**Run FrontEndService.java , OrderService.java , CatalogService.java**

**Then run Httpclient.java can get output:**

**FrontEndService.java**

PS C:\Users\lenovo\Desktop\lab2parentxxxx> & 'C:\Program Files\Java\jdk-18.0.1.1\bin\java.exe' '@C:\Users\lenovo\AppData\Local\Temp\cp\_c1288t7pu9n1qtpyp185psl8j.argfile' 'org.example.FrontEndService'

Server started, listening on port 9000

New message received

Request: GET /stocks/Lab HTTP/1.1

Connection: Upgrade, HTTP2-Settings

Content-Length: 0

Host: localhost:9000

HTTP2-Settings: AAEAAEAAAAIAAAABAAMAAABkAAQBAAAAAAUAAEAA

Upgrade: h2c

User-Agent: Java-http-client/18.0.1.1

New message received

Request: GET /stocks/Lab HTTP/1.1

Connection: Upgrade, HTTP2-Settings

Content-Length: 0

Host: localhost:9000

HTTP2-Settings: AAEAAEAAAAIAAAABAAMAAABkAAQBAAAAAAUAAEAA

Upgrade: h2c

User-Agent: Java-http-client/18.0.1.1

New message received

Request: POST /order HTTP/1.1

Connection: Upgrade, HTTP2-Settings

Content-Length: 41

Host: localhost:9000

HTTP2-Settings: AAEAAEAAAAIAAAABAAMAAABkAAQBAAAAAAUAAEAA

Upgrade: h2c

User-Agent: Java-http-client/18.0.1.1

Content-Type: application/json; charset=UTF-8

{"quantity":10,"type":"buy","Name":"Lab"}

New message received

Request: GET /stocks/LOL HTTP/1.1

Connection: Upgrade, HTTP2-Settings

Content-Length: 0

Host: localhost:9000

HTTP2-Settings: AAEAAEAAAAIAAAABAAMAAABkAAQBAAAAAAUAAEAA

Upgrade: h2c

User-Agent: Java-http-client/18.0.1.1

New message received

Request: GET /stocks/Zsgwsh HTTP/1.1

Connection: Upgrade, HTTP2-Settings

Content-Length: 0

Host: localhost:9000

HTTP2-Settings: AAEAAEAAAAIAAAABAAMAAABkAAQBAAAAAAUAAEAA

Upgrade: h2c

User-Agent: Java-http-client/18.0.1.1

New message received

Request: GET /stocks/Bench HTTP/1.1

Connection: Upgrade, HTTP2-Settings

Content-Length: 0

Host: localhost:9000

HTTP2-Settings: AAEAAEAAAAIAAAABAAMAAABkAAQBAAAAAAUAAEAA

Upgrade: h2c

User-Agent: Java-http-client/18.0.1.1

New message received

Request: GET /stocks/KING HTTP/1.1

Connection: Upgrade, HTTP2-Settings

Content-Length: 0

Host: localhost:9000

HTTP2-Settings: AAEAAEAAAAIAAAABAAMAAABkAAQBAAAAAAUAAEAA

Upgrade: h2c

User-Agent: Java-http-client/18.0.1.1

New message received

Request: POST /order HTTP/1.1

Connection: Upgrade, HTTP2-Settings

Content-Length: 42

Host: localhost:9000

HTTP2-Settings: AAEAAEAAAAIAAAABAAMAAABkAAQBAAAAAAUAAEAA

Upgrade: h2c

User-Agent: Java-http-client/18.0.1.1

Content-Type: application/json; charset=UTF-8

{"quantity":10,"type":"buy","Name":"KING"}

New message received

Request: GET /stocks/Zsgwsh HTTP/1.1

Connection: Upgrade, HTTP2-Settings

Content-Length: 0

Host: localhost:9000

HTTP2-Settings: AAEAAEAAAAIAAAABAAMAAABkAAQBAAAAAAUAAEAA

Upgrade: h2c

User-Agent: Java-http-client/18.0.1.1

New message received

Request: POST /order HTTP/1.1

Connection: Upgrade, HTTP2-Settings

Content-Length: 44

Host: localhost:9000

HTTP2-Settings: AAEAAEAAAAIAAAABAAMAAABkAAQBAAAAAAUAAEAA

Upgrade: h2c

User-Agent: Java-http-client/18.0.1.1

Content-Type: application/json; charset=UTF-8

{"quantity":10,"type":"buy","Name":"Zsgwsh"}

New message received

Request: GET /stocks/WildRaft HTTP/1.1

Connection: Upgrade, HTTP2-Settings

Content-Length: 0

Host: localhost:9000

HTTP2-Settings: AAEAAEAAAAIAAAABAAMAAABkAAQBAAAAAAUAAEAA

Upgrade: h2c

User-Agent: Java-http-client/18.0.1.1

New message received

Request: GET /stocks/Zsgwsh HTTP/1.1

Connection: Upgrade, HTTP2-Settings

Content-Length: 0

Host: localhost:9000

HTTP2-Settings: AAEAAEAAAAIAAAABAAMAAABkAAQBAAAAAAUAAEAA

Upgrade: h2c

User-Agent: Java-http-client/18.0.1.1

New message received

Request: POST /order HTTP/1.1

Connection: Upgrade, HTTP2-Settings

Content-Length: 44

Host: localhost:9000

HTTP2-Settings: AAEAAEAAAAIAAAABAAMAAABkAAQBAAAAAAUAAEAA

Upgrade: h2c

Content-Type: application/json; charset=UTF-8

{"quantity":10,"type":"buy","Name":"Zsgwsh"}

New message received

Request: GET /stocks/Bench HTTP/1.1

Connection: Upgrade, HTTP2-Settings

Content-Length: 0

Host: localhost:9000

HTTP2-Settings: AAEAAEAAAAIAAAABAAMAAABkAAQBAAAAAAUAAEAAEAA

Upgrade: h2c

User-Agent: Java-http-client/18.0.1.1

**CatalogService.java:**

PS C:\Users\lenovo\Desktop\lab2parentxxxx> & 'C:\Program Files\Java\jdk-18.0.1.1\bin\java.exe' '@C:\Users\lenovo\AppData\Local\Temp\cp\_8g20cg1hxj7n6lyyhzslvk9lt.argfile' 'org.example.CatalogService'

