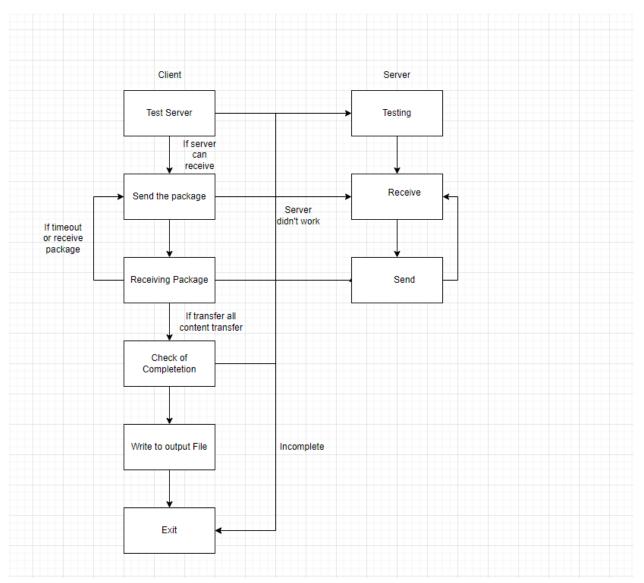
## Lab2 Report

- 1. In this lab, we are building a http server and client that will echo back a file that is sent to the server.
- 2. The method I use is recefrom and sendto, which are udp methods used to transfer messages between two computers.
- 3. The diagram of my code if follow:

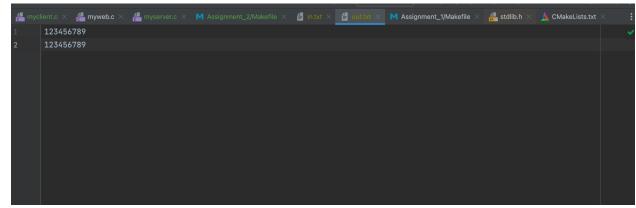


4. The file I use to test is a in.txt with content of 1-9 in two-line:

```
1 123456789
2 123456789
```

5. Test 1: Normal transfer MTU Size 1:

```
(base) dongzihao@dongzihao@dongzihaodeMacBook-Pro Assignment_2 % clear
(base) dongzihao@dongzihaodeMacBook-Pro Assignment_2 % ./myserver 1824
successerver 1832
server 9
size :1
size :
```



6. Test 2: Normal transfer MTU Size 5:

```
server 9
server 9
server 9
server 9
server 13
server 14
server 15
server 15
server 17
server 18
size :5
server 18
size :5
server 19
server 19
size :6
```

Output File:

7. Test 3: No Server

```
(base) dongzihao@dongzihaodeMacBook-Pro Assignment_2 % ./myclient 127.0.0.1 1024 5
    ./bin/in.txt ./bin/out.txt
6
can't find server
(base) dongzihao@dongzihaodeMacBook-Pro Assignment_2 %
```

8. Test 4: Incorrect Order:

```
clang -Wall -Wextra -Werror -Wpedantic -g -o bin/myclient bin/myclient.o -lm clang -Wall -Wextra -Werror -Wpedantic -g -c src/myserver.c -o bin/myserver.o clang -Wall -Wextra -Werror -Wpedantic -g -o bin/myserver bin/myserver.o -lm (base) dongzihao@dongzihao@dongzihaodeMacBook-Pro Assignment_2 % ./bin/myserver 1024 seq :0

zsh: no such file or directory: ./bin/myserver

(base) dongzihao@dongzihaodeMacBook-Pro Assignment_2 % ./bin/myserver 1024 seq :0

seq :0

seq :0

seq :1

seq :3

sec :5

server 13

server 14

server 15

server 15

server 16

seq :0

seq :1

seq :3

seq :2

seq :5

size :5

size :5

(base) dongzihao@dongzihaodeMacBook-Pro Assignment_2 % ./bin/mysclient 127.0.0.1 10

24 5 ./bin/in.txt ./bin/out.txt

seq :0

seq :1

seq :3

seq :2

seq :5

size :5

size :5

(base) dongzihao@dongzihaodeMacBook-Pro Assignment_2 % ./bin/mysclient 127.0.0.1 10

24 5 ./bin/in.txt ./bin/out.txt
```

To test Incorrect Order, I switch the order of packages 2 and 3. Here is the result:

9. Test 5: Lost Package:

To test package loss, I make the server try package number 2:

```
(base) dongzihao@dongzihaodeMacBook-Pro Assignment_2 % make
clang -Wall -Wextra -Werror -Wpedantic -g -c src/myclient.c -o bin/myclient.o -o
clang -Wall -Wextra -Werror -Wpedantic -g -c bin/myclient.o -o
bin/myserver.o
clang -Wall -Wextra -Werror -Wpedantic -g -c src/myserver.c -o bin/myserver.o
clang -Wall -Wextra -Werror -Wpedantic -g -o bin/myserver bin/myserver.o -lm
(base) dongzihao@dongzihaodeMacBook-Pro Assignment_2 % ./bin/bmyserver 1024
successserver 1032
server 13
server 13
server 13
server 13
server 13
server 15

(base) dongzihao@dongzihaodeMacBook-Pro Assignment_2 % ./bin/bmyserver 1024
seq :0
seq :1
time out
seq :3
size :5
size :5
size :292879232
package Lost@
(base) dongzihaodeMacBook-Pro Assignment_2 %
(base) dongzihaodeMacBook-Pro Assignment_2 %
(base) dongzihaodeMacBook-Pro Assignment_2 %
(base) dongzihaodeMacBook-Pro Assignment_2 %
```