Lab 3: Operation Gumbo

Instructions

Problem 1: SOS Gumbo!

Inside of Gumbos recipe (You DID decrypt it yourself, right?), we found some disturbing messages! We received a hint that we should try and reach them on port 6369 (MEOW) (classes server)

Write a C program that can connect to the classes server on port 6369 and see if we can read the SOS signal to figure out what's going on!

Problem 2: Meow and Response

Based on the information provided, we will need to connect to another port on the system. Gumbo is rather cautious and will likely ask for a response to their messages to validate who you are!

You will be receiving encrypted messages; you should be able to decrypt them and then send back the requested information. You will likely want to type the information in to send back encrypted as well!

Hints:

1.

The IP address for the classes server will be posted on the board.

You can also grab it yourself by running the following command:

$dig classes.csc.lsu.edu

Note this will only work if you have access to the classes server (on eduroam or VPN)

2.

You will likely want to modify/use the sample code for networking provided.

Note that the samples given only read/write once. For this problem you will have to deal with an arbitrary amount of data.

3.

After completing Part 1, you will receive some hints about how to finish Part 2.

Specifically, you will look for the Port number needed, and the encryption key.

This time, the encryption scheme is a word-based XOR. in that if our word is “test”, and our message is “hello bob”, the encryption looks like this:

E[0] = ‘h’ ^ ‘t’
E[1] = ‘e’ ^ ‘e’
E[2] = ‘l’ ^ ‘s’
E[3] = ‘l’ ^ ‘t’
E[4] = ‘o’ ^ ‘t’
E[5] = ‘ ’ ^ ‘e’
E[6] = ‘b’ ^ ‘s’
E[7] = ‘o’ ^ ‘t’
E[8] = ‘b’ ^ ‘t’