A SOCIAL MEDIA Q&A WEBSITE

A Project Report

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DECLARATION

I hereby declare that the project entitled “A Social Media Q&A website” submitted for the B. Tech. (CSE) degree is my original work and the project has not formed the basis for the award of any other degree, diploma, fellowship or any other similar titles.

Signature of the Student

Place:

Date:

CERTIFICATE

This is to certify that the project titled “A Social Media Q&A website” is the bona fide work carried out by PRANAY BHATNAGAR (191B190), RANGOLI JAISWAL (191B199), RISHI NEELKANTH (191B201), students of B Tech (CSE) of Jaypee University of Engineering and Technology, Guna (M.P), during the academic year 2020-21, in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology (Computer Science and Engineering) and that the project has not formed the basis for the award previously of any other degree, diploma, fellowship or any other similar title.

Signature of the Guide

Place:

Date:

ABSTRACT

This is a social questions and answers website in which users can create their account and can post their questions and can answer questions posted by other users. Using this website students can get their problems resolved by others , it will also help students communicate with seniors and clear all their doubts and questions .So here is all the technologies we have used React.js – for frontend , Redux – for state management tools , Firebase – for backend , Material UI – for icons .This project is bootstrapped with CREATE-REACT-APP and redux template. This project will make communication between people of same interest very easy and effective.

ACKNOWLEGEMENT

We have invested a lot of time and efforts in completion of this project but this project would not have been possible without the kind support of various individuals and organizations, we hereby extend our sincerest gratitude to all of them. We are highly indebted to our faculty DR. Neelesh Kumar Jain . We would like to thank him for his constant guidance and supervision. We would like to thank the JUET for providing us with such supportive and innovative environment facilities and lending us their support whenever required.

We will also like to thank the whole as an organization for providing us with such opportunities. At last we all will like to thank and congratulate our fellow project members for their hard-work and dedication.

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1. INTRODUCTION

1.1 Problem Definition

The project we are making is about an online Question and Answer questioning and answering website which contains people of same interest who work or are part of a campus or a office .User can put their questions and those questions can be answered by someone of same interest or user can answer the questions put up by someone else of his/her field of interest .

1.2 Project Overview/Specifications

Project overview are the silent features of the project , the services which it will provide to the user and the user interface .

- The Login & Sign Up page for user authentication.
- Add Question Button is provided for asking questions.
- User can also upload image along with the question .
- Answer button available for answering questions .
- Section for different interests.
- Section for Spaces to Follow.
- It is mobile-friendly.
- Realtime Database on firebase cloud firestore.

1.3 Hardware Specification

Hardware Specification means the minimum technical specification and configuration that must be met by the Hardware in order to ensure the correct operation of the Software.

Component	Minimum	Recommended
Processor	1.9 gigahertz (GHz) x86- or x64-bit dual core processor with SSE2 instruction set	3.3 gigahertz (GHz) or faster 64-bit dual core processor with SSE2 instruction set
Memory	2-GB RAM	4-GB RAM or more
Display	Super VGA with a resolution of 1024 x 768	Super VGA with a resolution of 1024 x 768

1.4 Software Specification

A software requirements specification (SRS) is a document that describes what the software will do and how it will be expected to perform. It also describes the functionality the product needs to fulfill all stakeholders needs.

- Microsoft Edge (latest publicly-released version) running on Windows 11, Windows 10, Window 8.1 Windows 8.1 extended support will end January 10, 2023.
- Mozilla Firefox (latest publicly-released version) running on Windows 11, Windows 10, Windows 8.1.
- Google Chrome (latest publicly-released version) running on Windows 11, Windows 10, Windows 8.1
- Google Chrome (latest publicly-released version) running on the two latest publicly-release Mac OS versions
- Apple Safari (latest publicly-released version) running on the two latest publicly-release Mac OS versions

2.LITERATURE SURVEY

2.1 Existing System

Existing System means a system which is currently in use and is running successfully with user all around the world .

Quora and reddit are the two existing system similar to this project in different ways.

2.1.1 Quora

Quora is an American social question-and-answer website based in Mountain View, California, United States. It was founded on June 25, 2009, and made available to the public on June 21, 2010. Users can collaborate by editing questions and commenting on answers that have been submitted by other users. As of 2020, the website was visited by 300 million users a month.

URLs of questions only contain the question title without a numeric identifier as used on Stack Exchange sites (in addition to a URL slug), and before the title, if the question is unanswered. With the help of asynchronous JavaScript and XML, some site functionality resembles instant messaging, such as updating follow counts and an indicator showing that a user is typing an answer. Quora has developed its own proprietary algorithm to rank answers, which works similarly to Google's PageRank. Quora uses Amazon Elastic Compute Cloud technology to host the servers that run its website. In November 2012, Quora introduced the Top Writers Program as a way to recognize individuals who had made especially valuable content contributions to the site and encourage them to continue.

2.1.2 Reddit

Reddit is an American social news aggregation, web content rating, and discussion website. Registered members submit content to the site such as links, text posts, images, and videos, which are then voted up or down by other members. Posts are organized by subject into user-created boards called "communities" or "subreddits", which cover a variety of topics such as news, politics, religion, science, movies, video games, music, books, sports, fitness, cooking, pets, and image-sharing. Although there are strict rules prohibiting harassment, it still occurs, and Reddit administrators moderate the communities and close or restrict them on occasion. Moderation is also conducted by community-specific moderators, who are not considered Reddit employees.

As of September 2021, Reddit ranks as the 19th-most-visited website in the world and 7th most-visited website in the U.S., according to Alexa Internet.

Reddit was founded by University of Virginia roommates Steve Huffman and Alexis Ohanian, with Aaron Swartz, in 2005. Condé Nast Publications acquired the site in October 2006. In 2011, Reddit became an independent subsidiary of Condé Nast's parent company, Advance Publications.

