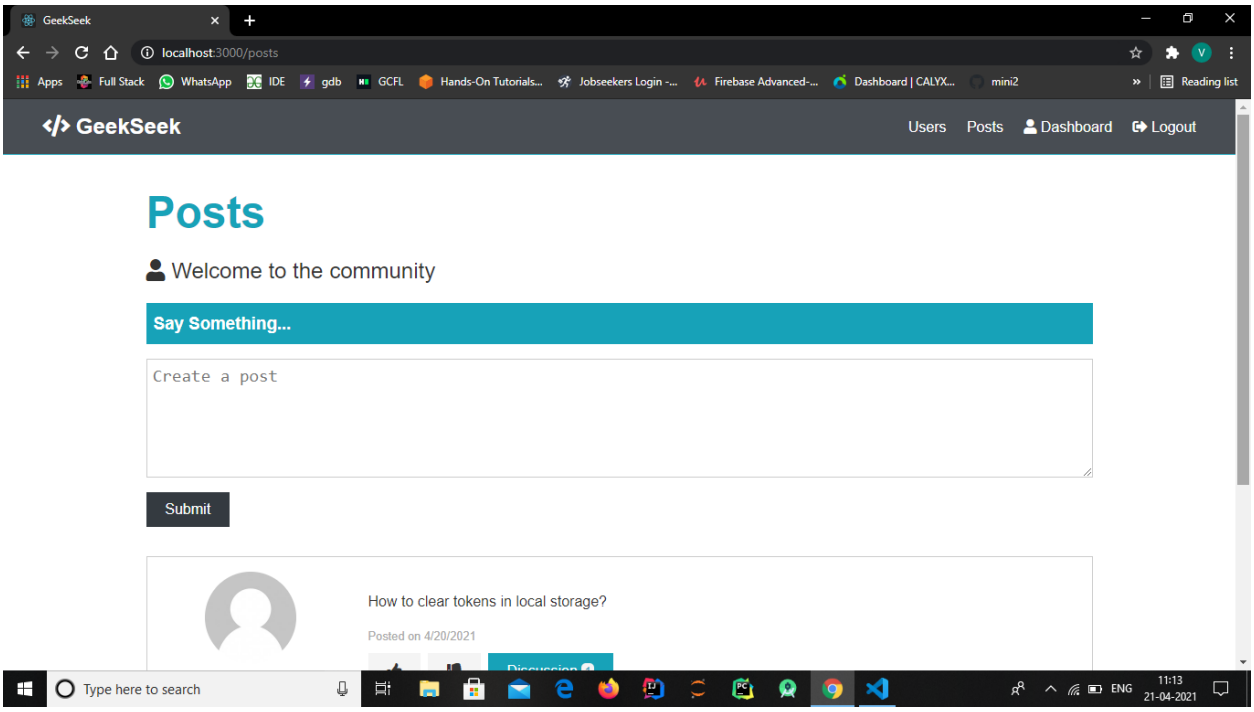

GeekSeek
localhost:3000/profile/605a38cebaaeff523c961b09
GeekSeek
Users
Posts
Dashboard
Logout
rohans Bio
I am a full stack developer
Skill Set
Java
Python
ReactJS
MongoDB
Nodejs
Experience
Nasdaq
2/8/2021 - 4/30/2021
Position: Software Developer
Location: Newyork
Description: did testing and optimization
Education
GLA
8/1/2018 - Now
Branch: B.Tech
Course: CSE
Description: Learned about high level programming languages and operating systems and database
Type here to search
ENG
11:10
21-04-2021

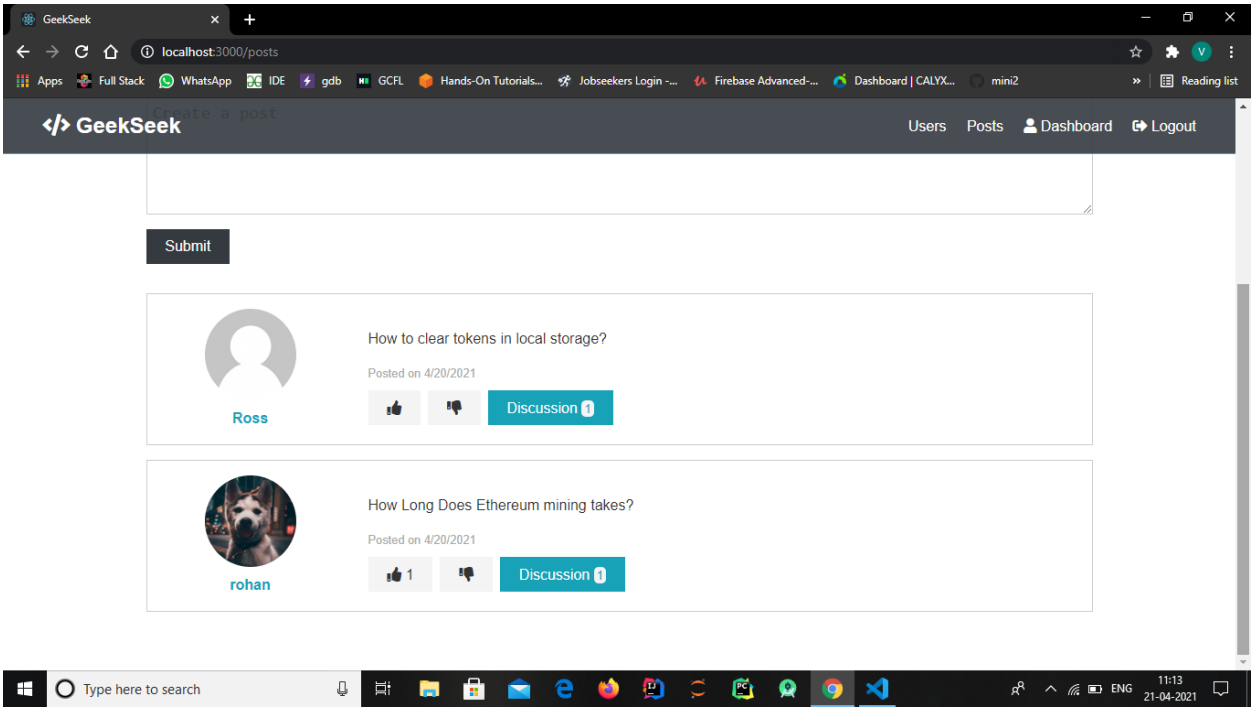

GeekSeek
localhost:3000/profile/605a38cebaaeff523c961b09
GeekSeek
Users
Posts
Dashboard
Logout
Github Repos
GeekSeek
Stars: 1
Watchers: 1
Forks: 1
FullStackPractical
A frontend website prepared within 2 hour for my fullstack practical exam
Stars: 1
Watchers: 1
Forks: 0
Firebase-ChatApp
A chatting application built with the help of firebase
Stars: 5
Watchers: 5
Forks: 1
To-Do-List
Stars: 0
Watchers: 0
Type here to search
ENG
11:10
21-04-2021

