PROJECT REPORT

on

REAL TIME CHAT APPLICATION

Submitted by

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CERTIFICATE

This is to certify that the project work titled **"CHAT APPLICATION"** is a bonafied project work submitted by **P.PRASANTHI - R170475 ,T.SHOBA RANI – R170755 & P.DASTHAGIRAMMA - R170435** in the department of COMPUTER SCIENCE AND ENGINEERING in partial fulfillment of requirements for the award of degree of Bachelor of Technology in Computer science and engineering for the year 2022-2023 carried out the work under the supervision.

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M MUNIBABU

HEAD OF THE DEPARTMENT
P.HARINADHA

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ABSTRACT

Chat application is a feature or a program on the Internet to communicate directly among Internet users who are online or who were equally using the internet.

Chat applications allow users to communicate even though from a great distance. Therefore, this chat application must be real-time and multi platform to be used by many users.

The development of information and communication technologies are rapidly making one of the reasons for Indonesia, especially Bandung to develop this chat application.

That's because Indonesia does not always rely on outsiders. It is important for Indonesia to develop this chat application for themselves. This chat application in the manufacture begins with the collection of relevant data that will be displayed in the web and mobile versions.

The programming language used to build server is JAVA SCRIPT and MYSQL.

Introduction

Our project is related to a new way of chatting with people.Chatting and communicating with people through internet is becoming common to people and is connecting people all over the world. Mainly, chatting apps in today's world mainly focus on connecting people, providing users with more features like GIFs, stickers etc. But this app, is different from them.This chatting application includes chatting through internet using IP address. It mainly focuses on chatting and connects people all around the world. Mostly, chatting applications like WhatsApp requires mobile no. Of the person and then we can chat and connect with the person. But here, the person only has to login with the system, and then he can connect with the people which he wants with.

In this chat application, when you open it first on your browser, there is shown a signup form where you have to signup with your details like name, email, password, and image. Email and image field is fully validated which means you've to enter a valid email and an image file only. Once you signed up successfully, you'll be redirected to the user's page where you can see your full name, image, status, and logout button to the top, and users, like you, appear on the bottom if someone has signed up.

On this page, you can see their image, name, status, and the last message if they sent to you. You have to click on the particular user or you can also search any existing user with their name then you'll be redirected to the chat page and there you can see the image, name, status of that user who is going to chat.

Once you send a message to another user then immediately that message appears in your chat box and another user chatbox too which you've sent the message. On the message receiver chatbox, this user received the message with the sender image. Remember chatbox will be automatically scrolled to the bottom once the chatbox starts scrolling. You

can log out from the chat application at any time and once you log out, immediately all other users will know that you've been log out or offline.

Once you log out, you can again login and with your email and password that you used when signing up for the form. If you entered the correct credentials then you'll be redirected to the user's page and all other users will immediately know that you've logged on and now active.

PURPOSE

Chatting app allows you to communicate with your customers in web chat rooms. It enables you to send and receive messages. Chatting apps make it easier, simpler, and faster to connect with everyone and it is also easy to use. There are many types of chatting apps and every one has its own format, design, and functions.

SCOPE

A chat application makes it easy to communicate with people anywhere in the world by sending and receiving messages in real time. With a web or mobile chat app, users are able to receive the same engaging and lively interactions through custom messaging features, just as they would in person.

ADVANTAGES:

- Chatting is the textual or multimedia conversation over the Internet. It is a real-time communications between two users via computer. It is widely interactive text based communication process that takes places over the Internet.
- Speed. A chat application allows you to message or contact a person in real-time

•Familiarity

•Convenienc

•Privacy

DISADVANTAGE:

You can't be sure other people are being honest or that they are who they say they are.

•If you are feeling vulnerable, people online might try to take advantage of you.

•Building relationships online can result in your spending less time with friends and family.

