

**EAST AFRICA UNIVERSITY**

# BONAFIDE CERTIFICATE

Certified that this project report titled **CHATWME APP** is a Bonafede work of **Ahmed Abdikadir Mohamed, Mohammed Abdirahman isse , abuubakar Mohamud Abdirahman, Mohamed abdiasis Ahmed, Yuusuf abdihakiim yuusuf** who carried out the project work under my supervision.

**DEAN OF COMPUTER SCIENCE**

Eng.Ahmed jamac

(SIGNATURE WITH DATE)

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# DECLARATION

I hereby declare that the project titled **CHATWME** submitted in partial fulfillment of the requirement for the award of the degree of Bachelor of Science in Computer Science of East Africa University is my original work and not submitted for the award of any other degree, or any other similar title.

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**Date: / 05 / 2024**

# Approval

This project is entitled " **CHAT WITH ME**" and its accompanied report has been approved by

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# Abstract

Chat application is the essential need of 21st century to make communication via network, with help of chat application anyone can make conversation with making any voice call at real time & it can reduce your the efforts of voice call, we can make conversation without voice throughout the chat application & discuss the any issue or any query related to any problem or work. The most interesting part of the application is we can send same message to many users at the same time with the help of group chat feature & we can know which user has seen this message. This Flutter Chat Application provides the features of Image Sharing, , In App Image view, In App pdf View, file download, image uploads. And other files with different extension will downloaded to the external storage & it will open with corresponding extension view, which is available in Android operating system. Windows & Web Application file will downloaded to external storage, you easily open it with corresponding extension viewers.

Keywords: Cross-Platform Mobile Application Development, IDE, Android Development, Web Development, Windows Development, Flutter, Dart, Cross Platform Application Development.

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**CHAPTER ONE**

# INTRODUCTION

## Introduction

Communication is means for people to exchange messages. It has started since the beginning of human creation. Distance communication began as early as 1800 century with the introduction of television, telegraph and then telephony. Interesting enough, telephone communication is 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. Chatting may refers to the transmission of data over the internet that offers a real-time transmission of data from sender to receiver. Communication is essential for achieving managerial and organizational effectiveness, employees will not be able to aware of what their co-workers are doing, will not have any idea about what their goal are, and will not be able to assess their performance. In absence of channels of communication, supervisors will not be able to give instruction to their subordinates and management will not receive the information it requires to develop plans and take decision. Chatting is a method of using the 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 an android chat. It is made up of application, the client application which runs on the user mobile. To start the chatting our Client should get connect to the server, where they can do group and private chatting.

## 1.2 Background

The first online chat system was called Talkomatic, created by Doug Brown and David R. Woolley in 1973 on the PLATO System(Programmed Logic for Automatic Testing operations) at the University of Illinois. It offered several channels, each of which could accommodate up to five people, with messages appearing on all users' screens character-by-character as they were typed. Talkomatic was very popular among PLATO users into the mid-1980s. In 2014, Brown and Woolley released a web-based version of Talkomatic. The first online system to use the actual command "chat" was created for The Source in 1979 by Tom Walker and Fritz Thane of Dialcom,Inc. The first transatlantic Internet chat took place between Oulu, Finland and Corvallis, Oregon in February 1989. The first dedicated online chat service that was widely available to the public was the CompuServe CB Simulator in 1980, created by CompuServe executive Alexander "Sandy" Trevor in Columbus, Ohio. Ancestors include network chat software such as UNIX "talk" used in the 1970s. Modern instant messaging and SMS both began their march to prominence in the early and mid1990s.The difference between the two is subtle: SMS(short service message) allows mobile phone users to send each other text messages without an Internet connection, whereas instant messaging uses an internet connection to transfer the messages.

## Problem statement

Here are the main points related to the challenges faced by those looking to start an application or service in the form of numbered statements:

1. One of the primary challenges faced by developers is determining the appropriate tools, languages, stacks, or frameworks to use when building an application or service.

2. For real-time applications, slow latency message delivery can lead to high levels of latency and data transfer size over the network. This can be a significant challenge for developers to overcome.

3. SMS messaging and cross-platform permissions for Android and iOS can further complicate the development process, adding to the challenges faced by developers.

4. Private organizations often require a separate chat system to communicate with people and share resources securely, as public applications may not meet their unique needs.

5. Public applications are often subject to restrictions that may not align with the needs of private organizations, further complicating the development process.

