



iJRASET

International Journal For Research in
Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 14 **Issue:** I **Month of publication:** January 2026

DOI: <https://doi.org/10.22214/ijraset.2026.77190>

www.ijraset.com

Call: ☎ 08813907089

E-mail ID: ijraset@gmail.com

Chatting Wings Application

Rituraj Bharti¹, Santosh Chand², Shudhanshu Yadav³, Mr. Satish Kumar⁴

^{1, 2, 3}CSE (Data Science), ⁴Assistant Professor, Buddha Institute of Technology Gorakhpur, India

Abstract: Today, the latest version of development of the internet has been in our hand. Everything happens through internet from passing information from one point to another. This project is also based on the internet that shows the importance of the chatting with surrounding such as friends, family, and to the other also. This platform will develop to interact with another on the internet. Our application is much more reliable and secure than the other traditional system.

The chatting wings application will also give the different services such as freely chat to other and also help to transfer the message in both ways that is private or public. It also gives the features that enable the other resources such as videos, images etc.

I. INTRODUCTION

As we know that chatting platform takes a large amount of impact on today's life. And there will be different numbers of chatting applications available with their features. But our chatting application also has features which are varying from the other application. People will easily communicate to their surroundings with better experience, reliability, and security.

In this application both sender and receiver will send or receive messages simultaneously by using the MERN concept.

- Welcome to ChatWings the smart, seamless, and secure way to stay connected. Designed for modern conversations, ChatWing takes your message in experience to new heights with real-time communication, and powerful features that keep you in control.
- Whether you're chatting with friends, collaborating with colleagues, or meeting new people, ChatWings empowers every conversation with speed, clarity, and privacy.
- From voice and video calls to file sharing and encrypted messaging, everything you need is just a tap away.
- It is time saving and energy saving.
- Person can easily log in to site while sitting on home
- Manage the notification of Internet
- Show the information and description of the Shopping.

Overview of Organization

Tech pile is an organization working in both software development and software training, which aims to make all the special of its client successful through their coding as well as to make students more competent to work with a well-reputed organization.

We are proud of our high-quality standards. These standards allow us to provide our customers with reliable and xenofree applications, regardless of complexity. Our top-notch developers use the latest software Methodologies and technologies. This means that they can concentrate on our clients' business goals and keep them involved in every stage throughout the entire project. Our meticulous approach has helped us build our excellent track record with no failed or aborted projects. We are in the business of change, managing complexity with an unparalleled insight, looking beyond the horizon of IT with resources focused on solutions.

II. PROBLEM STATEMENT

In this section we shall discuss the limitation and drawback of the existing system that forced us to take up this project. Really that work was very typical to manage the daily errors, free records, and adding or removing any node from server. This problem produces a need to change the existing system. Some of these shortcomings are being discussed below:-

A. Low Functionality

With the existing system, the biggest problem was the low functionality. The problem faced hampered the work.

B. Portability Problem

System that existed previously was annual. As a result, the system was less portable. One has to carry the loads of many registers to take the data from one place to another. A big problem was that the system was less flexible and if we wanted to calculate yearly or monthly maintenance report or efficiency report

C. Security

Security concerns were also one of the natives of the Company for the need of software. In the registers, the data is not secure as anybody can tamper with the data written in the registers. This software, just a password makes it absolutely secure from the reach of unauthorized persons.

D. Data

In the case of a manual system, the registers are maintained in which, a lot of data is written. Complexity in work. In a manual system when ever a record is to be updated or to be deleted a lot of cutting and overwriting needs to be done on the registers that are concerned that are deleted or updated record.

III. LITERATURE REVIEW

With the development of the internet, large amount of people will be choosing the network for communication. Our application will provide the communication over the long distances and also work on the multi-platform and real-time used by the many users over the internet.

Chatting applications have become an integral part of modern communication, enabling users to interact with each other in real-time. The rise of messaging apps and chatbots has transformed the way people communicate, access information, and seek support. This literature review aims to provide an overview of the current state of research on chatting applications, their features, benefits, and challenges.

The programming tools used in building this application is React.js, Node.js with the express framework and mongoDB database. This application is being developed for communication. For this, users must register with their information.

