DISCUSSY: A Web based Application for connecting people to exchange Ideas

Bhooshan Mate ,Parimal Meshram ,Mitali Maheshkar, Khusbhu Kamble

Department of Computer Science and Engineering,
G.H Raisoni Institute of Engineering and Technology, Nagpur, Shradha Park,
B-37/39
Hingna-wadi road,Nagpur,440028

(Prof. Vinita Kakani ,Department of CSE, GHRIET, Nagpur, 440028)

Abstract – A chatting application with a communication environment was the focus of this project. Our project aims to develop a chatting system that will facilitate communication between students, colleagues, and workers within the same organization, in order to provide an effective channel for communication both among themselves and among them and their colleagues.

For the application itself, this system can serve as a link to reach out for all users. During the design of the system, the socket concept was used, a software endpoint used to communicate bidirectionally between a server program and one or more client programs. Furthermore, the database for this system was designed using ERD and normalization methods.

KEYWORDS: Normalization, ERD, React, Socket concept.

I. INTRODUCTION

The internet has been a vital tool in our lives in recent years, especially for online chatting. As a result of its use in many industries, including scientific, educational, training, and social networking. Many topics are covered in considered chat rooms, ranging from entertainment, sports, politics, and pop culture. They're a great place to connect with friends who share your interests. With its emoticons, custom fonts and even voices, you can spice up your chats. The Yahoo chat program is the largest known in the world, however there is one disadvantage: a username isn't linked to any real personal information about the person who's using it. Anonymity can make it difficult to know whether other chats are honest. Which makes chat rooms a possible means to other predators. The special boxes for messages are poor in utilities such as shapes and symbols.

Our project "Discussy" intends to establish a chat room for communication and idea exchange with people from any type of organization, be it educational, business, or non-profit, to share their perspectives and ideas. Also, amongst colleagues and staff members, to enrich the conversation about the job in progress. React JS has been used to build the UI (User Interface) & for handling the view layer of the application. Node JS for backend architecture of the application such as creating threads.
Firebase is used for cloud support to save our data instantaneously (synchronization).

II. LITERATURE SURVEY

1. Multi-User Chat Application (R. Gayathri, C. Kalieswari)

A reference on the workings and building blocks of a multi-user chat application such as data storage and approach for inculcating the concept of multi-threading with the aim to carry-out aims such as minimum system resources usage, improve server responsiveness and better communication.

2. A Review on Client-Server based Application. (Santosh Kumar)

Socket programming helps to build communication linkages between remote and local processes to create a server-client based communication system, this allows you to exchange information between processes on the same machine or over a network, distribute work to the most efficient machines, and easily access centralized data.

3. Research and Analysis of the Front-end Frameworks and Libraries in E-Business Development (Xing, Yongkang & Huang)

React is a JavaScript library developed that creates a single-page application user interface by splitting the user interface into configurable components and turns out to be easy to implement while designing for front-end development.

Node.js can easily be used as a server-side proxy and can handle a large number of concurrent connections in a non-blocking manner. This is especially useful when proxying different services with different response times or collecting data from multiple source points and handle the back-end development.

4. System Development Life Cycle (SDLC) Methodologies

A reference to the process (overall) of developing a system or software to meet specific requirements. It covers many activities. First, understand the reasons for building the system, consider the feasibility of the project, analyze the problems, select the design and architecture of the system, implement and test it, and provide the system to the user as a product. SDLC is a step-by-step improvement process that progresses through multiple stages of development.
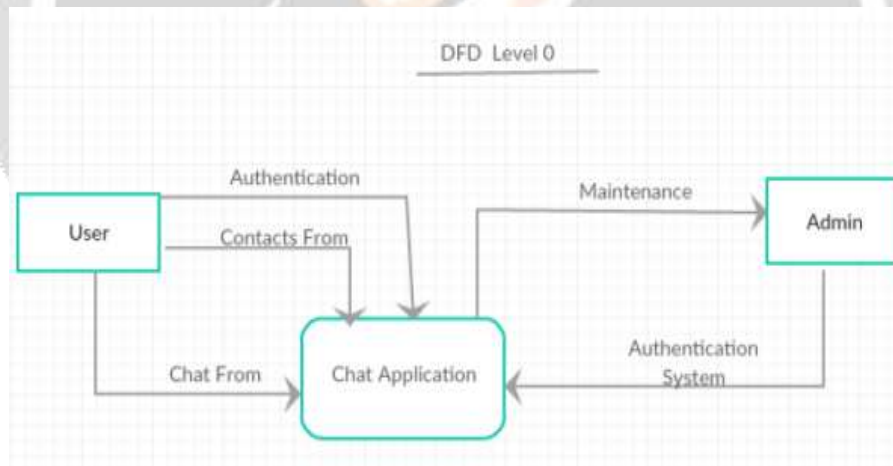
III. METHODOLOGY