6. Network threats can compromise the security and reliability of public applications, making it difficult for private organizations to trust these solutions for their communication needs. In summary, starting an application or service can be a complex undertaking, with developers facing a range of challenges related to tool selection, real-time message delivery, SMS messaging, cross-platform permissions, and security. Private organizations may require a separate chat system to communicate and share resources securely, as public applications may not be reliable or secure enough to meet their unique needs

## 1.4 Purpose of the project

The communication process has undergone a drastic change over the years. It has travelled quite a long distance right from the era of sending handwritten letters to the present age of instant messaging. Today business is encountering a fierce competition in the market and so the need for real-time communication has augmented. Just a decade ago, the SMS was the order of the day, but with the evolution of time, the popular chat based apps have substituted its place. And it be clear-cut, one must thank the emergence of the Smartphones which has played a dominant role in bringing these applications to the forefront. The purpose of the chatting application is to allow users be able to the chat with each other, like a normal chat application. The users will be able to chat with each other , most likely only from user to user or with the group, group-chatting will be developed unless there is time to do so. The main motive to build an chatting application is to provide an ease to use the software for communication in the effective manner. Nowadays, people are busy in day-to-daily life ,so they are not getting that much time to meet with the friends and relatives to overcome this communication gap this application acts as an intermediate. SMS (short messaging service) are most costlier than the data charges , per SMS cost one rupees if your SMS plan is not active and the data charges are in kilobytes or megabytes depends on the usage of the internet

## 1.5 Objectives of the project

The primary objective of this project is to create a social platform that enables people to connect with each other. By providing a platform for users to share their thoughts and views, Ping will serve as a discussion board that facilitates communication and collaboration between individuals. One of the key features of Ping is its messaging functionality, which allows users to engage in conversations with each other. This feature is essential, as it enables users to add people to their contact list in a variety of ways beyond the conventional means of collecting contact details. Ping's social power is immense and will revolutionize the way people communicate in Somalia and around the world. Even in business settings, people will prefer to use Ping to send emails, as it provides a more convenient and efficient communication experience. Overall, the objectives of this project are focused on creating a powerful social platform that enables people to connect and communicate with each other in a seamless and efficient manner. By providing innovative features and functionalities, Ping will serve as a valuable tool for individuals and businesses alike, facilitating collaboration and communication in a more convenient and enjoyable way.

## 1.6 Scope of the project

This application is designed as a mobile application. It provides a general architecture for chat applications, and anyone or organization can use it as the basis for providing instant messaging capabilities. the project will be tested as the program is being developed. A database for the users registered will be developed and tested, a menu will be developed and tested, a client/server interface will be developed and tested, and GUI's will be developed and tested, for the users' benefits. When the chat application is near completion, more testing will be done in order to make it less buggy or more user friendly

## 1.7 Significance of the project

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. This also keeps users conversing on your platform instead of looking elsewhere for a messaging solution. Whether it’s private chat, group chat, or adding personalized chat features to your app can help ensure that your users have a memorable experience.

## 1.8 Project organization

The content of this project has been arranged to be read chapter by chapter as follows:

##### Chapter 1:

Gives an introduction, background or deep history of Appraisal and the problem Identification of this project, on the other hand in this chapter will get more about the objectives, scope, significance and organization of Chatting application

##### Chapter 2:

Presents and discuss in detailed related and literatures of the of Chatting application

##### Chapter 3:

Describes the design of the project and how data related to each other, and this chapter displays how data collected, analyzed, and design Chatting application using Unified Modeling Language (UML) especially use case diagram and activity Diagram.

##### Chapter 4:

This chapter will show the design of Chatting application

##### Chapter 5:

Describes the implementation and testing of the project and producing complete Useful of Chatting application

##### Chapter 6:

Finally, this chapter is the conclusion of the project and recommendations and also describes the achievements and weaknesses of Chatting application

**CHAPTER TWO**

**LITERATURE REVIEW**

## Introduction

Messaging apps now have more global users than traditional social networks—which mean they will play an increasingly important role in the distribution of digital information in the future. In 2016, over 2.5 billion people used at least one messaging app. That’s one-third of the world’s entire population, with users ranging from various age grades. Today, it’s common place for offices to use a messaging app for internal communication in order to coordinate meetings, share pitch decks, and plan happy hours. And with the latest bot technology, chat apps are becoming a hub for employees to do work in their apps without leaving the chat console. For many people, chat apps are a given part of their workday. But how did these chat apps become so popular?

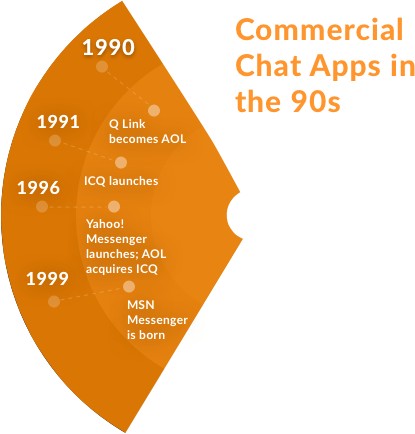
## Historical Overview

### INSTANT MESSAGING: CHILD OF THE 90’S

Chat apps (and their subsets, chat rooms) bring to remembrance images of the 1990s, with its dial-up internet and classic sitcoms, however, commercial chat apps date back to the 1980s. CompuServe released CB Simulator in 1980, and 1985 brought the launch of Commodore’s Quantum Link (also known as Q-Link). An online service, it allowed multi- user chat, email, file sharing, and games.

