



# **COMPUTER NETWORKS**

## **ASSIGNMENT 01**

## Group Members:

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- ii) Muaaz Alam (20k0212)

## Task:

Develop a simple “Chat Messenger” that is connection oriented (i.e. it uses TCP) and that consists of a Client and a Server Program.

- 1) The Server runs first and waits for some client to contact it.
- 2) Client Program starts and connects to the server.
- 3) Client-Server sends and receives messages.

## Libraries Used:

### i) Tkinter:

Python library for creating Graphical User interface.

### ii) Threading:

Used to create threads for sending and receiving messages.

### iii) Socket:

For creating sockets for communication between server and clients.

## Working of Program:

### i) Server Side:

```
PS C:\Users\Bilal\Desktop\CN Assignment 01> python -u "c:\Users\Bilal\Desktop\CN Assignment 01\server.py"
Enter port number: 3000
Server Up and Running
Enter 'Quit' to terminate the Server :
('127.0.0.1', 64259) :

delivering message : ('127.0.0.1', 64259) :

('127.0.0.1', 64260) :

delivering message : ('127.0.0.1', 64260) :

Just delivered Message
('127.0.0.1', 64259) : Hi I am bilal, how are you?

delivering message : ('127.0.0.1', 64259) : Hi I am bilal, how are you?
```

## ii) Client Side

Client 01:

Instant LAN Messenger Client (by Bilal and Muaaz)

— □ ×

### Enter Port number

65535

Start Listening to port Disconnect from port

Send Message

You:  
(('127.0.0.1', 50348) :  
You: Hi I am bilal what is your name?  
(('127.0.0.1', 50348) : Hi there  
(('127.0.0.1', 50348) : I am Muaaz  
You: Glad to meet you Muaaz  
(('127.0.0.1', 50348) : Likewise Bilal  
You: So what do you study, Muaaz?  
(('127.0.0.1', 50348) : I am a computer science student at Fast, NUCES Karachi  
You: What a coincidence! I also study there.

Client 02)

Instant LAN Messenger Client (by Bilal and Muaaz) — □ ×

## Enter Port number

65535

Start Listening to port Disconnect from port

Send Message

You:  
(127.0.0.1, 50347) : Hi I am bilal what is your name?  
You: Hi there  
You: I am Muaaz  
(127.0.0.1, 50347) : Glad to meet you Muaaz  
You: Likewise Bilal  
(127.0.0.1, 50347) : So what do you study, Muaaz?  
You: I am a computer science student at Fast, NUCES Karachi  
(127.0.0.1, 50347) : What a coincidence! I also study there.