Stock Networking Interface – Part 2

Authors: Mihir Patel, John Jasinski, Jacob Mathison

Project Details:

Platform: Windows 10/11

Programming Language: Python

Running Instructions:

Compilation Instructions:

Delete database file and pycache:

make clean

Change server address and port(or leave as default):

Change PORT to desired port

Change address string in the serverAddress line to desired address

Execution Instructions:

Run server in one powershell terminal:

make OR python server.py

Run clients in separate powershell terminals(can run and connect up to 10 clients to the server):

python client.py

input server as “localhost:8414” (by default) in client

Student Roles:

Jacob: Login/Logout Functions; Server and Client Multi-Threading; Shutdown Functionality and Permissions; Updated Readme

Mihir: Updated List Command; Lookup functionality; Deposit Functionality;

John: Input Validation for Login, Deposit, and Lookup; Who Command; Modify Buy/Sell for default uid from login; Test Plan

Test Cases:

Test Plan Programming Assignment 2

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test # | Input type | Input | Expected Result | Result |
| 1 | Any command with no login | BUY/SELL etc. | Denied access due to a lack of login credentials | Pass |
| 2 | Login with false credentials | LOGIN wrong wrong | Denied access due to a lack of login credentials | Pass |
| 3 | Login with missing credentials | LOGIN | Prompt username and password | Pass |
| 4 | Login with missing password | LOGIN username | Prompt password | Pass |
| 5 | Login with standard credentials | LOGIN username password | Login accepted for standard user | Pass |
| 6 | BUY cmd with no additions | "BUY" > Balance | Prompted inputs followed by successful purchase and deduction | Pass |
| 7 | BUY SYMBOL | "BUY appl" > Balance | Prompted inputs followed by successful purchase and deduction | Pass |
| 8 | BUY SYMBOL AMOUNT | "BUY appl 4" > Balance | Prompted inputs followed by successful purchase and deduction | Pass |
| 9 | BUY SYMBOL AMOUNT PRICE | "BUY appl 4 8" > Balance | Prompted inputs followed by successful purchase and deduction | Pass |
| 10 | SELL cmd with no additions | "SELL" > Balance | Prompted inputs followed by successful sell and reflected balance | Pass |
| 11 | SELL SYMBOL | "SELL appl" > Balance | Prompted inputs followed by successful sell and reflected balance | Pass |
| 12 | SELL SYMBOL PRICE | "SELL appl 9" > Balance | Prompted inputs followed by successful sell and reflected balance | Pass |
| 13 | SELL SYMBOL PRICE AMOUNT | "SELL appl 9 3" > Balance | Prompted inputs followed by successful sell and reflected balance | Pass |
| 14 | Check LIST function | "LIST" | Executes the List function properly | Pass |
| 15 | Check negative values and string values | "BUY appl -5 x ">Balance | Reprompt invalid values followed by purchase and deduction | Pass |
| 16 | Who with standard login | "WHO" | Tell user that they have invalid credentials | Pass |
| 17 | Lookup cmd with no params | "LOOKUP" | Prompt user for stock name | Pass |
| 18 | Lookup cmd standard | "LOOKUP appl" | Standard output | Pass |
| 19 | Deposit with no params | "DEPOSIT" | Prompt user for amount | Pass |
| 20 | Deposit cmd standard | "DEPOSIT 10" | Standard output | Pass |
| 21 | DEPOSIT w negative numbers | "DEPOSIT -1" | Reprompt user | Pass |
| 22 | Check the Balance Function | "BALANCE" | Executes the Balance function properly | Pass |
| 23 | SHUTDOWN as standard user | SHUTDOWN | Tell user that they have invalid credentials | Pass |
| 24 | Logout | LOGOUT | Logout user | Pass |
| 25 | LOGIN with root credentials | LOGIN root rootpw | Login root | Pass |
| 26 | WHO with root | WHO | Standard output | Pass |
| 27 | LIST as root user | LIST | Root output | Pass |
| 28 | SHUTDOWN as root user | SHUTDOWN | Shutdown the server | Pass |

Screenshots:

2 clients connected to server after a “make clean”:

Text

Description automatically generated

* 1 – client 1

Text

Description automatically generated

* 2 - client 1

Text

Description automatically generated

* 3/4/5 – client 1

Text

Description automatically generated

* 5 – client 2

Text

Description automatically generated

* 6/7/8/9 – client 2

Text

Description automatically generated

* 10/11/12/13 – client 2

A screenshot of a computer

Description automatically generated with medium confidence

* 14 – client 2

Text

Description automatically generated

* 15 + list – client 1

Text

Description automatically generated

* 16 – client 1

Text

Description automatically generated

* 17/18 – client 1

Text

Description automatically generated

* 19/20 – client 1

Text

Description automatically generated

* 21 – client 1

Text

Description automatically generated

* 22 – client 1

Text

Description automatically generated

* 23 – client 2

Text

Description automatically generated

* 24/25 – client 2

Text

Description automatically generated

* 26 – client 2

Text

Description automatically generated

* 27 – client 2

Text

Description automatically generated

* 28 – client 2

Text

Description automatically generated

Client 1:

Text

Description automatically generated

Server:

Text

Description automatically generated