IT 386 – Programming Assignment

For this assignment you will work in pairs, where one team member can run the server on **bur.ad.ilstu.edu** server, and the other team member can run the client on **aspen.ad.ilstu.edu** for example.

In this assignment you will implement client/server application using UDP, similar to the application we did in class using TCP during Week 5. For details on java sockets UDP check the lecture notes from Thursday Week 6, and the resources below.

Your client-server application will do the following:
- client reads a line of characters (message) from its keyboard and sends data to server
- server receives the data and converts characters to uppercase
- server sends modified data to client as well as the name of the server
    - To get the name of the server you can use:
      `InetAddress.getLocalHost().getHostName();` which will return a string containing the name of the computer (host) you are using
- client receives modified data and prints the message on its screen

Create two classes, one named `ClientUDP.java` where you will implement the client side of your application, and the other class named `ServerUDP.java`. when you will implement the server side.
- The port number and hostname should be inputted as argument input when running your code.
- Comment and indent your code properly.
- Add a comment at the begging of your code with team member's name

The finalized application should show the communication between Client and Server. The Client UDP sending a sentence to the server UDP, and the server UDP receives the message, and sends a modified sentence back to the Client UDP which receives and prints to screen.

Compiling and Running (open a terminal)
- Team member 1: Compile and run ServerUDP with port number of your choice
- Team member 2: Compile and run the ClientUDP with hostname (machine where ServerUDP is running) and port number where the ServerUDP is listening.

- Each team member takes a screenshot of your terminal operation successfully interacting with the client and the server. The message sent to the client should contain the team members name.

Resources:
https://docs.oracle.com/javase/tutorial/networking/sockets/index.html
https://docs.oracle.com/javase/8/docs/api/java/net/package-summary.html

Submission Guidelines on ReggieNet.
On the submission box, write the names of both team members, attach your files ServerUDP.java and ClientUDP.java and the screenshots. Note: Both team members should submit the same assignment.