Output Document

Part1:

Client :
Screenshot showing the 4 concurrent requests sent from the client with messages from the server.

```
PS E:\UMASS_Acads\Sem2\677DOS\lab-1-asterix-and-the-stock-bazaar-vineeth-om\src\part1> python .\client.py
Message received from server(elnux3.cs.umass.edu:26119) : b'connection initiated - message from server'
calling lookup for GameStart
Message received from server(elnux3.cs.umass.edu:26119) : b'connection initiated - message from server'
calling lookup for BoarCo
lookup response for GameStart: 10.99
Message received from server(elnux3.cs.umass.edu:26119) : b'connection initiated - message from server'
calling lookup for FishCo
lookup response for BoarCo: -1
Message received from server(elnux3.cs.umass.edu:26119) : b'connection initiated - message from server'
calling lookup for MenhirCo
lookup response for FishCo: 12.00
lookup response for MenhirCo: -1
PS E:\UMASS_Acads\Sem2\677DOS\lab-1-asterix-and-the-stock-bazaar-vineeth-om\src\part1>
```

Server :
Screenshot showing the connection established message, client request, server response and the thread on which the request was processed.

```
sdara@elnux3.cs.umass.edu                                                      —  □  ✕
elnux3 part1) > python3 server.py
initializing stocks database
Connection from client:('128.119.202.2', 34543) to server:elnux3.cs.umass.edu has been established.
Connection from client:('128.119.202.2', 47713) to server:elnux3.cs.umass.edu has been established.
Connection from client:('128.119.202.2', 28924) to server:elnux3.cs.umass.edu has been established.
Connection from client:('128.119.202.2', 16192) to server:elnux3.cs.umass.edu has been established.
GameStart exists, isTrading: True
request from client: GameStart, server response: 10.99, on thread: 0
BoarCo doesn't exist
request from client: BoarCo, server response: -1, on thread: 1
FishCo exists, isTrading: True
request from client: FishCo, server response: 12.00, on thread: 0
MenhirCo doesn't exist
request from client: MenhirCo, server response: -1, on thread: 1
```

Part 2:

Client Output (Sequential Requests) :

Output showing 3 sequential requests sent from client along with their responses from server (one for each trade functionality)

```
(base) om@Oms-MacBook-Air part2 % python3 client.py
Sending update request for : GameStart with new price 100
Update request: GameStart, 100, response status : 1
Sending trade request of type: BUY for : GameStart with quantity: 1
Trade request: GameStart, 1, response status : 1
Sending lookup request for : GameStart
Lookup request: GameStart, response: Price of stock: 100.0, Volume of the stock: 1
(base) om@Oms-MacBook-Air part2 %
```

Server Output (Sequential Requests) :

Output showing 3 sequential requests received and processed at the server.

```
(base) om@Oms-MacBook-Air part2 % python3 server.py
initializing stocks database
Update:  GameStart  on  ThreadPoolExecutor-0_0
Received update request for : GameStart with new price 100.0
Trade:  GameStart  on  ThreadPoolExecutor-0_0
Received trade request with quantity: 1 of type: 0 for : GameStart
Lookup:  GameStart  on  ThreadPoolExecutor-0_0
Received lookup request for : GameStart
```

Client Output (Concurrent Requests) :

Client output showing requests being sent concurrently:

```
(base) om@Oms-MacBook-Air part2 % python3 client.py
Sending update request for : FishCo with new price 10.9999
Sending trade request of type: 0 for : FishCo with quantity: 30
Sending lookup request for : FishCo
Sending update request for : FishCo with new price 10.9999
Sending trade request of type: 0 for : FishCo with quantity: 30
Sending lookup request for : FishCo
Sending update request for : FishCo with new price 10.9999
Sending trade request of type: 0 for : FishCo with quantity: 30
Sending lookup request for : FishCo
Update request: FishCo, 10.9999, response status : 1
Trade request: FishCo, 30, response status : 1
Lookup request: FishCo, response: Price of stock: 10.99, Volume of the stock: 30
Lookup request: FishCo, response: Price of stock: 10.99, Volume of the stock: 30
Lookup request: FishCo, response: Price of stock: 10.99, Volume of the stock: 30
Trade request: FishCo, 30, response status : 1
Update request: FishCo, 10.9999, response status : 1
Trade request: FishCo, 30, response status : 1
Update request: FishCo, 10.9999, response status : 1
(base) om@Oms-MacBook-Air part2 %
```

Server Output (Concurrent Requests) :
Server output showing requests being processed concurrently on different threads:

```
(base) om@Oms-MacBook-Air part2 % python3 server.py
initializing stocks database
Update:  GameStart  on  ThreadPoolExecutor-0_0
Received update request for : GameStart with new price 100.0
Trade:  GameStart  on  ThreadPoolExecutor-0_0
Received trade request with quantity: 1 of type: 0 for : GameStart
Lookup:  GameStart  on  ThreadPoolExecutor-0_0
Received lookup request for : GameStart
Update:  FishCo  on  ThreadPoolExecutor-0_0
Received update request for : FishCo with new price 10.9999
Trade:  FishCo  on  ThreadPoolExecutor-0_1
Received trade request with quantity: 30 of type: 0 for : FishCo
Lookup:  FishCo  on  ThreadPoolExecutor-0_2
Received lookup request for : FishCo
Update:  FishCo  on  ThreadPoolExecutor-0_3
Lookup:  FishCo  on  ThreadPoolExecutor-0_2
Received lookup request for : FishCo
Lookup:  FishCo  on  ThreadPoolExecutor-0_0
Received lookup request for : FishCo
Trade:  FishCo  on  ThreadPoolExecutor-0_4
Received trade request with quantity: 30 of type: 0 for : FishCo
Trade:  FishCo  on  ThreadPoolExecutor-0_1
Received trade request with quantity: 30 of type: 0 for : FishCo
Update:  FishCo  on  ThreadPoolExecutor-0_5
Received update request for : FishCo with new price 10.9999
Received update request for : FishCo with new price 10.9999
▯
```