- The evolution of communication technologies has dramatically transformed the way individuals interact in both personal and professional settings. Instant messaging applications have become integral to daily communication, speed, accessibility, and a wider range of multimedia functionalities.
- This literature review explores the existing body of work related to messaging platforms, focusing on usability, privacy, user engagement, and technological innovations, which serve as the foundation for the development of the ChatWings application.
- Instant Messaging and Communication Trends
- Privacy and Security in Messaging Applications
- User Engagement and Behavioural Aspects

IV. PROPOSED METHODOLOGY

This project is made by using Android studio, Virtual emulator. The programming language used for building the application are java, XML. User interface is handled using XML codes. Backend programming is handled mainly through set of java codes.

The other libraries required are -

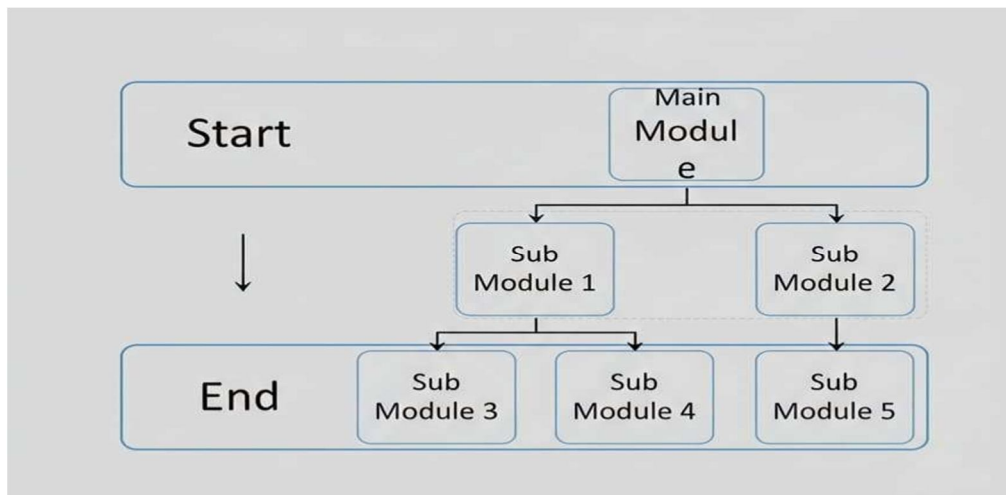
- Android SDK tools
- Android SDK platform tools
- Android SDK build tools
- SDK platform
- Intel x86 Atom_64 system image
- Google APIs
- Google APIs ARM EABI v7a system
- GPU debugging tools
- Android support libraries
- Intel x86 Emulator Accelerator (HAXM installer)

The development of the ChatWings application followed a structured methodology aimed at ensuring a user-friendly, secure, and high-performance messaging platform.

V. SYSTEM DESIGN APPROACH

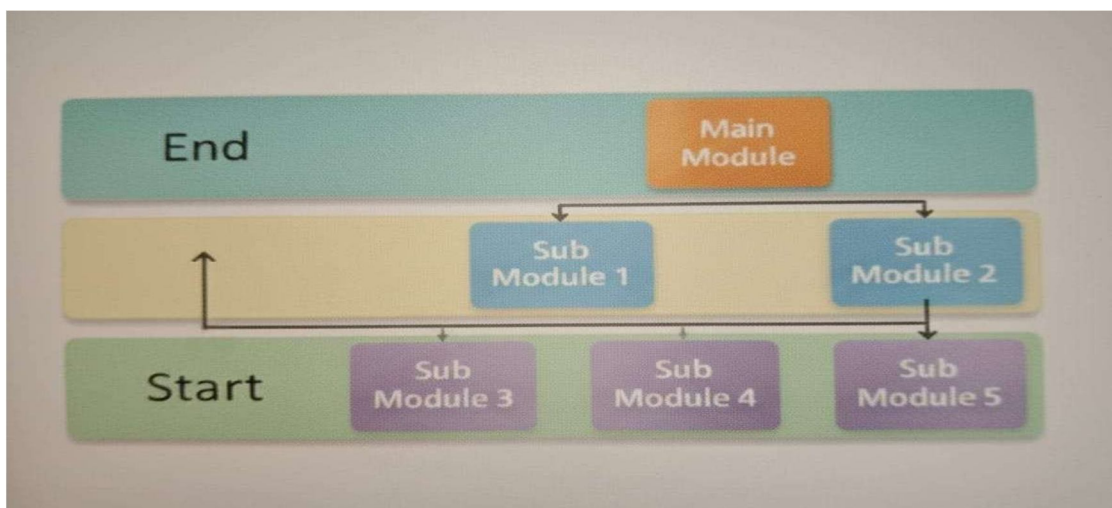
A. Top-down designing

The top-down designing approach started with major components of the system. It is a stepwise refinement which starts from an abstract design, in each step the design is refined to two or more concrete levels until we reach a level where no more refinement is possible or not needed.