Requirement Specification

Hardware Configuration:

Client side:

Ram	512 MB
Hard disk	10 GB
Processor	1.0 GHz

Server side:

Ram	1 GB
Hard disk	20 GB
Processor	2.0GHz

Software requirement:

Front end	HTML,CSS ,jquery,java script
Server side Language	PHP
Database Server	MYSQL
Web Browser	Firefox , Google Chrome or any compatible browser
Operating System	Ubuntu,Windows or any equivalent OS
Tools	Xampp,phpmyadmin

APACHE

The Apache HTTP Server Project is an effort to develop and maintain an open-source HTTP server for modern operating systems including UNIX and Windows. The goal of this project is to provide a secure, efficient and extensible server that provides HTTP services in sync with the current HTTP standards.

The Apache HTTP Server was launched in 1995 and it has been the most popular web server on the Internet since April 1996. It has celebrated its 20th birthday as a project in February 2015.

PHP

- PHP stands for PHP: Hypertext Preprocessor.
- PHP is a server-side scripting language, like ASP.
- PHP scripts are executed on the server.
- PHP supports many databases (MYSQL, Informix, Oracle, Sybase, Solid, Generic ODBC, etc.).
- PHP is an open source software.
- PHP is free to download and use.

MYSQL

- MYSQL is a database server
- MYSQL is ideal for both small and large applications
- MYSQL supports standard SQL
- MYSQL is free to download and use
- How to access MySQL:
- http://localhost/phpmyadmin

MYSQL compiles on a number of platforms

Analysis and Design

Analysis

Chat applications and messaging apps are surging in popularity. The reason for this is simple—people love to chat. It's the preferred method of communication in a *multitude of different scenarios* from collaborating with a colleague to checking in on a loved one.

Chat and messaging applications help foster a sense of community and connection that other forms of communication can't reproduce.

Design Introduction:

Design is the first step in the development phase for any techniques and principles or the purpose of defining a device, a process or system in sufficient detail permit Its physical realization. Once the software requirements have been analyzed and specified the software design involves three technical activities - design, coding, implementation and testing that are required to build and verify the software.

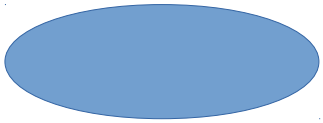
The design activities are of main importance in this phase, because in this activity, decisions ultimately affecting the success of the software implementation and its ease of maintenance are made. These decisions have the final bearing upon reliability and maintainability of the system. Design is the only way to accurately translate the customer's requirements into finished software or a system. Design is the place where quality is fostered in development. Software design is a process through which requirements are translated into a representation of software. Software design is conducted in two steps. Preliminary design is concerned with the transformation of requirements into data

UML Diagrams:

Actor:

A coherent set of roles that users of use cases play when interacting with the use cases. an observable result of value of an actor.

Use case: A description of sequence of actions, including variants, that a system performs yields an observable result of value of an actor. actor diagram is drawned in a eclipse shape



UML stands for Unified Modeling Language. UML is a language for specifying, visualizing and documenting the system. This is the step while developing any product after analysis. The goal from this is to produce a model of the entities involved in the project which later need to be built. The representation of the entities that are to be used In the product being developed need to be
designed.

USECASE DIAGRAMS:

Use case diagrams model behavior within a system and helps the developers understand of what the user require. The stick man represents what's called an actor.

Use case diagram can be useful for getting an overall view of the system and clarifying that can do and more importantly what they can't do.

Use case diagram consists of use cases and actors and shows the interaction between the use case and actors.

- The purpose is to show the interactions between the use case and actor.
- To represent the system requirements from user's perspective.
- An actor could be the end-user of the system or an external system.

USECASE DIAGRAM: A Use case is a description of set of sequence of actions. Graphically it is rendered as an ellipse with solid line including only its name. Use case diagram is a behavioral diagram that shows a set of use cases and actors and their relationship. It is an association between the use cases and actors. An actor represents a real-world object. Primary Actor – Sender, Secondary Actor Receiver.