Stock catalog file does not exist

Trade catalog file does not exist

CatalogServer started, listening on port 9001

Request: GET /stocks/Lab HTTP/1.1

User-Agent: Java/18.0.1.1

Host: localhost:9001

Accept: text/html, image/gif, image/jpeg, \*; q=.2, \*/\*; q=.2

Connection: keep-alive

Request: GET /stocks/Lab HTTP/1.1

User-Agent: Java/18.0.1.1

Host: localhost:9001

Accept: text/html, image/gif, image/jpeg, \*; q=.2, \*/\*; q=.2

Connection: keep-alive

Request: POST /order HTTP/1.1

Content-Type: application/json; charset=UTF-8

User-Agent: Java/18.0.1.1

Host: localhost:9001

Accept: text/html, image/gif, image/jpeg, \*; q=.2, \*/\*; q=.2

Connection: keep-alive

Content-Length: 41

{"quantity":10,"type":"buy","Name":"Lab"}

Request Body: {"quantity":10,"type":"buy","Name":"Lab"}

Request: GET /stocks/LOL HTTP/1.1

User-Agent: Java/18.0.1.1

Host: localhost:9001

Accept: text/html, image/gif, image/jpeg, \*; q=.2, \*/\*; q=.2

Connection: keep-alive

Request: GET /stocks/Zsgwsh HTTP/1.1

User-Agent: Java/18.0.1.1

Host: localhost:9001

Accept: text/html, image/gif, image/jpeg, \*; q=.2, \*/\*; q=.2

Connection: keep-alive

Request: GET /stocks/Bench HTTP/1.1

User-Agent: Java/18.0.1.1

Host: localhost:9001

Accept: text/html, image/gif, image/jpeg, \*; q=.2, \*/\*; q=.2

Connection: keep-alive

Request: GET /stocks/KING HTTP/1.1

User-Agent: Java/18.0.1.1

Host: localhost:9001

Accept: text/html, image/gif, image/jpeg, \*; q=.2, \*/\*; q=.2

Connection: keep-alive

Request: POST /order HTTP/1.1

Content-Type: application/json; charset=UTF-8

User-Agent: Java/18.0.1.1

Host: localhost:9001

Accept: text/html, image/gif, image/jpeg, \*; q=.2, \*/\*; q=.2

Connection: keep-alive

Content-Length: 42

{"quantity":10,"type":"buy","Name":"KING"}

Request Body: {"quantity":10,"type":"buy","Name":"KING"}

Request: GET /stocks/Zsgwsh HTTP/1.1

User-Agent: Java/18.0.1.1

Host: localhost:9001

Accept: text/html, image/gif, image/jpeg, \*; q=.2, \*/\*; q=.2

Connection: keep-alive

Request: POST /order HTTP/1.1

Content-Type: application/json; charset=UTF-8

User-Agent: Java/18.0.1.1

Host: localhost:9001

Accept: text/html, image/gif, image/jpeg, \*; q=.2, \*/\*; q=.2

Connection: keep-alive

Content-Length: 44

{"quantity":10,"type":"buy","Name":"Zsgwsh"}

Request Body: {"quantity":10,"type":"buy","Name":"Zsgwsh"}

Request: GET /stocks/WildRaft HTTP/1.1

User-Agent: Java/18.0.1.1

Host: localhost:9001

Accept: text/html, image/gif, image/jpeg, \*; q=.2, \*/\*; q=.2

Connection: keep-alive

Request: GET /stocks/Zsgwsh HTTP/1.1

User-Agent: Java/18.0.1.1

Host: localhost:9001

Accept: text/html, image/gif, image/jpeg, \*; q=.2, \*/\*; q=.2

Connection: keep-alive

Request: POST /order HTTP/1.1

Content-Type: application/json; charset=UTF-8

User-Agent: Java/18.0.1.1

Connection: keep-alive

Content-Length: 44

{"quantity":10,"type":"buy","Name":"Zsgwsh"}

Request Body: {"quantity":10,"type":"buy","Name":"Zsgwsh"}wsh"}

Request: GET /stocks/Bench HTTP/1.1

User-Agent: Java/18.0.1.1

Host: localhost:9001 \*; q=.2

Accept: text/html, image/gif, image/jpeg, \*; q=.2, \*/\*; q=.2

Connection: keep-alive

