

**Tribhuvan University**

**Institute Of Engineering**

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**A Project Proposal On**

Chat App

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In addition, we would like to thank all our friends for helping out in figuring what to do and how to do. We hope to get their support same while doing the project.

Finally, we hope to complete the project in time with all the love, support and encouragements.

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**Introduction**

The Chat program is a general communication program coded and designed to give communication service between two parties or more. It facilitates one to one and one to many communication. TCP protocol is used for data transmission as in TCP communication the data loss during transmission is less likely to happen. The program is GUI based and is effective to use for general people as well. SFML and other network related libraries are used for its development. In the advancement of the communication system socket programming has become boon for data transfer and communication. Today nearly every devices are communicating with one another using the concept of sockets. Having conversation with people has been easier. These days everything around are connected to each other and that is only possible because of socket programming.

**Objectives**

1. To be familiar with object-oriented approach in C++.
2. To use C++ to make real world software applications.
3. To understand how socket programming works in real life and its implementation in communication.

**Existing System**

The Chat app basically uses sockets to communicate between two or more computers connected in a local network. Also sockets are used everywhere when it comes to network. So there are many existing examples or systems that use it. The internet is the biggest example of all. It is no longer just a place of content. Social networking sites and all websites use sockets or internet protocols to share information. Its been a long time since the socket programming has been introduced in data transfer and communication system. It has taken the communication system to new feet. Programs like Yahoo Messenger, Messenger by Facebook, Viber, etc. possess a numerous features to facilitate users to have efficient conversation thereby simplifying the communications from the old cumbersome communication systems.

**Proposed System**

* Description

The app is a chat program particularly designed for Linux operating system and uses socket programming concept to implement the objective. The program basically comprises of server and client. The server is made so as to handle multiple connections and requests of clients. The program will be designed for local area network to provide easy communication between people connected to same network. To increase its accessibility we are determined to use SFML for graphical user interface so that the user finds it more convenient, appealing and easier than using CUI. The program will have multiple features such as group chat and private chat. A private chat will give a user privilege to have conversation with a particular individual whereas a group chat will let a user to have conversation with a number of people connected to the server. If possible, the clients will to able to transfer data files among one another. To meet the objectives the concept of object-oriented programming seems to be crucial and hence will be widely used throught the program.

* Block Diagram

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**Methodology**

General socket programming concept will be used in the program codes. The key features include the one to one and one to many conversation and ease to use interface. The interface will include graphical elements of their own classes and features of their own. If data files transfer becomes possible, file handling will come handy. Basically, a server listens on a particular port and the client will have to establish connection to that port and for each client connection the server creates a new socket and using select() function a particular socket is selected from a list of sockets and data are transmitted. In this way, multiple client requests will be handled.

**Project scope**

Scope of Chat program has been expanding in different sectors. For cheaper, faster and easier communication such programs have become an appendage for companies of different scales as well as for general people. As per the mentioned features, users will be able to communicate among each other and transmit data thereby becoming time efficient and convenient. The program can be designed to setup for a group of people wanting to have just a conversation medium or it can be implemented for a system used by a company such that the people could communicate within a particular network despite the size of the company.

**Project schedule**

Since we are about to use SFML and socket programming, which are totally new concepts, we would require few weeks to become familiar with the codes. For the completion of whole project we would require, more or less, 4-5 weeks.