2.2 Proposed System

Our Social Media Q&A website which is inspired by Quora and Reddit but is different and better in many ways.

- In our site we have a very precise traffic .
- Registered users of the website can ask questions , can aswer question.
- Website has a section for daily world knowledge.
- There are also many communities of different interests.
- The project is also mobile friendly which means it can easily be access through mobile

2.3 Feasibility Study

A feasibility study is an analysis that considers all of a project's relevant factors including economic, technical, legal, and scheduling considerations to ascertain the likelihood of completing the project successfully.

2.3.1 Financial Feasibility

Being a web application our site will have an associated hosting cost. The system will follow the freeware software standards. No cost will be charged from the potential customers. Bug fixes and maintaining tasks will have an associated cost. At the initial stage the potential market space will be the local universities and higher educational institutes. Beside the associated cost, there will be many benefits for the customers. Especially the extra effort that is associated with paper making and marking will be significantly reduced while the effort to create descriptive statistical reports will be eliminated, since reports generation is fully automated. From these it's clear that our project is financially feasible.

2.3.2 Technical Feasibility

Our project is a complete web based application. The main technologies and tools that

are associated with our project are :-

- React.js – for frontend
- Redux – for state management tools
- Firebase – for backend
- Material UI – for icons

Each of the technologies are freely available and the technical skills required are

manageable. Time limitations of the product development and the ease of implementing

using these technologies are synchronized. The web site will be hosted in a free web hosting space.

From these it's clear that the project OES is technically feasible.

2.3.3 Resource Feasibility

Resources that are required for our project includes,

- Programming device (Laptop)
- Hosting space (freely available)
- Programming tools (freely available)
- Programming individuals

So it's clear that our project has the required resource feasibility.

2.3.4 Risk Feasibility

Risk feasibility can be discussed under several contexts.

Risk associated with size

- Estimated size of the product in line of codes:

  Being a web application with many number of stakeholders, our project will contain significant amount of code lines.

- Estimated size of product in number of programs:

  Though the application supports many stakeholders, it will be constructed as a single web application with a single login page rather than having many number of sites for different users. Depending on the access rights, the contents will be showed or hidden.

- Size of database created or used by the product:

  Database size will not exceed the values supported by Firebase Cloud Firestore. Number of relations and entities are minimized by using best practices of normalization theories.

- Users of the product:

  People who are studying or working in university or office .
  Admin (Us).

- Number of projected changes to the requirements for the product? Before delivery? After delivery:

  The requirements are clearly identified before the implementation phase. Being a general product (not specific to a single user) the requirements will be changed only if new functionalities are added to the system.

- Customer related risks:

  Our project is a general type of product (not designed just for a single college). Before implementing the system in an educational institute, there will be some basic modifications required.

- Technology risks (Is the technology to be built new?)

  All the technologies are very well established and old enough (but not obsolete).

2.3.5 Social/Legal Feasibility

Our project uses freely available development tools, and provide the system as an open source system. Only the maintenance cost will be charged from potential customers. Libraries that are used in this system are free open source libraries.

3. SYSTEM ANALYSIS & DESIGN

3.1 Requirement Specification

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 and scripting languages such as JavaScript.

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

Javascript: JavaScript, often abbreviated JS, is a programming language that is one of the core technologies of the World Wide Web, alongside HTML and CSS. Over 97% of websites use JavaScript on the client side for web page behavior, often incorporating third-party libraries.

ReactJS: React is a free and open-source front-end JavaScript library for building user interfaces based on UI components. It is maintained by Meta and a community of individual developers and companies. React can be used as a base in the development of single-page or mobile applications.

Material UI: Material UI is an open-source, front-end framework for React components that has 60,500 plus stars on github. It is built using Less. Less (stands for Leaner Style Sheets), is a backward-compatible language extension for CSS. Material UI stays recent with regular updates.

Firebase: Firebase is a platform developed by Google for creating mobile and web applications. It was originally an independent company founded in 2011. In 2014, Google acquired the platform and it is now their flagship offering for app development.

3.2 Flowcharts / DFDs / ERDs

In this project we have the Use case Diagram and Entity Relation Diagram which describes the project's internal working in a more elaborative way.

3.2.1 Use Case Diagram

A use case diagram is a graphical depiction of a user's possible interactions with a system. A use case diagram shows various use cases and different types of users the system has and will often be accompanied by other types of diagrams as well. The use cases are represented by either circles or ellipses.