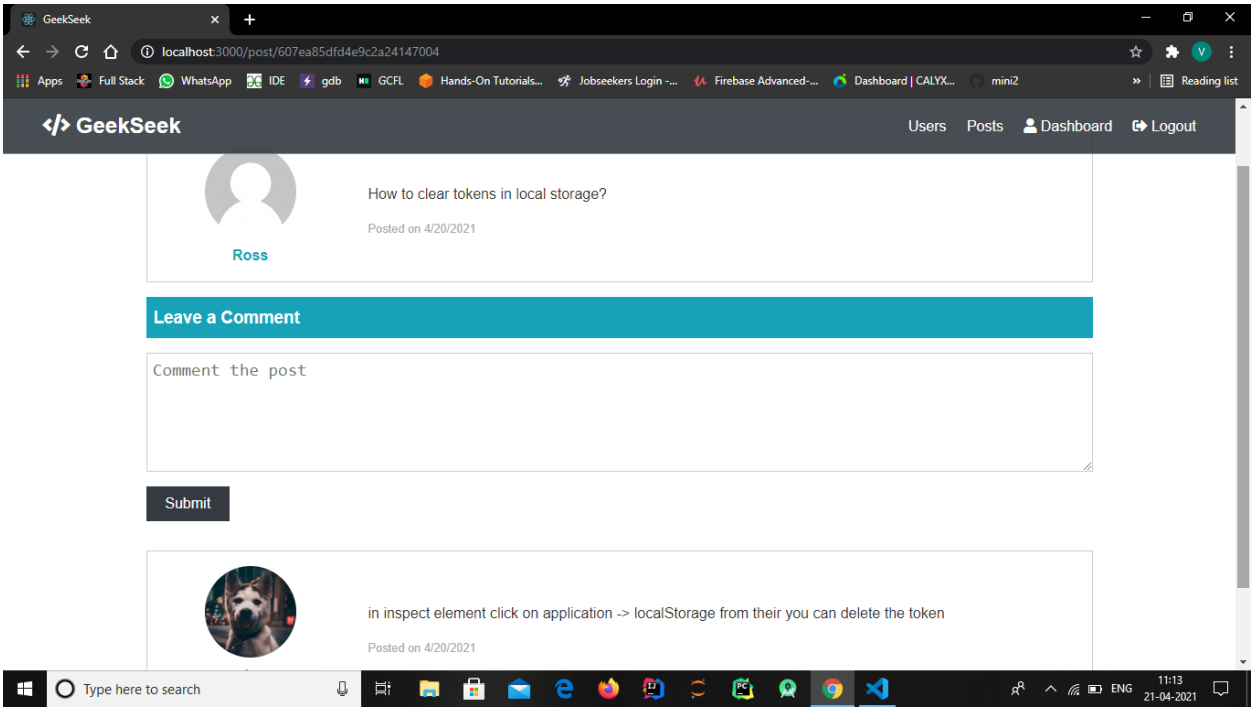

GeekSeek
localhost:3000/profile/605d9bfc7f4acb26bc87a088
GeekSeek
Users
Posts
Dashboard
Logout
Rosss Bio
We were on a break
Skill Set
Unagi
Pivot
Music
Experience
college
12/12/1995 - Now
Position: Professor
Location: Neywork
Description: teach students and friends
Education
Harvard
12/12/1990 - 12/12/1992
Branch: palentology
Course: Masters in Science
Description: maintain Dinosaur
Type here to search
ENG
11:11
21-04-2021


GeekSeek
localhost:3000/profile/605d9bfc7f4acb26bc87a088
GeekSeek
Users
Posts
Dashboard
Logout
Location: Neywork
Description: maintain Dinosaur
Github Repos
SCC
Part of The Datasets and Part of the Source Code of Model SCC
Stars: 0
Watchers: 0
Forks: 0
py4e
Web site for www.py4e.com and source to the Python 3.0 textbook
Stars: 0
Watchers: 0
Forks: 0
Type here to search
ENG
11:11
21-04-2021