If Q-Link sounds familiar, that’s because it is: in 1991, the company changed its name to America Online (AOL). But AOL wouldn’t launch its signature product, AOL Instant Messenger (AIM), until 1997. In the meantime, the Vodafone GSM network enabled the first SMS in 1992. And in 1996, ICQ launched as the first widely-adopted instant messaging platform.

The late 1990s brought dramatic changes in the chat app market. Both Yahoo! And MSN launched their own instant messengers (in 1998 and 1999, respectively), and AOL bought out competitor ICQ’s parent company, Mirabilis, for a fee around $287 million upfront, with an additional $120 million paid out later. That’s about $612.7 million today!



### Figure 2.1: Commercial chat apps in 90’s

As AIM pioneered Chabot, like Smarter Child, it also increased its market share. Its rivalry with MSN Messenger began almost as soon as the competitor launched in 1999. By 2006, AIM controlled 52% of the IM market. Its dominance, however, was short lived. Struggling to monetize and facing increasing competition from new apps like Skype and Google Talk, AIM fell out of favour, eventually eliminating its entire development team in 2012.

## COMMERCIAL CHAT APPS IN THE 10s



### Figure 2.2: Commercial chat apps in 10’s

With the inception of smart phones, chat apps continued to thrive; in 2013, chat apps finally surpassed SMS in message volume. By 2015, WhatsApp alone hosted 30 billion messages per day; SMS logged only 20 billion. And in the summer of 2016, Facebook Messenger hit one billion users.

### THE SLOW GROWTH OF ENTERPRISE CHAT APPS

Despite developing around the same time, the history of enterprise chat apps is markedly different than the story of their consumer-facing counterparts. The very first enterprise chat apps do not enjoy the same place in our collective memory as AIM and ICQ.

Early contender Yammer launched in 2008; Microsoft acquired the platform in 2012. Clearspace began in 2006, rebranding several times until its rebirth as Jive six years later. Other enterprise chat programs, usually integrated with other social features like blogs and wikis, blipped in and out of existence.

None of this initial crop of enterprise apps proved a runaway success, and many theories exist as to why later programs have overshadowed them. One thing is certain: these programs predated the rise of smart phones, and mobility certainly fomented the creation of second- generation commercial apps like WhatsApp and Snapchat.

### ENTERPRISE CHAT: THE NEXT GENERATION

As the first decade of the new millennium closed, an enterprise chat app renaissance slowly began. Though email had been widely used for the previous twenty years, companies soon began looking for a better way to communicate quickly; email-based workflows are slower and do not allow for many business functions that are now critical to work, like screen- sharing or video calls. Some one-to-one chat applications existed, like GChat and Outlook Messenger, but group messaging applications had yet to take off.

In January 2010, three graduates of Rensselaer Polytechnic Institute—Chris Rivers, Garret Heaton, and Pete Curley—launched [Hipchat](https://www.workato.com/integrations/hipchat?utm_source=blog), a web-based chat and instant messaging service. Shortly thereafter, [Atlassian](https://en.wikipedia.org/wiki/Atlassian) acquired it in March 2012. Its premium version addressed several enterprise concerns by adding screens haring, history retention controls, and the ability to run within corporate firewalls.

In August 2013, the enterprise chat space exploded. [Slack,](https://www.workato.com/integrations/slack?utm_source=blog) which stands for “Searchable Log of All Conversation and Knowledge,” grew out of an internal tool used during the development of *Glitch*, a defunct online game. Though not the first (or even the most revolutionary) office chat app, Slack’s growth—it now has four million users—has dwarfed most other programs. A mere 1.25 years after launching, it reached a valuation of $1 billion. By April 2015, Slack was worth almost three times that.

Slack–with its channels, DMs, and private groups–is reminiscent of IRC, which might help explain its popularity. A host of similar apps have since incorporated these features. 2015 saw the launch of [Cisco Spark](https://www.workato.com/integrations/cisco_spark?utm_source=blog), which has since evolved into an entire ecosystem of SDKs, APIs, and a developer site.

Microsoft designed [MS Teams](http://get.workato.com/workbot-teams/?utm_source=blog) to compete directly with Slack; [it launched in early 2017](https://www.workato.com/blog/2017/03/microsoft-teams-workbot/#.WR3rHYkrKRs) as an integrated component of Office 365.

