**COMP 7005**

**Computer Networks and Protocols**

*Assignment-02*

*User Guide*

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# **Purpose**

This client-server application demonstrates inter-process communication using network sockets. The server accepts an IP address and port as parameters to run. The client sends content along with a key that is used to encrypt the content using the Vigenère cipher. Once the server receives the key and content, it encrypts the data and sends the encrypted content back to the client

# **Installation**

Navigate to <https://learn.bcit.ca>. Download COMP7005-assign02-v1.zip and Extract the contents.

## Requirements

Need gcc compiler to compile

## Building

cd <To the Ectracted Folder> /source

gcc ./client.c -o ./client

gcc ./server.c -o ./server

## Running

Run the server first by navigating to the terminal and typing

./server -ip <Server IP Address> -p <Port to run on>

Then run client

./client -ip <Server IP Address> -p <Port> -f <Filename> -key <Keyword>

# **Command Line Arguments**

The following configuration values can be set in <file>:

### Server

|  |  |
| --- | --- |
| **Variable** | **Purpose** |
| -ip <ip address> | This is a unique identifier that tells the server where to receive the connection request. |
| -p <port> | The port number is another identifier that tells the server which port to list on for client requests. |

### Client

|  |  |
| --- | --- |
| **Variable** | **Purpose** |
| -ip <ip address> | This argument specifies the IP address of the server the client will connect to. |
| -p <port> | This argument specifies the port number on which the server is listening for incoming connections. |
| -f <filename> | This argument specifies the filename of the file whose content will be sent to the server for encryption. |
| -key <keyword> | This argument specifies the keyword to be used in the Vigenère cipher encryption. |

# **Examples**

|  |  |
| --- | --- |
| Server | Client |
|  |  |
|  |  |