COMP 7005
Assignment 2
Testing

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Client.py Tests

Test	Expected	Actual	Screenshot
No arguments	fail	fail	Test 1
Client Connects to Server Successfully	pass	pass	Test 2
Invalid Server IP Address	fail	fail	Test 3
Client launch but Server Not Running	fail	fail	Test 4
File Path Does Not Exist	fail	fail	Test 5
Send Empty File	pass	pass	Test 6
Send Large File	pass	pass	Test 7
Send any file other than .txt	fail	fail	Test 8
Abrupt Disconnection During File Transfer	fail	fail	Test 9
Server Shuts down during client file transfer	fail	fail	Test 10
Too many arguments	fail	fail	Test 11
Client sends multiple files	fail	fail	Test 12
Invalid Port number	fail	fail	Test 13

Server.py tests

Test	Expected	Actual	Screenshot
No arguments	fail	fail	Test 14
Out of Range Port Number (Below 1024)	fail	fail	Test 15
Out of Range Port Number (Above 65535)	fail	fail	Test 16
Too many arguments	fail	fail	Test 17
Server Shutdown on KeyboardInterrupt	pass	pass	Test 18
Server starts successfully	pass	pass	Test 19
Single client connection	pass	pass	Test 20
Multiple Client	pass	pass	Test 21
Invalid Port Number (Non-Integer)	fail	fail	Test 22
Client Sends Empty File	pass	pass	Test 23

Client Sends Non-Text File	fail	fail	[Test 24](#)
Client Disconnects Abruptly	fail	fail	[Test 25](#)
Large File Handling	pass	pass	[Test 26](#)
Starting another server using same port	fail	fail	[Test 27](#)

Tests

Test 1

```
[developer@archlinux src]$ python server.py --port 3000
Server IP address: 192.168.0.35
Server is listening on port 3000...
```

```
[andyt@LenovoPC src]$ python3 client.py
  Error: No arguments provided. Please provide --ip, --port, and --file arguments.
  usage: client.py [-h] --ip IP --port PORT --file FILE

  Send file content to TCP server.

  options:
    -h, --help    show this help message and exit
    --ip IP       Server IP address (e.g., 192.168.1.1)
    --port PORT   Server port number (e.g., 12345)
    --file FILE   Path to the .txt file to send
```

Test 2

```
[developer@archlinux src]$ python server.py --port 3000
Server IP address: 192.168.0.35
Server is listening on port 3000...
Client conected from ('192.168.0.177', 36682).
No more data from client, file transfer complete.
File data received succesfully.
File data decoded successfully.
Counted 0 alphabetic characters in the received file.
Sending response to client: Alphabetic character count: 0
Client connection closed.
```

```
[andyt@LenovoPC src]$ python3 client.py --ip 192.168.0.35 --port 3000 --file testfile.txt
  Connected to server at 192.168.0.35:3000
  Finished sending file data.
  Client socket shutdown.
  Server response: Alphabetic character count: 0
[andyt@LenovoPC src]$
```

Test 3

```
[andyt@LenovoPC src]$ python client.py --ip 10.65.43.33453455 --port 12345 --file testf
ile.txt
Error: Unable to resolve the server address '10.65.43.33453455'. Please check if the IP address or
 hostname is correct.
[andyt@LenovoPC src]$
```

```
[andyt@LenovoPC src]$ python client.py --ip invalidip --port 12345 --file testfile.txt
Error: Unable to resolve the server address 'invalidip'. Please check if the IP address or hostnam
e is correct.
[andyt@LenovoPC src]$
```

Test 4

```
[developer@archlinux src]$ python server.py --port 3000
Server IP address: 192.168.0.35
Server is listening on port 3000...
Client conected from ('192.168.0.177', 36682).
No more data from client, file transfer complete.
File data received succesfully.
File data decoded successfully.
Counted 0 alphabetic characters in the received file.
Sending response to client: Alphabetic character count: 0
Client connection closed.
^C
Server shutting down.
[developer@archlinux src]$ ^C
[developer@archlinux src]$
```

```
Server response: Alphabetic character count: 0
[andyt@LenovoPC src]$ python3 client.py --ip 192.168.0.35 --port 3000 --file testfile.txt
Error: Could not connect to 192.168.0.35:3000. Please check if the IP address is correct and the server is ru
nning.
Details: [Errno 111] Connection refused
[andyt@LenovoPC src]$
```

Test 5

```
[developer@archlinux src]$ python server.py --port 3000
Server IP address: 192.168.0.35
Server is listening on port 3000...
```

```
[andyt@LenovoPC src]$ python3 client.py --ip 192.168.0.35 --port 3000 --file testfie.txt
Error: File 'testfie.txt' does not exist.
[andyt@LenovoPC src]$
```