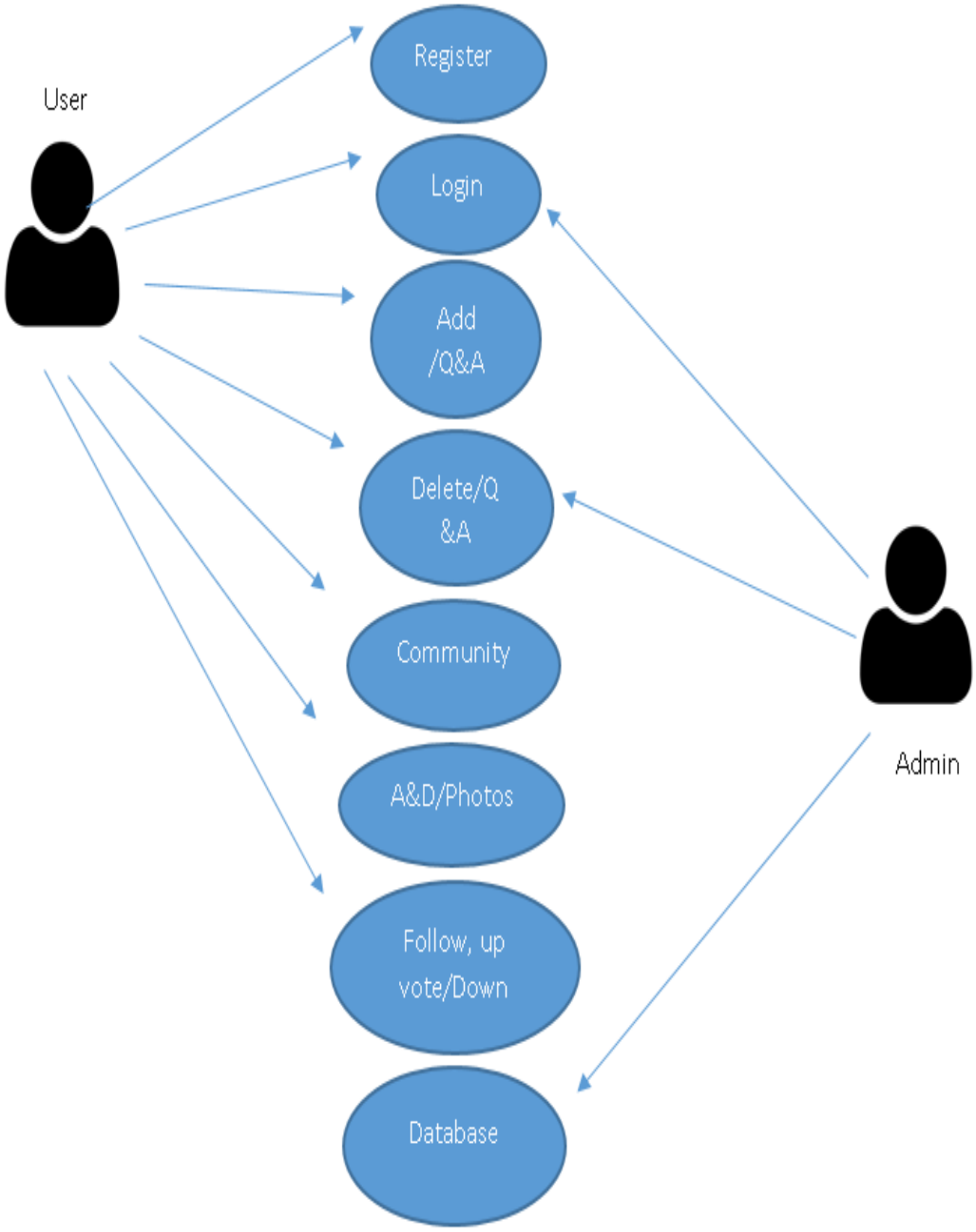


Figure 3.1: Use Case Diagram

Explanation

Register - Admin can register a new user.

Login - After registration user can login himself whenever he want.

Add Q/A - User can add any type of Questions on the website.

Delete Q/A - User can also delete the Questions which is uploaded on website.

Community - User can subscribe to any community which he want to join.

Add & Delete Photos - User can add and delete photo.

Follow up / down vote - Individual can follow other users.

Database – The questions and answers uploaded by the user is stored in database.

3.2.2 ER Diagram

ER Diagram stands for Entity Relationship Diagram, also known as ERD is a diagram that displays the relationship of entity sets stored in a database. In other words, ER diagrams help to explain the logical structure of databases. ER diagrams are created based on three basic concepts: entities, attributes and relationships.

ER Diagrams contain different symbols that use rectangles to represent entities, ovals to define attributes and diamond shapes to represent relationships.

At first look, an ER diagram looks very similar to the flowchart. However, ER Diagram includes many specialized symbols, and its meanings make this model unique.

