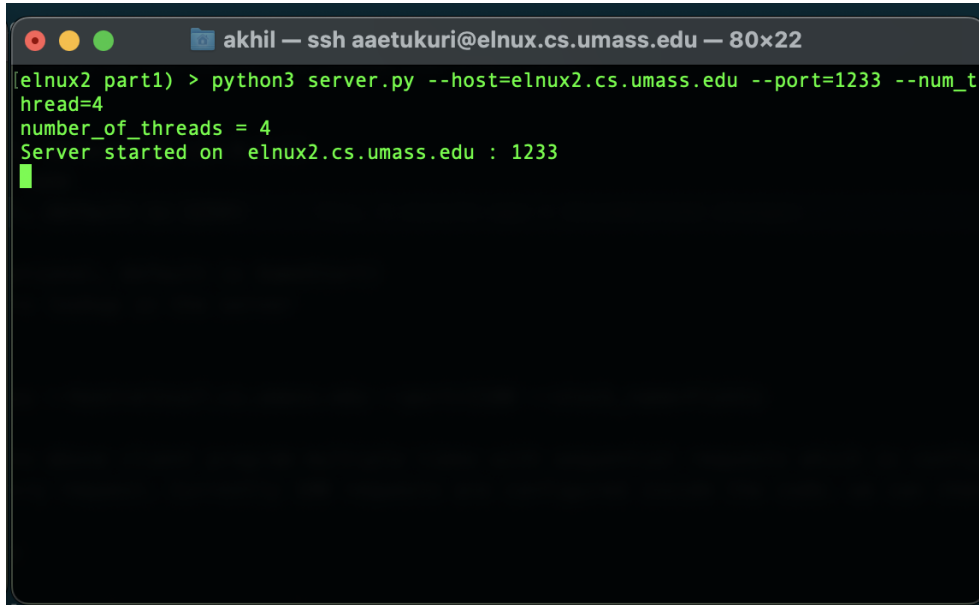


OUTPUTS DOCUMENT

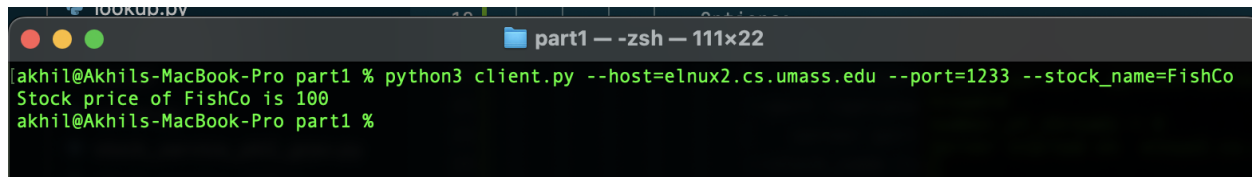
Part 1: (For the sample commands to run the following programs, please refer to the src/README.md file in the lab1 repository.)

Server output: Running the server.py in edlab

A terminal window titled 'akhil — ssh aetukuri@elinux.cs.umass.edu — 80x22'. The prompt is '[elinux2 part1] >'. The user enters 'python3 server.py --host=elinux2.cs.umass.edu --port=1233 --num_threads=4'. The output is 'number_of_threads = 4' and 'Server started on elinux2.cs.umass.edu : 1233'. A green cursor is on the line following the output.

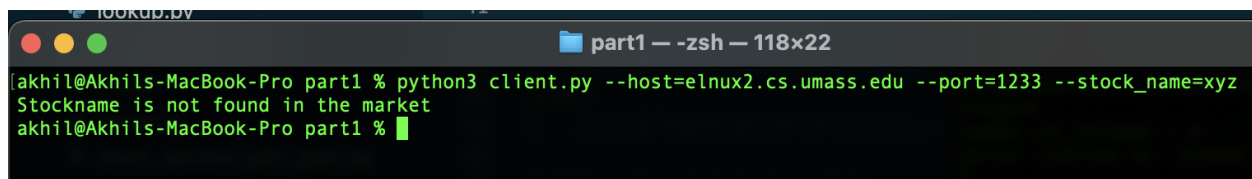
```
akhil — ssh aetukuri@elinux.cs.umass.edu — 80x22
[elinux2 part1] > python3 server.py --host=elinux2.cs.umass.edu --port=1233 --num_threads=4
number_of_threads = 4
Server started on elinux2.cs.umass.edu : 1233
█
```

Client output: running one request per one client from our local machine
For a valid stock name:

A terminal window titled 'part1 — -zsh — 111x22'. The prompt is 'akhil@Akhils-MacBook-Pro part1 %'. The user enters 'python3 client.py --host=elinux2.cs.umass.edu --port=1233 --stock_name=FishCo'. The output is 'Stock price of FishCo is 100'. The user then enters 'akhil@Akhils-MacBook-Pro part1 %' and a green cursor is on the line following the prompt.

