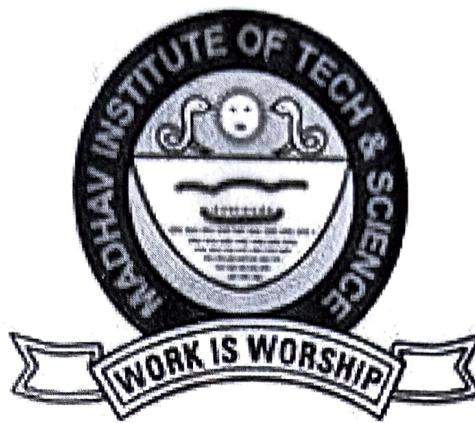


MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR
(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)



Project Report
on
Institute Level Discussion Forum

Submitted By:

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
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GWALIOR - 474005 (MP) est. 1957

MAY-JUNE 2022

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR
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Project Report

on

Institute Level Discussion Forum

A project report submitted in partial fulfilment of the requirement for the degree of

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

Submitted by:

Prabhat Dhakar

0901CS191079

FacultyMentor:

Mr. Mir Shahnawaz Ahmad

Assistant Professor, Computer Science and Engineering

Submitted to:

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE
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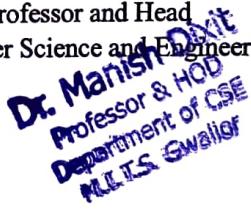
CERTIFICATE

This is certified that **Prabhat Dhakar**(0901CS191079) has submitted the project report titled **Institute Level Discussion Forum** under the mentorship of **Mr. Mir Shahnawaz Ahmad**, in partial fulfilment of the requirement for the award of degree of Bachelor of Technology in Computer Science and Engineering from Madhav Institute of Technology and Science, Gwalior.



09/05/22
Mr. Mir Shahnawaz Ahmad
Faculty Mentor
Assistant Professor
Computer Science and Engineering



09/05/22
Dr. Manish Dixit
Professor and Head
Computer Science and Engineering

Dr. Manish Dixit
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MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

DECLARATION

I hereby declare that the work being presented in this project report, for the partial fulfilment of requirement for the award of the degree of Bachelor of Technology in Computer Science and Engineering at Madhav Institute of Technology & Science, Gwalior is an authenticated and original record of my work under the mentorship of **Mr. Mir Shahnawaz Ahmad, Assistant Professor, Computer Science and Engineering.**

I declare that I have not submitted the matter embodied in this report for the award of any degree or diploma anywhere else.



Prabhat
Dhakar 0901CS
191079
3rd Year
Computer Science and Engineering

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR
(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

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I would sincerely like to thank my department, **Department of Computer Science and Engineering**, for allowing me to explore this project. I humbly thank **Dr. Manish Dixit**, Professor and Head, Department of Computer Science and Engineering, for his continued support during the course of this engagement, which eased the process and formalities involved.

I am sincerely thankful to my faculty mentors. I am grateful to the guidance of **Mr. Mir Shahnawaz Ahmad, Assistant Professor**, Computer Science and Engineering for their continued support and guidance throughout the project. I am also very thankful to the faculty and staff of the department.


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Abstract

Time is very precious and we cannot afford to waste it. Usually, we see students spending a lot of time on searching the solution of their daily queries related to studies, institute, webinar due to the lack of proper communication among them. Till now there is no such application where students of any particular institute are connected together where they can ask their queries in such a way that it will be shared with all related users of that institute, user with the solution of that query can put their views and answer. Keeping all these things in mind I have developed a web application having desired features and interface which will help students to find solutions rapidly and these questions with all the answers(answered by different users) will be stored in the database forever so whenever any student is searching for query that is answered earlier will be available to them.

Keywords: Web application, Queries, database, interface, features.

