Department of Electrical and Computer Engineering
College of Engineering, Design, Art and Technology
Makerere University

Semester II, 2018

ELE3214 Computer Communication Networks

Sockets Programming Assignment - 2

Assignment 1:
Write a simple program that can read a host name and convert it to an IP address.

Assignment 2:
Write a URL-based program that pulls content from www.cedat.mak.ac.ug.

Assignment 3:
Write a ping-pong client and server application. When a client sends a ping message to the server, the server will respond with a pong message. Other messages sent by the client can be safely dropped by the server.

Assignment 4:
Write a simple program to fetch and then double the current number of bytes in the socket's receive buffer.

Assignment 5:
Your company has recently installed a UDP "server" program running on a machine whose IP number is 193.168.X.254 (where X is the numeric part of the lab room number, e.g. 162, 140, 3006, etc.) on a UDP port 3310. Whenever it receives a datagram on this port, it sends back a text message. The maximum length of the text message is 100 bytes including the terminating null.

1. Write a program to send a datagram to this server, receive the return message and print it out.

2. Suppose there is more than one machine on your labs subnet which will reply to these UDP queries. UDP, being connectionless, allows broadcasts. Using a broadcast, discover how many machines are listening on well-known port 3310 and sending back text strings.