Use Case Diagrams:

USER

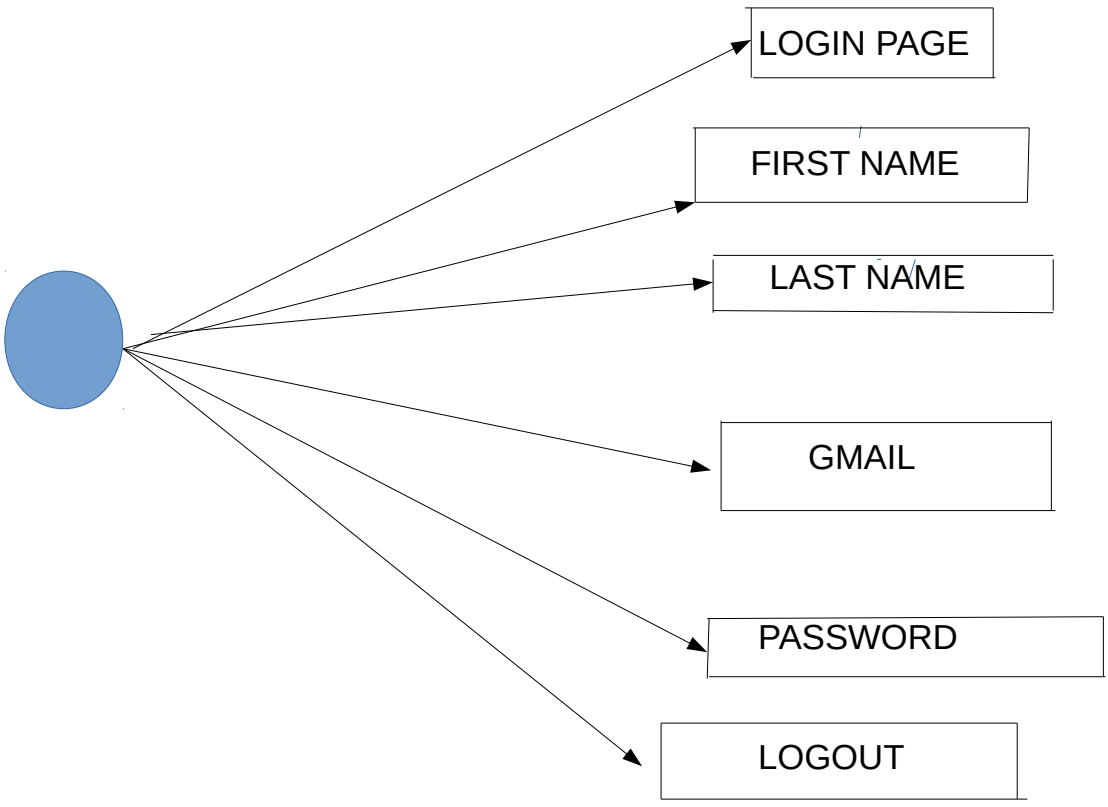


Fig.1 User UML

ER Diagram:

The Entity-Relationship (ER) model was originally proposed by Peter in 1976 [Chen76] as a way to unify the network and relational database views. Simply stated the ER model is a conceptual data model that views the real world as entities and relationships. A basic component of the model is the Entity-Relationship diagram which is used to visually represent data objects. Since Chen wrote his paper the model has been extended and today it is commonly used for database design for the database designer, the utility of the ER model is:

- It maps well to the relational model. The constructs used in the ER model can easily be transformed into relational tables.
- It is simple and easy to understand with a minimum of training. Therefore, the model can be used by the database designer to communicate the design to the end user.
- In addition, the model can be used as a design plan by the database developer to implement a data model in specific database management software.

ER Notation

There is no standard for representing data objects in ER diagrams. Each modeling methodology uses its own notation. The original notation used by Chen is widely used in academics texts and journals but rarely seen in either CASE tools or publications by non-academics. Today, there are a number of notations used; among the more common are Bachman, crow's foot, and IDEFIX.

All notational styles represent entities as rectangular boxes and relationships as lines connection boxes. Each style uses a special set of symbols to represent the cardinality of a connection. The notation used in this document is from Martin. The symbols used for the basic ER constructs are:

- **Entities** are represented by labeled rectangles. The label is the name of the entity. Entity names should be singular nouns.
- **Relationships** are represented by a solid line connecting two entities. The name of the relationship is written above the line. Relationship names should be verbs
- **Attributes**, when included, are listed inside the entity rectangle. Attributes which are identifiers are underlined. Attribute names should be singular nouns.
- **Cardinality** of many is represented by a line ending in a crow's foot. If the crow's foot is omitted, the cardinality is one.