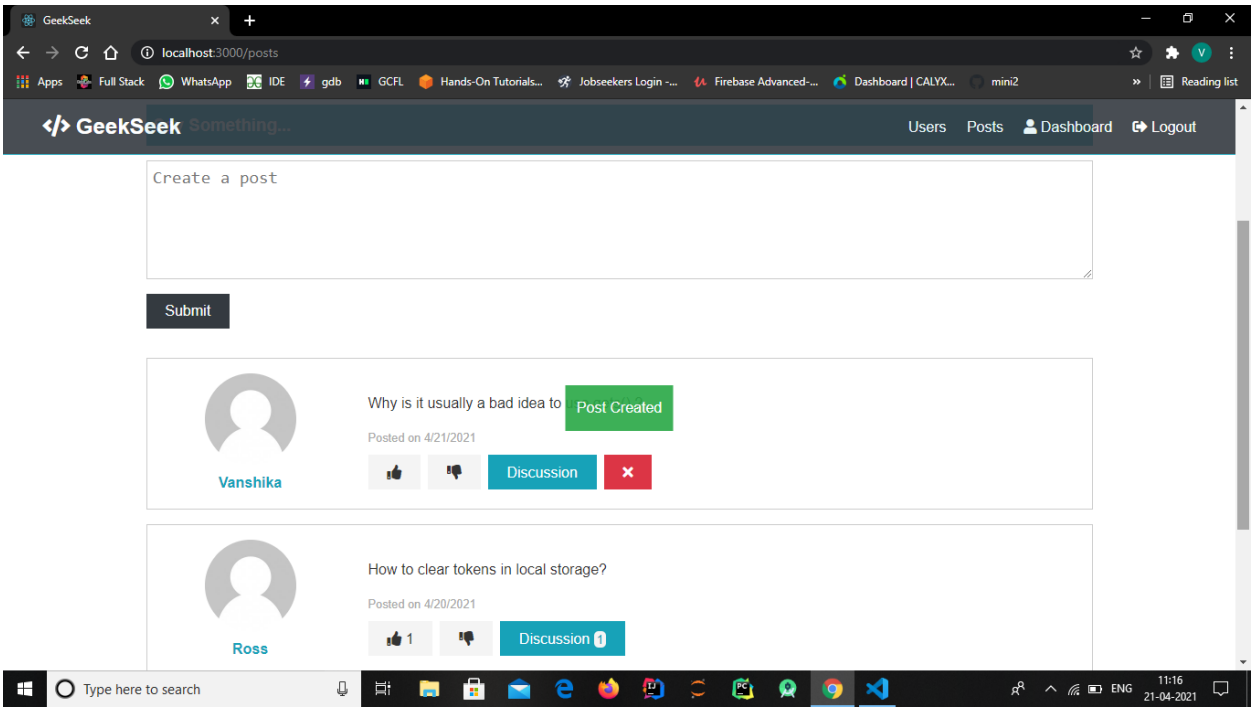
Posts -

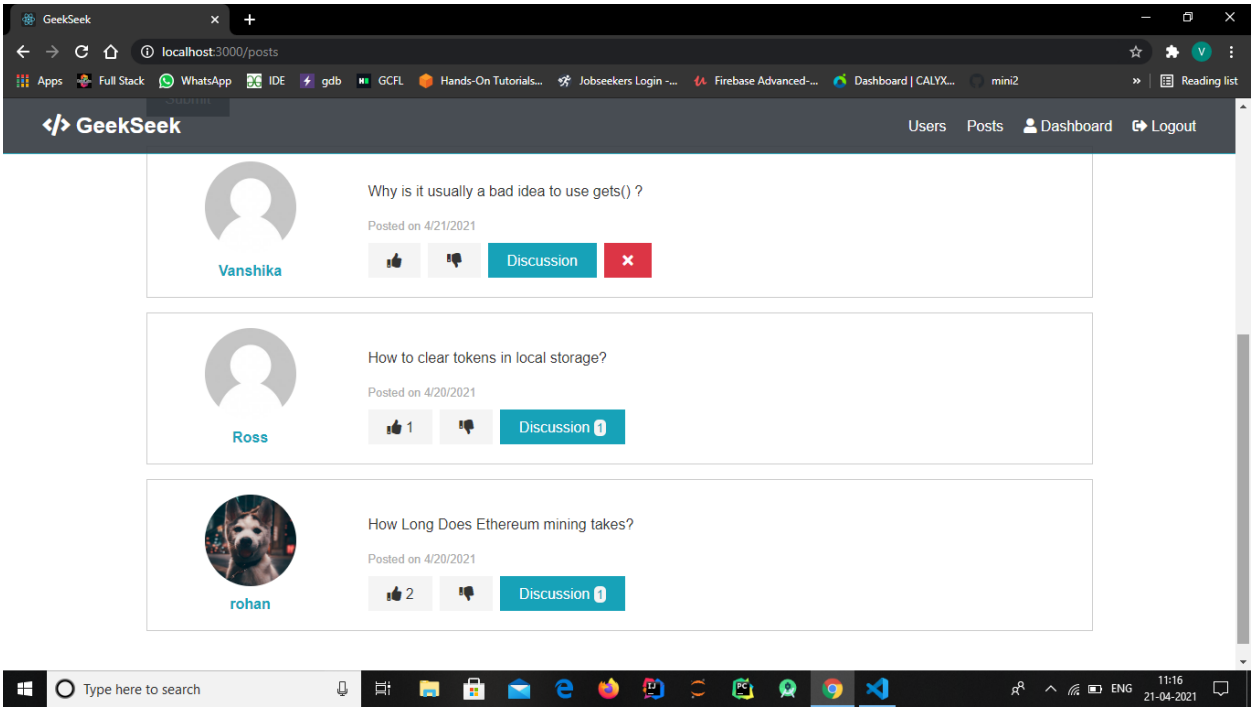

GeekSeek
localhost:3000/posts
GeekSeek
Users
Posts
Dashboard
Logout
Posts
Welcome to the community
Say Something...
Create a post
Submit
How to clear tokens in local storage?
Posted on 4/20/2021


GeekSeek
localhost:3000/posts
GeekSeek
Users
Posts
Dashboard
Logout
Submit
How to clear tokens in local storage?
Posted on 4/20/2021
Discussion 1
Ross
How Long Does Ethereum mining takes?
Posted on 4/20/2021
1
Discussion 1
rohan

