LMU|LA
Frank R. Seaver College
of Science and Engineering

Client Server Application

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An exercise in TCP communications via Unix programming

Server

- Establishes ownership over an available port on some UNIX based machine
- Listens for an incoming TCP request to make a 3 way handshake
- Decodes incoming files and stores them at a given existing directory

Client

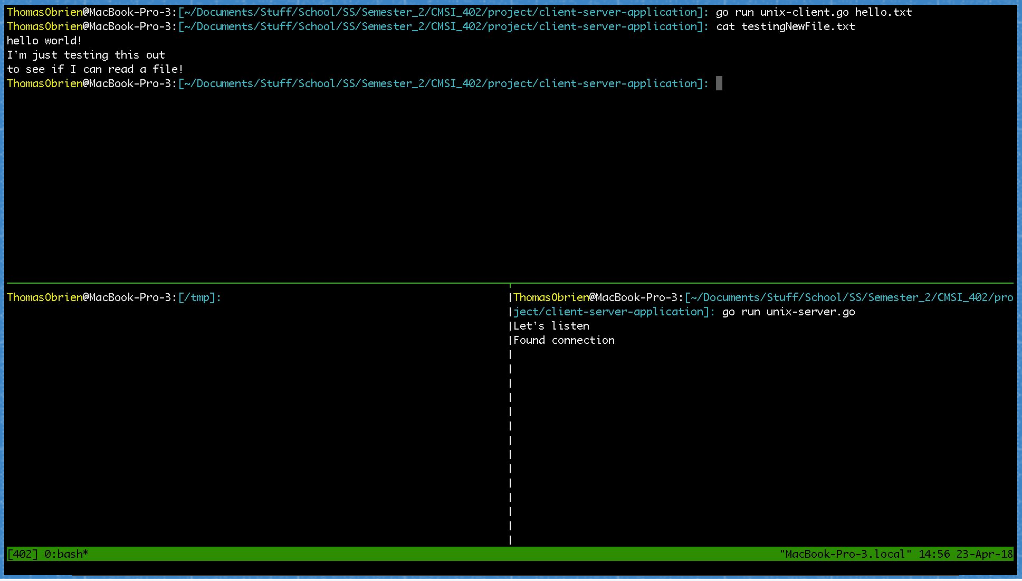
- Attempts to make a simulated TCP connection with a server
    - Utilizes a TCPHeader struct
- Sends encoded files from the client side to the server side
- Returns whether or not the file was sent over successfully

Technologies

- Golang is a powerful systems programming language gaining popularity in modern tech stacks
- Unix programming libraries are utilized for lower level programming

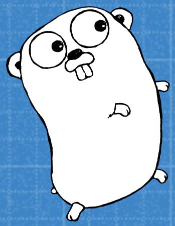
Justification

- To develop an in-depth understanding of the TCP/IP stack
- Relevant to Site Reliability/DevOps Engineering



```
ThomasObrien@MacBook-Pro-3:[~/Documents/Stuff/School/SS/Semester_2/CMSI_402/project/client-server-application]: go run unix-client.go hello.txt
ThomasObrien@MacBook-Pro-3:[~/Documents/Stuff/School/SS/Semester_2/CMSI_402/project/client-server-application]: cat testingNewFile.txt
hello world!
I'm just testing this out
to see if I can read a file!
ThomasObrien@MacBook-Pro-3:[~/Documents/Stuff/School/SS/Semester_2/CMSI_402/project/client-server-application]:
```

```
ThomasObrien@MacBook-Pro-3:[/tmp]:                    |ThomasObrien@MacBook-Pro-3:[~/Documents/Stuff/School/SS/Semester_2/CMSI_402/pro
                                                      |ject/client-server-application]: go run unix-server.go
                                                      |Let's listen
                                                      |Found connection
[402] 0:bash*                                          "MacBook-Pro-3.local" 14:56 23-Apr-18
```



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