ATMIYA UNIVERSITY

RAJKOT

A

Report On

Social media web app

Under subject of

PROJECT

B. TECH Semester– VII

(Computer Engineering)

Submitted by:

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Academic Year

(2022-23)

CANDIDATE'S DECLARATION

We hereby declare that the work presented in this project entitled "**Social media web app**" submitted towards completion of project in **7th Semester** of B.Tech. (Computer Engineering) is an authentic record of our original work carried out under the guidance of "**Prof. Nirali Borad".**

We have not submitted the matter embodied in this project for the award of any other degree.

Semester:
7thPlace, Rajkot

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Pritkumar Godhani (190002034)

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CERTIFICATE

Date:

This is to certify that the "**Social media web app**" has been carried out by **Pritkumar Godhani** under my guidance in fulfillment of the subject Project in COMPUTER ENGINEERING (7thSemester) of Atmiya University, Rajkot during the academic year 2022.

Prof. Nirali Borad
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Prof.Tosal M.Bhalodia
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CERTIFICATE

Date:

This is to certify that the "**Social media web app**" has been carried out by **Pratik Gadhiya** under my guidance in fulfillment of the subject Project in COMPUTER ENGINEERING (7thSemester) of Atmiya University, Rajkot during the academic year 2022.

Prof. Nirali Borad — **(Project Guide)**

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CERTIFICATE

Date:

This is to certify that the "**Social media web app**" has been carried out by **Savan Dave** under my guidance in fulfillment of the subject Project in COMPUTER ENGINEERING (7thSemester) of Atmiya University, Rajkot during the academic year 2022.

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ABSTRACT

Technology is booming rapidly from year to year, and the younger generations are the ones caught in this rapid change. With the technological advances and the increased scope of media, communication with anyone around the world has become easy. Earlier we had to wait for days or sometimes months for a beautiful handwritten letter sent through post from close and loved ones. But now any dialogue happens in a fraction of seconds. Social media is fundamentally changing the way people communicate, consume and collaborate. It provides companies a new platform to interact with their customers. In academia, there is a surge in research efforts on understanding its effects. This paper aims to provide a review of current status of social media research. We discuss the specific domains in which the impacts of social media have been examined. A brief review of applicable research methodologies and approaches is also provided.

INDEX

1. INTRODUCTION

1.1 Purpose

Social media allows individuals to keep in touch with friends and extended family. Some people will use various social media applications to network and find career opportunities, connect with people across the globe with like-minded interests, and share their own thoughts, feelings, and insights online

1.2 Scope

The scope of social media has spread to almost every corner of the world. Social media marketing is very popular and has affected marketers in decision-making when it comes to how useful they could advertise their product, social media have become an important tool of marketing in true sense of customer orientation. Social Media is a most important medium today to reach out , Connect and Explore things. It will be growing more and with increase in Data & Mobile penetration in India more users from Tier 2 and Tier 3 cities are using Social Media . From Business Owners to Political Parties every one wants to use this space to reach out the Target Audience.

1.3 Technology and tools

1. HTML:

Hypertext Markup Language (HTML) is the main markup language for creating

Web pages and other information that can be displayed in a web browser. HTML is written in the form of HTML elements consisting of tags enclosed in angle brackets (like <html>), within the web page content. HTML tags most commonly come in pairs like <h1> and </h1>, although some tags represent empty elements and so are unpaired, for example <img>.

The first tag in a pair is the start tag, and the second tag is the end tag (they are also called opening tags and closing tags). In between these tags' web designers can add text, further tags, comments and other types of text-based content.

The purpose of a web browser is to read HTML documents and compose them into visible or audible web pages. The browser does not display the HTML tags, but uses the tags to interpret the content of the page.

2. CSS:

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation semantics (the look and formatting) of a document written in a markup language. Its most common application is to style web pages written in HTML and XHTML, but the language can also be applied to any kind of XML document, including plain XML, SVG and XUL.CSS is designed primarily to enable the separation of document content from document presentation, including elements such as the layout, colors, and fonts.

This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple pages to share formatting, and reduce complexity and repetition in the structural content (such as by allowing for table less web design).

CSS specifies a priority scheme to determine which style rules apply if more than one rule matches against a particular element. In this so-called cascade, priorities or weights are calculated and assigned to rules, so that the results are predictable.

The CSS specifications are maintained by the World Wide Web Consortium (W3C). Internet media type (MIME type) text/CSS is registered for use with CSS by RFC 2318 (March 1998), and they also operate a free CSS validation service.

3. React:

- React is a JavaScript library for building user interfaces. React gives you a template language and some function hooks to render HTML. Your bundles of HTML/ JavaScript are called "components". Components are similar to JavaScript functions. They accept arbitrary inputs called props and return React elements. These elements describe what should appear on the screen.

- Developers love ReactJS because it is highly performant and render changes almost instantly. The best part about ReactJS is that it is a relatively small framework and does not take too much time to learn

Back End: Back End technologies used in the website are:

1. MongoDB:

- MongoDB is an open-source document-oriented database that is designed to store a large scale of data and also allows you to work with that data very efficiently. It is categorized under the NoSQL (Not only SQL) database because the storage and retrieval of data in the MongoDB are not in the form of tables.
- The MongoDB database is developed and managed by MongoDB. Inc under SSPL(Server Side Public License) and initially released in February 2009. It also provides official driver support for all the popular languages like C, C++, C#, and .Net, Go, Java, Node.js, Perl, PHP, Python, Motor, Ruby, Scala, Swift, Mongoid. So, that you can create an application using any of these languages. Nowadays there are so many companies that used MongoDB like Facebook, Nokia, eBay, Adobe, Google, etc. to store their large amount of data.
- The MongoDB database contains collections just like the MYSQL database contains tables. You are allowed to create multiple databases and multiple collections.

2. NodeJS:

- Node.js is an open-source and cross-platform JavaScript runtime environment. It is a popular tool for almost any kind of project!
- Node.js runs the V8 JavaScript engine, the core of Google Chrome, outside of the browser. This allows Node.js to be very performant.
- A Node.js app runs in a single process, without creating a new thread for every request. Node.js provides a set of asynchronous I/O primitives in its standard library that prevent JavaScript code from blocking and generally, libraries in Node.js are written using non- blocking paradigms, making blocking behavior the exception rather than the norm.
- When Node.js performs an I/O operation, like reading from the network, accessing a database or the filesystem, instead of blocking the thread and wasting CPU cycles waiting, Node.js will resume the operations when the response comes back
- This allows Node.js to handle thousands of concurrent connections with a single server without introducing the burden of managing thread concurrency, which could be a significant source of bugs.

- Node.js has a unique advantage because millions of frontend developers that write JavaScript for the browser are now able to write the server-side code in addition to the client-side code without the need to learn a completely different language.

- In Node.js the new ECMAScript standards can be used without problems, as you don't have to wait for all your users to update their browsers - you are in charge of deciding which ECMAScript version to use by changing the Node.js version, and you can also enable specific experimental features by running Node.js with flags.

2. PROJECT MANAGEMENT

2.1 Project Planning:

Project Planning is concerned with identifying and measuring the activities, milestones and deliverables produced by the project. Project planning is undertaken and completed sometimes even before any development activity starts. Project planning consists of following essential activities:

Scheduling manpower and other resources needed to develop the system.

Staff organization and staffing plans.

Risk identification, analysis, and accurate planning.

Estimating some of the basic attributes of the project like cost, duration and efforts. The effectiveness of the subsequent planning activities is based on the accuracy of these estimations.