Existence is represented by placing a circle or a perpendicular bar on the line. Mandatory existence is shown by the bar (looks like a 1) next to the entity for an instance is required. Optional existence is shown by placing a circle next to the entity that is optional.

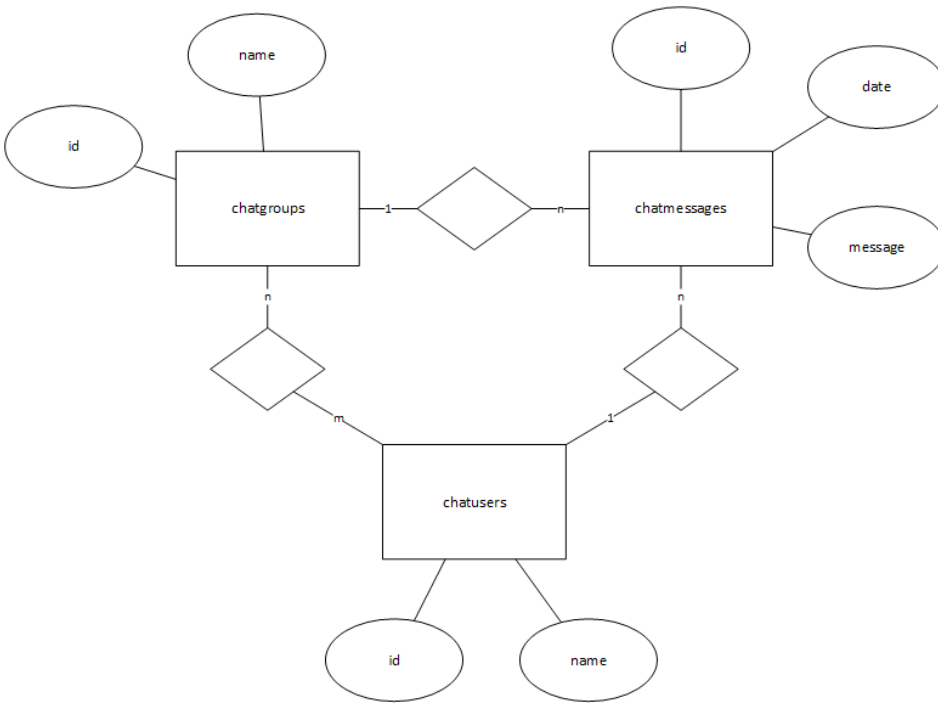


Fig.3 ER Diagram

Implementation and System Testing

After all phase have been perfectly done, the system will be implemented to the server and the system can be used.

System Testing

The goal of the system testing process was to determine all faults in our project .The program was subjected to a set of test inputs and many explanations were made and based on these explanations it will be decided whether the program behaves as expected or not. Our Project went through two levels of testing

1. Unit testing
2 .Integration testing

Unit Testing

Unit testing is commenced when a unit has been created and effectively reviewed .In order to test a single module we need to provide a complete environment i.e. besides the section we would require The procedures belonging to other units that the unit under test calls Non local data structures that module accesses .A procedure to call the functions of the unit under test with appropriate parameters

1. Test for the admin module

T **Testing user registration form-**This form is used for login of user of the system. In this form we enter the URL and check whether the website is opening or not

user check whether the message will be delivered or not .

Whether he will be able to receiving the messages or not

Test for logout .

