**LetsTalk - Online Chatting**

Project Submitted in Partial Fulfillment of the Requirements for the Degree of Bachelor of Technology in the field of Computer Science and Engineering

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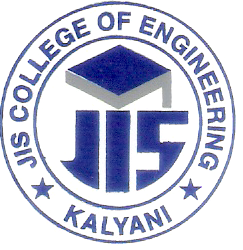
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**CERTIFICATE**

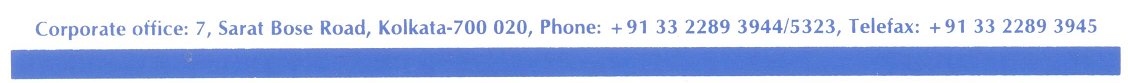
This is to certify that **Name of the Student with Roll no.** has completed his/her project entitled **Name of the Project,** under the guidance of  **Name of the Supervisor** in partial fulfillment of the requirements for the award of the **Bachelor of Technology in Computer Science and Engineering** from JIS college of Engineering (An Autonomous Institute)is an authentic record of their own work carried out during the academic year 2020-21 and to the best of our knowledge, this work has not been submitted elsewhere as part of the process of obtaining a degree, diploma, fellowship or any other similar title.

**--------------------------------- ------------------------------- ------------------------------**

**Signature of the Supervisor Signature of the HOD Signature of the Principal**

**Place:** KALYANI

**Date:**



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# INTRODUCTION

Messaging apps now have more global users than traditional social networks—which means they will play an increasingly important role in the distribution of digital journalism in the future. Drawing upon our interviews and case studies, we identify a number of opportunities and challenges for organizations using—or hoping to use—messaging apps for news. We argue that to devise a successful messaging app strategy, publishers must understand regional strongholds, user demographics, and popular features of each app. As happened after the early days of social media, before which a proliferation of services (some with regional strengths) led to intense competition for user attention, we expect to see some eventual consolidation among chat apps. Elsewhere, we conclude that issues around information, privacy, personal security, and mobile data penetration will unfold in different ways around the world; apps like Telegram and FireChat are among those at the forefront of addressing and solving these problems. In developing editorial strategies for some of these wide-ranging messaging platforms, news organizations are not just helping to future-proof themselves, they are also venturing into online spaces that could enable them to reach hundreds of millions of (often young) people with whom they have never engaged before.

The emergence of computer network and telecommunication technologies bears the same objective : to allow people to communicate.

Chatting is a method of using technology to bring people and ideas together despite geographical barriers. The technology has been available for years but the acceptance of it was quite recent. Our project is an example of a chat server. It is made up of an application which runs on any pc connected to the network. To start chatting our client should get connected to server where they can do group chatting

**TECHNOLOGIES USED**

**Frontend Development:**

The part of a website that the user interacts with directly is termed the front end. It is also referred to as the ‘client side’ of the application. It includes everything that users experience directly: text colors and styles, images, graphs and tables, buttons, colors, and navigation menu. HTML, CSS, and JavaScript are the languages used for Front End development. The structure, design, behavior, and content of everything seen on browser screens when websites, web applications, or mobile apps are opened up, is implemented by front End developers. Responsiveness and performance are two main objectives of the Front End. The developer must ensure that the site is responsive i.e. it appears correctly on devices of all sizes no part of the website should behave abnormally irrespective of the size of the screen.

We have used HTML, CSS and JavaScript. Below are the reason for using these technologies.

**Why HTML?**

Hypertext Markup Language, or HTML, is a [programming language](https://generalassemb.ly/education/front-end-web-development-remote-online) used to describe the structure of information on a webpage. A web page can contain headings, paragraphs, images, videos, and many other types of data. [Front-end developers](https://generalassemb.ly/education/front-end-web-development-remote-online) use the HTML element to specify what kind of information each item on a webpage contains. A look under the hood of any website would reveal a basic HTML code page, written with an HTML structure editor, providing structure for all the page’s components, including its header element, footer element, main content, and other inline elements.

