**Assignment 2**

It is a Chat API that should be able to provide capabilities to chat between all users connected to the server. The application creates a user interface that would use the API to allow users to communicate with others in real-time.

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***Note***

* *This application does not meet the requied objective of the given assignment yet.*
* *It will continue to be updated and the final version shall be mailed soon.*
* *To avoid losing the opportunity an incomplete version of the assignment is sent.*
* *Plans to implement all assignment objectives are stated below.*

***Steps to get it working***

* *Add a dictionary to hold the client login details of all users.*
* *Display all active users in an “unordered list” at the side of the chat window.*
* *Option to create groups and broadcast to group members by creating lists in python to hold the client login details of the selected members from the dictionary mentioned above.*

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**Getting Started**

Download/fork the following files:

1. chatApi.py
2. chat\_client.html

Create a new folder and add both the files to it. Inside the project folder create a new folder called ‘templates’ and transfer the ‘chat\_client.html’ file to this folder.

**Prerequisites**

Before proceeding with implementing the project, we need to review some required dependencies and libraries. I performed the installation process on Ubuntu 16.04 to make the installation much easier.

1. Python:

* You can simply install Python by simply executing the following command: “sudo apt-get install python-dev build-essential”

2. pip:

* pip is a package management system used to install and manage software packages written in Python. You can install pip by executing following command: “sudo apt-get install python-pip”

3. flask, flask-socketIO:

* Flask is a Python web framework. To install use the command: “pip install Flask”
* Flask-SocketIO gives Flask applications access to low latency bi-directional communications between the clients and the server. You can install this package in the usual way using pip: “pip install flask-socketio”

**Running the application**

1. To run the application open the terminal and navigate to the project folder.
2. Type ‘FLASK\_APP=chatApi.py flask run’
3. This starts the SocketIO server which runs on “127.0.0.1:5000”.

**Using the application**

1. Open any browser and type in “[http://127.0.0.1:5000](http://127.0.0.1:5000/)” into the address bar.
2. This will open a webpage which will be used to chat with clients connected to the server.
3. Enter a nickname to chat with all connected members.
4. To create new clients, open a new window of the browser and repeat steps 1-3.