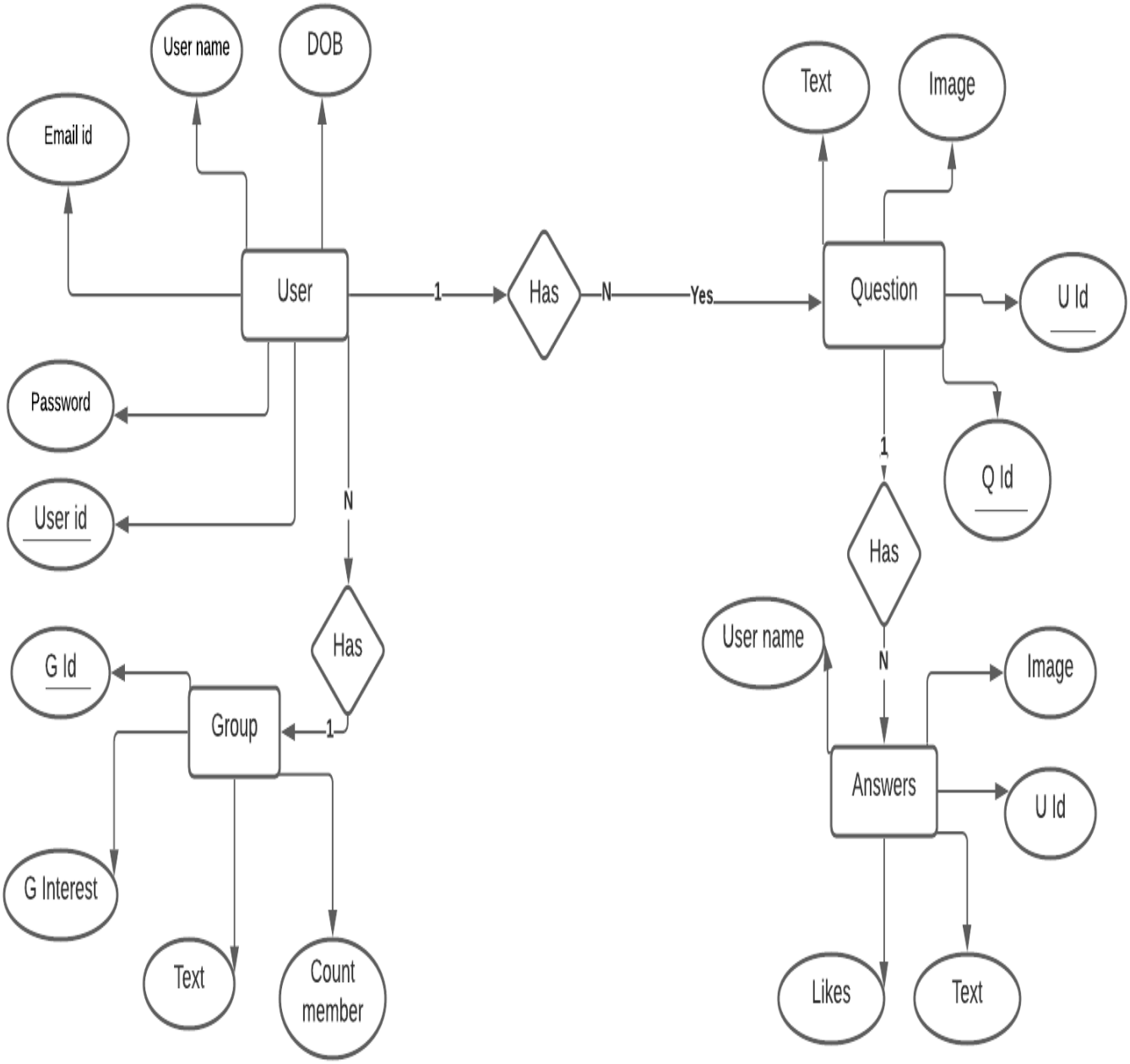


Figure 3.2: ER Diagram

Explanation

User

- User id : This will act as primary key and will be unique to every user.
- User name : Username will be chosen by the user.

- Password: Password will be chosen by the user.
- Email ID: Email ID will be entered by the user.
- DOB: Date of Birth will be entered by the user.

Question

- QID – Every Question will have their unique id.
- Image – Every user can post photos related to Questions.
- Up vote – User can like and dislike the Questions posted in the websites.
- Text - User can the change the text according to requirement.
- Userid – Every Question will have their user name displayed.

Answers

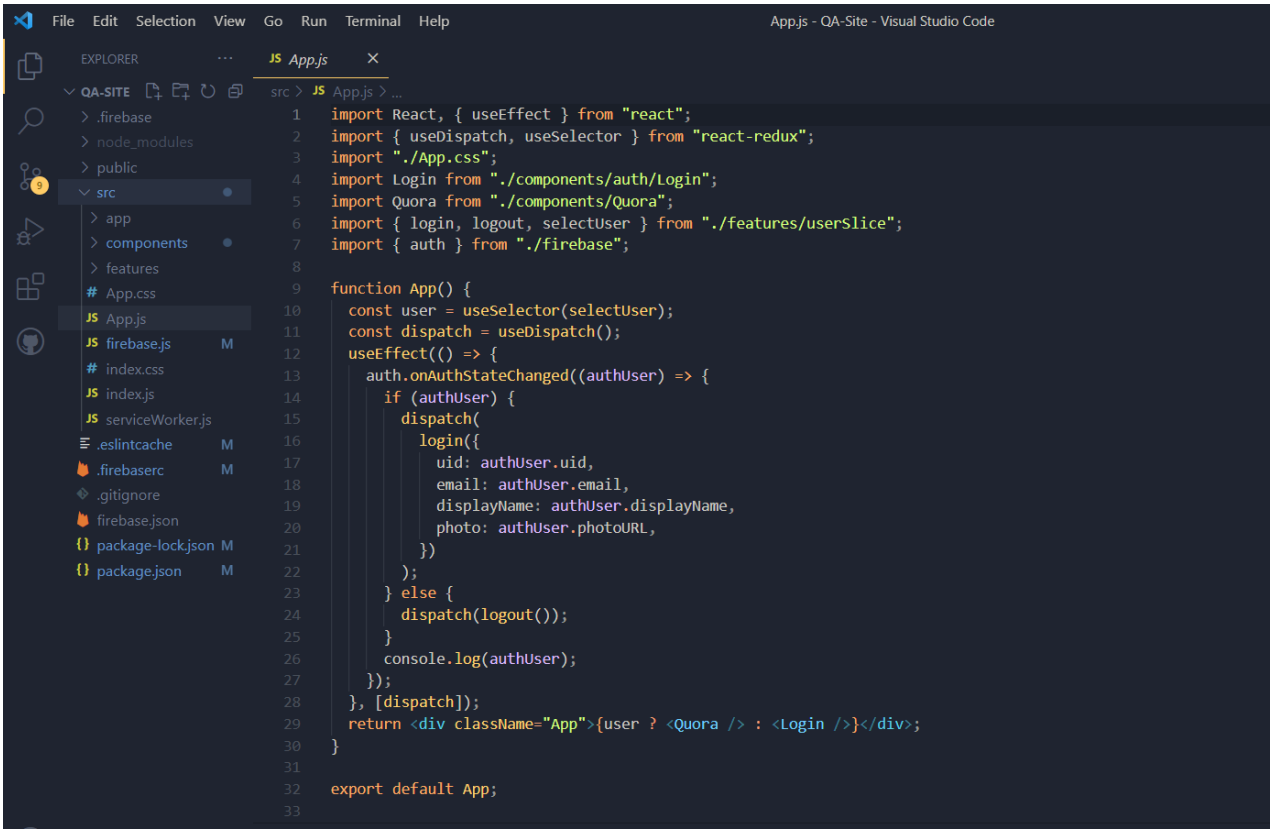
- Uid – Every answer to the given question will have the name of user.
- Image – User can post related photos as answers.
- Like – Different user can like the answer which are posted.
- Text – Answers text can be change accordingly.
- Username – Users name will be displayed on the on the answers.

Group

- Groupid- Every group will have their unique id.
- Group interest- Individual group will have their own interest.
- Count member- no. of members of group will be shown up.

