**Client-Server Secure Messaging Platform & Chat-bot**

**Sam Poirier**

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# 1 Analysis

## Problem Description

I will be creating a secure Client-Server messaging platform, and a chat-bot to run on the server in order to help users with tasks. My client is Mr Ovayolu, a Computer Science teacher who wishes to set up a secure platform for the teachers to discuss work with each other. The focus will be on a secure design, hosted by the client to ensure they know exactly where their messages/data is stored and that it is not being sold to companies by the owners of the software.

## 1.2 Research

### 1.2.1 Interview

It is important to interview the client in order to establish the key features that they require for the program to include, as well as what features are less important not needed. I will work from the responses the client gives in order to accurately tailor the software to their requirements.

### 1.2.2 Questionnaire

I will develop a questionnaire to determine the demand from the general public so I can also tailor the software to be desirable to users other than the initial client, as long as the general demand does not contradict the client’s needs. I will use google forms to create the questionnaire.

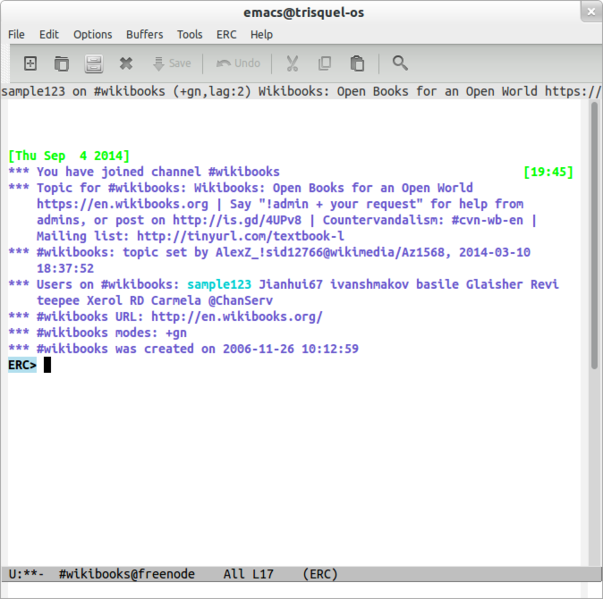
### 1.2.3 Existing Solutions

There are currently a number of existing pieces of software that fulfil similar functions, which I will analyse to determine crucial aspects that should be included in my project, but also determine flaws which I should make sure not to include in the software. I will also investigate examples of successful chat-bots and their development.

## Project Background – Instant Messaging

Instant Messaging platforms have existed pretty much as long as computers have, originally (in the 1960s) acting as a way of communicating between users on multi-user operating systems. They were originally also used for notification systems like printing. A good example of possibly the first instance of this software is from CTSS (Compatible Time-Sharing System), an operating system developed by MIT which was the first to demonstrate any sort of messaging, and was a precursor to email.

### 1.3.1 Internet Relay Chat

The first IM platform to run over the internet was Internet Relay Chat (IRC), which was made in 1988. By 1989 IRC had spread across the world with over 40 servers worldwide.

*Figure 1.1: An IRC Client called ‘ERC’ which runs within the text editor Emacs.*

**Pros**

* Easy to write new compatible clients; servers are standard but the user interface can change.
* Secure