B. Bottom-topdesigning

In this approach the most basic and primitive components are designed first, and we proceed to higherlevel components. We work with layers of abstraction are implemented until the stage is reached wheretheoperationssupportedbythelayeriscomplete.



VI. HARDWARE REQUIERMENT

MicrosoftWindows7/8/1(32or64bit)

2GBofavailablediskspaceminimum,4GBreconnectedMBforIDE+1.5for AndroidSDKandemulatorsystemimage)

1280x800 Lilliannascreeenresolution

Graphics- none(Integratedgraphics64MB) o 250GBSSD(themain reasonfora laptoptorunasfastaslight)Server-sideSoftware Requirement:
oJava DevelopmentKit(JDK)8oAndroidStudio2020.3.IoFirebaseDatabase

Client-sideHardwarerequirements:

- AfastspeedUSBcable
- AndroidPhoneforTesting(Version11/10/9)

VII. TO DEVELOP THIS PROJECT VARIOUS SOFTWARE ARE USED

- FrontEnd-XML
- BackEnd-FirebaseBrowserBased

- Technology-Android
- Code-BehindLanguage-Java
- IDE-AndroidStudio

VIII. IMPLEMENTATION

Theproposedsystemis implementedusingthe followingtechnologies-

- Programing language: Python, web Sockets, Firebase
- Framework:Node.js,ReactNative,Firebase
- DeepLearningModel:RNN,CNNandseq2seq
- 4-Frontend: HTML, CSS, JavaScript

IX. RESULTS

ThedevelopmentandtestingoftheChatWingsapplicationsuccessfullymetthecoreobjectivesofbuilding a secure, user-friendly, and real-time messaging platform. Key results include:

- Real-Time Messaging:Achievedsmoothandinstantaneoustextandmultimediacommunication using WebSocket technology.
- Cross-PlatformCompatibility:Deliveredaconsistentuserexperience
- PositiveUserFeedback:Betatestingusersreportedhighssatisfactionwiththeapp'sspeed, design, and ease of use.

X. APPLICATIONS

Theapplicationwillbeusedinvariousreal-worldsuchas-

- Personalcommunication
- Business communication
- Customerservice
- SocialMedia
- Healthcare

XI. ADVANTAGES OF THE PROPOSED SYSTEM

- Real-timecommunication
- IncreasedProductivity
- Enhancedcollaboration
- Improvedcustomersupport
- Secureandprivate
- User-friendlyinterface
- Scalability
- Cost-effective

XII. LIMITATION

Therewillbeseverallimitationordifficultyofthischattingapplicationwhichareasfollows-

1) SECURITY RISKS

This is the main problem to secure our data from unauthorize person over the internet such as databreach,hacking,andphishingattacks.

2) DEPENDENCEONTHEINTERNET

To runtheapplication,wewillneedtheinternetconnectionorwecansaythatitisdependupon theinternettocommunicatetotheothers.

3) MISUNDERSTANDING

Inthisapplication,itwillalsoleadtomisunderstandingandmiscommunications.

4) DATA STORAGE

Inthis,wewillchallengestoringproblemandalsoconcernsaboutsecurityandprivacyof datastoredinthechattingapplication.

5) LIMITEDFEATURES

Inchattingapplicationmayhavelimitedfeatureshatmaynotuserrequirement.



6) COMPATIBILITY

Chatting application may have compatibility issues especially when used on the different platforms.