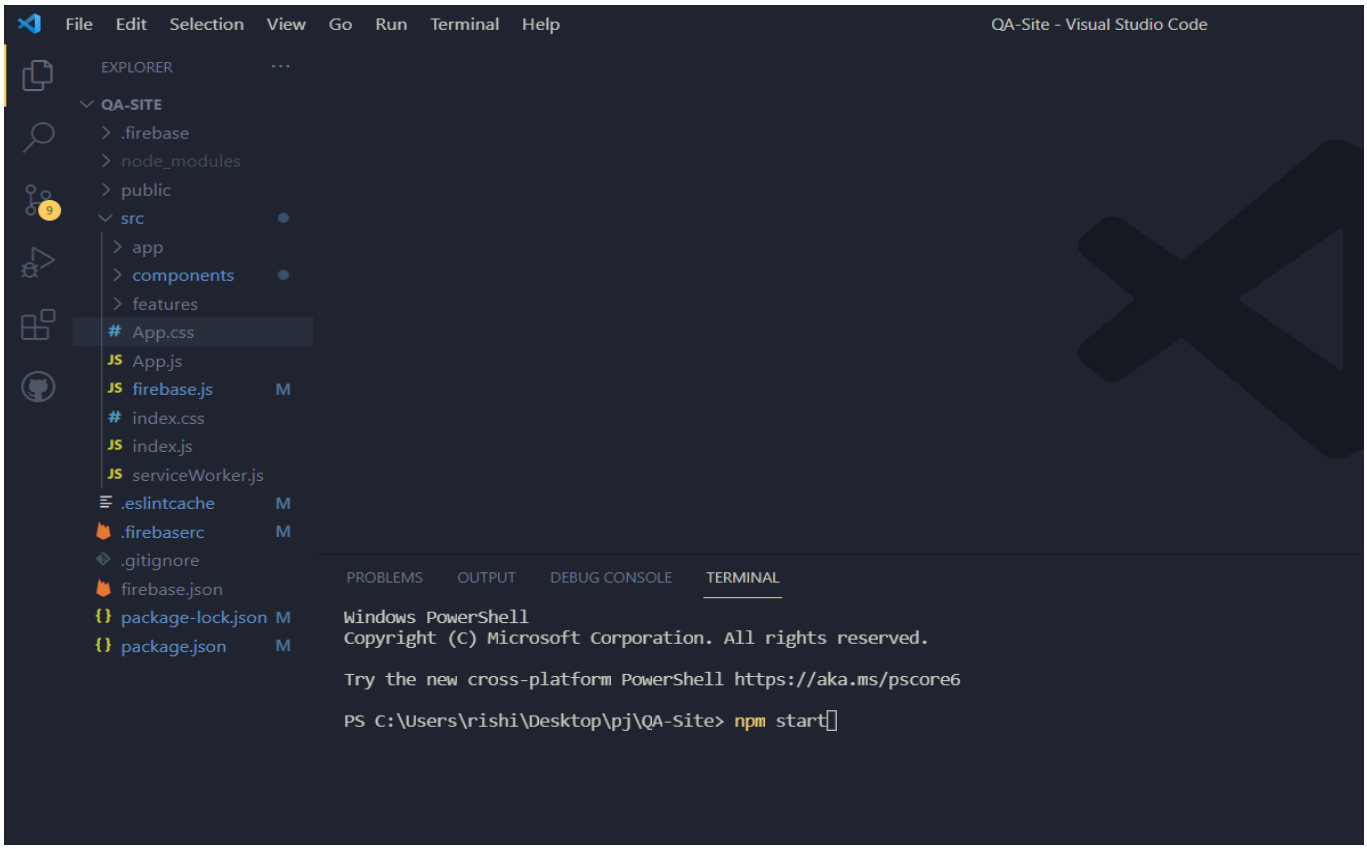
3.3 Design and Test Steps

A test design is developed to portray the test effort, in order to give project and test personnel a mental framework on the boundary and scope of the test program. Following test analysis, the test team develops the test program design models.



3.4 Testing Process

Testing is an integral component of the software development process. It entails a comprehensive assessment of a software to ensure it meets your client's requirements and goals. The primary goal of testing is to identify all the defects and errors in the software before the implementation phase.



4. RESULTS / OUTPUTS

This project have different pages starting from the Landing page , Authentication , Main page , Adding Question , Adding Answers and Spaces to Follow .

Landing Page

Landing pages is the which appears first whenever the project is started. In Projects Landing page we have a frontend displaying the authentication and a colorful UI at the back of it.

