Assignment 6

TCP Client-server

Due: October 27, 2006

1. Write a simple TCP concurrent server to evaluate arithmetic expressions. The client-server system has the following functionalities:

    a. The client asks for an arithmetic expression from the user. The user enters an arithmetic expression containing only positive integers and the binary operators +, -, *, and /. The arithmetic expression can be at most 100 characters long. There may or may not be spaces before and after the operators. For example, all of the following are valid expressions to enter: "13 + 42*5", "10+2/4", "5 + 6 - 3". Assume that all operators have the same precedence and are left-associative.
    b. The client sends the expression to the server. You should not send the complete buffer if not needed.
    c. The server computes the expression and sends the integer back to the client.
    d. The client displays the result on the screen. It then prompts the user to enter the next expression.
    e. The client terminates when the user enters a –1.

Note that multiple clients can connect to the server at the same time.