सार :

समय बहुत कीमती है और हम इसे बर्बाद नहीं कर सकते। आमतौर पर, हम देखते हैं कि छात्र अपने बीच उचित संचार की कमी के कारण पढ़ाई, संस्थान, वेबिनार से संबंधित अपने दैनिक प्रश्नों का समाधान खोजने में बहुत समय व्यतीत करते हैं। अभी तक ऐसा कोई एप्लिकेशन नहीं है जहां किसी विशेष संस्थान के छात्र आपस में जुड़े हों, जहां वे अपने प्रश्न इस तरह से पूछ सकें कि इसे उस संस्थान के सभी संबंधित उपयोगकर्ताओं के साथ साझा किया जाएगा, उपयोगकर्ता उस प्रश्न के समाधान के साथ अपने विचार रख सकते हैं। और उत्तर। इन सभी बातों को ध्यान में रखते हुए मैंने वांछित सुविधाओं और इंटरफेस वाला एक वेब एप्लिकेशन विकसित किया है जो छात्रों को तेजी से समाधान खोजने में मदद करेगा और सभी उत्तरों के साथ ये प्रश्न (विभिन्न उपयोगकर्ताओं द्वारा उत्तर दिए गए) हमेशा के लिए डेटाबेस में संग्रहीत किए जाएंगे ताकि जब भी कोई छात्र हो उन प्रश्नों की खोज करना जिनका उत्तर पहले दिया जा चुका है, उनके लिए उपलब्ध होगा।

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CHAPTER 1: INTRODUCTION

1.1 Project Overview

This project is a web application, which will provide an interface to the users/students for better communication among them. It will provide the feature by which students can post their queries to the portal and it will be circulated with everyone using this application. Student who wants to contribute to solving the problem can post their solutions. It will help students to find solutions very rapidly and all the questions asked will remain in the database with the answers attached to it, and can be easily accessed in the future.

1.2 Problem with existing system

We have some platforms like this, but they are somehow lacking in maintaining proper communication. Pre-existing applications don't have double-sided communication. For reference take example of collage apps, where only teacher or person related to management has access to post anything & students can only read it.

1.3 Proposed System

I developed an application which will be overcoming all the lacks in the existing system which are discussed in the previous section. It will allow two-way communication, where one user can ask a question and another can answer it. These Queries & their responses will be stored in the database and can be accessed easily .

1.4 Technologies Used

We have developed this project using following technologies

1. HTML : Page layout has been designed with the help of HTML
2. CSS : All the designing part was result of implementation of CSS
3. Express.js : Database was created & handled with the help of Express.js framework
4. Next.js : Front-end is designed using Next.js Frame work
5. Mongo DB : Used for storing data
6. Javascript : All logics has been implemented in Javascript only

1.5 System Requirements

Windows Based Requirements:

Computers running Microsoft Windows must meet the following minimum hardware and software requirements.

Microsoft Windows: 7/8/10/11

4 GB RAM minimum, 8 GB RAM recommended

1GB of available disk space minimum

1280 * 800 minimum screen resolution

Software Requirement: Node.js 16.15.0

Hardware Requirement: Laptop/Computer

Internet Connectivity

CHAPTER 2: INITIATING AND PLANNING

This Process helps in visualization of what is to be accomplished & finding prerequisites of developing a project. Plans are documented, the project deliverables and requirements are defined, and the project schedule is created.

It involves creating a set of plans to help guide our team through the implementation and closure phases of the project. The plans created during this phase will help in managing time, cost, quality, changes, risk and related issues

2.1 Prerequisites

To design a eye catching user interface we need to know basic level of HTML and react.js to design skeleton of web-pages & to style them and make them look beautiful, prior knowledge of CSS is needed.

Prior knowledge of Javascript is needed to implement various logics, and Framework like:

Next.js and Express.js is needed for designing Front-end and back-end. MongoDB & knowledge of mongoose is prerequisite for designing databases and implement various operations on data.

