

Jesi Merrick A20264903

Ron Pyka A20250364

Dylan Boliske A20252450

Program Listing

client.c:

```
main()
    connect() //client connects to indexing server
    clientAsServer() //in a new thread, works as server-side of a peer
        select() //checks to see if any sockets have data to be read/written
            recv() //receive command from peer
            send() //send file back to peer

    while(1)
        //input command from user
        if command == retf
            retrieveFile() //will request file from peer
                connect() //connect to a peer to download from
                write() //send file request to peer
                read() //multiple times, reads the file chunks
        else if command == exit
            exit the program
        else
            write() //send command and arguments to the indexing server
            read() //read expected response from the indexing server
```

server.c:

```
main()
    select() //checks to see if any sockets have data to be read/written
    recv() //receive command from peer
        if command == addf
            addfile() //adds the file to the index
        else if command == remf
            remove_file() //removes the file from the index
        else if command == getf
            search_for_file() //find the file and its attached clients
    send() //send response back to peer
```