Integration testing

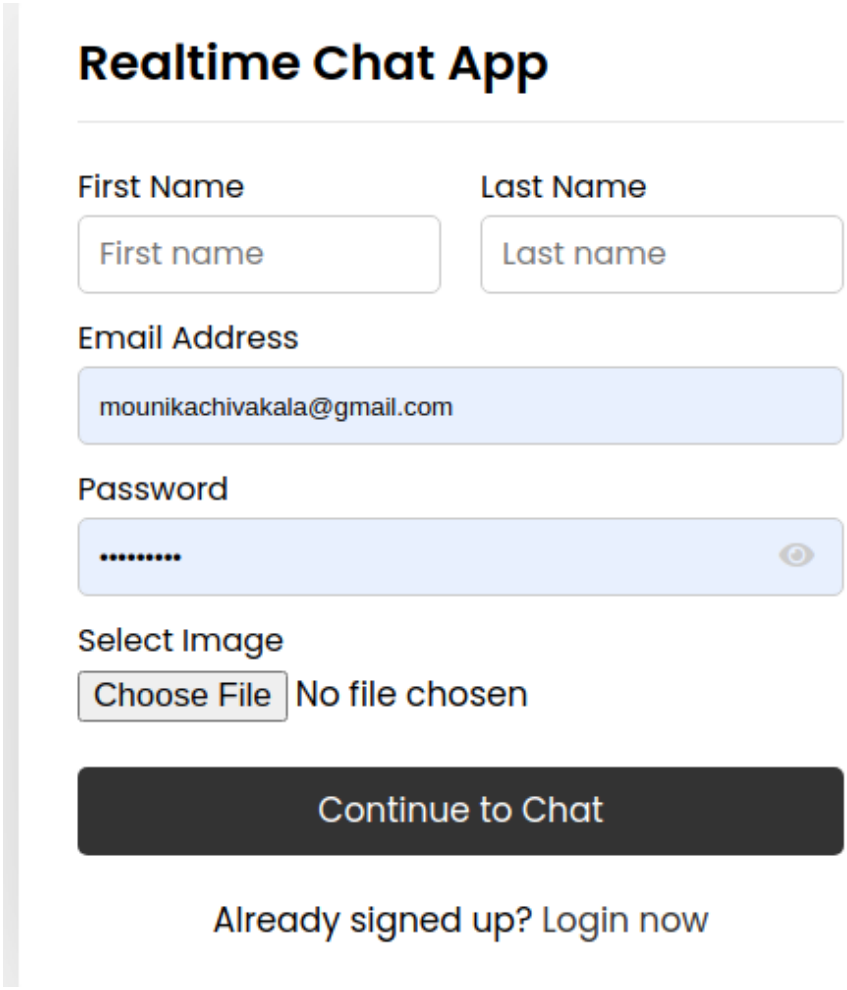
In the Integration testing we test various combination of the project module by providing the input.

The primary objective is to test the module interfaces in order to confirm that no errors are occurring when one module invokes the other module.