1. HTML : Page layout has been designed with the help of HTML
2. CSS : All the designing part was result of implementation of CSS
3. Next.js : Used for creating app
4. Express.js : Used for back-end
5. MongoDB: Database use is mongoDB
6. Javascript : All logics has been implemented in Javascript only

2.2 Installation of dependencies

Keeping all the prerequisites in mind, we need to install some needed libraries. Some of them are mentioned below:

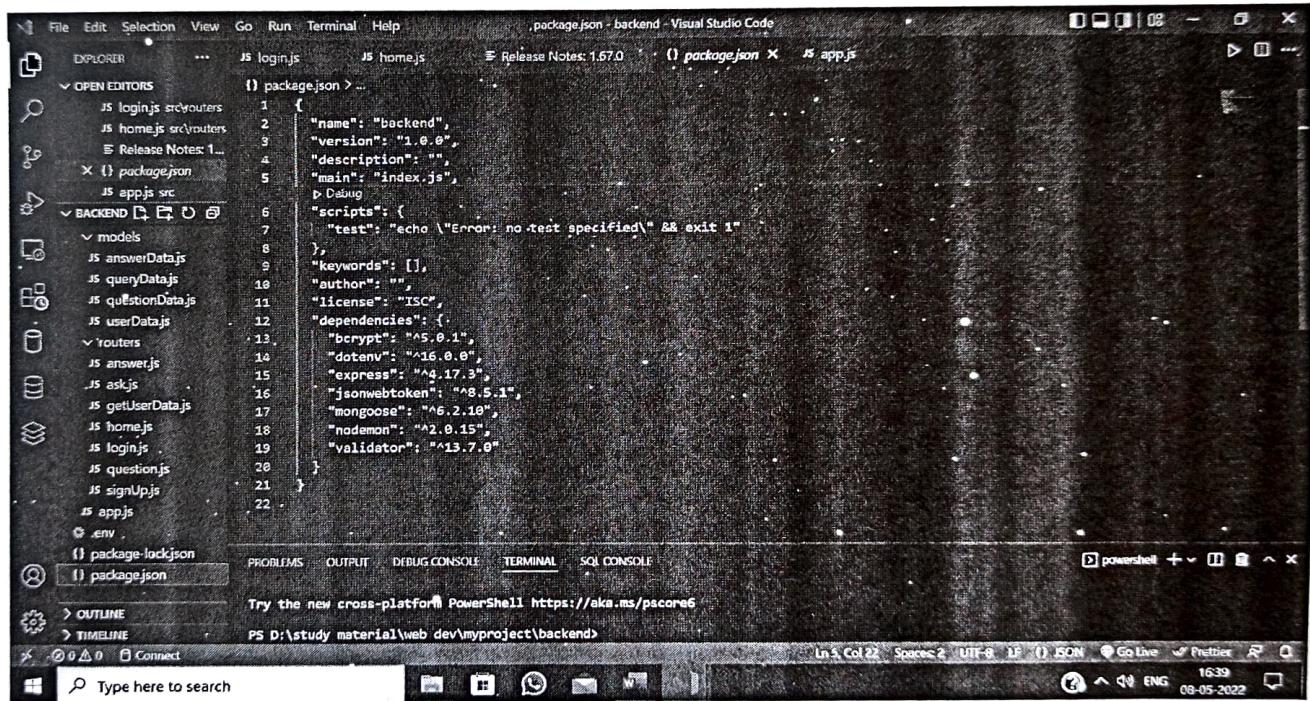
1. Node.js
2. Express
3. Create-next-app
4. mongoose

CHAPTER 3: EXECUTING

This process is also known as the implementation phase, in which the plan designed in the previous phase of the project activity cycle is put into action. The intent of the execution phase of the project activity cycle is to bring about the project's expected results. Normally, this is the longest phase of the project management life cycle, where most resources are applied.

This is the step where our plan & visualization came into practical implementation. From here we started writing code by importing the dependencies needed which we had installed in previous phase, started designing database, designed various models that we need in future, code etc.

