ASSIGNMENT 4

Moving to Datagrams...

Introduction : What will we learn here ?
In this assignment, we will learn to communicate between a client and a server using UDP sockets.

Problem Statement C1 (Compulsory; Difficulty level *; 100 points)

Implement this: a client sends an AWK script to the server. The AWK script on execution generates a message. Server will (first) execute the script and (then) send the output message back to client. To avoid spamming, server will accept the AWK script only after authentication with a secret code. This secret code is pre-known to all the true clients.

Problem Statement O1 (Optional; Difficulty level **; 10 bonus marks)

Extend the above scenario to serve multiple clients simultaneously. The server should be able to keep track of up to 5 simultaneous users. However, server should accept the AWK script as a file only from the first client who makes a request. Server should make the AWK file into an executable, execute it locally and send the generated message back to the client.

Problem Statement O2 (Optional; Difficulty level ***; 20 bonus marks)

Extend the above scenario so that the server broadcasts the output message to all the available clients. Also provide the functionality to broadcast a custom message entered by ADMIN[1]. All the clients (except the 1st one) should stay only in listen state.

NOTE:
- The assignment must be uploaded to https://sakai.iitd.ac.in (in certain exceptional cases, the TAs may allow it to be mailed to dslab2013.iitd@gmail.com)
- Submission deadline is 5 PM today
- Submit a zip file named assignno_entryno having 2 folders:

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[1] By the way, custom message broadcasts are already done by Unix using the `wall` or `write all` command. Try it ! Now, does `wall` use UDP ?

1. CODE: Suitable files associated with the assignment
2. DOCUMENTATION: .pdf and .tex file of your report

Copying is counter-productive and will be penalized.

Reading instructions for the next week

Next week, we will be doing assignments on network modelling using Petri Nets in SHARPE tool. A tutorial will be given by Garima ma'am in this regard..