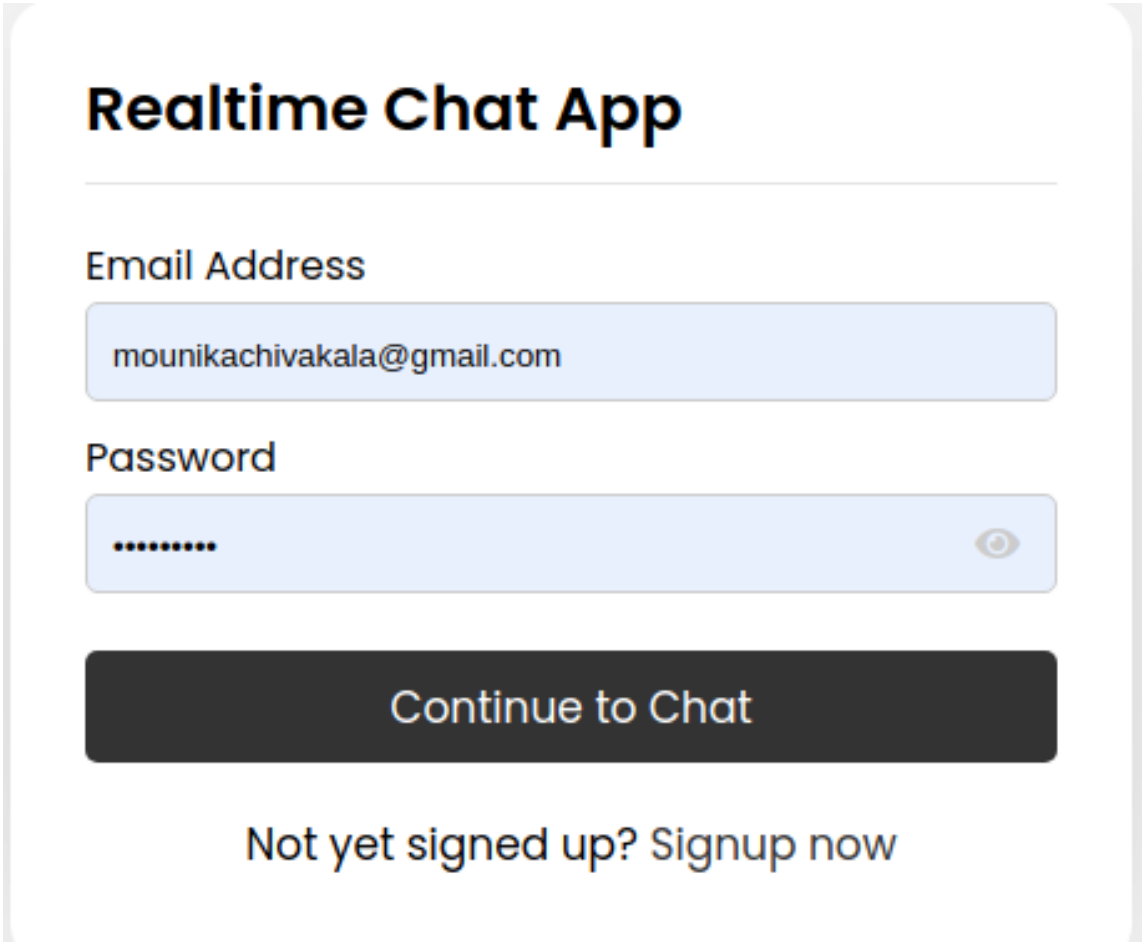
EVALUATION

Project URL :https://newchatdomain.000webhostapp.com