Test 6

```
[developer@archlinux src]$ python server.py --port 3000
Server IP address: 192.168.0.35
Server is listening on port 3000...
^[[A^[[AClient conected from ('192.168.0.177', 46166).
No more data from client, file transfer complete.
File data received succesfully.
File data decoded successfully.
Counted 0 alphabetic characters in the received file.
Sending response to client: Alphabetic character count: 0
Client connection closed.
```

```
[andyt@LenovoPC src]$ python3 client.py --ip 192.168.0.35 --port 3000 --file tes
tfile.txt
Connected to server at 192.168.0.35:3000
Finished sending file data.
Client socket shutdown.
Server response: Alphabetic character count: 0
```

Test 7

```
andy@DESKTOP-225V9R7 C:\Users\Andy\Documents\COMP7005_Assign2\source\src>python server.p
 --port 3000
Server IP address: 192.168.1.87
Server is listening on port 3000...
Client connected ...
Processed file: counted 1572870 alphabetic characters.
Client disconeccted.
```

```
[andyt@LenovoPC src]$ python3 client.py --ip 192.168.1.
87 --port 3000 --file testfile.txt --file largefile.txt
Connected to server at 192.168.1.87:3000
Finished sending file data.
Client socket shutdown.
Server response: Alphabetic character count: 1572870
```

Test 8

```
andy@DESKTOP-225V9R7 C:\Users\Andy\Documents\COMP7005_Assign2\source\src>python server.py --port 3000
Server IP address: 192.168.1.87
Server is listening on port 3000...
```

```
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⊗ [andyt@LenovoPC src]$ python client.py --ip 192.168.1.87 --port 3000 --file wrongfile.pdf
  Error: Only .txt files are allowed.
```

Test 9

```
No more data from client, file transfer complete.
File data received succesfully.
File data decoded successfully.
Counted 1245023 alphabetic characters in the received file.
Sending response to client: Alphabetic character count: 1245023
Client connection closed.
```

```
  [andyt@LenovoPC src]$ ^C
⊗ [andyt@LenovoPC src]$ python client.py --ip 192.168.1.87 --port 3000 --file gists.txt
  Connected to server at 192.168.1.87:3000
  ^C
  Transfer interrupted by user. Closing connection...
```

Test 10

```
andy@DESKTOP-225V9R7 C:\Users\Andy\Documents\COMP7005_Assign2\source\src>python server.py
 --port 3000
Server IP address: 192.168.1.87
Server is listening on port 3000...
Client connected ...

Transfer interrupted by server. Closing connection.
Client disconeccted.
Server socket closed.
```

```
  by peer
⊗ [andyt@LenovoPC src]$ python3 client.py --ip 192.168.1.
  87 --port 3000 --file testfile.txt --file largefile.txt
  Connected to server at 192.168.1.87:3000
  Finished sending file data.
  Client socket shutdown.
  Error receiving response: [Errno 104] Connection reset
  by peer
```

Test 11

```
  [andyt@LenovoPC src]$ python client.py --ip 192.168.1.87 --port 3000 --file gists.txt unkow
  n
  usage: client.py [-h] --ip IP --port PORT --file FILE
  client.py: error: unrecognized arguments: unkown
```

Test 12

```
Server response: Alphabetic character count: 0
[andyt@LenovoPC src]$ python3 client.py --ip 192.168.1.87 --port 3000 --f
ile largefile.txt --file testfile.txt
Error: Too many arguments please provide one each.
[andyt@LenovoPC src]$ 
```

Test 13

```
andy@DESKTOP-225V9R7 C:\Users\Andy\Documents\COMP7005_Assign2\source\src>python server.py --port 3000
Server IP address: 192.168.1.87
Server is listening on port 3000...
```

```
[andyt@LenovoPC src]$ python3 client.py --ip 192.168.1.87 --port 3001 --file testfile.txt -
-file testfile.txt
Error: Connection to 192.168.1.87:3001 timed out.
```

Test 14

```
andy@DESKTOP-225V9R7 C:\Users\Andy\Documents\COMP7005_Assign2\source\src>python server.py
usage: server.py [-h] --port PORT
server.py: error: the following arguments are required: --port
```

Test 15

```
andy@DESKTOP-225V9R7 C:\Users\Andy\Documents\COMP7005_Assign2\source\src>python server.py --
port 1023
Server IP address: 192.168.1.87
Invalid port number: 1023. Port must be between 1024 and 65535.
```

Test 16

```
andy@DESKTOP-225V9R7 C:\Users\Andy\Documents\COMP7005_Assign2\source\src>python server.py --
port 102000
Server IP address: 192.168.1.87
Invalid port number: 102000. Port must be between 1024 and 65535.
```

Test 17

```
andy@DESKTOP-225V9R7 C:\Users\Andy\Documents\COMP7005_Assign2\source\src>python server.py --
port 102000 additionarguments
usage: server.py [-h] --port PORT
server.py: error: unrecognized arguments: additionarguments
```

Test 18

```
andy@DESKTOP-225V9R7 C:\Users\Andy\Documents\COMP7005_Assign2\source\src>python server.py --
port 3000
Server IP address: 192.168.1.87
Server is listening on port 3000...

Server interrupted (Ctrl+C). Shutting down...
Server socket closed.
```