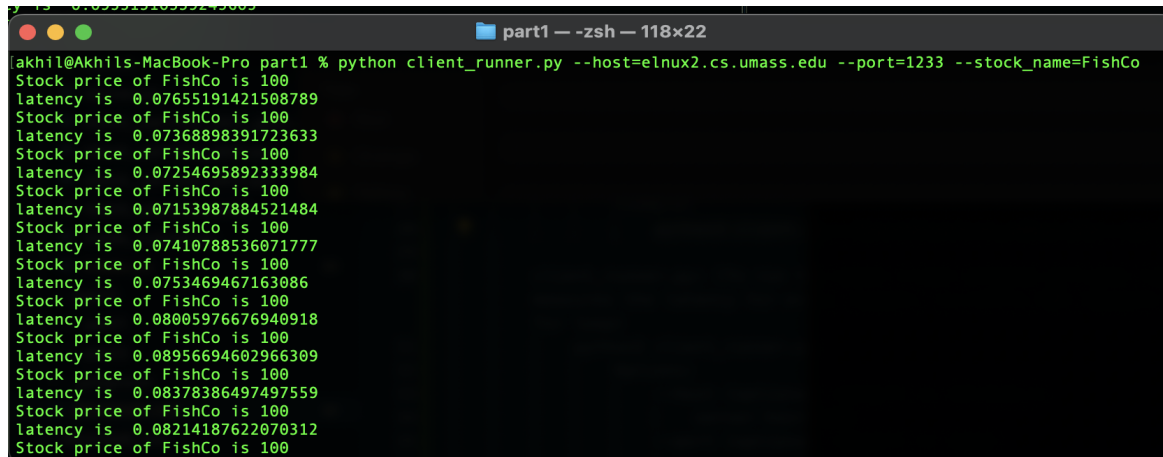
```
part1 — -zsh — 111x22
akhil@Akhils-MacBook-Pro part1 % python3 client.py --host=elinux2.cs.umass.edu --port=1233 --stock_name=FishCo
Stock price of FishCo is 100
akhil@Akhils-MacBook-Pro part1 % █
```

For an invalid stock name:

A terminal window titled 'part1 — -zsh — 118x22'. The prompt is 'akhil@Akhils-MacBook-Pro part1 %'. The user enters 'python3 client.py --host=elinux2.cs.umass.edu --port=1233 --stock_name=xyz'. The output is 'Stockname is not found in the market'. The user then enters 'akhil@Akhils-MacBook-Pro part1 %' and a green cursor is on the line following the prompt.

```
part1 — -zsh — 118x22
akhil@Akhils-MacBook-Pro part1 % python3 client.py --host=elinux2.cs.umass.edu --port=1233 --stock_name=xyz
Stockname is not found in the market
akhil@Akhils-MacBook-Pro part1 % █
```

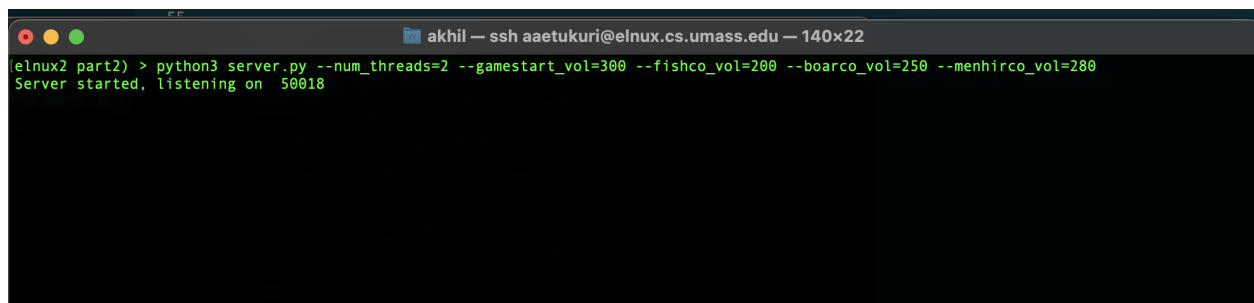
For sequential client requests: sequential requests with multiple client processes.



```
part1 — -zsh — 118x22
akhil@Akhils-MacBook-Pro part1 % python client_runner.py --host=elinux2.cs.umass.edu --port=1233 --stock_name=FishCo
Stock price of FishCo is 100
latency is 0.07655191421508789
Stock price of FishCo is 100
latency is 0.07368898391723633
Stock price of FishCo is 100
latency is 0.07254695892333984
Stock price of FishCo is 100
latency is 0.07153987884521484
Stock price of FishCo is 100
latency is 0.07410788536071777
Stock price of FishCo is 100
latency is 0.0753469467163086
Stock price of FishCo is 100
latency is 0.08005976676940918
Stock price of FishCo is 100
latency is 0.08956694602966309
Stock price of FishCo is 100
latency is 0.08378386497497559
Stock price of FishCo is 100
latency is 0.08214187622070312
Stock price of FishCo is 100
```