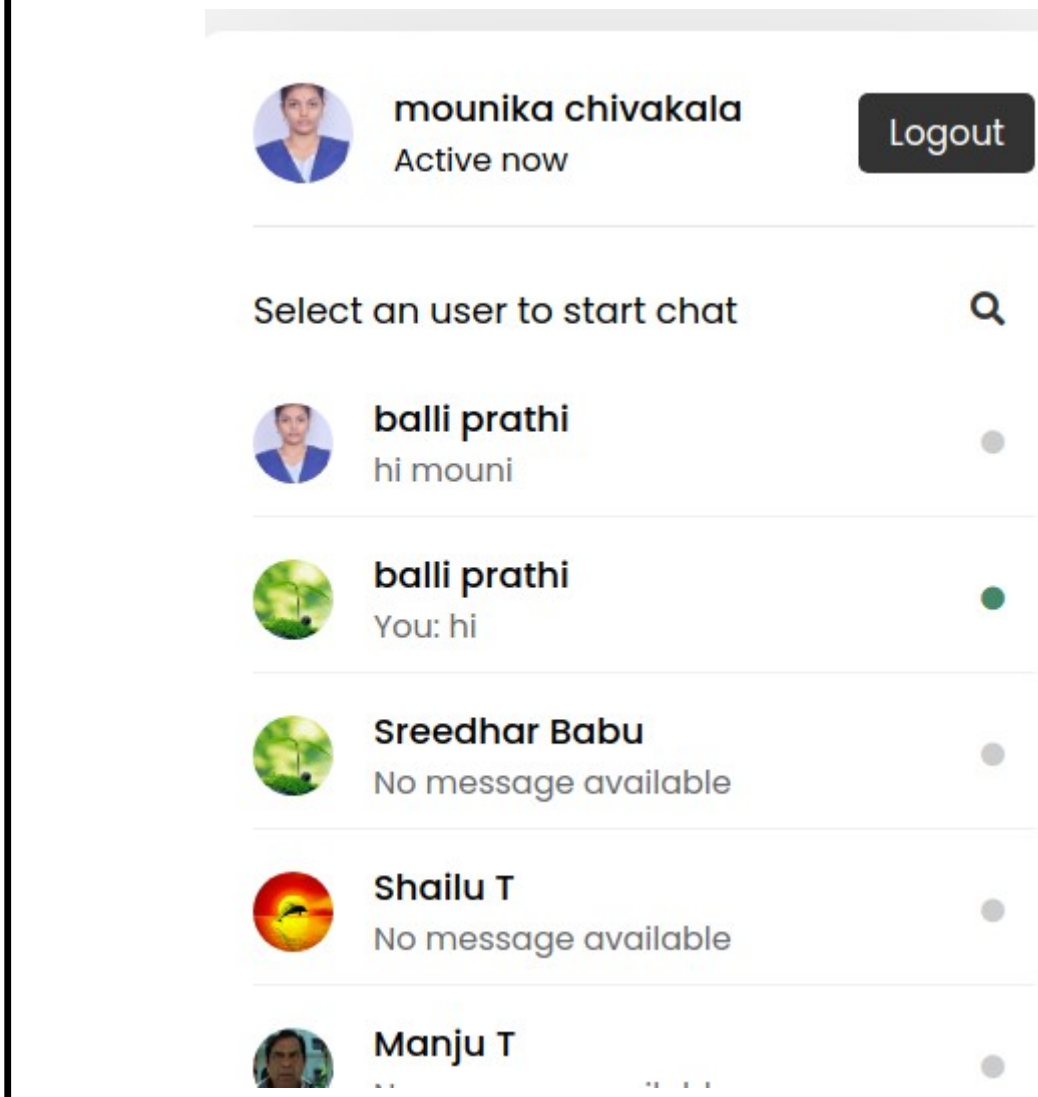
signup page



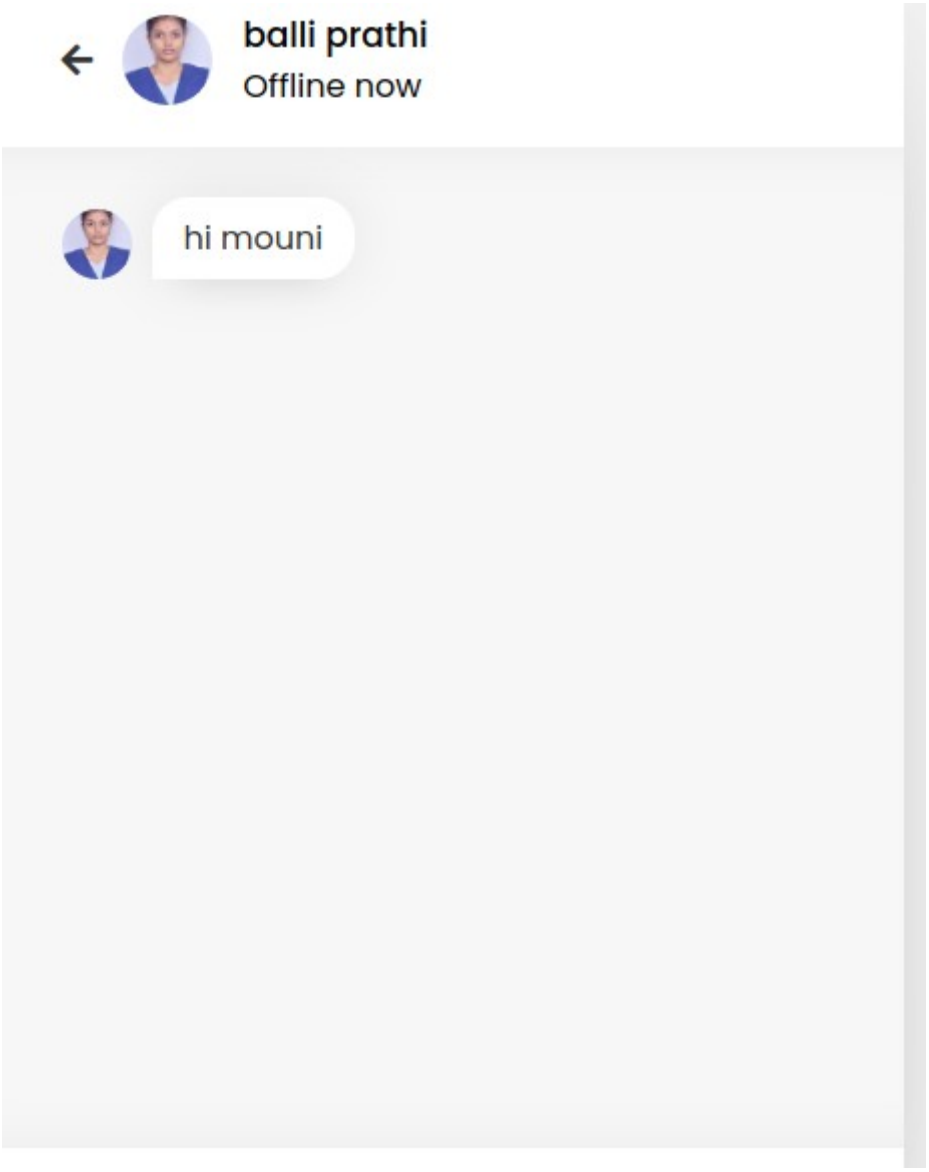
LOGIN HERE:


Realtime Chat App
Email Address
mounikachivakala@gmail.com
Password
Continue to Chat
Not yet signed up? Signup now

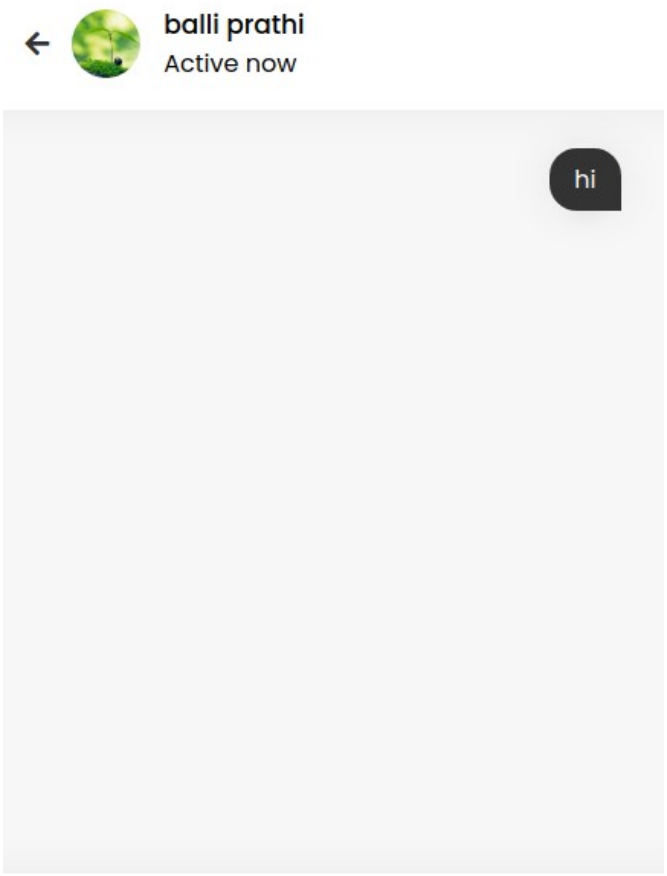
SELECT CHAT


mounika chivakala
Active now
Logout
Select an user to start chat
balli prathi
hi mouni
balli prathi
You: hi
Sreedhar Babu
No message available
Shailu T
No message available
Manju T

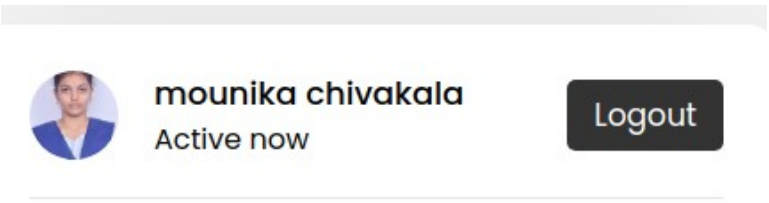
RECEIVING MESSAGE



SENDING MESSAGE



LOGOUT PAGE



CONCLUSION

The chat app provides a better and more flexible chat system. Developed with the latest technology in the way of providing a reliable system. The main advantage of the system is instant messaging, real-world communication, added security, etc. This application may find the best demand in the market for most organizations that aim to have independent applications.

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**********THANKYOU**********