**Project Participants:** DevAgarwal, Vineeth Pillai.

**Presentation Title:** Web Based Chat Application

**Research focus:** Creating a real-time Chat Application using PHP and MySQL

**College:** B.P.H.E Society’s Ahmednagar College

**ABSTRACT**

There has been an emerging trend of a vast

number of chat applications which are present in the recent years

to help people to connect with each other across different

mediums, like Hike, WhatsApp, Telegram, etc. The proposed

network-based android chat application used for chatting

purpose with remote clients or users connected to the internet,

and it will not let the user send inappropriate messages. This

paper proposes the mechanism of creating professional chat

application that will not permit the user to send inappropriate or

improper messages to the participants by incorporating base

level implementation of natural language processing (NLP).

Before sending the messages to the user, the typed message

evaluated to find any inappropriate terms in the message that

may include vulgar words, etc., using natural language

processing. The user can build an own dictionary which contains

vulgar or irrelevant terms. After pre-processing steps of removal

of punctuations, numbers, conversion of text to lower case and

NLP concepts of removing stop words, stemming, tokenization,

named entity recognition and parts of speech tagging, it gives

keywords from the user typed message. These derived keyw ords

compared with the terms in the dictionary to analyze the

sentiment of the message. If the context of the message is

negative, then the user not permitted to send the message

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There has been an emerging trend of a vast number of chat applications which are present in the recent years to help people to connect with each other across different mediums, like Hike, WhatsApp, Telegram, etc. The proposed network-based chat application used for chatting purpose with remote clients or users connected to the internet. This paper proposes the mechanism of creating professional chat application that will allow users to chat in real time. The visual representation of the application will be modern and minimalistic. It will also give user an option to switch between Light and Dark theme mode for a better experience. The user is only allowed to access the application using the credentials of the user and all the credentials will be safely encrypted.

**1. Introduction**

Online chatting refers to the process of sending and receiving messages using the internet. There are various chatting applications available in the market. As of October 2019, the most used messaging apps worldwide are WhatsApp with 1.6 billion active users, Facebook messenger with 1.3 billion users, and WeChat with 1.1 billion. All these applications provide various features to ensure security, integrity, and consistency. All these apps let the user send any messages, and the messages can be lewd or inappropriate. The proposed network based android chat application used for chatting purpose with remote clients or users connected to the internet. The application is developed mainly in PHP and MySQL.

**1.1 Motivation**

The evolution of the internet technologies had benefit people to accessing to the web easily. More and more services provide by this internet All of this can be virtualize thank to the technologies. Traditionally, when people need to communicate with others they will have a face to face conversation to deliver the message. Now communication between people using the internet becomes part of their daily life. Now as there are many application with same feature and complex UI we wanted to create an application with a simple UI for user to use.

**1.2 Problem Statement**

This project is to create a chat application with a server and users to enable the users to chat with each others. To develop an instant messaging solution to enable users to seamlessly communicate with each other. The project should be very easy to use enabling even a novice person to use it.

**1.3 Purpose/objective and goals**

However, the purpose of this project is to develop a web based chat application. The objective of this process is as follows;

1. To develop an instant messaging solution to enable users to seamlessly communicate with each other.

2. The project should be very easy to use enabling even a novice person to use it.

**1.4 Literature Survey**

**1.5 Project Scope and Limitations**

1. Broadcasting Web based Chat Application is going to be a text communication application, it will be able to communicate between two computers using point to point communication
2. The limitation of Live Chat is it does not support sending file. To overcome this limitation we are concurrently working on developing better technologies
3. Companies would like to have a communication software wherein they can communicate instantly within their organization
4. The fact that the software uses an internal network setup within the organization makes it very secure from outside attacks.

**2. System analysis**

Communication over a network is one field where this tool finds wide ranging application. Chat application establishes a connection between 2 or more systems connected over an internet. This tool can be used for communication in an organization. In addition it converts the complex concept of sockets to a user friendly environment. This software can have further potentials, such as file transfer and voice chatting options that can be worked upon later.

**2.1 Existing systems**

**2.2 Scope and Limitations of Existing Systems**

This project will be developed in web based. The project is planned to introduce an online web chat system solution. The project included a theme option for a better viewing option. Furthermore, a real time communication chat system will be included as the feature in the project to transfer files between the users. The above mentioned are explained in detail in following points:

1. Broadcasting Web based Chat Application is going to be a text communication application, it will be able to communicate between two computers using point to point communication
2. The limitation of Live Chat is it does not support sending file. To overcome this limitation we are concurrently working on developing better technologies
3. Companies would like to have a communication software wherein they can communicate instantly within their organization
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**2.3 Project Perspective & Features**

In this section, we will present the implementation process of the most relevant features, which are part of the user stories we described. Each of the subsections goes over a particular characteristic, detailing the relevant parts of both the back end and front end development. We have sorted them in order:

* **Different Themes:** We have added a trending feature which can be find in every application this is known as “Dark Theme” or “Dark Mode”. This is useful when user uses the application in a dark atmosphere.
* **Real-Time Chat:** All users can chat in real time. The time taken for sending and receiving message is very less (it can vary on users internet connection)
* **Active Status:** User can see who is online and who’s not. This will help the user to see whether the person in front is logged in or not.

**2.4 Stakeholders:**

|  |  |  |
| --- | --- | --- |
| Stakeholder’s Name | Class | Role |
| Dev Agarwal | Sy BBA (CA) | Full Stack Developer |
| Vineeth Pillai | Sy BBA (CA) | Frontend Developer |

**2.5 Functional requirements:**

This section will cover the functional requirements of the chat application.

* **Login Menu function**

This functional requirement is for prompting the user with the option to register for the chat application, logging in, or exit the program. It will take the form of a GUI

* **Register function(Login Menu aspect)**

This aspect of the login menu will ask the user for the name, username, and password of the client. It will check if the username has been taken and will close if the username is not taken and will go back to the main login menu.

* **Login function(Login Menu aspect)**

This aspect will ask for the username and password. Errors will occur if a space is left blank, the username doesn’t exist, or the password doesn’t match with the username. If the username and password matches, you are online and able to message anyone else online.

* **Exit(Login Menu aspect)**

This aspect will close the chat application

* **Who is online(Online Menu aspect)**

This aspect will show who is online and will give the user the ability to click on a user and send a message to that user.

* **Send a message(Online Menu Aspect)**

This aspect will give the user the ability to send a message to whoever they want who is online and selected by the user.

* **Logout(Online Menu aspect)**

This aspect will give the option to logout of the chat application and will go back to the login menu.

**2.6 Performance Requirements**

The application is very lightweight, to run this application we need a PC or Mobile with a browser installed and an internet connection. It can run on all browser like Google Chrome, Mozilla Firefox, Opera, Brave, etc. The internet connection will affect the speed of sending and receiving of message so the better connection will give better speed.

**2.7 Security Requirements:**

TCP/IP, HTTP/HTTPS, SMPP, MD5, POP3, SMTP, FTP, TFTP, etc.

**3. System Design:**

**4. Implementation Details:**

**Software Used:**

* XAMPP: Local Server
* 000WebHost: Online Server
* Visual Studio Code: Coding Environment
* Git
* GitHub

**Operating System Used:**

* Windows 10
* Ubuntu

**Languages Used:**

* HTML, CSS, Js, PHP : Used for Frontend
* XML, SQL: Used for Backend