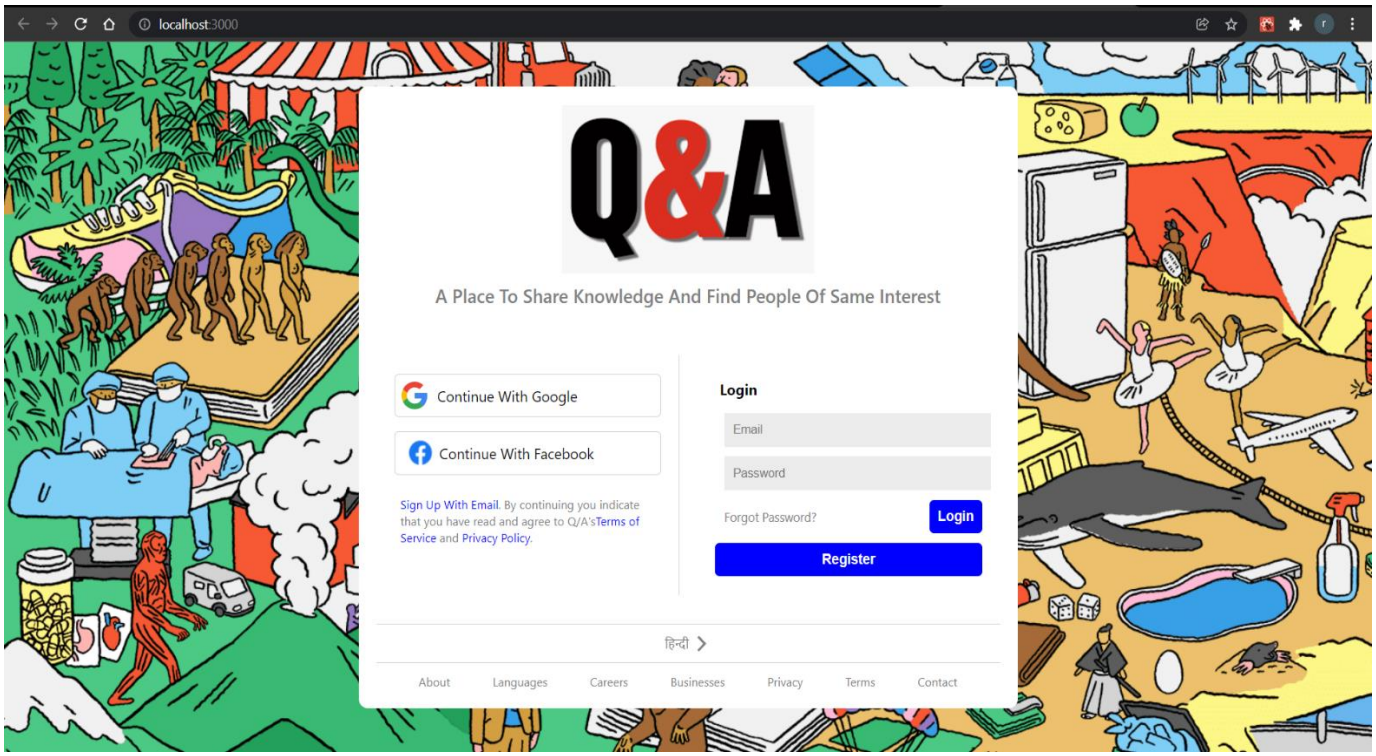


Figure 4.1: Landing Page

Authentication

Authentication is for the login or register if you are using the project for the first time. In our authentication page we get a pop out by google for login with google account

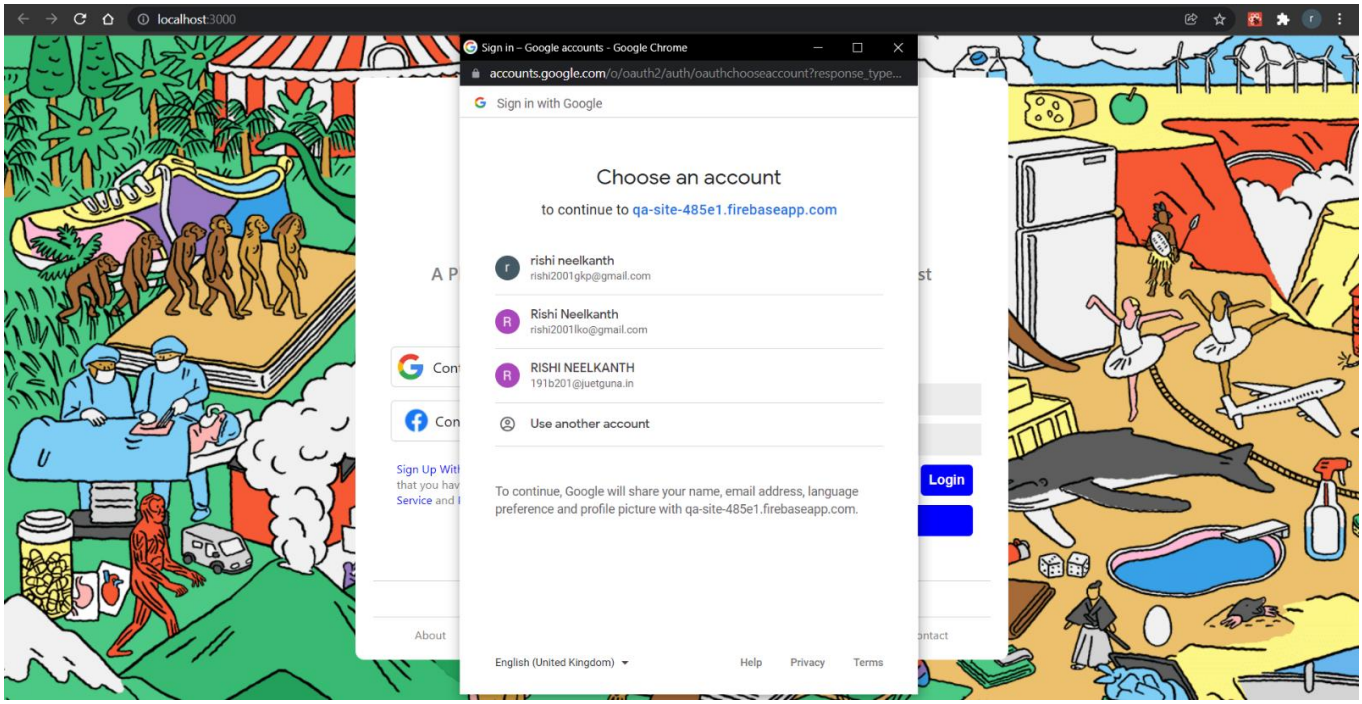


Figure 4.2: Authentication

Main Page

Main page is the page which will appear after the user will login or register. It will display question And answers that other user have answered.

