NES416- Network Programming
Programming Assignment #2

Objective
To write a complete client-server application that handles both TCP and UDP.

Description:

In this assignment, you will implement a string-capitalized server that would respond to both TCP and UDP requests. The client will send a string to the server as a request. When the server runs, it listens to both the TCP port and the UDP port (it will take port number as an argument).

- When a TCP connection is made to the port, the server (actually the child) will receive a string from client and reply to that connection with capitalized string and then the client will print out the result and close the connection.
- When a UDP packet is received on that port, the server (you can have the server itself handle this or fork a child) will reply with capitalized string and then the client will print out the result.

To test your server, you will also need to implement a TCP client and a UDP client that would contact the server (the clients take IP address and port number of the server as arguments). The UDP client will work in a loop until the user choose to exit.

Your programs for clients need to take two arguments that specify the IP address and the port of the server. Your program for server needs to take an argument that specifies the port number to work on

Hints:

- Submit your source codes and some running sample of your code as one compressed file whose name is your group number
- Your programs should be compiled and run without any single error or warning.
- Comment and error-check you code
- Test your code by running the two clients simultaneously.
- Note that the servers are kept running after the clients exit.