Figure 1

- Server Listener: This is a step on the server's side that allows it to send and receive data from clients over a shared port.
- Client Connection: Clients, who send and receive data from the server, go through this process.
- Services define which operations are permitted during data transmission between clients via the server.
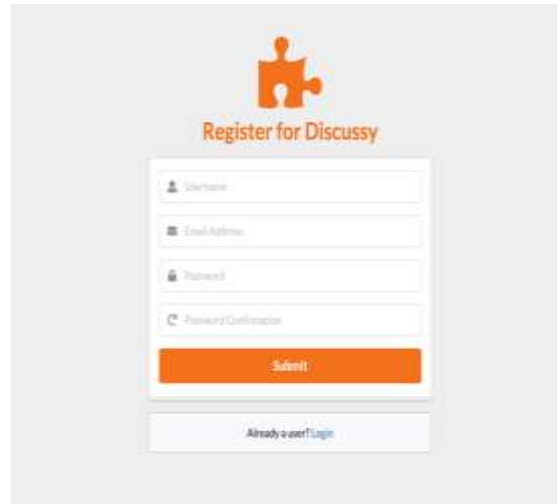
IV. IMPLEMENTATION

Figure 2

- Registration is the very first step to use Discussy by which person will be on the official user list.
- Entering few details such as username, email address, password will let the signup happen.
- The main entry point of the application which render all other components and UI elements of the application.
- The MD5 used here encrypts the user password and stores this encrypted password in the database.
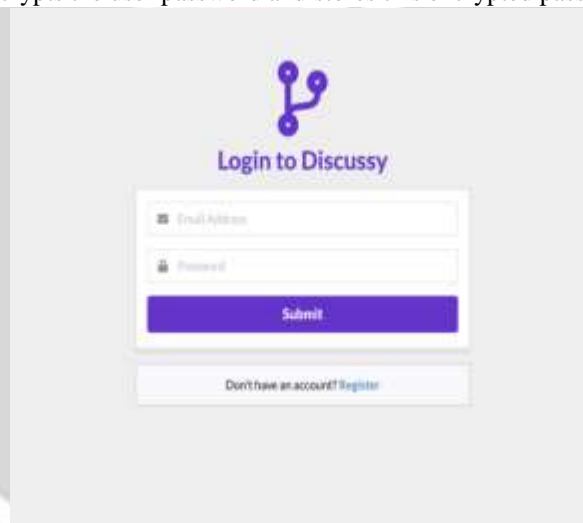

Figure 3

- Login button to login to the Discussy, simply with email address and password user can login to his/her account.
- When the user logs in, the user enters their password, and when the system validates the user information, the password is also encrypted and validated. This is because the encrypted password has already been inserted in the database table. This will prevent password hacking
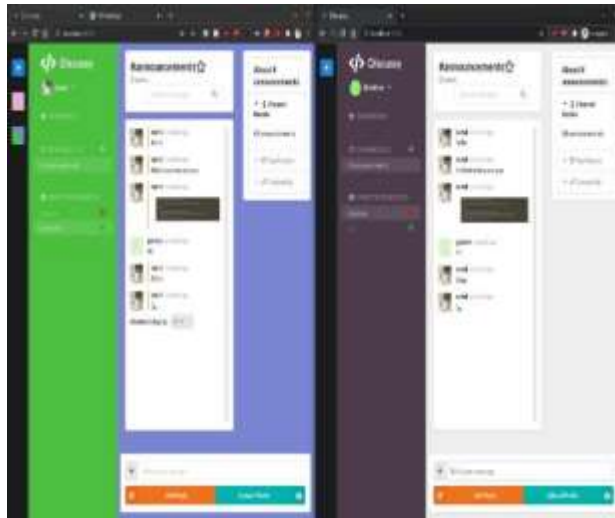
Figure 4