Part2:

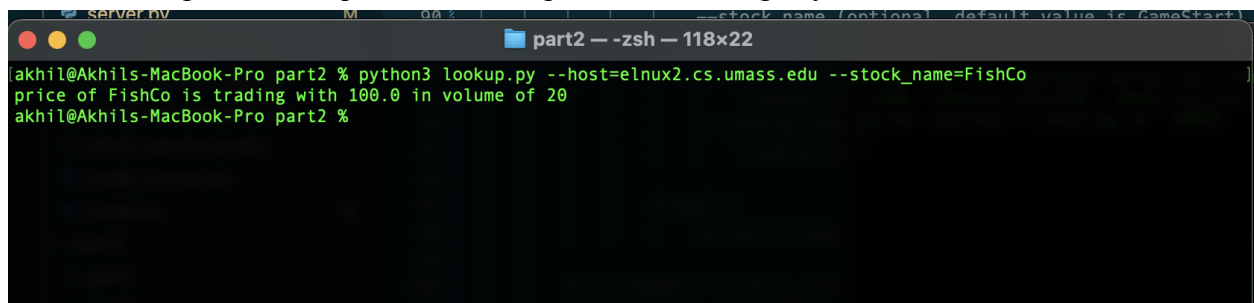
Server: running the sever in edlab



```
akhil — ssh aetukuri@elinux.cs.umass.edu — 140x22
elinux2 part2) > python3 server.py --num_threads=2 --gamestart_vol=300 --fishco_vol=200 --boarco_vol=250 --menhirco_vol=280
Server started, listening on 50018
```

Client:

Lookup: Initial output of the lookup without running any trade function



```
part2 — -zsh — 118x22
akhil@Akhils-MacBook-Pro part2 % python3 lookup.py --host=elinux2.cs.umass.edu --stock_name=FishCo
price of FishCo is trading with 100.0 in volume of 20
akhil@Akhils-MacBook-Pro part2 %
```

The output of the lookup after running the trade function. Notice that the trading volume updated from the above screenshot i.e. the volume got changed from 20 to 40.

```
Client
part2 — -zsh — 118x22
[akhil@Akhils-MacBook-Pro part2 % python3 trade.py --host=elinux2.cs.umass.edu --stock_name=FishCo --trading_volume=20 -]
-trading_type=SELL
operation success
[akhil@Akhils-MacBook-Pro part2 % python3 lookup.py --host=elinux2.cs.umass.edu --stock_name=FishCo
]
price of FishCo is trading with 100.0 in volume of 40
akhil@Akhils-MacBook-Pro part2 %
```

Output for lookup after price updater is executed. Notice that the price of the “GameStart” stock is 90.18 before the price_updater is executed, and the after the price_updater is executed the price of the “GameStart” stock is updated to 11.76 in the lookup output.

```
part2 — -zsh — 84x22
[akhil@Akhils-MacBook-Pro part2 % python price_updater.py --host=elinux2.cs.umass.edu
]
price updater client started...
company GameStart price updated to 11.76
update successful
company FishCo price updated to 76.16
update successful
company FishCo price updated to 38.93
update successful

part2 — -zsh — 80x22
[akhil@Akhils-MacBook-Pro part2 % python lookup.py --host=elinux2.cs.umass.edu --s]
tock_name=GameStart
price of GameStart is trading with 90.18 in volume of 0
[akhil@Akhils-MacBook-Pro part2 % python lookup.py --host=elinux2.cs.umass.edu --s]
tock_name=GameStart
price of GameStart is trading with 11.76 in volume of 0
akhil@Akhils-MacBook-Pro part2 %
```

Lookup output for invalid stock name

```
part2 — -zsh — 118x22
[akhil@Akhils-MacBook-Pro part2 % python3 lookup.py --host=elinux2.cs.umass.edu --stock_name=xyz
]
invalid stock given
akhil@Akhils-MacBook-Pro part2 %
```

Lookup Runner: Output for lookup_runner.py. It is a sequential operation of lookup.py program.

```
part2 — -zsh — 84x22
[akhil@Akhils-MacBook-Pro part2 % python3 lookup_runner.py --host=elinux2.cs.umass.edu]
--stock_name=FishCo
price of FishCo is trading with 38.93 in volume of 220
0.21314525604248047
price of FishCo is trading with 38.93 in volume of 220
0.19976806640625
price of FishCo is trading with 38.93 in volume of 220
0.1816871166229248
price of FishCo is trading with 38.93 in volume of 220
0.16338610649108887
price of FishCo is trading with 38.93 in volume of 220
0.17525100708007812
price of FishCo is trading with 38.93 in volume of 220
```