Miscellaneous plans like quality assurance plan, configuration management plan, etc.

Project management involves planning, monitoring and control of the people, process, and the events that occurs as the software evolves from a preliminary concept to an operational implementation. Cost estimation is a relative activity that is concerned with the resources required to accomplish the project plan.

2.2 Project Scheduling:

The scheduling is the peak of a planning activity, a primary component of software project management. When combined with estimation methods and risk analysis, scheduling establishes a roadmap for project management. The characteristics of the project are used to adapt an appropriate task set for doing work.

2.3 Risk Management:

Risk management consists of a series of steps that help a software development team to understood and manage uncertain problems that may arise during the course of software development and can plague a software project.

General Risks:

- General Risks are the risks, which are concerned with the mentality and resources.
- Lack of resources can cause great harm to efficiency and timely productivity.
- Rapidly changing requirements.
- Changes in requirements can cause a great harm to implementation, designing and schedule of developing the system.
- Insufficient planning and task identification.

2.3.2 Risk Analysis

"Risk analysis = risk assessment + risk management + risk communication."

Risk analysis is employed in its broadest sense to include:

Risk assessment:

Involves identifying sources of potential harm, assessing the likelihood that harm will occur and the consequences if harm does occur.

For this project It might be :-

System Crash.

Risk management

Evaluates which risks identified in the risk assessment process require management and selects and implements the plans or actions that are required to ensure that those risks are controlled.

Precautions taken to make risks minimal are as under:-

Periodical backups are taken to avoid major loss in case of system crash.

Risk communication

Involves an interactive dialogue between stakeholders and risk assessors and risk managers which actively informs the other processes.

Steps taken for risk communication is as under:-

Probability of certain risks is negotiated with client.

All the possible risks are listed out during communication and project is developed taking care of that risks.

3. SYSTEM REQUIREMENTS STUDY

3.1 Hardware and Software Requirement

This shows minimum requirements to carry on to run this system efficiently.

3.1.1 Hardware Requirements

Server side Hardware Requirement:

Devices	Description
Processor	Intel Core Duo 2.0 GHz or more
RAM	512 MB or more
Hard Disk	10 GB or more

Table 3.1.1.1 Server side Hardware Requirement

3.1.2 Software Requirements

For which	Software
Operating System	Windows7/8/10, Linux
Front End	React
Back End	Node JS
Database	MongoDB

Table 3.1.2.1 Software Requirements

3.1.3 Client side Requirements

For which	Requirement
Browser	Any Compatible browser device

Table 3.1.3.1 client side Requirements

3.2 Constraints

3.2.1 Hardware Limitations

The major hardware limitations faced by the system are as follows:

If the appropriate hardware is not there like processor, RAM, hard disks

-The problem in processing requests of client

-If appropriate storage is not there our whole database will crash due to less storage because our main requirement is large storage.

3.2.2 Reliability Requirements

Since many users can access the server simultaneously, load on the server becomes very high. Hence, the server should be of enough high configurations. There should be high back up storage and management of huge data for overall ideas, videos , images, multiple countries, multiple user profile.

The Reliability requirements are the validations used to protect the system against one or more incorrect activities. Without proper validation of the system, the failure possibilities of it grow higher so it is must to understand the proper validation of the system and must implement them. All the required validator controls spend very good role to keep the system secure from any unauthorized or incorrect information. In all these validation actions if system found one or more entries violating validation rules then user will be warned by proper error messages and the details or the record is not going to be saved until corrections are made to them.

4. SYSTEM ANALYSIS

4.1 Study Current System

Implementation is the stage where the theoretical design is turned into a working system. The most crucial stage in achieving a new successful system and in giving confidence on the new system for the users that it will work efficiently and effectively.

The system can be implemented only after thorough testing is done and if it is found to work according to the specification.

It involves careful planning, investigation of the current system and its constraints on implementation, design of methods to achieve the change over and an evaluation of change over methods a part from planning. Two major tasks of preparing the implementation are education and training of the users and testing of the system.

The more complex the system being implemented, the more involved will be the systems analysis and design effort required just for implementation.

The implementation phase comprises of several activities. The required hardware and software acquisition is carried out. The system may require some software to be developed. For this, programs are written and tested. The user then changes over to his new fully tested system and the old system is discontinued.

4.2 Problem and weakness of current system

- Inconsistency in data entry and generate errors
- System is fully dependent on skilled individuals
- Time consuming and costly to produce reports
- Entry of false information
- Lack of security
- Duplication of data entry

4.3 Requirements of New System

4.3.1 User Requirements:

The user requirement for this system is to make the system fast, flexible, less prone to error, reduce expenses and save the time.

4.3.2 System Requirements:

Functional System Requirement:

This section gives a functional requirement that applicable to the Online shopping system.

- **There are three sub modules in this phase.**

1. Customer module.
2. Admin module.
3. Moderator module.

The functionality of each module is as follows:

1. **Customer module**:

• A user must login with his user name and password to the system after registration. If they are invalid, the user not allowed to enter the system.

- Username and password will be provided after user registration is confirmed.
- A new user will have to register in the system by providing essential details in order to view the products in the system.
- The system must encrypt the password of the customer to provide security.
- The user can add the desired product into his cart by clicking add to cart option on the product. He can view his cart by clicking on the cart button.
- User can remove an item from the cart by clicking remove.
- After confirming the items in the cart the user can submit the cart by providing a delivery address. On successful submitting the cart will become empty.
- System must ensure that, only a registered customer can purchase items.

2. **Admin module**:

- The administrator can add user, delete user, view user and block user.The administrator can add product, delete product and view product.
- The system must identify the login of the admin.Admin account should be secured so that only owner of the shop can access that account.

3. **Moderator module**:

- A moderator is considered as a staff who can manage orders for the time being. As a future update moderator may give facility to add and manage his own products.
- The system must identify the login of the admin.Admin account should be secured so that only owner of the shop can access that account.
- Moderator has all the privilege of an admin having except managing other moderators.
- He can manage users and manage products. He can also check the orders and edit his profile.
- The system must identify the login of a moderator.

Non-Functional System Requirements:

i. EFFICIENCY REQUIREMENT:

When an online shopping cart android application implemented customer can purchase product in an efficient manner.

ii. RELIABILITY REQUIREMENT:

The system should provide a reliable environment to both customers and owner. All orders should be reaching at the admin without any errors.

iii. USABILITY REQUIREMENT:

The android application is designed for user friendly environment and ease of use.

iv. IMPLEMENTATION REQUIREMENT:

Implementation of the system using css and html in front end with jsp as back end and it will be used for database connectivity. And the database part is developed by mysql. Responsive web designing is used for making the website compatible for any type of screen.

v. DELIVERY REQUIREMENT:

The whole system is expected to be delivered in four months of time with a weekly evaluation by the project guide.

4.4 Feasibility Study

The feasibility study of any system is mainly intended to study and analyze the proposed system and to decide whether the system under consideration will be viable or not after implementation. That is it determines the usability of the project after deployment. To come to result a set of query is answered keeping the efficiency of the software and its impact on the domain for which it was developed.

Technical Feasibility:

In technical feasibility, we study all technical issues regarding the proposed system. It is mainly concerned with the specifications of the equipments and the software, which successfully satisfies the end-user's requirement. The technical needs of the system may vary accordingly but include:

- The feasibility to produce outputs in a given time.
- Response time under certain conditions.
- Ability to process a certain volume of the transaction at a particular speed.
- Facility to communicate data.

