P-Club CHAT-CLIENT

## Synopsis

* + We wish to take up the P-Club Chat Client project. The project will be primalrily aimed at developing a platform where the p-club members can chat.
  + This tool can be used for communication and conferencing in our campus, thus increasing the standard of co-operation.
  + This project can have further potentials, such as file transfer and voice chatting options that can be worked upon.

## Benefits

* + The chat client will facilitate communication between the members of the group and will be a go-to destination whenever one requires any kind of support.
  + Easy sharing of files amongst the members.

## Project description

* Design Considerations :
  + Approach:

Front-end of the application will be made using HTML/CSS and Javascript.

* + Methodology:

User will be able to interact with the tool using a GUI which will operate in two forms - List form & Chat form.

* Description:

-> **List form** will contain the names of all the systems connected to the network. These names can later be used for communication with the help of a mouse click.

-> **Chat form** will make actual communication possible in the form of text by creating a connection between the host system and the selected system with the help of a socket. It will be called only when an element is selected from the list form. Multiple tabs can be implemented so that more than one chats can be active at the same time.

* Operations:
  + **List form :** When the client is opened, the list will display all the online members. It will have two buttons : “**Refresh**” (which refreshes the list of online members) & “**Connect**” (which when clicked after highlighting a member’s name will open up a new chat tab). A new chat can also be opened by a double click.

**Note :** if no name is selected, and connect is clicked, an error message will be displayed.

* + **Chat form :** Will contain a text box which will display the messages.

Another box where the text message will be written along with a “**Send”** button. When the “**Send”** button will be clicked, in the background, the text in the text box will be encoded and sent as a packet over the network to the client machine. Here this message will be decoded and shown in the text box. To make it more user friendly both the messages will be differentiated by using proper indentation and/or displaying the name of the member along with the message. If possible time stamps can be used.

## Project Schedule

The project will be divided in two phases :

* + Learning phase : The time when we learn the basics of socket programming along with detailed study of HTML/CSS and Python which will include workshops and are basic mentoring.

Time required : 5-10 days.

* + Development phase : The time when we actually develop the chat client.

This developement phase will be largely interactive including contributions by all team members to ensure that project is adequately meeting expectations .

Time required : 25 days.

**Wrap- up and extra content**: As the basics of the project are completed we will look through for its further refinement and including features like Voice Chat.

We are really enthusiastic towards the project and really wish to work hard in the summers to gain substantial knowledge and contribute significantly towards the p-club.