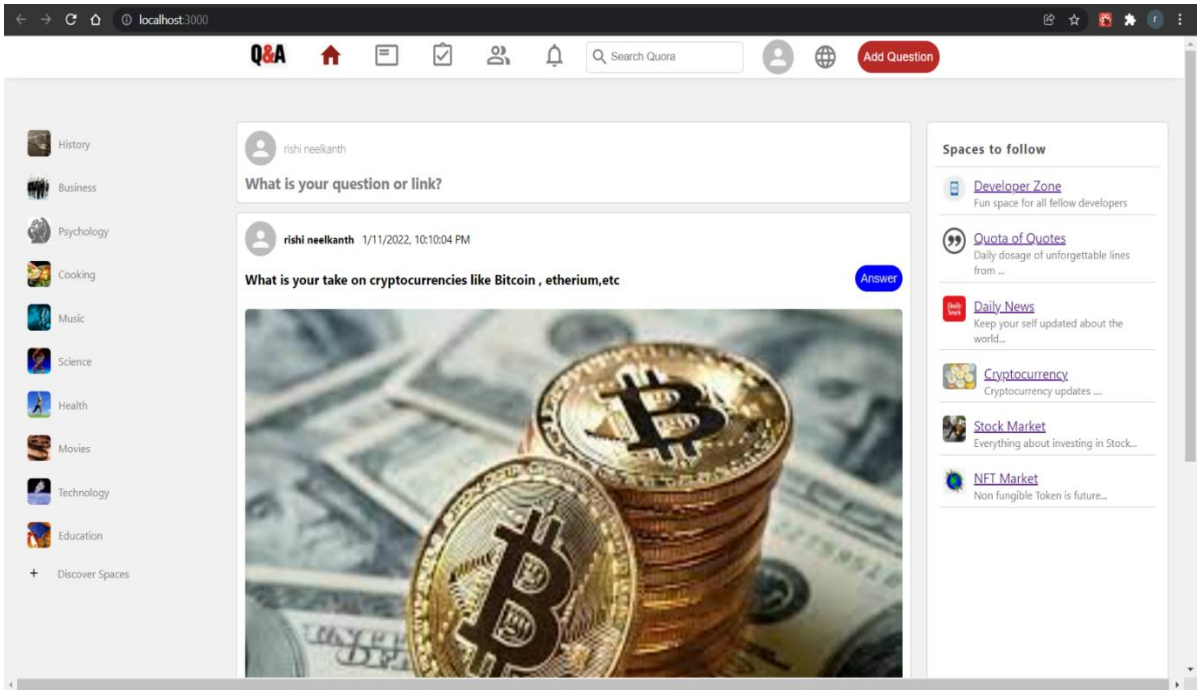


Figure 4.3: Main Page

Adding Question

On the main page at the right corner, we can see the add question button.

When we click on it a question model will appear in which we can add any question and images with the help of image address.

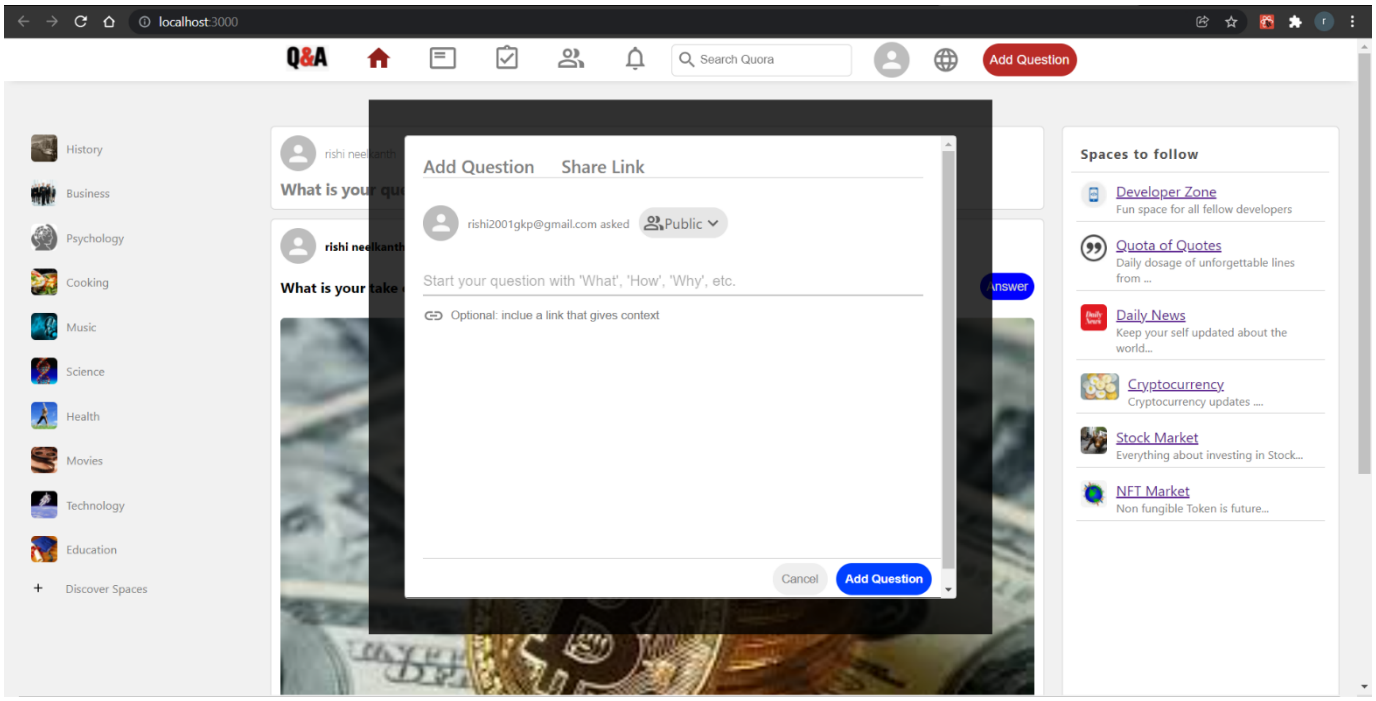


Figure 4.4: Adding Question

Adding answer

On the main page when question is added then we get a answer button on the left of the question. On clicking that answer model will appear where we can our answer.