4.5 Selection of Hardware and Software and Justification

The configuration of the existing systems is:

Processor	: Pentium III, 500 MHz (or above)
Memory	: 128 MB (or above)
Operating System	: Window 98, 2000, XP, NT
Development tools	: ReactJS, CSS, HTML
Database	: MongoDB
Documentation tool	: MS-Word

5. System Design

5.1 Input /output interface

Login page

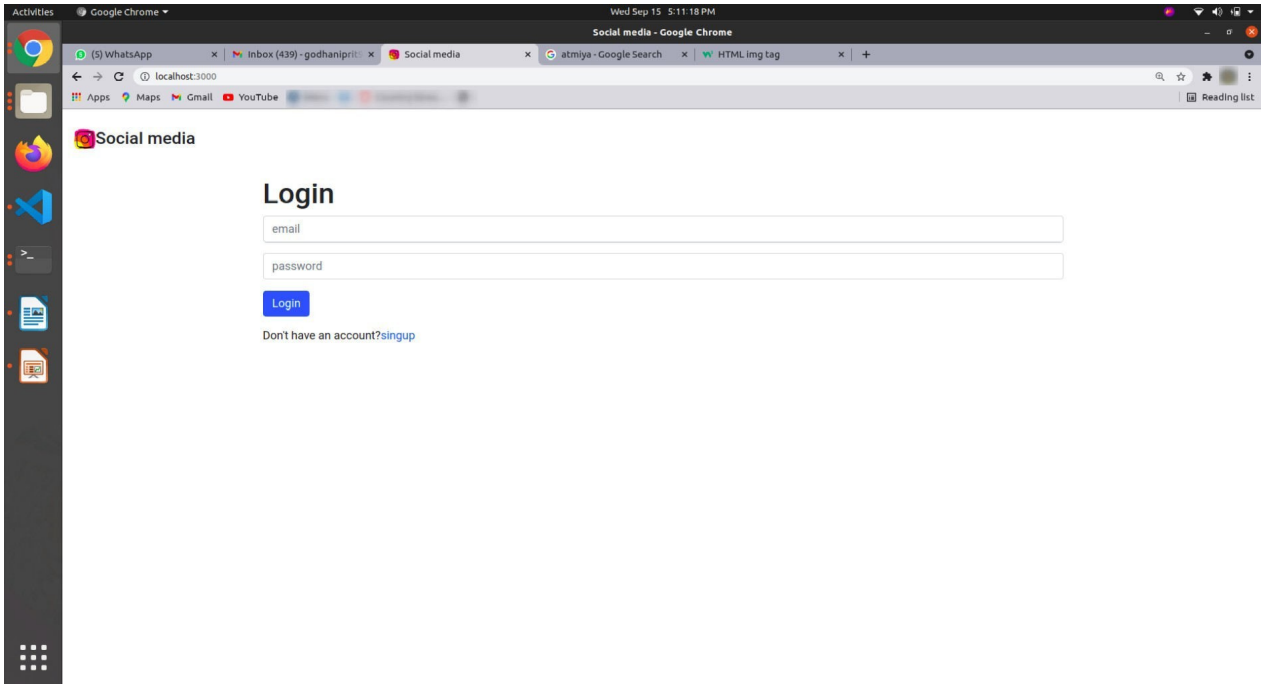


Figure 5.1.1 login page

Sign up Page

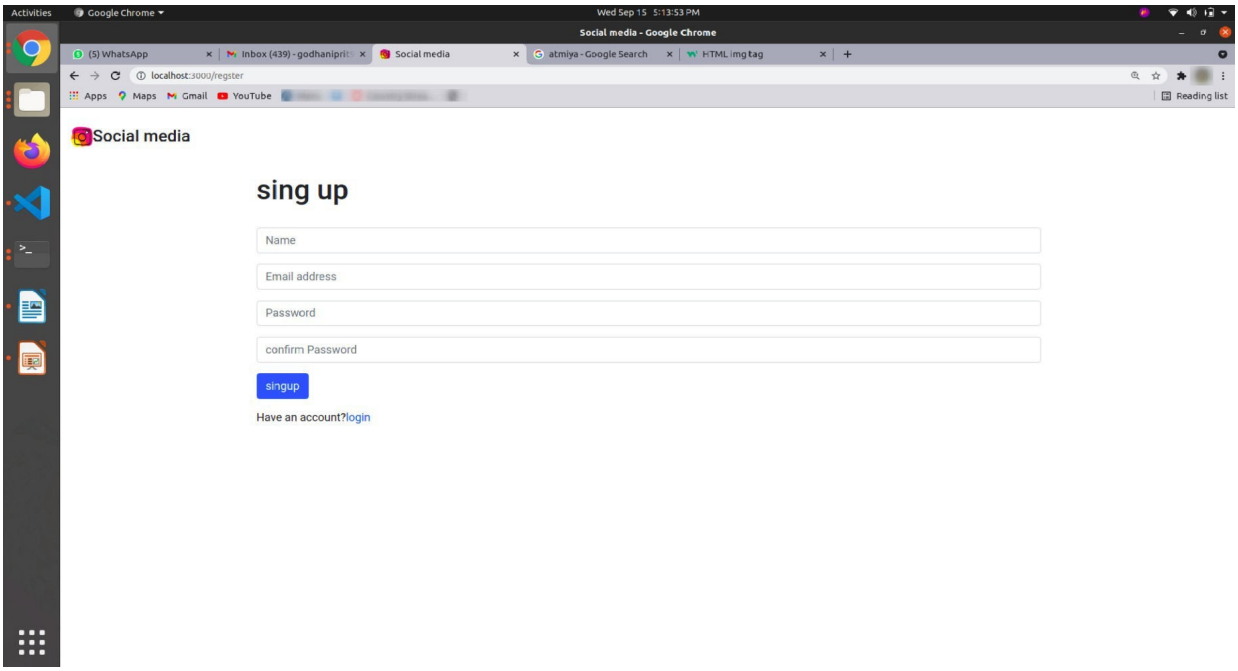


Figure 5.1.2 Signup page

Allpost

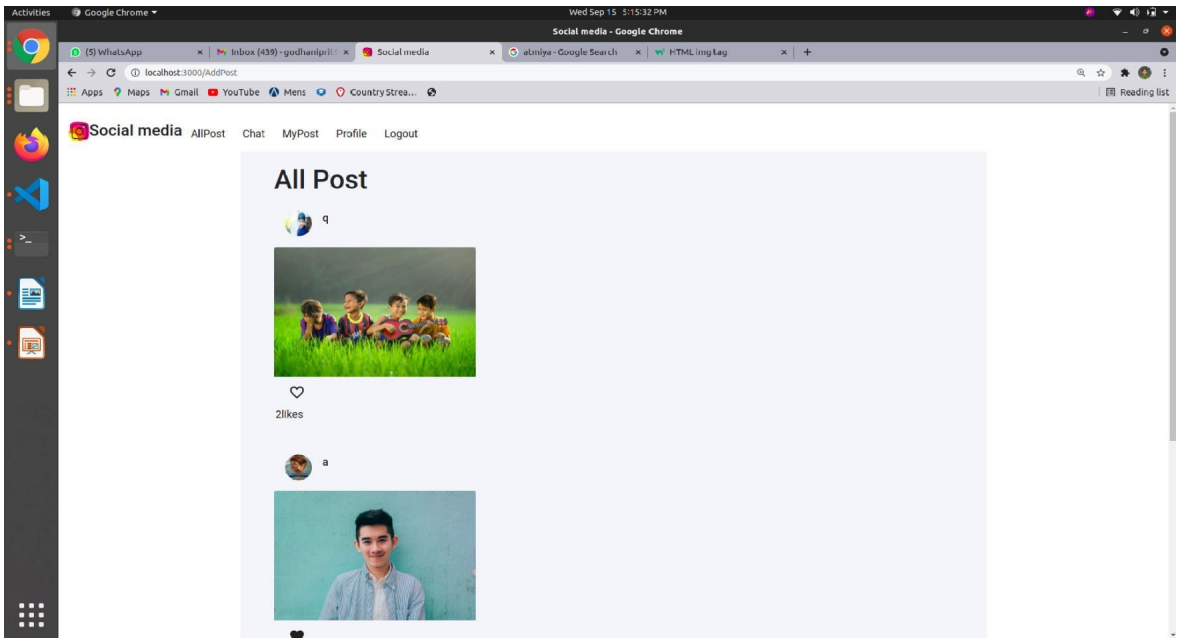