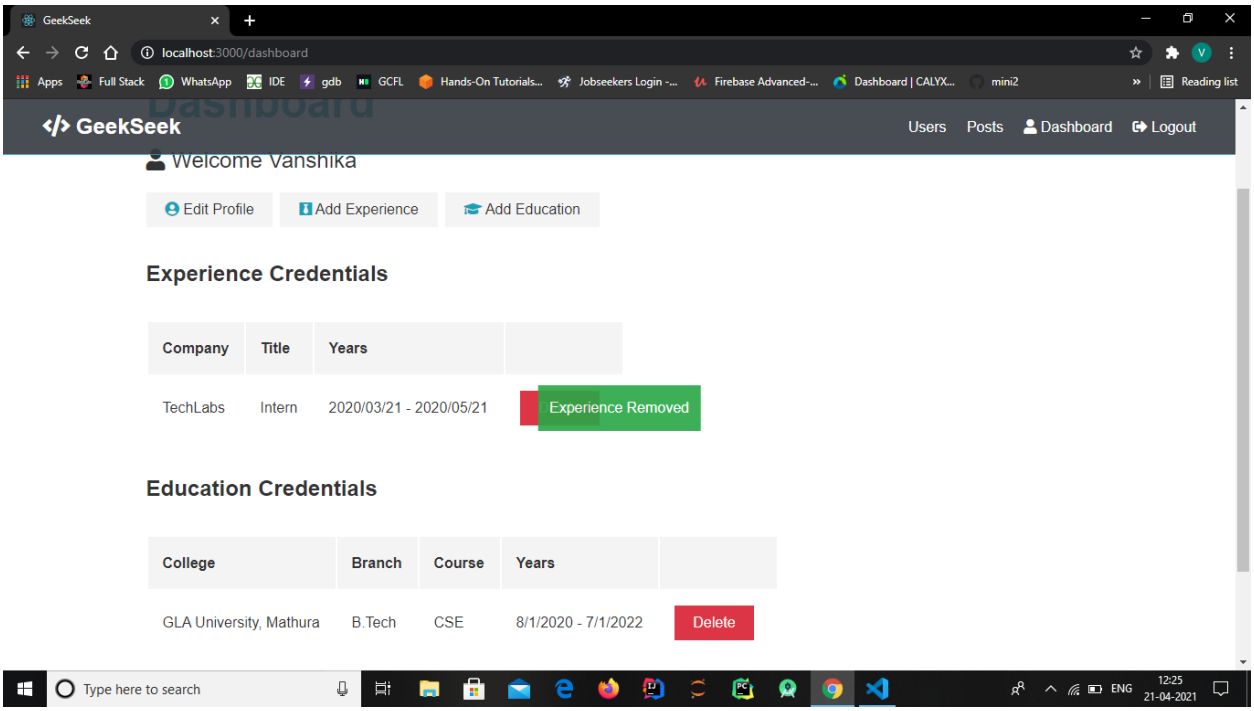


Post Created -

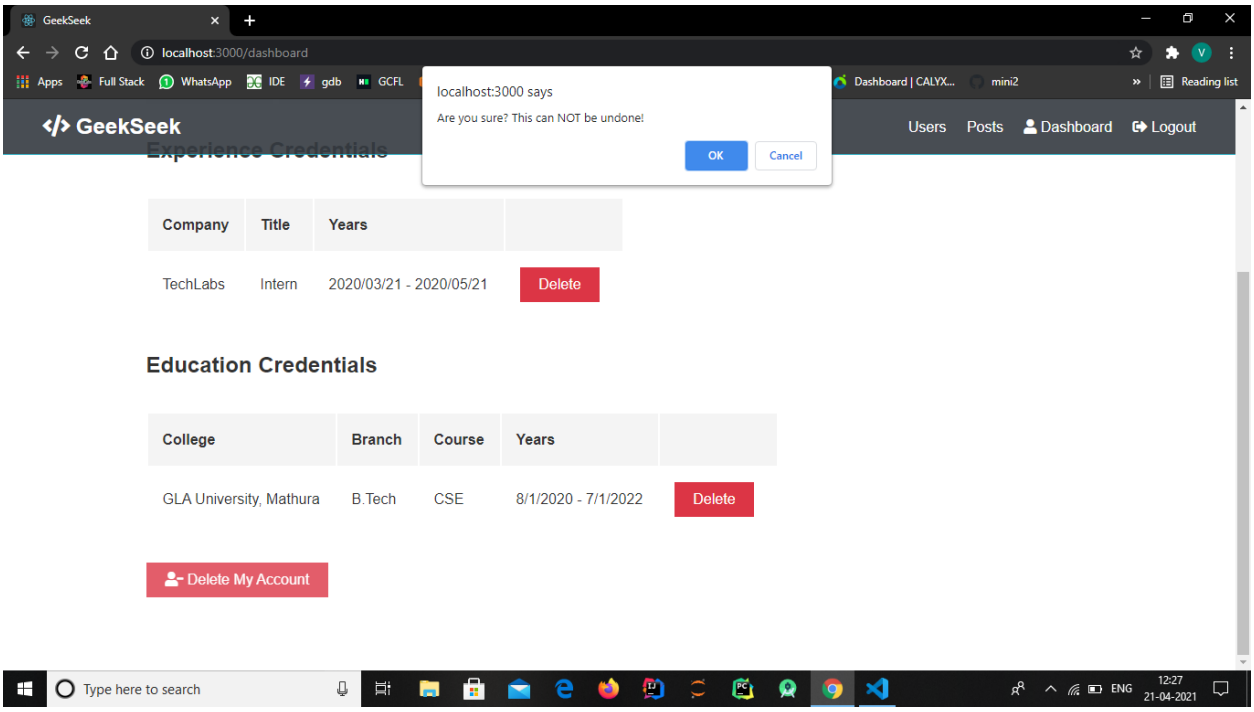