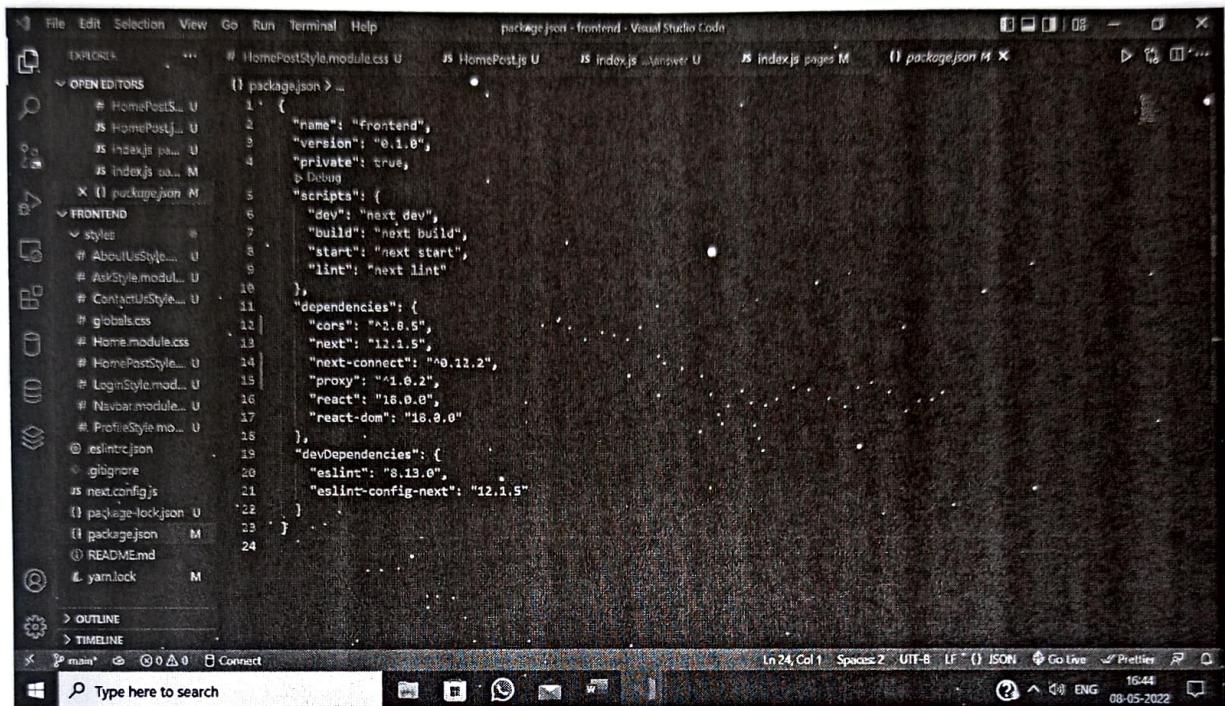
3.1 Back-end Dependencies



```
1  {
2    "name": "backend",
3    "version": "1.0.0",
4    "description": "",
5    "main": "index.js",
6    "scripts": {
7      "test": "echo \\\"Error: no test specified\\\" & exit 1"
8    },
9    "keywords": [],
10   "author": "",
11   "license": "ISC",
12   "dependencies": {
13     "bcrypt": "^5.0.1",
14     "dotenv": "16.0.0",
15     "express": "^4.17.3",
16     "jsonwebtoken": "^8.5.1",
17     "mongoose": "6.2.10",
18     "nodemon": "2.0.15",
19     "validator": "13.7.0"
20   }
21 }
22 }
```

Figure 3.1 list of back-end dependencies

3.2 Front-end Dependencies



The screenshot shows the Visual Studio Code interface with the following details:

- File Bar:** File, Edit, Selection, View, Go, Run, Terminal, Help.
- Editor:** The main editor window displays the `package.json` file for a Next.js project. The file content is as follows:

```
1  {
2    "name": "Frontend",
3    "version": "0.1.0",
4    "private": true,
5    "scripts": {
6      "dev": "next dev",
7      "build": "next build",
8      "start": "next start",
9      "lint": "next lint"
10    },
11    "dependencies": {
12      "cors": "2.8.5",
13      "next": "12.1.5",
14      "next-connect": "4.0.12.2",
15      "proxy": "1.6.2",
16      "react": "18.0.8",
17      "react-dom": "18.0.0"
18    },
19    "devDependencies": {
20      "eslint": "8.13.0",
21      "eslint-config-next": "12.1.5"
22    }
23  }.
```

- Explorer:** Shows the project structure with files like `HomePost.module.css`, `HomePost.js`, `index.js`, `index.js.pages.tsx`, and `package.json`.
- Bottom Bar:** Includes a search bar, terminal tabs, and status indicators like "Ln 24 Col 1", "Spaces 2", "UTF-8", "LF", "JSON", "Go Live", "1644", "ENG", and "08-05-2022".

