

## **CSCD58 Project Proposal**

**Project name:** Online Chat Application

**Group members:** Yuanqian(Richard) Fang, Dezhi(Geralt) Ren, Haowen(Anson) Rui

**Description:** This application allows its hosts to communicate freely with one or more other hosts through a secure server.

**Goals and Targets:**

1. The server should be able to actively listen and prepare to accept connection requests from multiple clients.
  - a. Potentially many to many multicast
2. Server requests should follow HTTP protocol
3. For security reasons, encryption is done to the server-client communication
4. Clients should be able to communicate with other clients using their unique client\_id
5. The server can provide chat history between two clients

**Relation to “Computer Networks”:**

The server and client implement sockets communication, which utilizes protocols in the application and transport layer. To actively have multiple ports listening and waiting for client connection, we plan to implement multiple pipes and have each one of them listening for a client. The server also needs to know which client to forward messages to, or the client needs to know which message is intended for it. This follows the packet forwarding and network logic we learned. We also plan to encrypt the communication to improve security.