CS6111-COMPUTER NETWORKS LAB

Ex.NO.2 : SOCKET PROGRAMMING

Client Server Programming to handle multiple clients

Program 1:

Implementation of Connection-Oriented Concurrent date and time using user-defined ports

Client-server programming using

1. Assume that only one client requests for service at a given time.
2. Implement the server as an iterative server.
3. Extend the above so that the server can handle multiple concurrent client requests, that is the server is to be implemented as a concurrent server

Program 2:

Implement a simple client-server programming where the client must chat with a dummy "math" server.

The protocol between the client and server:

- In the Client side user enters a simple arithmetic expression string (e.g., "1 + 2", "5 - 6", "3 * 4"). The user's input is sent to the server via the connected socket. The server reads the user's input from the client socket, evaluates the expression, and   sends the result back to the client.
- The client should display the server's reply to the user, and prompt the user for the next input, until the user terminates the client program with Ctrl+C.

Program 1: A single process server that can handle only one client at a time. If a second client tries to chat with the server while one client's session is already in progress, the second client's socket operations should see an error.

Program 2: Multi-process server that will fork a process for every new client it receives. Multiple clients should be able to simultaneously chat with the server.

Program 3: A single process server that uses the "select"system call to handle multiple clients. Again, much like server2, server3 will also be able to handle multiple clients concurrently.