GLA UNIVERSITY MATHURA
(U.P)

Project Synopsis: **Real Time Chat Application**

Submitted By

Name:

1.Sumit Sharma

2.Sudhanshu Dixit

3.Lokesh Yadav

4.Yash Pandey

5.Mridul Srivastav

Submitted to:

Mr. Akash Choudhary

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INTRODUCTION

Communication is a mean for people to exchange messages. It has started since the beginning of human creation. Distant communication began as early as 1800 century with the introduction of television, telegraph and then telephony. Interestingly enough, telephone communication stands out as the fastest growing technology, from fixed line to mobile wireless, from voice call to data transfer. The emergence of computer network and telecommunication technologies bears the same objective that is to allow people to communicate. All this while, much efforts has been drawn towards consolidating the device into one and therefore indiscriminate the services. Chatting is a method of using technology to bring people and ideas together despite of the geographical barriers. The technology has been available for years but the acceptance it was quit recent. Our project is an example of a chat server. It is made up of applications the client application which runs on the users mobile and server application which runs on any pc on the network. To start chatting our client should get connected to server where they can do Group and private chatting.

System Requirements: -

Supported Operating system: -

Windows 10
Windows 8
Windows 7

Software Required: -

Visual Studio code

NodeJS

MongoDB

FireBase

ExpressJs

ReactJs

Web Browser.

Hardware Requirements: -

For Android Studio and Intelli j: -

Intel i3 6th Gen (1.8 GHz minimum).
4 GB of RAM.
2GB GPU
5000x Hard Disk
Internet Connection

For Eclipse: -

Intel Pentium dual Core (3.2 GHz) **2 GB** of RAM
5000x hard disk
Internet Connection

Frontend and Backend: -

Front end
ReactJs

React (also known as React.js or ReactJS) is an open-source, front end, JavaScript library[3] for building user interfaces or UI components. It is maintained by Facebook and a community of individual developers and companies.[4][5][6] React can be used as a base in the development of single-page or mobile applications. However, React is only concerned with state management and rendering that state to the DOM, so creating React applications usually requires the use of additional libraries for routing

Html

HTML is an acronym which stands for **Hyper Text Markup Language** which is used for creating web pages and web applications. Let's see what is meant by Hypertext Markup Language, and Web page.

Hyper Text: HyperText simply means "Text within Text." A text has a link within it, is a hypertext. Whenever you click on a link which brings you to a new webpage, you have clicked on a hypertext. HyperText is a way to link two or more web pages (HTML documents) with each other.

Markup language: A markup language is a computer language that is used to apply layout and formatting conventions to a text document. Markup language makes text more interactive and dynamic. It can turn text into images, tables, links, etc.

CSS

CSS stands for Cascading Style Sheets. It is a style sheet language which is used to describe the look and formatting of a document written in markup language. It provides an additional feature to HTML. It is generally used with HTML to change the style of web pages and user interfaces. It can also be used with any kind of XML documents including plain XML, SVG and XUL.

CSS is used along with HTML and JavaScript in most websites to create user interfaces for web applications and user interfaces for many mobile applications.

Backend

NodeJs

Node.js is an open-source, cross-platform, back-end JavaScript runtime environment that runs on the V8 engine and executes JavaScript code outside a web browser. Node.js lets developers use JavaScript to write command line tools and for server-side scripting—running scripts server-side to produce dynamic web page content before the page is sent to the user's web browser. Consequently, Node.js represents a "JavaScript everywhere" paradigm,[6] unifying web-application development around a single programming language, rather than different languages for server-side and client-side scripts.

ExpressJs

Express.js, or simply Express, is a back end web application framework for Node.js, released as free and open-source software under the MIT License. It is designed for building web applications and APIs.[3] It has been called the de facto standard server framework for Node.js.

MongoDB

MongoDB is a source-available cross-platform document-oriented database program. Classified as a NoSQL database program, MongoDB uses JSON-like documents with optional schemas. MongoDB is developed by MongoDB Inc. and licensed under the Server Side Public License (SSPL).

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.

Socket.io

Socket.IO is a JavaScript library for realtime web applications. It enables realtime, bi-directional communication between web clients and servers. It has two parts: a client-side library that runs in the browser, and a server-side library for Node.js. Both components have a nearly identical API.

Pusher

Pusher is a hosted service that makes it super-easy to add real-time data and functionality to web and mobile applications. Pusher sits as a real-time layer between your servers and your clients. ... NET, Go and Node on the server and JavaScript, Objective-C (iOS) and Java (Android) on the client.

Idea : -

The **purpose of Real Time Chat Application is** to have Real time Messaging with different clients .

Objective: -

Real-time Messaging

Most of us are familiar with the use of real-time messaging applications, especially in mobile devices, in the form of Whatsapp, Facebook Messenger, and numerous other messaging applications. However, real-time messaging is used not limited to purely messaging applications. We see real-time messaging features in on-demand taxi apps, delivery apps, and collaborative platforms.

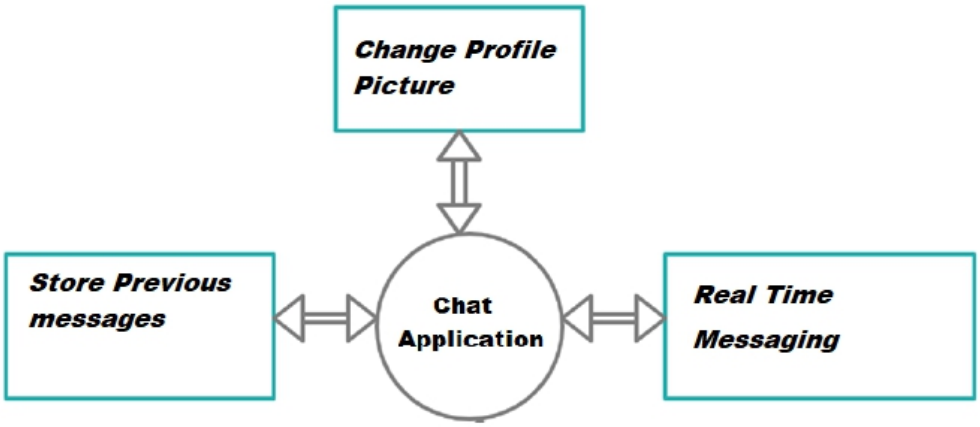
Scope: -

The scope of project is quite wide. We see real-time messaging features in on-demand taxi apps, delivery apps, and collaborative platforms.

, he can easily use this application.

DFD: - A data flow diagram (DFD) illustrates how data is processed by a system in terms of inputs and outputs. As its name indicates its focus is on the flow of information, where data comes from, where it goes and how it gets stored.

0 Level DFD: -DFD Level 0 is also called a Context Diagram. It's a basic overview of the whole system or process being analyzed or modeled. It's designed to be an at-a-glance view, showing the system as a single high-level process, with its relationship to external entities. It should be easily understood by a wide audience, including stakeholders, business analysts, data analysts and developers.



AVAILABILITY: -

This WEB APPLICATION works for all OPERATING SYSTEM.
It provides various features which is not present in other WEBSITE.