- Main App Private messages are shown as different users are communicating with each other.
- CSS in React is used to style the React App or Component. The style attribute is used for styling in the application.
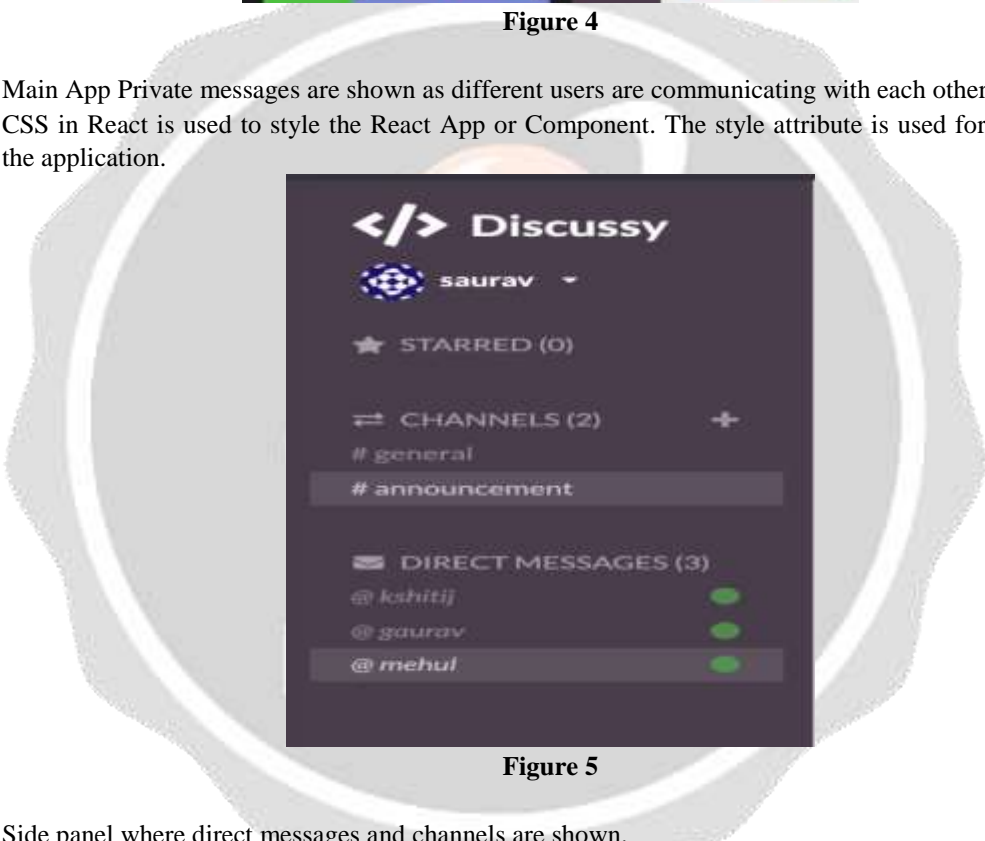

Figure 5

- Side panel where direct messages and channels are shown.
- The as prop in Semantic UI React allows us to build React components. It enables the creation of component features and properties without the need for further nested components.
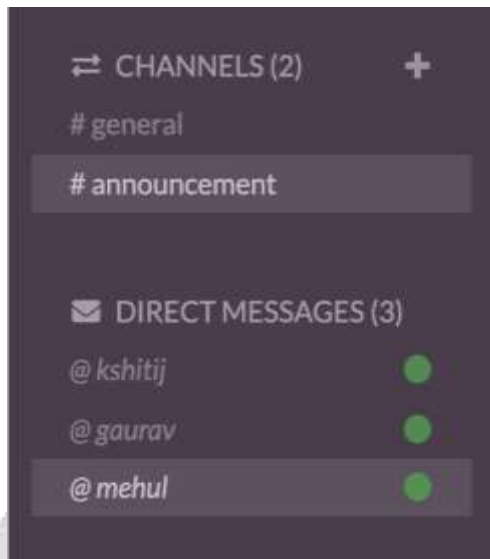.

Figure 6

- Direct message and channel section. The connect function connects a React component to a Redux store.
- It provides its connected component with the pieces of the data it needs from the store, and the functions it can use to dispatch actions to the store.
- It does not modify the component class passed to it; instead, it returns a new, connected component class that wraps the component you passed in.
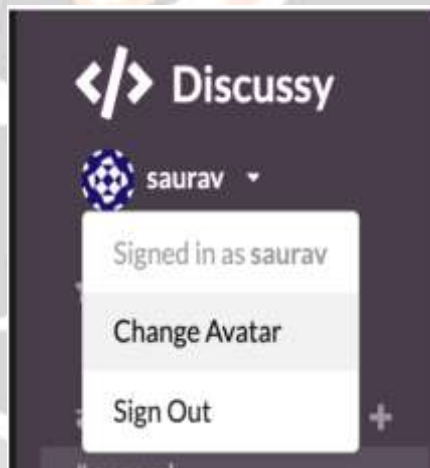

Figure 7

- The Sign Out option to log off after the login and usage.
- Change Avatar feature allows users to change between the older and any new avatar.
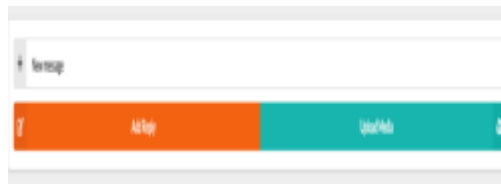
Figure 8

- Attachment Box and New message box are shown.
- Image sharing for better experience.
- It takes pictures from system and send it to other user/groups.

V. CONCLUSION

The project processed all the steps needed to analyze and design the system Gather the information you need, answer the questionnaire, and clarify the purpose The system and its beneficiaries also explained the system and how this clarification procedure is carried out. Through drawing flow charts, DFDs and ERDs. The second phase system of project development. It will be a chat system. Development using JavaScript. Who is in charge of the programming phase, who is testing The user's system that will benefit from this application.

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