

CST8234 – C Programming

Assignment #4: Network Applications

Objective

To create a Server – Client application over the network

To design a set of rules for proper network communication

Network Application

You are to write a Server-Client application to run over the network. Your application must run using IPv4 network addressing.

This is an open project, and it is up to you to decide what type of application you want to design. You should spend some time thinking in what do you want to do and then research similar applications, so you have a clear understanding on HOW you are to design your application.

You can not present any of the examples posted as your assignment #4.

Some ideas:

- (1) A chat program. A clients connects and “talks” to the server.
- (2) A server calculator. A clients connects and sends a set of instructions for the server to calculate. The server returns the end value.
- (3) A password generator. A clients connects and requests a new password from the server.
- (4) A encryption server. A client connects and requests for a string, file to be encrypted.
- (5) A compiler server. A client connects and requests for a c file to be compiled.

The possibilities are endless.

As in any network application, you need to design a set of rule (protocol) and convections to be sure that the communication between the server and client is done properly.

For example, you need to decide at least the following:

- (1) Is your application going to run as client-server or multiple clients – server?
- (2) Is your application going to be sending data in a secure way?
- (3) Are you going to be ack packets?
- (4) How big is going to be the size of the packets send?