

Konami Test Design Document

So, to start, I created the base program. I decided to use TinyXML because it is a lightweight XML parser, so I didn't have to code a parser from scratch.

After implementing TinyXML into my program, I began creating the base program. First, I began with the easiest part which was passing command line arguments to determine what IP address and port number for the socket to use. Using the built in sockets library from Linux, I created a switch statement that takes the number of arguments and, depending on the number of arguments, sets up the socket with the provided IP address and port number. After setting up the socket, it begins to listen for incoming connections on the provided IP address and port. I then call the accept function in a loop to accept any incoming connections up to a max of 50 requests.

From the prompt, I made a few assumptions. The packet being sent would be a "command" and that command would be parsed into my program and executed. The example command I was given was "Print" which would just print out the data given in the XML packet. I achieved this by parsing the XML Packet into an object and outputting its data as a cstring using the built in Printer class from TinyXML.

After implementing the base program, I used pthread to make the program able to accept multiple clients.

Finally, I made a simple mutex lock that prevents the data from being accessed from multiple threads at the same time.

I decided during the time given that the core functionality was more important than the usability of the program so I didn't implement GTK+ or QT. Learning and implementing a gui would have taken too much time due to my inexperience with either of these libraries.

Due to time restraints, there are a few errors or exceptions that are not handled so the program is easy to break. Currently, the program will break if you send anything that isn't XML to the program.

I implemented the requested example "Print" command and my own "Add" and "Sub" command. The XML must follow the format of the prompt in order to function correctly. You can add as many rows of info as you like, so long as it follows the format.