Figure 3.2 list of front-end dependencies

CHAPTER 4: MONITOR AND CONTROL

This process involves comparing actual performance with planned performance and taking corrective action to yield the desired outcome when significant differences exist

After successfully implementing the strategies to remove errors & making desired changes in the code, we are ready with our Health Tracker. Some screenshots of successful working of project are as follows:

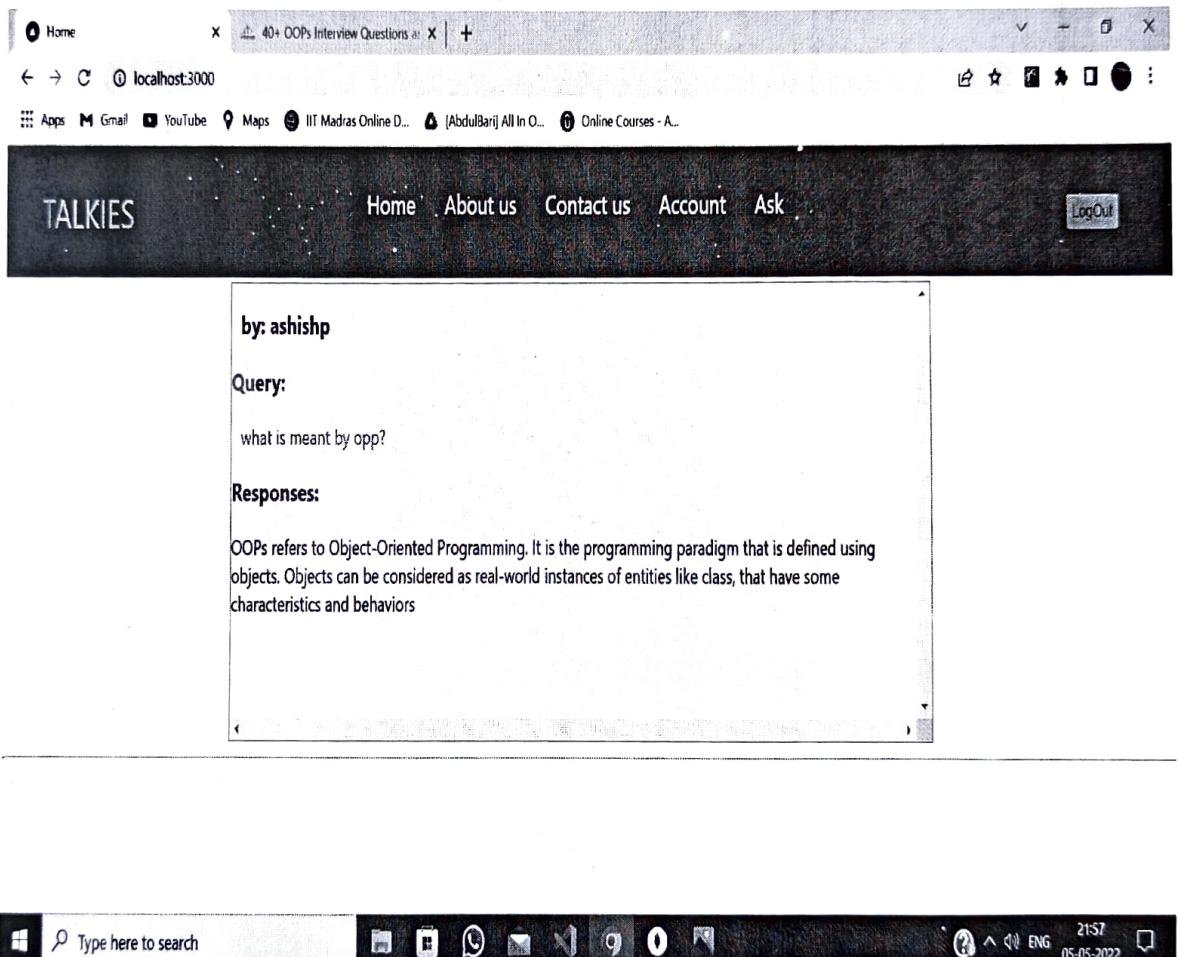


Figure 4.1 Home page

localhost:3000/ask

Home About us Contact us Account Ask Logout

Enter your query here

Select Tags

CS/IT ECE EE MECH CIVIL CHEMICAL

Post Query



Figure 3.2 Ask Queries

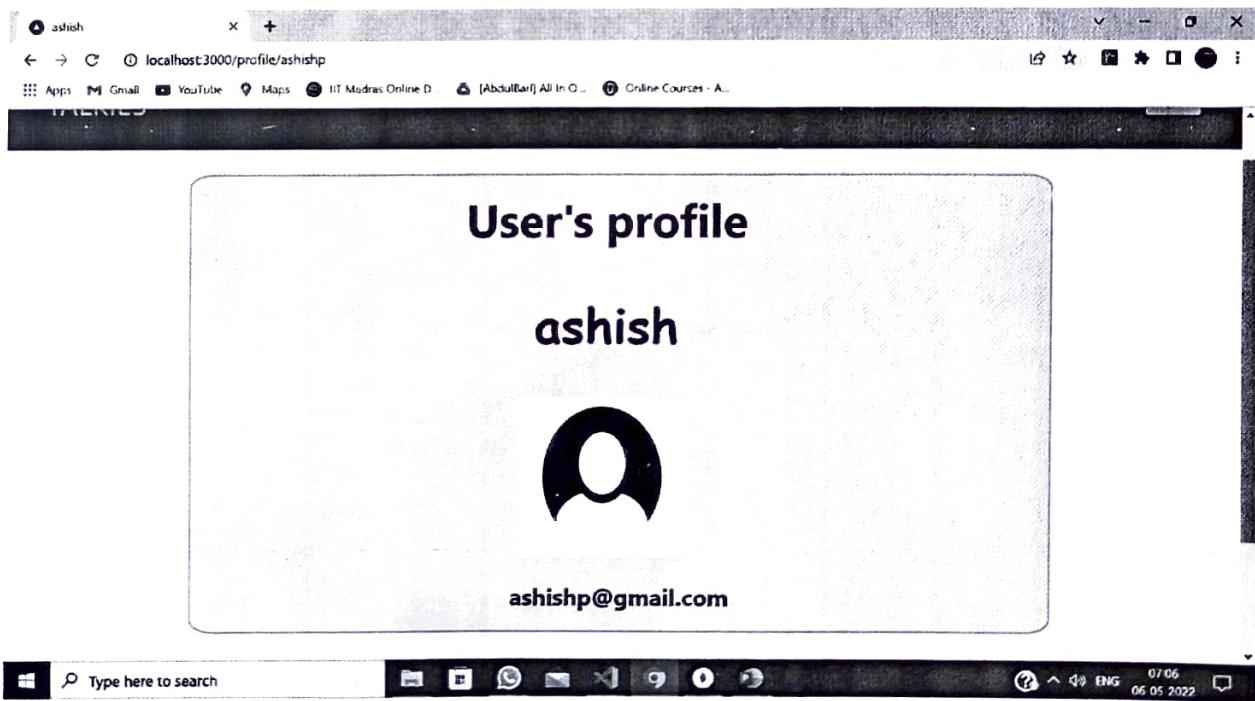


Figure 4.3 User profile

CHAPTER 5: CONCLUSION AND FUTURE SCOPE

5.1 Conclusion

Purpose of this project is to establish proper communication among students and provide them an interface where they can get solution of their queries very rapidly. Moto of this project is to provide answer to their queries and providing them a plate form where they can present their views. This will save efforts and time.

5.1 Future Scope

- A searching system can be added so that student can see whether this kind of query is already asked or not. If it is already asked then he/she can find the solution from previously given responses.
- A system can be added where student can access the study material such as notes, previous year question papers
- A NOTICE system can be added so that where authorized person can post the notices related to academic and cultural activities.

References

1. Next.js by Vercel - The React Framework (nextjs.org)
2. React – A JavaScript library for building user interfaces (reactjs.org).
3. `howtocodeinreactjs` book by Joe Morgan