Computer Networks Lab (CS 353): Lab 2

This assignment will be graded.

1. Modify the program 'Server1' from Lab1 for the following: Transfer a text file from the client to the server to simulate a protocol that uses acknowledgements. For this, send 5000 bytes from the client to the server. When the server receives 5000 bytes, it sends an acknowledgement to the client (use a message such as "ACK"). When the client receives the ACK, it sends the next 5000 bytes. Manually compare the file received at the client with that received at the server to check if they are identical (you can use the vimdiff utility in linux for this) . You may use the attached text file for testing. [5 marks]

2. Write a program that implements the message flow from the top layer to the bottom layer of the 7-layer protocol model. Your program should include a separate protocol function for each layer. Protocol headers are sequences up to 64 characters. Each protocol function has two parameters: a message passed from the higher layer protocol (a char buffer) and the size of the message. This function attaches its header in front of the message, prints the new message on the standard output, and then invokes the protocol function of the lower-layer protocol. The input to the program is an application message. [5 marks]