**BTC4201 / ICS4104: Distributed Systems**

**Assignment: Inter-process Communications in Distributed Environment**

Akim Kingori – 112603

Muli Postinah – 108222

Dennis Kimani – 113233

Michelle Kiprop –104087

Cynthia Musindi - 113450

**PROGRAM WRITE-UP**

The development of the program had the aim of implementing sockets in communication between client and server. The ServerSocket object has been used to listen and create a different socket on accept.

A connection has been set up in the program allowing the server to communicate messages to the client as a way of serving the client and then closing the connection afterwards and go ack to waiting state until summoned again by the client.

In the program, the purpose of the server socket is to listen for client calls and then the server protocol communicates with the client. Socket communication moves in streams, there are input streams and output streams. Sockets have been defined in the try-with-resources block automatically closing them at the end of the block. After communication is completed between the two, the connection is closed.

On the client’s side, the client is expected to provide inputs which are read and sent to the server, with a socket object handling the communication. The client attains information of the IP Address of the server as well as port number.

The SocketServer class was created by creating an instance of the ServerSocket class. The server waits to hear from the client through the defined port number to return an instance of the socket.

SocketClient class was created as an instance of Socket class. The IP address and hostname of the Server and port number is passed to this class.

# **References**

*Java Socket Programming*. (n.d.). Retrieved from Javapoint: https://www.javatpoint.com/socket-programming

*Loyola Marymount University*. (n.d.). Retrieved from Java Socket Programming Examples: https://cs.lmu.edu/~ray/notes/javanetexamples/