XIII. FUTURE SCOPE

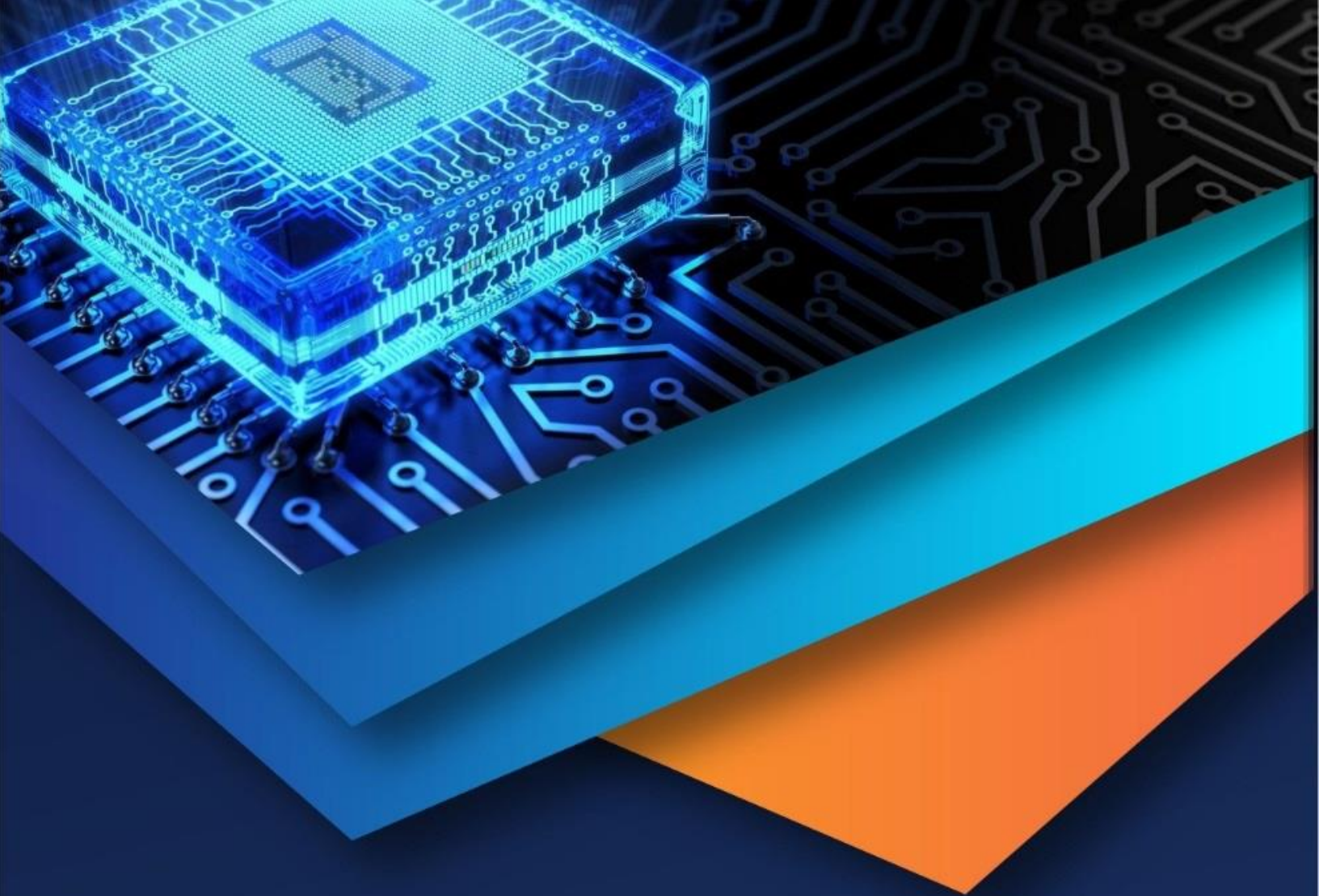
Following modification or upgrade can be done in system.

- 1) More than one company can be integrated through this software.
- 2) Web services can be used to know exact donation status of packets.
- 3) Client can check their donation delivery status online.

XIV. CONCLUSION

At the last the Conclusion of project is to develop a mobile application which the help programmer to get help from the site, so that they can develop their project and application. Different Technologies and make a group of Programmer. A Group is a social unit of any size that shares common values, ideas and code and queries. The portal doesn't have to be expensive. It supports multiple programmer goals.

Chatting is not only a App portal; It is a live product of board of technical education. In future we will add more features on it.



10.22214/IJRASET



45.98



IMPACT FACTOR:
7.129



IMPACT FACTOR:
7.429



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089  (24*7 Support on Whatsapp)