Computer System Administration 2 – Python Weekly Report 2

Date: Sunday 12th February 2017

What I did:

Last week I wrote an echo client to connect to an echo server on the local machine using the '**openbsd-inetd**' package on Ubuntu Linux or '**xinetd**' on Fedora Linux which I used. This week instead of relying on the provided echo server, I wrote my own echo server using Python and the sockets library. I also improved my existing echo client's code.

Specification Table

echo_client.py

Inputs	Processing	Outputs
message	Input message Encode message Send encoded message to server Decode reply message from server	Print reply from the server

echo_server.py

Inputs	Processing	Outputs
message	Receive message Decode message Send decoded message to client	Print reply from the client

Output

(The .py files and their output will be uploaded separately)

What I learned

This week I learned how to use the sockets library in python to create an echo server as well as using exception handling in python[1].

Problems I have encountered

I was surprised by the way python handled local and global variables as I was using a boolean to indicate when the client/server should stop but according to my IDE the local variable wasn't used so I dig deeper and found out that in python a variable is local or global depending in the scope it was declared in[2]. In order to fix that I needed to declare the variable global inside the local scope in order to access the variable.

What will be done next week

Next week I will add command line arguments to my echo client/server so it can receive the values for the IP address and port number on the command line.

[1] https://docs.python.org/3/tutorial/errors.html#handling-exceptions

[2] https://docs.python.org/3/faq/programming.html#why-am-i-getting-an-unboundlocalerror-when-the-variable-has-a-value