Trade:

For the successful updation of trading volume

```
part2 — -zsh — 118x22
[akhil@Akhils-MacBook-Pro part2 % python3 trade.py --host=elinux2.cs.umass.edu --stock_name=FishCo --trading_volume=20 --trading_type=SELL
operation success
akhil@Akhils-MacBook-Pro part2 %
```

After multiple trading operations, trading is suspended as the trading volume is more than the maximum volume. Output for the same.

```
part2 — -zsh — 118x22
[akhil@Akhils-MacBook-Pro part2 % python3 trade.py --host=elinux2.cs.umass.edu --stock_name=FishCo --trading_volume=20 --trading_type=SELL
Trading suspended
akhil@Akhils-MacBook-Pro part2 %
```

Output for the invalid stock name passed in trading

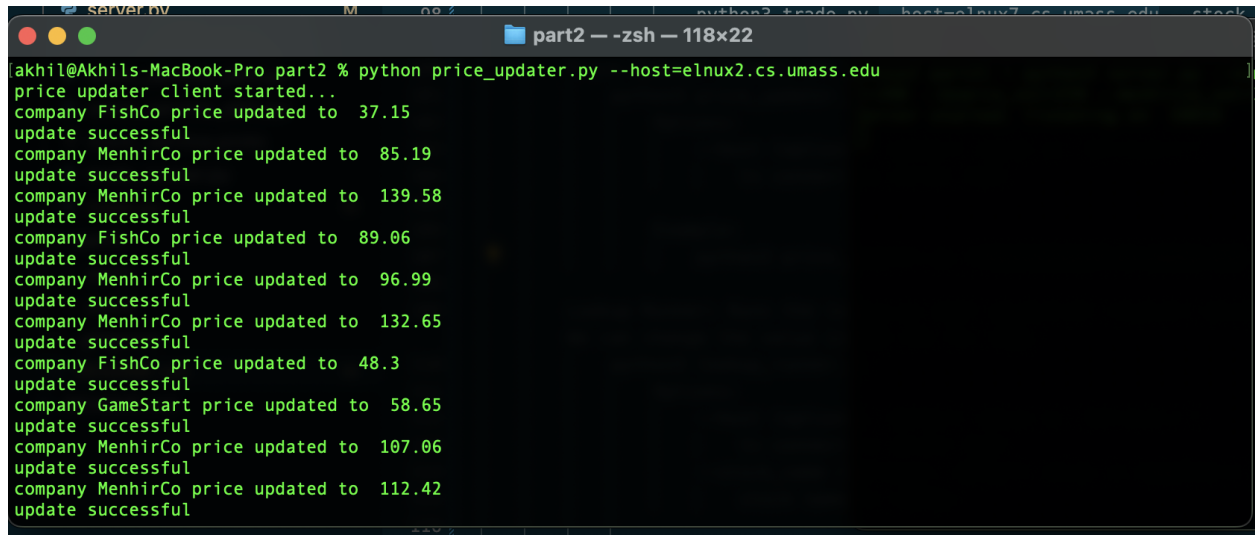
```
part2 — -zsh — 118x22
[akhil@Akhils-MacBook-Pro part2 % python3 trade.py --host=elinux2.cs.umass.edu --stock_name=xyz --trading_volume=20 --trading_type=SELL
invalid stock given
akhil@Akhils-MacBook-Pro part2 %
```

Trade Runner: output for trade_runner.py. It is a sequential operation of trade.py program

```
part2 — -zsh — 84x22
[akhil@Akhils-MacBook-Pro part2 % python3 trade_runner.py --host=elinux2.cs.umass.edu --stock_name=GameStart --trading_volume=20 --trading_type=SELL
operation success
0.16959810256958008
operation success
0.17387104034423828
operation success
0.17915701866149902
operation success
0.17919206619262695
operation success
0.17832112312316895
operation success
0.16340994834899902
operation success
```

Price Updater:

Output for price updater, please note that the following output is not generated at a time. It is generated sequentially at random times as we used randomization of time.



```
part2 — -zsh — 118x22
akhil@Akhils-MacBook-Pro part2 % python price_updater.py --host=elinux2.cs.umass.edu
price updater client started...
company FishCo price updated to 37.15
update successful
company MenhirCo price updated to 85.19
update successful
company MenhirCo price updated to 139.58
update successful
company FishCo price updated to 89.06
update successful
company MenhirCo price updated to 96.99
update successful
company MenhirCo price updated to 132.65
update successful
company FishCo price updated to 48.3
update successful
company GameStart price updated to 58.65
update successful
company MenhirCo price updated to 107.06
update successful
company MenhirCo price updated to 112.42
update successful
```