Figure 5.1.3 All post

Chat app

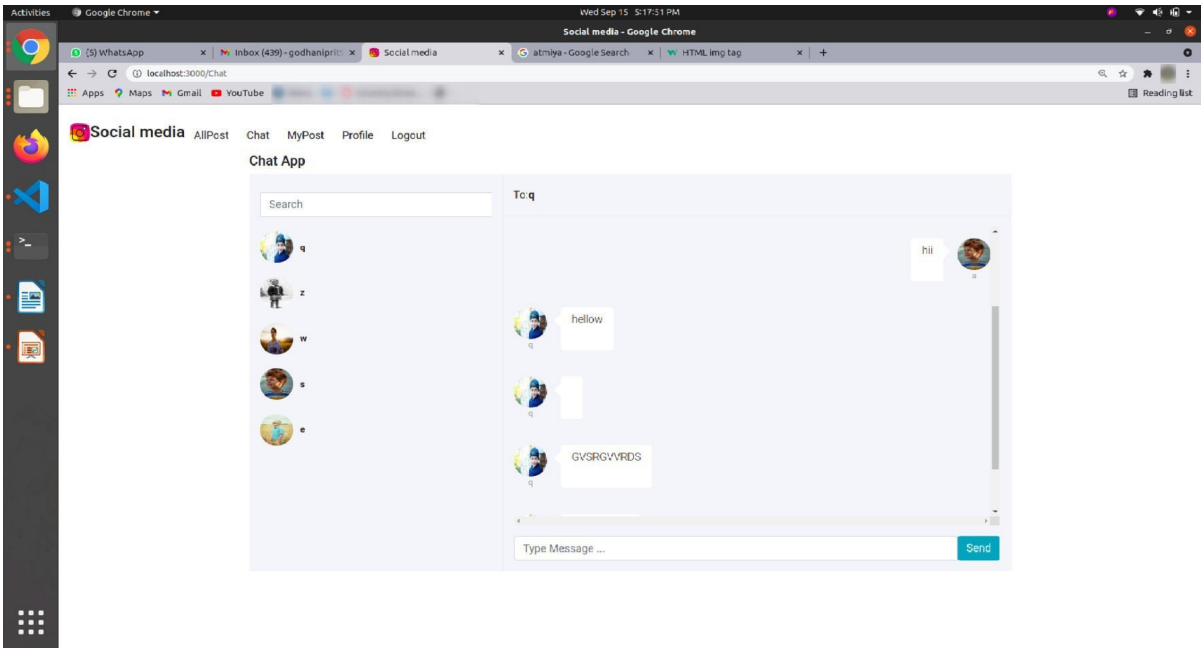


Figure 5.1.4 Chat app

my post

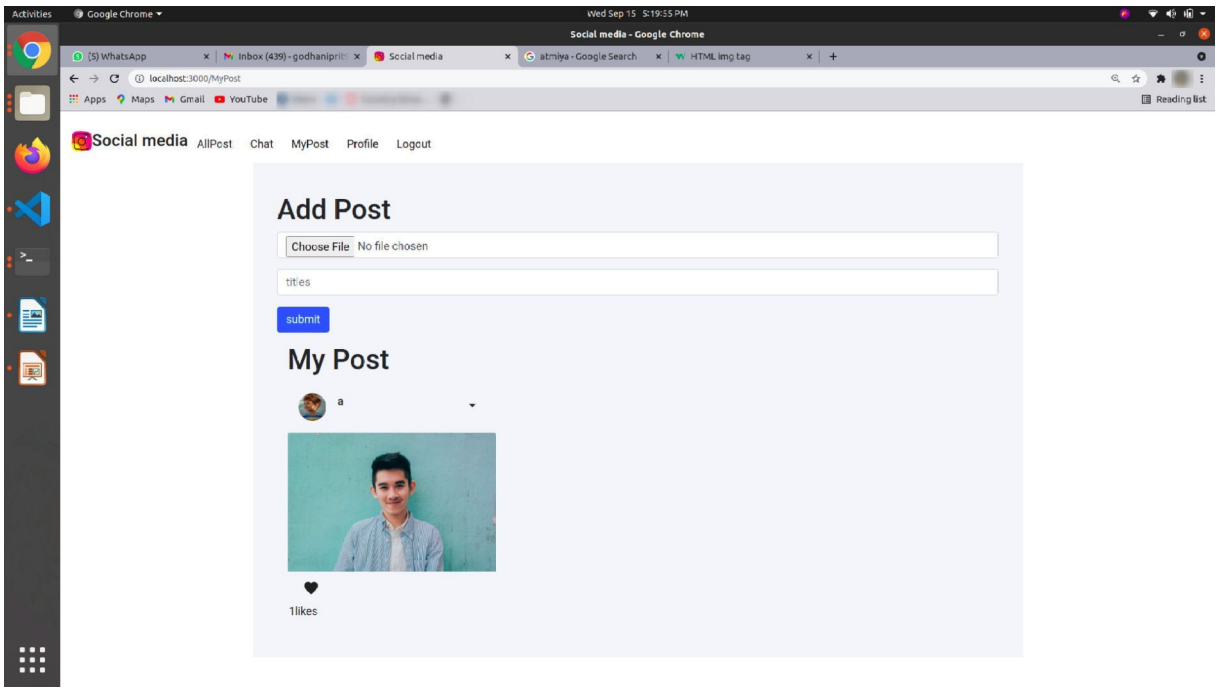


Figure 5.1.5 my post

Profile

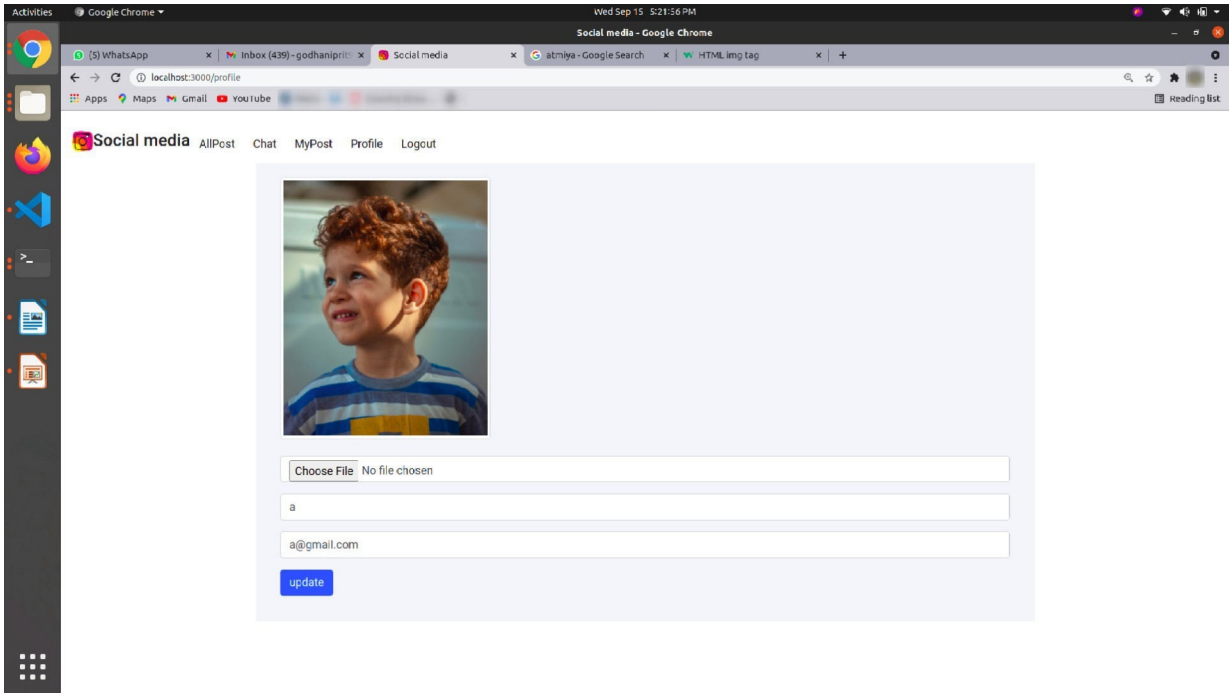
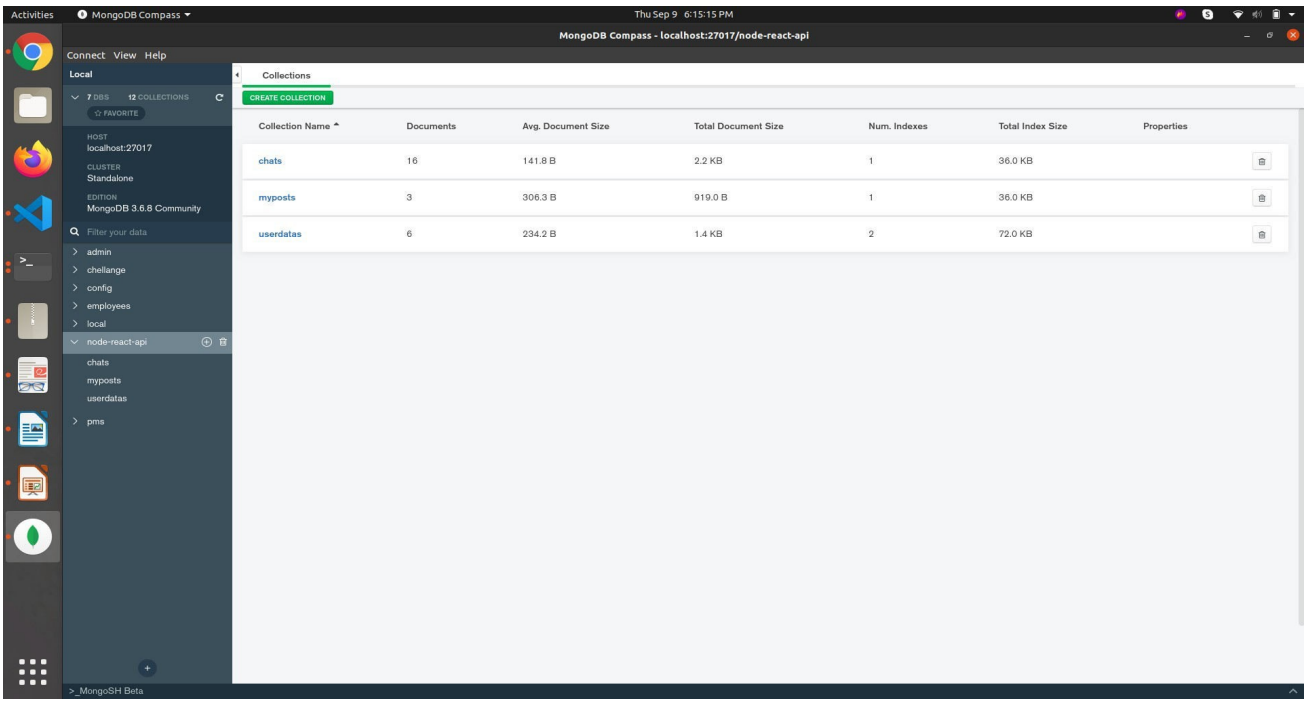