As businesses prioritize digital transformation, enterprise chat apps continue to enjoy overwhelming popularity. What’s to come? Chatbots, machine learning, and increased integration are all popular with both enterprise and commercial users, who discover new ways to chat every day.

### REGIONAL AND DEMOGRAPHIC STRONGHOLDS

When devising one’s strategy for messaging apps, it's vital to select the right platform mix for the targeted populace, based on TWO core criteria:

1. **Regional Strongholds:** Only a small group of apps like WhatsApp, Facebook Messenger, and Viber can be said to be truly global—and even those platforms struggle in certain countries. Meanwhile, messengers like WeChat, LINE, and KakaoTalk completely dominate specific markets but have negligible traction in others.
2. **Demographics:** It's a common misconception that messaging apps are a uniformly millennial phenomenon. Some apps like Snapchat and LINE skew both young and female, but others like Tango (which boasts 100 million monthly, active users, by estimate) predominantly appeal to those aged 25–54 and strongly over-index with Hispanic and African-American users.

### INDUSTRY CHALLENGES

1. **FRAGMENTATION:** The social media landscape is entering a period of hyper- fragmentation that may be a challenge to publishers: Facebook, Twitter, and Instagram continue to loom large, but social media managers can now launch official channels on roughly 10 chat apps with over 50 million monthly, active users each.
2. **ANALYTICS:** For organizations accustomed to robust, real-time data, the lack of good analytics tools for messaging apps remains a major deterrent to adoption. The challenge is twofold: Strong analytics dashboards take time to build, and many messengers are privacy- centric by nature.

## INDUSTRY OPPORTUNITIES

1. **HIGHER ENGAGEMENT:** Since many chat apps provide publishers with push notifications or chatbot experiences (programmable robots that converse with users), they can deliver significantly higher engagement rates.
2. **AUDIENCE DEVELOPMENT:** With billions of active users across multiple major chat apps, there is the opportunity in building large audiences fairly quickly on several platforms.
3. **A CHANCE TO CONNECT WITH USERS IN A NEW WAY:** Messaging apps offer a host of features not unavailable on social networks or other platforms. Programmers can creatively leverage these tools to socialize in new ways.

## Related Work

### WHAT THE FUTURE HOLDS

Predictions are always prone to inevitable ridicule and failure, but there are some that are worth making.

### THE GROWING IMPORTANCE OF SECURITY, CIRCUMVENTION, AND DATA RESTRICTIONS

As government snooping, personal privacy, and security become issues for many people globally, those living in countries where these are particular concerns will increasingly look for platforms that enable them to both communicate securely and receive accurate information, unfiltered by government censors.

### THE EMERGENCE OF REGIONALIZED AND LOCAL MESSAGING- APP ECOSYSTEMS

This is the era to launch CHATWME as it focuses on specific target audience in Africa.

### MESSAGING WILL BECOME LIKE ELECTRICITY

While messaging is currently a clearly defined function of specific apps, the future is likely to be one wherein the capability is baked-in to nearly all digital technologies and services. The point where a messaging app begins and ends will begin to blur. Already, app classification is getting trickier, especially as social media platforms update their in-app messaging capabilities, moving them closer to chat app experiences.

## Summary

**CHATWME** is a social-networking tool that leverages on technology advancement thereby allowing its users communicate and share media. It offers a wonderful one stop shop experience for keeping in touch with people you know. It can be use for messaging, placing voice messages, making voice and video calls, share updates and photos, share locations, enhance local socializing in and make monetary financial transactions.

CHATWME has the potential to become a widely used socializing app in Africa with specific focus on the East Africa African sub region with a grass root pilot scheme take off in Somalia due to the continent rich multi ethnic culture and a wide range of her special way of communication called pidgin English in somalia . The numerical strength of the Somali population which is estimated to be above 20million people presently affords a viable economic space as a rallying point for this application.

With the gradual acceptance of adult literacy gaining roots in Africa and the various government policies to drive education to the grass roots, CHATWME will be a welcome development and very user friendly to the average Nigerian citizen among which includes the local peasant farmers, market women, artisans, the low-income earners, less privilege and the lower social stratification individuals who are numerous in population. The introduction of the Pidgin English feature is a primary drive and force of attraction as it helps break the rank of the academic division between those who claim the Queens English is the best, thereby creating fun and increased cross fertilization of ideas, with a resultant economic boost.

While emphasis must be made to fore runners of similar inventions, which cuts across technology divides, it must be well understood that the basic fundamental of the CHAT which is embedded in messaging service, evolve as an app where you can comfortably make financial transactions as well.