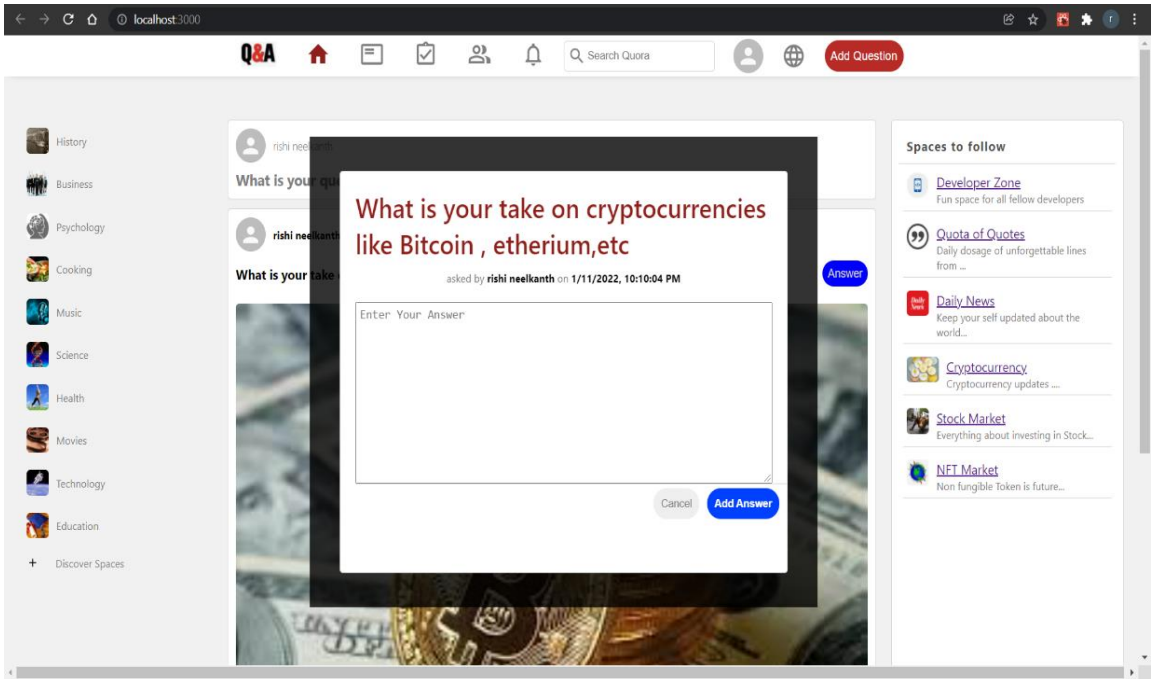


Figure 4.5: Adding Answer

Spaces to follow

It is the section present on the main page on the left corner which will help users to expand their field of interest and in other different fields also. On clicking the different spaces in space to follow, user will be directed to the page which contain useful articles.

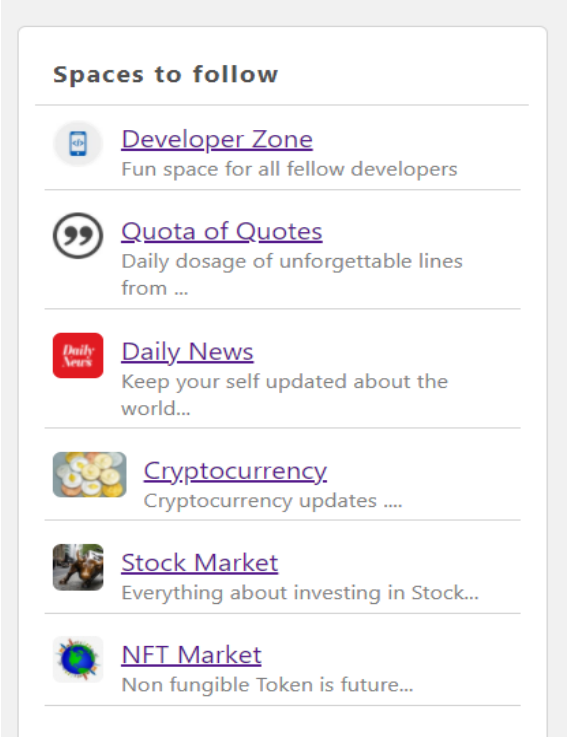


Figure 4.6: Spaces to Follow

5. CONCLUSIONS / RECOMMENDATIONS

The conclusion describes the final product that we get after running the project and also describes it's features , it's services and it's application.

- The expected outcome after the 5th semester , the website will be fully functional and ready to use in our daily life . The website will be ready to use by the people and they can create account on it.
- With the help of this project, people will be able to add questions and can answer the question asked by the other users having account on the website. On our website students can join different communities of their interest.
- Joining different communities helps people to interact with people of same interest and gain more knowledge by others.People of same interest can share their work with other people and can get some good tips or advice to improve their work.
- This website is made for a very precise traffic i.e. for university , office , society .So people of different level of knowledge can interact for their benefit.
- Using this website in a university where student of different year study so students of different year can ask question and that question can be answered by student of different year . As within a university it becomes very difficult to have one to one conversation physically with student of different years.
- This website also contain a section called spaces to follow. This section is for the users as they can not only share questions of their interest but also explore more spaces and make them as their field of interest and advice more people to join them.

6. REFERENCES

References are the resource which we have used to study for this project's working .

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7. APPENDICES

7.1 Details of software/simulator used

Project management software is software used for project planning, scheduling, resource allocation and change management. It allows project managers (PMs), stakeholders and users to control costs and manage budgeting, quality management and documentation and also may be used as an administration system.

VS Code:

Visual Studio Code is a 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.

7.2 Steps to execute/run

These are step which is to be used to run the project and see its working.

Step 1: Open terminal and type npm i

Step 2: npm start to start application on local server