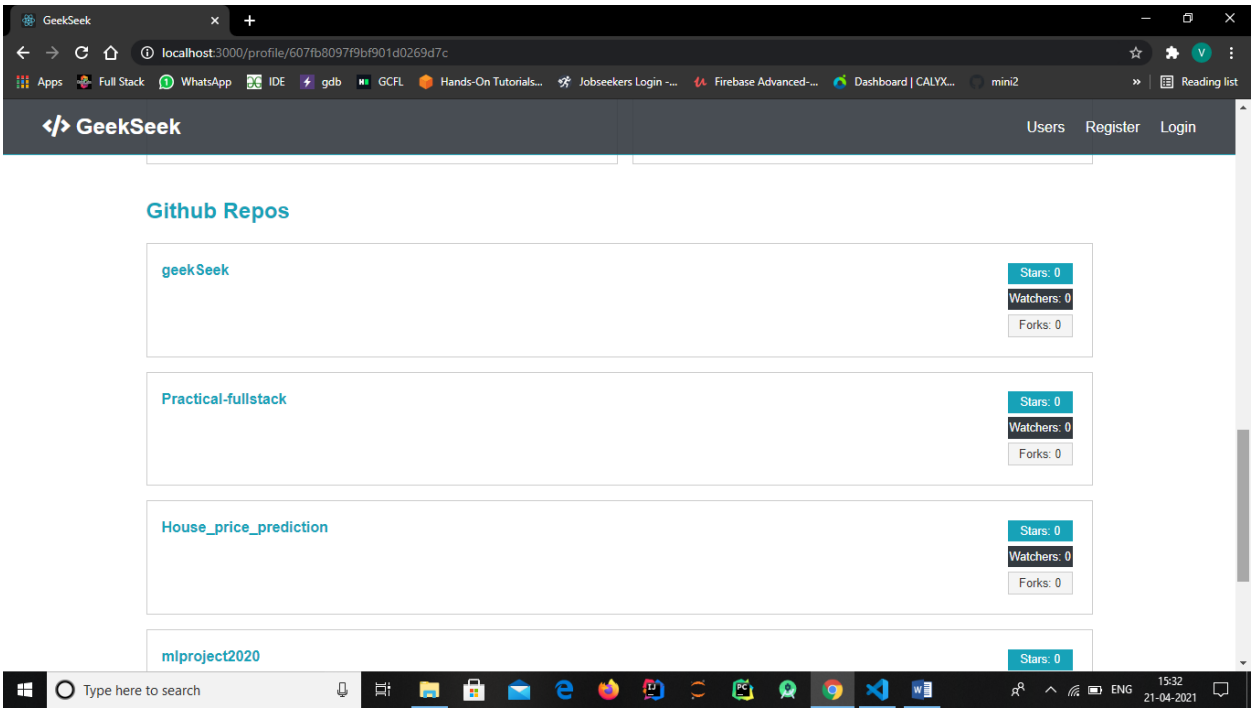
Experience Removed -



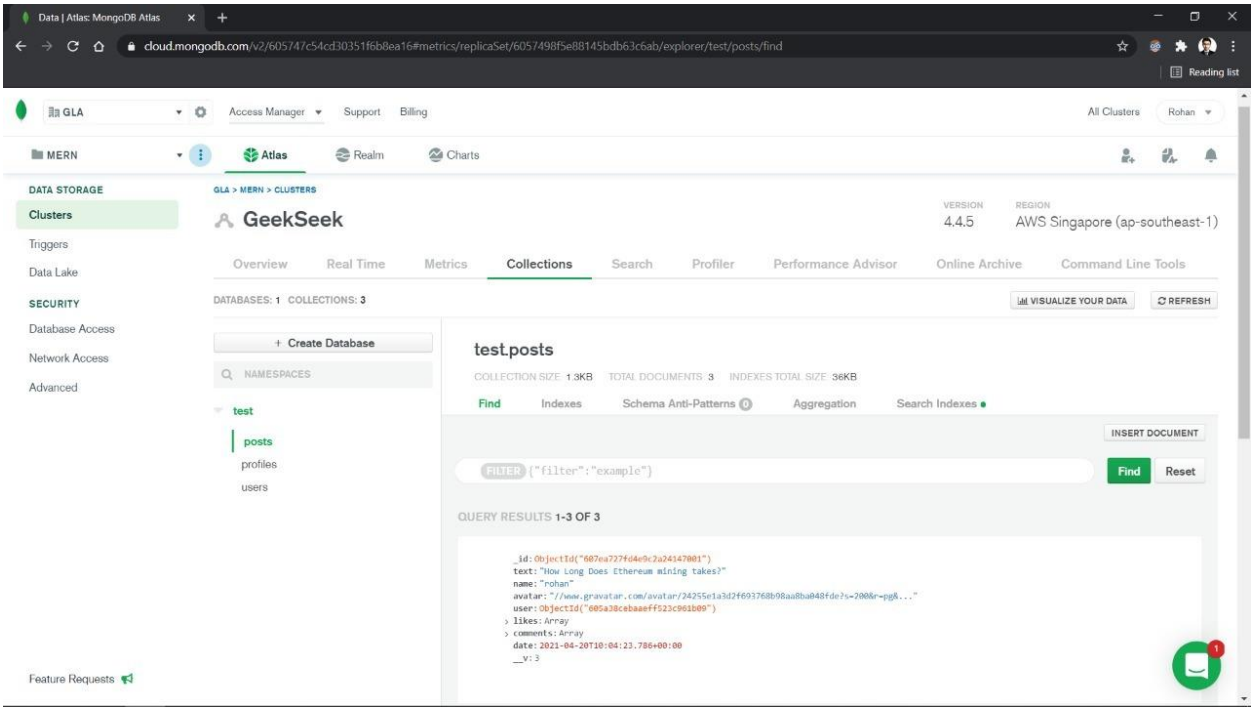
Delete my Account -