Figure 5.1.6 Profile

5.2 Database Co lection



5.2.1 Userdata

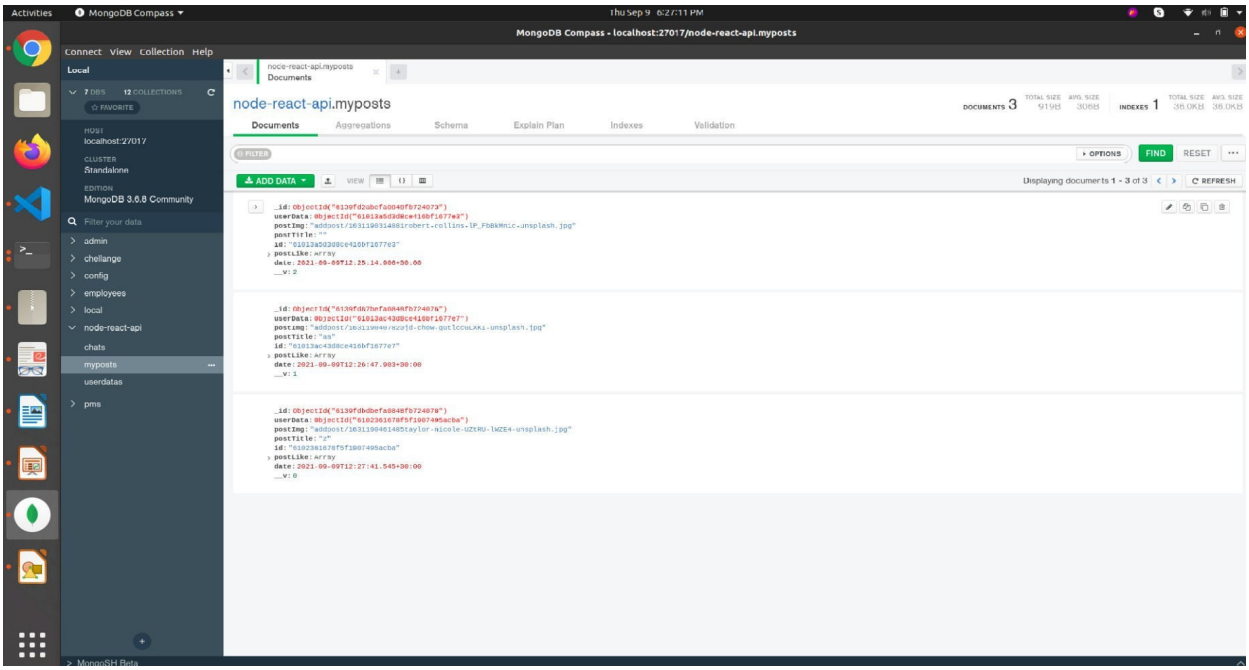


Figure 5.2.1.1 Userdata

5.2.2 Chatapp-data

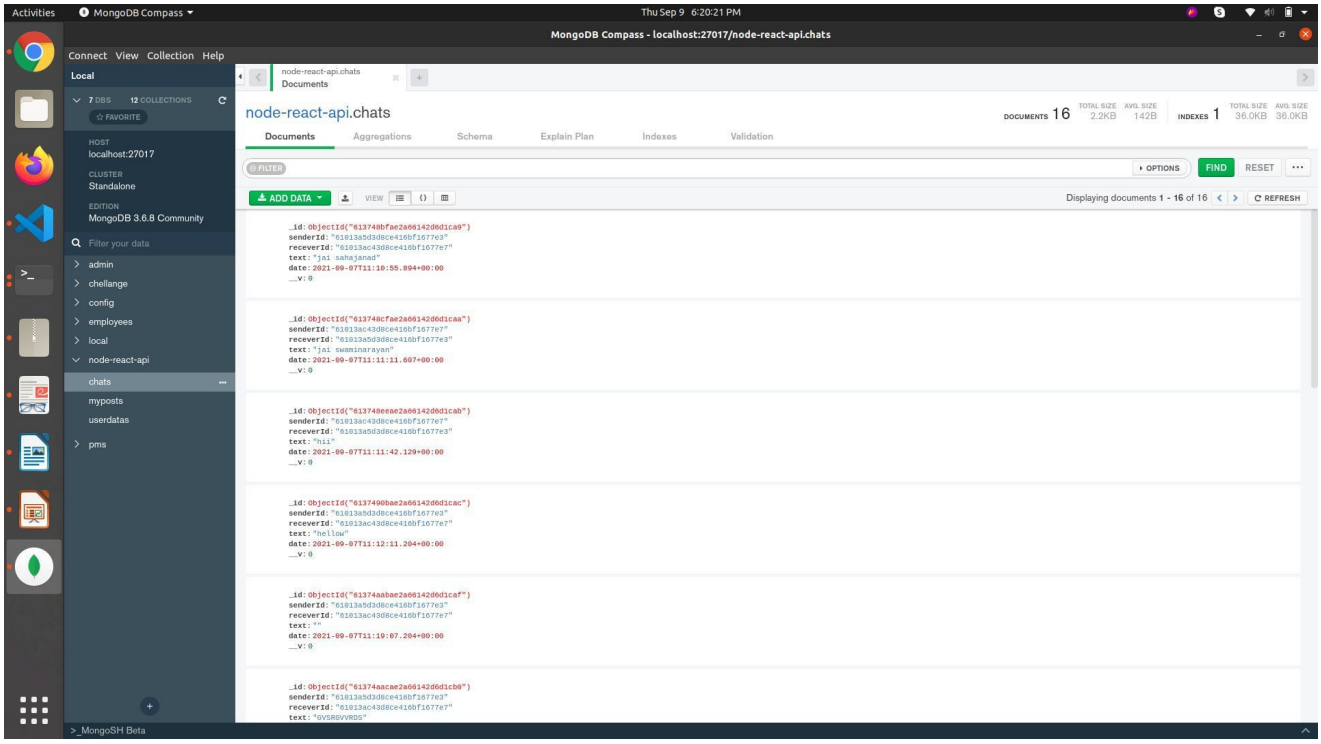


Figure 5.2.2.1 Chatapp-data

5.2.3 mypost-data

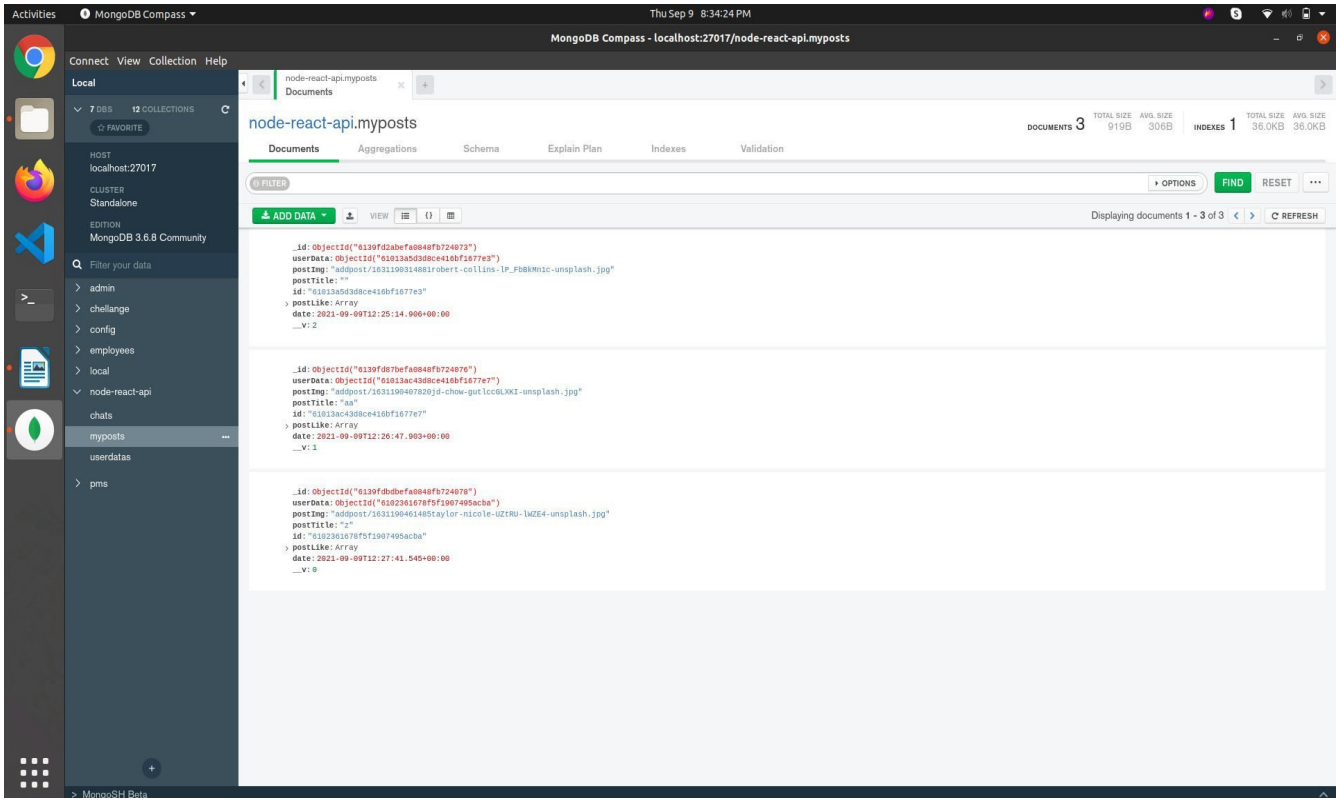


Figure 5.2.3.1 mypost-data

5.3 Interface Design

5.3.1 Class Diagram

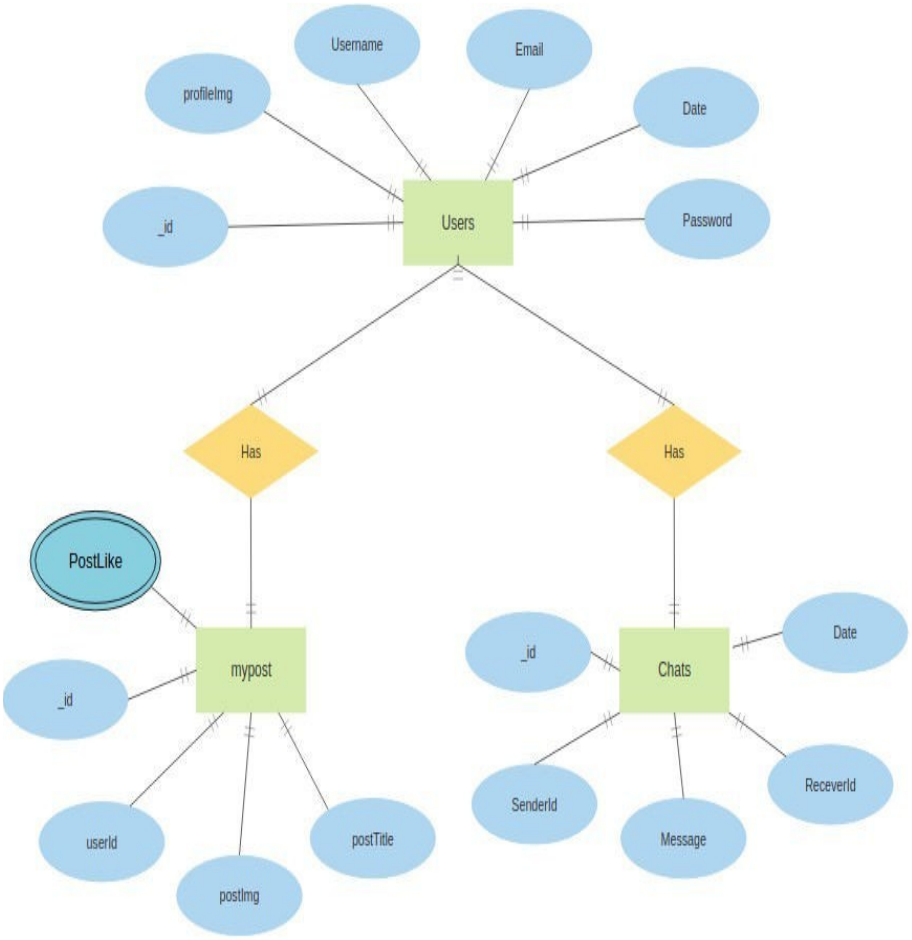


Figure 5.3.1.1 Class Diagram

5.3.2 Use Case Diagram

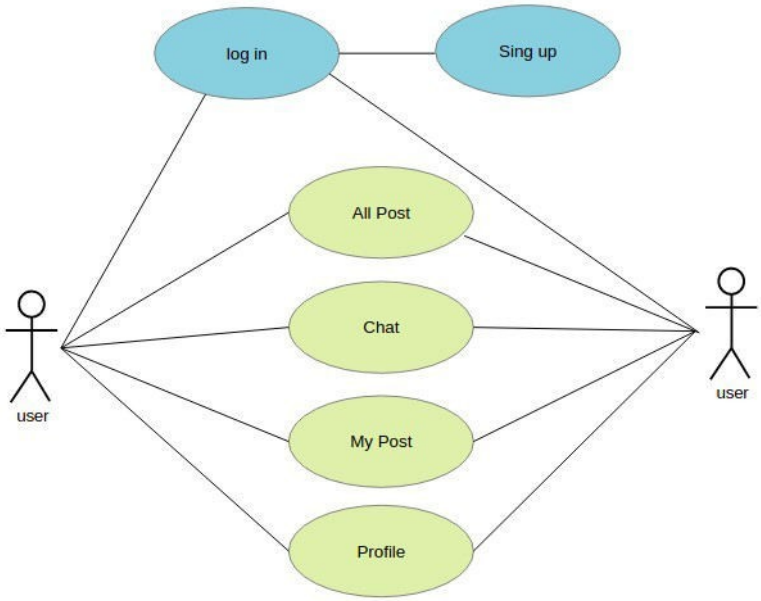


Figure 5.3.2.1 Use Case Diagram

5.3.3 Activity Diagram

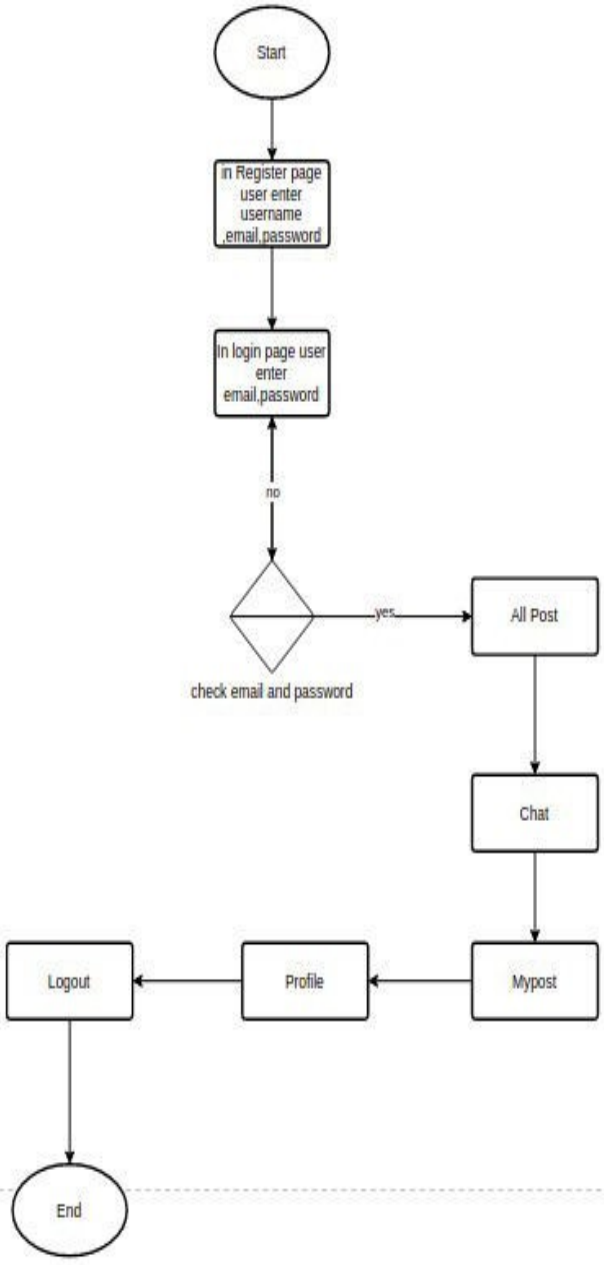


Figure 5.3.3.1 Activity Diagram

5.3.4 Data Flow Diagram

Context Level DFD

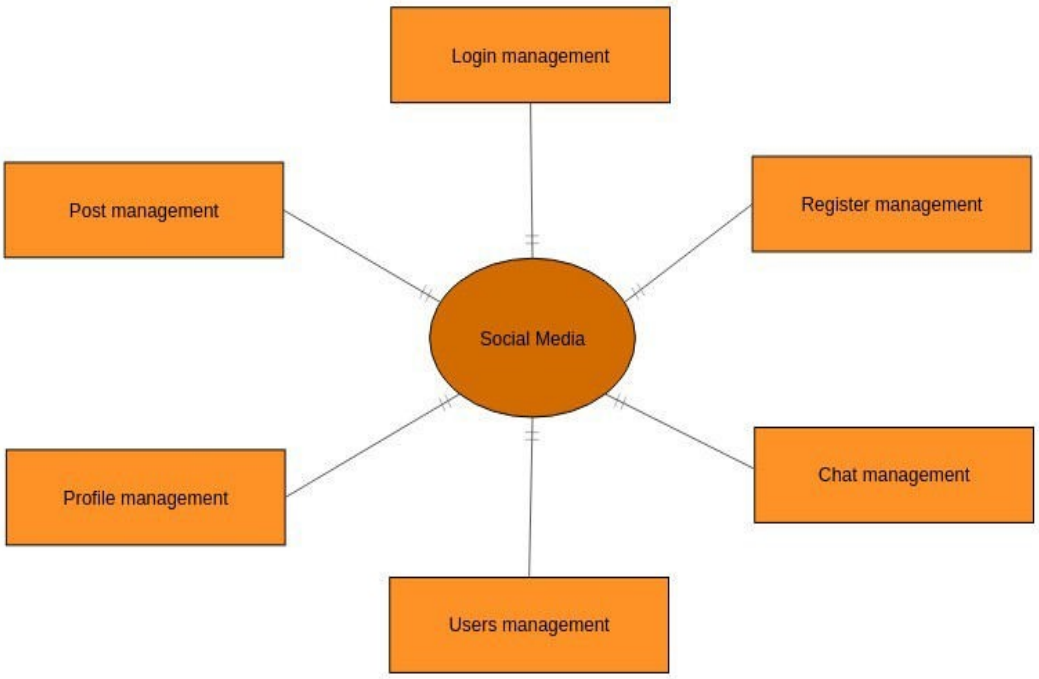


Figure 5.3.4.1 Context level DFD

First Level DFD

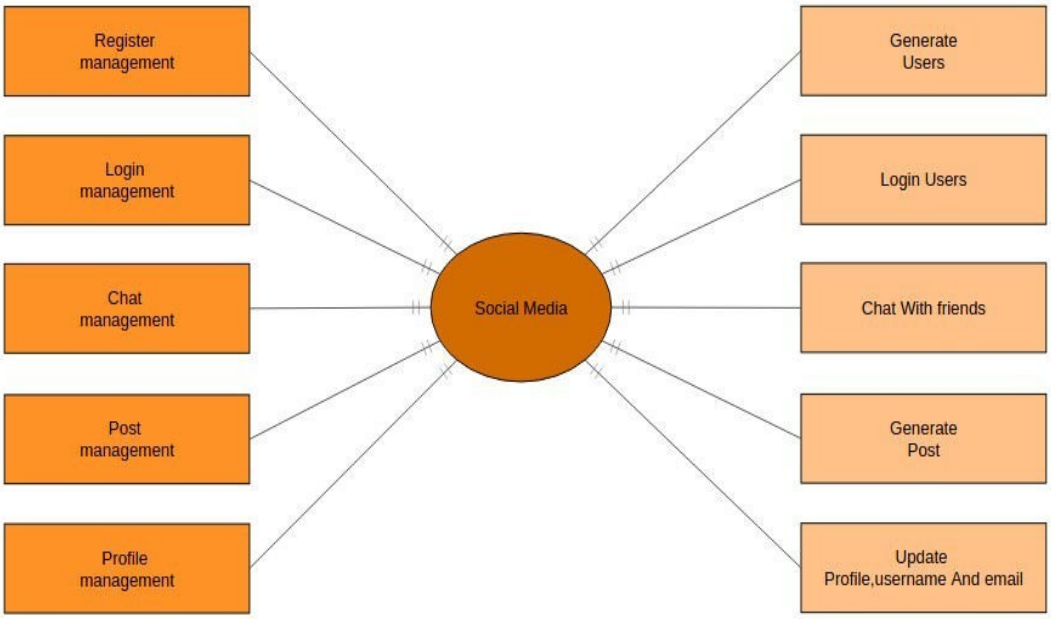


Figure 5.3.4.2 First level DFD

6. Code Implementation

6.1 Implementation Environment

Challenges identified for successful design and implementation of this project are dominated by:

- Complexity, reliability/availability, transparent data access. The project was a result of a group consensus. The team was having two members. The team was guided by project manager. The team structure depends on the management style of the organization, the no. of people in the team, their skill levels and the problem difficulty.

6.2 Program/Module Specification

- System GUI must be as simple and user friendly as anyone can use it. At front side we implemented login form to access the system.
- A Session is maintained throughout the system when a particular user enters into the system. The Session is regularly checked whenever it is required.
- Proper validation is placed as and when it is required.

6.3 Coding Standards

- Normally, good software development organization requires their programmers to maintain some well-defined and standard style of coding called coding standard.

6.3.1 Comment Standards:

- The comment should describe what is happening, how it is being done, what parameters mean, which global are used and which are modified, and any registration or bugs.
- The standards I have followed are:
- Comment may also be used in the body of the Cascading style sheets to explain individual sections or lines of codes to easily get access and easily review or manage the classes or properties for the pages.
- Inline comments should be made with the //. Comment style and should be indented at the same level as the code described.
- For multiple line comments we write between

7. Testing

7.1 Testing Strategy

A strategy for software testing integrates software test case design method into a well-planned series of steps that result in the successful construction of the software. The strategy provides the roadmap that describes the steps to be conducted as a part of testing, then these steps are planned and then undertaken, and how much effort, time and resource will be required.

7.2 Testing Method

7.2.1 Unit Testing

The unit testing is meant for testing smallest unit of software. There are two approaches namely bottom-up and top-down. In bottom up approach the last module is tested and then moving towards the first module while top down approach reverses the action. In present work we opt for the first one. The bottom up approach for the current project is carried out as shown in.

7.2.2 Validation Testing the

After the integration testing software is completely assembled as a package, interfacing error have been uncovered and corrected, and then validation testing may begin. Validation can be defined in many ways but a simple definition is what a validation succeeds when software functions in a manner that can be reasonably accepted by the user.

7.2.3 Integration Testing

The integration testing is meant to test all the modules simultaneously because it is possible that all the modules may function correctly when tested individually. But they may not work altogether and may lead to unexpected outcome.

8. Limitations and Future Enhancement

8.1 LIMITATIONS:

Though we tried our best in developing this system but as limitations are mere parts of any System so are of our system. Some limitations of Online Examination system are as under:

- Low storage capacity.
- Communication between admin and customer.

8.2 FUTURE ENHANCEMENT:

There is always a scope for enhancements in any developed system, especially when our nature of the project is iterative waterfall which allows us to rethink on the method of development to adopt changes in the project. Below mentioned are some of the changes possible in the future to increase the adaptability, and efficiency of the system.

- More attractive GUI (Graphical user interface).
- Communication options like chat.
- Online payment options.

9. Conclusion

network for all the people nowadays. We can use it to know friends and keep contact with friends that came from different countries. We can also share our ideas so quickly so that all the things could develop so fast because people could tell us their ideas and we could improve it immediately. We could also learn new things on social media by watching or reading the things that people shared onto the social media. People could also sell things on social media freely which could reduce the expenditure of advertisements.

There are more advantages for using social media, however, there is always advantages and disadvantages for a thing. As social media is too convenient for people, almost most of them don't even have to 'speak out' to communicate with people. No longer, people will lost their communication skills. The more serious problem is many people utilised the power of social media and used it to bully someone. The power of social media is also same as the one in real life. A little of them used social media to do things that against the law, which is a fool behaviour.

Social media changed our life so much. Our life became more convenient because social media is a very useful tool for us in 21st century, it could help us to improve our life. However, we have to aware of how we use them. If we could use the social media smartly, having social media will become a good change for us.

10. References

WEBSITES:

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- https://getbootstrap.com/docs/4.4/getting-started/introduction/
- https://nodejs.org/en/
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Books

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- Beginning Django E-commerce by James McGaw