

# Computer Network Lab (CS 3272)

## Assignment 3: Application development using TCP Socket

Time: 2 weeks

Write all the code using C/C++ programming languages. Don't use Process; instead, use Thread concept. If you use C++, try avoiding any library support of Socket and Thread (if any).

### Chat Application:

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Assignment 3: Application development using TCP Socket

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### Chat Application:

- (a) Develop a simple TCP Server Client application where the Client sends text messages to the Server in a user-defined know port (of your choice). On reception of that message, the Server forwards the same message to the Client. Both Server and Client print the message.
- (b) Develop a simple TCP Server and Client application to perform chat.
- (c) Develop a TCP chat Server application where multiple Clients participate. Here only modification is needed in the TCP Server applications, and the Client implemented in (b) should work as it is.

Note 1: Make sure the chatting mechanism is flexible enough, so sending and receiving messages should be concurrent (*sending and receiving of a message should not block each other*). Also, make sure the termination of the chat session happens gracefully.

Note 2: You are encouraged to use Thread concept instead Process. If you use C++, try avoiding any library support of Socket and Thread.

Extension follows ...