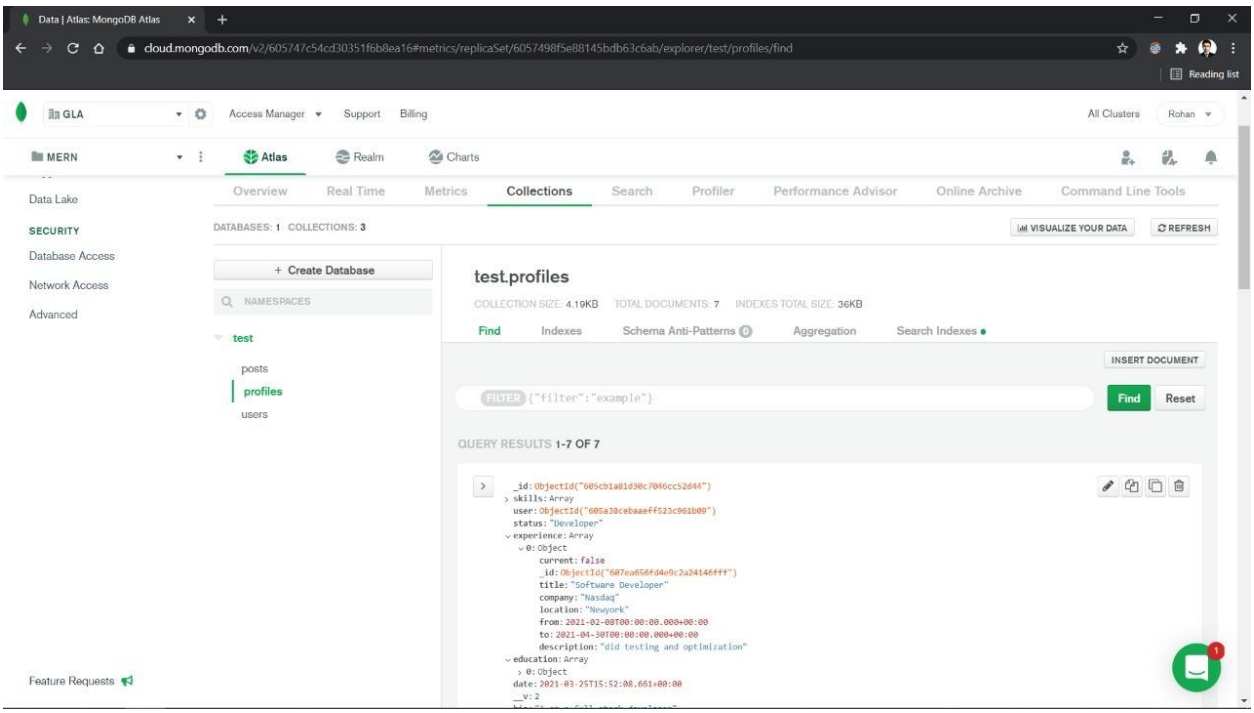


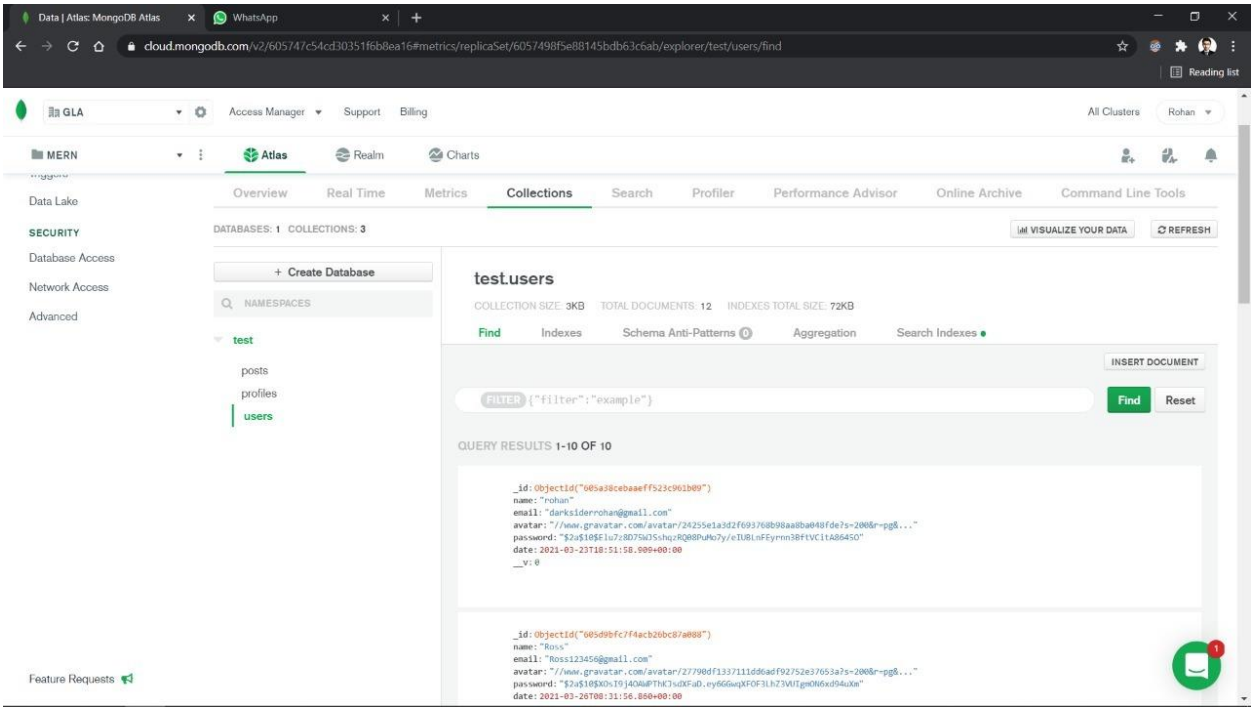
Github Repos -



Backend Screenshots:

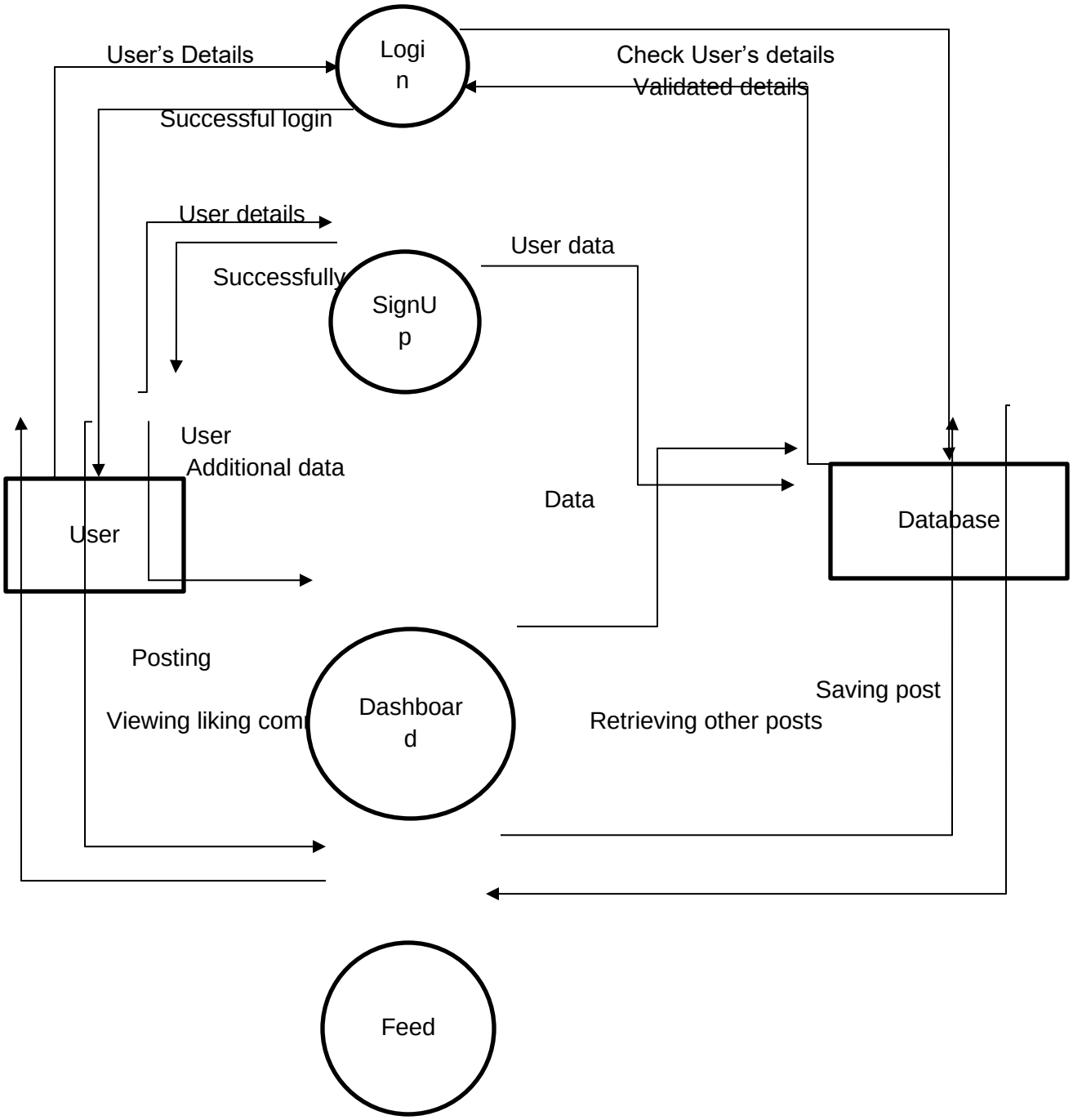


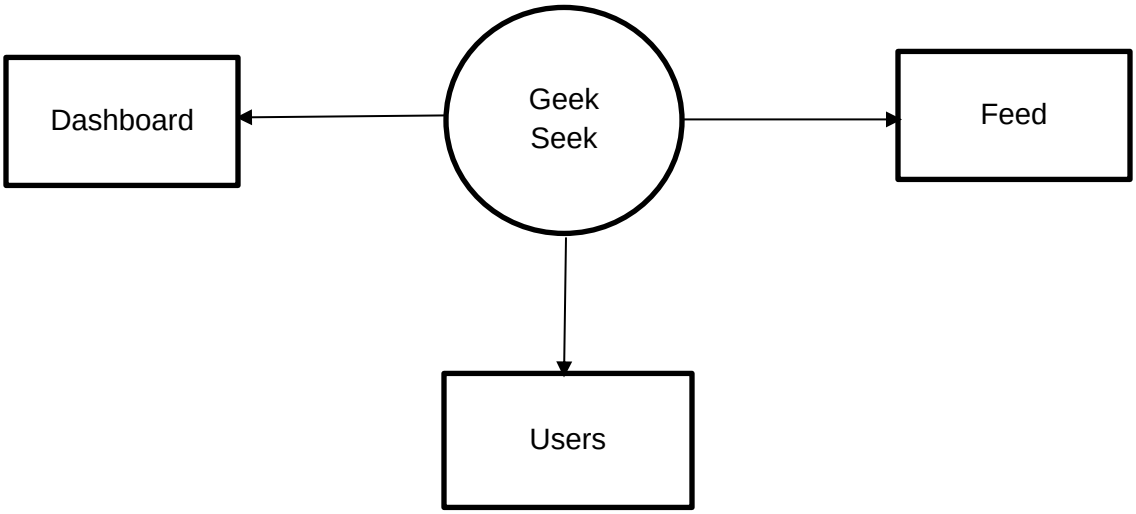



Data | Atlas: MongoDB Atlas
WhatsApp
cloud.mongodb.com/v2/605747c54cd30351f6b8ea16#metrics/replicaSet/6057498f5e88145bdb63c6ab/explorer/test/users/find
Reading list
GLA
Access Manager
Support
Billing
All Clusters
Rohan
MERN
Atlas
Realm
Charts
Overview
Real Time
Metrics
Collections
Search
Profiler
Performance Advisor
Online Archive
Command Line Tools
Data Lake
SECURITY
Database Access
Network Access
Advanced
DATABASES: 1 COLLECTIONS: 3
VISUALIZE YOUR DATA
REFRESH
+ Create Database
NAMESPACES
test
posts
profiles
users
test.users
COLLECTION SIZE: 3KB TOTAL DOCUMENTS: 12 INDEXES TOTAL SIZE: 72KB
Find
Indexes
Schema Anti-Patterns 0
Aggregation
Search Indexes
INSERT DOCUMENT
FILTER {"filter":"example"}
Find
Reset
QUERY RESULTS 1-10 OF 10
_id: ObjectId("605a38cebaaeff523c961b09")
name: "rohan"
email: "darksiderrohan@gmail.com"
avatar: "//www.gravatar.com/avatar/24255e1a3d2f693768b98aa8ba048fde?s=200&r=pg&..."
password: "$2a$10$Elu7z8D75WJSshqzRQ88PuMo7y/eIU8LnFEyrnn3BftVCitA8645O"
date: 2021-03-23T18:51:58.909+00:00
__v: 0
_id: ObjectId("605d9bfc7f4acb26bc87a088")
name: "Ross"
email: "Ross123456@gmail.com"
avatar: "//www.gravatar.com/avatar/27790df1337111dd6adf92752e37653a?s=200&r=pg&..."
password: "$2a$10$X0s19j4OA0PThCJsdXFuD.eyGGGwqXFOF3Lh73VUIgmON6xd94uXm"
date: 2021-03-26T08:31:56.860+00:00
Feature Requests

