

Data Communications and Networking

Assignment 2: Chat Application

I. Assignment Description and Requirements

A chat application allows users to interact or communicate by texting, audio, and video. It can be useful for social or commercial activities.

In this assignment, students are required to write a **Chat Program** based on Windows Socket Programming C++. The program should allow users to chat concurrently on the Internet (i.e., User A can send encrypted messages to User B, and vice versa). You can download the sample programs (namely, “server.cpp” and “client.cpp”) from iSpace. The program should consist of the following modules:

- (1) User management: provide functions to add, delete, or group users;
- (2) Group chat: allow users to chat as a group;
- (3) Management of connections: support at least three concurrent connections.

II. Assignment Submission

- (1) This is a group assignment (with at most four members).
- (2) Students are required to submit their source codes (in a single compressed file) to iSpace on or before **Monday, May 12th, 2025** (before 9:00 a.m.).
- (3) In Weeks 14 or 15, students are required to give a 10-minute English presentation with a demonstration.