**Why CSS ?**

[CSS](https://www.w3.org/Style/CSS/)(Cascading Style Sheet) is the language for describing the presentation of Web pages, including colors, layout, and fonts. It allows one to adapt the presentation to different types of devices, such as large screens, small screens, or printers. CSS is independent of HTML and can be used with any XML-based markup language. The separation of HTML from CSS, known as external CSS, makes it easier to maintain sites, share style sheets across pages, and tailor pages to different environments.

**Why JavaScript?**

The importance of JavaScript as a web technology can be determined from the fact that it is currently used by 94.5% of all websites. As a client-side programming language, JavaScript helps web developers to make web pages dynamic and interactive by implementing custom client-side scripts.  One can even combine JavaScript, HTML5 and CSS3 to create web pages that look good across browsers, platforms, and devices.

There are also a number of reasons why each modern web developer must know JS like-

* Implement Client-Side Scripts
* Write Server-Side Code
* Responsive Web Design
* Varying Libraries and Framework.

**Backend Development:**

Backend is the server-side of the website. It stores and arranges data, and also makes sure everything on the client-side of the website works fine. It is the part of the website that you cannot see and interact with. It is the portion of software that does not come in direct contact with the users. The parts and characteristics developed by backend designers are indirectly accessed by users through a front-end application. Activities, like writing APIs, creating libraries, and working with system components without user interfaces or even systems of scientific programming, are also included in the backend.

**Why Nodejs?**

Node (or more formally *Node.js*) is an open-source, cross-platform runtime environment that allows developers to create all kinds of server-side tools and applications in [JavaScript](https://developer.mozilla.org/en-US/docs/Glossary/JavaScript). The runtime is intended for use outside of a browser context (i.e. running directly on a computer or server OS). As such, the environment omits browser-specific JavaScript APIs and adds support for more traditional OS APIs including HTTP and file system libraries.

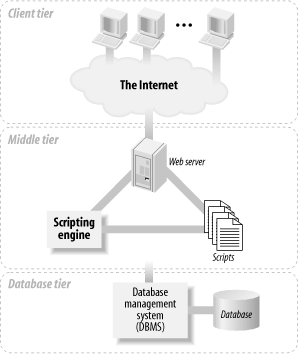
Here is how Node.js handles a file request:

1. Sends the task to the computer's file system.
2. Ready to handle the next request.
3. When the file system has opened and read the file, the server returns the content to the client.

Node.js eliminates the waiting, and simply continues with the next request.

Node.js runs single-threaded, non-blocking, asynchronous programming, which is very memory efficient.

**For Database:**



The three-tier architecture is conceptual. In practice, there are different implementations of web database applications that fit this architecture. The most common implementation has the web server (which includes the scripting engine that processes the scripts and carries out the actions they specify) and the database management system installed on one machine: it’s the simplest to manage and secure, and it’s our focus in this book. With this implementation on modern hardware, your applications can probably handle tens of thousands of requests every hour.

**Why MongoDB?**

In the simplest terms, MongoDB is a cross-platform document-oriented [NoSQL database](https://www.educba.com/what-is-nosql-database/) that uses JSON-like documents using dynamic schemas, called BSON documents, instead of following the conventional relational database (RDB) structure.

As a document database, MongoDB makes it easy for developers to store structured or unstructured data. It uses a [JSON-like](https://www.mongodb.com/json-and-bson) format to store documents. This format directly maps to native objects in most modern programming languages, making it a natural choice for developers, as they don’t need to think about [normalizing data](https://www.mongodb.com/basics/data-models). MongoDB can also handle high volume and can scale both vertically or horizontally to accommodate large data loads.

We will use MongoDB not for storing chats between the people but MongoDB will be used to store the details of Users who are registering as first user and existing User.