NA-1 Spring 2016 Project

Paper and Bb submissions, Due on Tuesday, April 12th 2:30pm

Maximum upto 3 students can be in a team. Demo information will be announced later. Any programming language can be used for this project. _All team will do the demo to Prof. Choi at an assigned time on Wednesday 4/13 (10 min /team). Questions on the code and execution will be asked to all of the students._
Sign up for the demo time by responding to the doodle message. Only one response should be sent including all team members' names.

Part I. GENI/Socket programming Warm-up (50%)

Develop and deploy a simple TCP client and server programs on GENI (refer GENI LabZero slide and sample socket programs). Show the screenshots of simple message exchanges.

a) (20%) Start from client message 'Hello from Client-your names' and server responses with 'Hello from Server-your names'. Then messages from each side are echoed to each other. The program quit the program with typing 'Bye from Client-your name' and 'Bye from Server-your name'.

b) (30%) A client sends a text file (> 10KB) to a server.
Server prints the file on the screen,
Server saves the file in a local system,
Server appends one more line (eg. 'This is an added line from a server) to the file,
And send the updated file back to the client.
Client shows the file on the screen after it fully receives the file.

Part II. Group Chatting Program (50%)

Develop a simple chat program (similar to google hangout and skype chat), and show the screenshots of the execution of the below.

Extend the first program to chat client-server program following these steps.

a) (5%) A chat server will accept a single client connection and display everything the client types. If the client user types 'exit', both client and server will end the program.

b) (5%) A server now remains 'open' for additional connection once a client quits. The server can handle at most one connection at a time.

c) (20%) A server now can handle multiple clients at the same time. The output from all the connected clients will appear on the server's screen.

d) (20%) A server now echoes all the text received from any of the connected clients to all