

# **Real-Time One-to-One Chat Platform**

**A Minor Project Report Submitted To**



*Where Success is a Tradition*

**SAGE UNIVERSITY, INDORE**

**Towards Partial Fulfillment for the Award of  
Bachelor of Technology  
in  
Computer Science & Engineering**

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## **SAGE University, Indore**



### **CERTIFICATE**

**This is to certify that the project work entitled “Real-Time  
One-to-One Chat Platform**

**” has been carried**

Out by Bahadur Ninama ,Digpal Singh, students of B.Tech III year, VI Semester under our supervision and guidance. They have submitted this project report towards partial fulfillment under the minor project work of the **Bachelor of Engineering in Computer Science and Engineering** degree by **Institute of Advance Computing Core, SAGE University**, during the academic year 2024-25.

**Date:**

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### **Minor Project Approval Sheet**

**The project entitled “Real-Time One-to-One Chat Platform”  
submitted by,**

Bahadur Ninama , Digpal Singh is approved as partial fulfillment under minor project work, for the award of the **Bachelor of Engineering (Computer Science and Engineering)** degree by IAC core, SAGE University, Indore, during academic year 2024-25.

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## Acknowledgement

First and foremost, we would like to express our thankfulness towards **Prof. Garima Hardia** , Institute of advance computing core for extending all the facilities needed to carry out this work. We take pride in saying that we have successfully completed our major project under his proficient guidance. He was a major support to us throughout projects, being available at odd hours with his ideas, inspiration and encouragement. It is a through his masterful guidance that we have been able to complete our major project.

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## **Candidate Declaration**

We hereby declare that the work which is being presented in this project report entitled “Real-Time One-to-One Chat Platform” in partial fulfillment, under Major project, for the award of **B.Tech (Computer Science and Engineering)** is an authentic record of my own work, carried out under the supervision and guidance of **Prof. Garima Hardi**, Institute of advance computing core, **SAGE University, Indore**.

We are fully responsible for the matter embodied in this report and it has not been submitted elsewhere for the award of any other degree.

**Date:**  
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## Abstract

In the age of digital transformation, real-time communication has become an essential feature of modern web applications. This project, titled "**Real-Time One-to-One Chat Platform**", presents a simple yet efficient web-based chat system enabling two users to communicate privately and instantly. Unlike conventional messaging applications that store conversations permanently, this platform emphasizes **user privacy** by implementing **ephemeral messaging**—all chat data is deleted once both users disconnect from the session.

The backend of the application is developed using **Java Spring Boot**, while the frontend utilizes **React**, ensuring a responsive and interactive user interface. Real-time communication is facilitated via **WebSocket technology**, using **STOMP** for message formatting and **SockJS** to provide compatibility across various browsers. Temporary data storage is managed through **MongoDB Atlas**, a cloud-based NoSQL database, configured to delete messages automatically

after a session ends.

The platform is scalable, lightweight, and designed for educational as well as real-world use cases, such as customer support, private consultations, and privacy-conscious communication. The modular structure of the system ensures ease of maintenance and future enhancements like group chat, multimedia sharing, or AI chatbot integration.

This project demonstrates not only the implementation of real-time communication but also the importance of **data minimization and privacy by design** in modern applications.

# Table of Contents

Chapter No.	Title	Page No.
<b>Chapter I</b>	<b>Introduction</b>	1
1. 1	Overview	2
1. 2	Problem Statement	3
1. 3	Objective of Project	4
1. 4	Applications or Scope	5
		6
<b>Chapter II</b>	<b>Literature Survey</b>	
2. 1	Real-Time Communication Protocols	8
2. 2	Java Spring Boot for Backend Development	10
2. 3	React as Frontend Framework	12
2. 4	Privacy and Ephemeral Messaging	14
2. 5	NoSQL Databases and MongoDB Atlas	16
2. 6	Integration Challenges	18
2. 7	Comparative Analysis of Chat Platforms	20
2. 8	Message Handling and Event Architecture	22
2. 9	Asynchronous and Reactive Programming	24
2. 10	Scalability and Load Testing	26
2. 11	Frontend UI Components for Chat	28
2. 12	Future Trends in Chat Applications	30
<b>Chapter III</b>	<b>Methodology</b>	<b>32</b>
3. 1	Background / Overview	33
3. 2	Project Platforms Used	35
3. 3	Proposed Methodology	37
3. 4	Project Modules	39
3. 5	Diagrams (ER, Use Case, DFD)	41
<b>Chapter IV</b>	<b>Implementation</b>	<b>43</b>
4.1	Main Functions with Explanation	44

<b>Chapter No.</b>	<b>Title</b>	<b>Page No.</b>
4.2	Coding with Explanation	50
<b>Chapter V</b>	<b>Results</b>	60
5.1	Overview of Testing	61
5.2	Key Results and Observations	62
5.3	Screenshot Evidence	64
5.4	Performance Benchmarks	65
5.5	Conclusion of Testing	66
<b>Chapter VI</b>	<b>User Manual</b>	67
6.1	System Requirements	68
6.2	Installation Steps	69
6.3	How to Use	70
<b>Chapter VII</b>	<b>Conclusion and Future Scope</b>	72
7.1	Conclusion	73
7.2	Future Enhancements	74
<b>Chapter VIII</b>	<b>References</b>	75