Test 19:

```
andy@DESKTOP-225V9R7 C:\Users\Andy\Documents\COMP7005_Assign2\source\src>python server.py --port 3000
Server IP address: 192.168.1.87
Server is listening on port 3000...
```

Test 20

```
dy@DESKTOP-225V9R7 C:\Users\Andy\Documents\COMP7005_Assign2\source\src>python server.py --
rt 3000
rver IP address: 192.168.1.87
rver is listening on port 3000...
ient connected from ('192.168.1.76', 56820).
ceived 20 bytes from client.
more data from client, file transfer complete.
le data received successfully.
le data decoded successfully.
unted 17 alphabetic characters in the received file.
nding response to client: Alphabetic character count: 17
ient connection closed.
```

```
[andyt@LenovoPC src]$ python client.py --ip 192.168.1.87 --port 3000 --file small.txt
Connected to server at 192.168.1.87:3000
Finished sending file data.
Client socket shutdown.
Server response: Alphabetic character count: 17
```

Test 21

```
andy@DESKTOP-225V9R7 C:\Users\Andy\Documents\COMP7005_Assign2\source\src>python server.py
 --port 3000
Server IP address: 192.168.1.87
Server is listening on port 3000...
Client connected ...
Processed file: counted 1572870 alphabetic characters.
Client disconeccted.
Client connected ...
Processed file: counted 1572870 alphabetic characters.
Client disconeccted.
Client connected ...
Processed file: counted 1572870 alphabetic characters.
Client disconeccted.
```

```
[andyt@LenovoPC src]$ python3 client.py --ip 192.168.1.87 --port 3000
--file testfile.txt --file largefile.txt
Connected to server at 192.168.1.87:3000
Finished sending file data.
Client socket shutdown.
Server response: Alphabetic character count: 1572870
[andyt@LenovoPC src]$
```

```
[andyt@LenovoPC src]$ python3 client.py --ip 192.168.1.87 --port 3
000 --file largefile.txt
Connected to server at 192.168.1.87:3000
Finished sending file data.
Client socket shutdown.
Server response: Alphabetic character count: 1572870
[andyt@LenovoPC src]$
```

```
[andyt@LenovoPC src]$ python3 client.py --ip 192.168.1.87 --port 300
0 --file largefile.txt
Connected to server at 192.168.1.87:3000
Finished sending file data.
Client socket shutdown.
Server response: Alphabetic character count: 1572870
[andyt@LenovoPC src]$
```

Test 22

```
[andyt@LenovoPC src]$ python client.py --ip 192.168.1.87 --port asfasdf --file small.txt
usage: client.py [-h] --ip IP --port PORT --file FILE
client.py: error: argument --port: invalid int value: 'asfasdf'
```

Test 23

```
andy@DESKTOP-225V9R7 C:\Users\Andy\Documents\COMP7005_Assign2\source\src>python server.py
 --port 3000
Server IP address: 192.168.1.87
Server is listening on port 3000...
Client connected from ('192.168.1.76', 39306).
No more data from client, file transfer complete.
File data received successfully.
File data decoded successfully.
Counted 0 alphabetic characters in the received file.
Sending response to client: Alphabetic character count: 0
Client connection closed.
```

```
[andyt@LenovoPC src]$ python client.py --ip 192.168.1.87 --port 3000 --fi
le testfile.txt
Connected to server at 192.168.1.87:3000
Finished sending file data.
Client socket shutdown.
Server response: Alphabetic character count: 0
```

Test 24

```
Server response: Alphabetic character count: 0
[andyt@LenovoPC src]$ python client.py --ip 192.168.1.87 --port 3000 --fi
le wrongfile.pdf
Error: Only .txt files are allowed.
```

Test 25

```
[andyt@LenovoPC src]$ python client.py --ip 192.168.1.87 --port 3000 --fi
le largefile.txt
Connected to server at 192.168.1.87:3000
^C
File transfer interrupted by user. Closing connection...
[andyt@LenovoPC src]$
```

```
Received 1924 bytes from client.
No more data from client, file transfer complete.
File data received successfully.
File data decoded successfully.
Counted 860160 alphabetic characters in the received file.
Sending response to client: Alphabetic character count: 860160
Client connection closed.
```

Test 26

```
andy@DESKTOP-225V9R7 C:\Users\Andy\Documents\COMP7005_Assign2\source\src>python server.py
 --port 3000
Server IP address: 192.168.1.87
Server is listening on port 3000...
Client connected ...
Processed file: counted 1572870 alphabetic characters.
```

```
[andyt@LenovoPC src]$ python client.py --ip 192.168.1.87 --port 3000 --fi
le largefile.txt
Connected to server at 192.168.1.87:3000
Finished sending file data.
Client socket shutdown.
Server response: Alphabetic character count: 1572870
```

Test 27

```
[andyt@LenovoPC src]$ python server.py --port 3000
Server IP address: 192.168.1.76
Error: Port 3000 is already in use. Please use a differ
ent port or stop the running server.
```