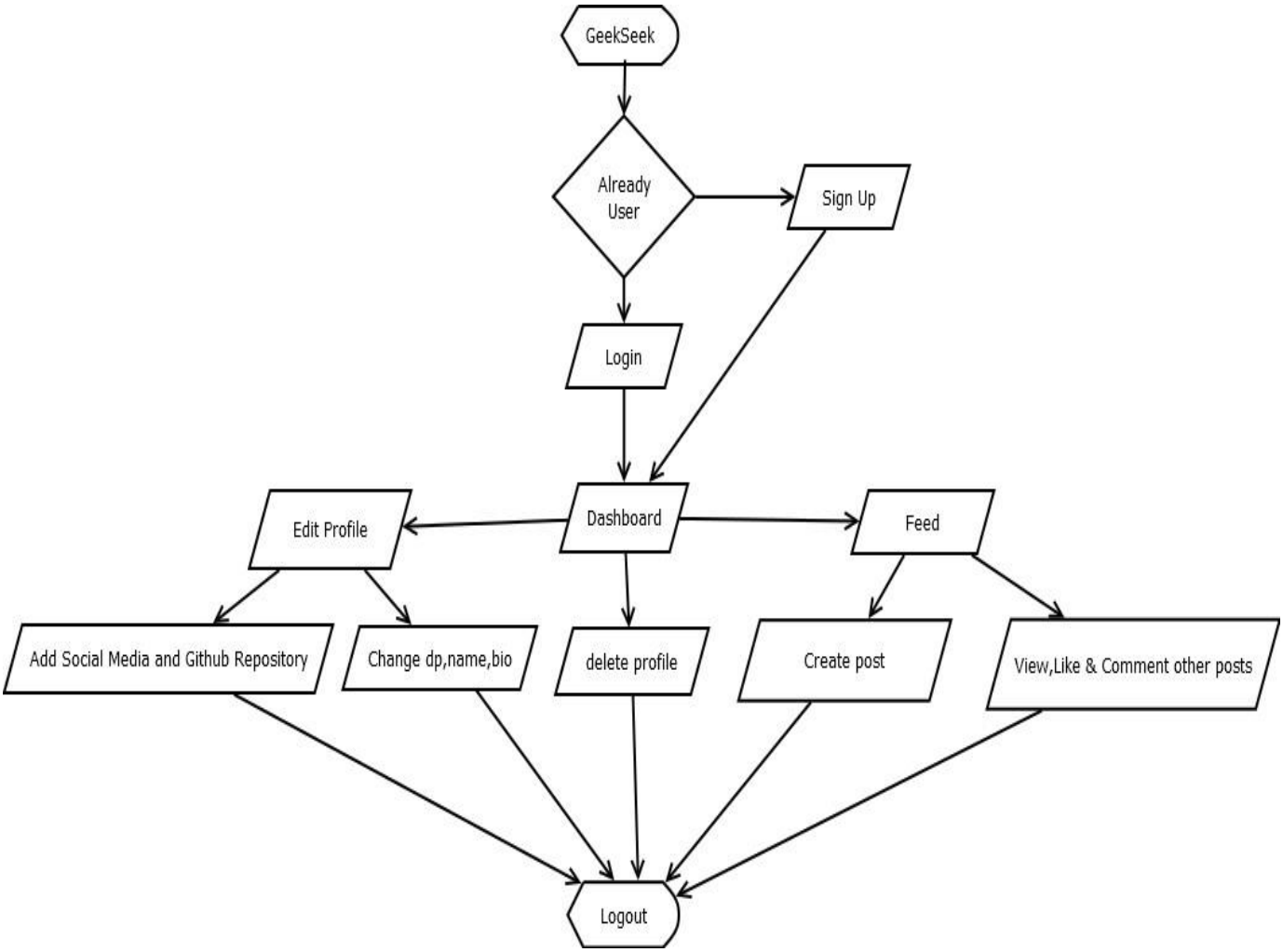
System Design

Data flow diagram:




Dashboard
Geek
Seek
Feed
Users

Flow Chart :


GeekSeek
Already User
Sign Up
Login
Dashboard
Edit Profile
Feed
Add Social Media and Github Repository
Change dp,name,bio
delete profile
Create post
View,Like & Comment other posts
Logout

Unit Testing

Table 1 - Frontend

Test Case	Expected Result	Pass/ Fail
Register user Page	Should register the new user	Pass
Login / Signup page	If user is already register then user should able to login with all valid credentials else user should signup	Pass
Profile creation	User should be able to create profile with all the required information	Pass
User view	User should be able to view all the users on that platform	Pass
Post	User should be able to participate in the on going discussion of the platform and should be able to comment or reply and start new discussion	Pass

Profile view	User should be able to view anyone's profile and should be able to update their profile	Pass
Add skills	User should be able to add their skills in profile	Pass
Add social media info	User should be able to add social media info in their profile	Pass
Log out	User should be able to logout of his account	Pass

Table 2 - Backend App

Server connection	Server should start	Pass
Database connection	Database should connect	Pass

Register user	Should verify valid email and password and give user access to register	Pass
Login /signup page	Should verify all the credentials when user is trying to login(If user is already registered) or sign up and save the data	Pass
Create profile	Save all the data when user is creating the profile	Pass
View profile	Should fetch all the user's data from database and display it on the screen	Pass
Post	Should store all the data to database and display it when the user view post or start the new discussion	Pass
Add skills	Should store all the data to database when user updates the profile	Pass

Add social media info	Should store all the data to database and display it as per user requirements.	Pass
Logout	Should log out the user	Pass

6.2 Compatibility Testing

This application was tested and used on different devices like LG G3, Google Nexus 4. The application worked fine and is stable. The application worked fine both in landscape and portrait modes and there isn't any problem with the resolution or compatibilty.

6.3 User Testing

The present application was tested by my friends who are using different mobile and laptop devices and that seemed to be working fine and they were satisfied with the performance and responsiveness of the application and how the website worked.

Conclusion

The key purpose of developing a Social Networking Site for developers is to reach out to others around the world and share knowledge, educational material, etc. This includes regular social networking material, such as accounts, images, emails, and forums, and video sharing, posts, etc. developers can create accounts, exchange and gain information, teach related lessons, etc. also by using this network, users can share information, educational books, questions/answers, and everything else.

REFERENCES

- https://www.youtube.com/
- https://www.google.com/
- https://www.w3schools.com/
- https://nodejs.org/en/
- https://www.mongodb.com/
- https://reactjs.org/

APPENDIX

Source Code:

https://github.com/RohanBhardwaj/GeekSeek