**OrderService.java:**

PS C:\Users\lenovo\Desktop\lab2parentxxxx> & 'C:\Program Files\Java\jdk-18.0.1.1\bin\java.exe' '@C:\Users\lenovo\AppData\Local\Temp\cp\_9oqeexj9qfn0rowl6w3fziur.argfile' 'org.example.OrderService'

Server started, listening on port 9002

Request: POST /order HTTP/1.1

Content-Type: application/json; charset=UTF-8

User-Agent: Java/18.0.1.1

Host: localhost:9002

Accept: text/html, image/gif, image/jpeg, \*; q=.2, \*/\*; q=.2

Connection: keep-alive

Content-Length: 41

{"quantity":10,"type":"buy","Name":"Lab"}

Request: POST /order HTTP/1.1

Content-Type: application/json; charset=UTF-8

User-Agent: Java/18.0.1.1

Host: localhost:9002

Accept: text/html, image/gif, image/jpeg, \*; q=.2, \*/\*; q=.2

Connection: keep-alive

Content-Length: 42

{"quantity":10,"type":"buy","Name":"KING"}

Request: POST /order HTTP/1.1

Content-Type: application/json; charset=UTF-8

User-Agent: Java/18.0.1.1

Host: localhost:9002

Connection: keep-alive

Content-Length: 44

{"quantity":10,"type":"buy","Name":"Zsgwsh"}

Request: POST /order HTTP/1.1

Content-Type: application/json; charset=UTF-8

User-Agent: Java/18.0.1.1

Host: localhost:9002

Accept: text/html, image/gif, image/jpeg, \*; q=.2, \*/\*; q=.2\*; q=.2

Connection: keep-alive

Content-Length: 44

{"quantity":10,"type":"buy","Name":"Zsgwsh"}

**HttpClient.java**

PS C:\Users\lenovo\Desktop\lab2parentxxxx> & 'C:\Program Files\Java\jdk-18.0.1.1\bin\java.exe' '@C:\Users\lenovo\AppData\Local\Temp\cp\_4zp36p8k0xql082h5kr1hexu5.argfile' 'org.example.HttpClient'

Starting...

Iteration: 1

Looking up: Lab

Complete response: (GET http://localhost:9000/stocks/Lab) 200

Response: {"data":{"Price":16.340473,"Quantity":68,"Name":"Lab"}}

Iteration: 2

Looking up: Lab

Complete response: (GET http://localhost:9000/stocks/Lab) 200

Response: {"data":{"Price":16.340473,"Quantity":68,"Name":"Lab"}}

Trade response: {"data":{"Order Number":2}}

Iteration: 3

Looking up: LOL

Complete response: (GET http://localhost:9000/stocks/LOL) 200

Response: {"data":{"Price":12.191753,"Quantity":3,"Name":"LOL"}}

Iteration: 4

Looking up: Zsgwsh

Complete response: (GET http://localhost:9000/stocks/Zsgwsh) 200

Response: {"data":{"Price":2.0873058,"Quantity":73,"Name":"Zsgwsh"}}

Iteration: 5

Looking up: Bench

Complete response: (GET http://localhost:9000/stocks/Bench) 200

Response: {"data":{"Price":9.952578,"Quantity":231,"Name":"Bench"}}

Iteration: 6

Looking up: KING

Complete response: (GET http://localhost:9000/stocks/KING) 200

Response: {"data":{"Price":8.000788,"Quantity":176,"Name":"KING"}}

Trade response: {"data":{"Order Number":3}}

Iteration: 7

Looking up: Zsgwsh

Complete response: (GET http://localhost:9000/stocks/Zsgwsh) 200

Response: {"data":{"Price":2.0873058,"Quantity":73,"Name":"Zsgwsh"}}

Trade response: {"data":{"Order Number":4}}

Iteration: 8

Looking up: Zsgwsh

Complete response: (GET http://localhost:9000/stocks/Zsgwsh) 200

Response: {"data":{"Price":2.0873058,"Quantity":63,"Name":"Zsgwsh"}}

Trade response: {"data":{"Order Number":5}}

Iteration: 10

Looking up: Bench

Complete response: (GET http://localhost:9000/stocks/Bench) 200

Response: {"data":{"Price":9.952578,"Quantity":231,"Name":"Bench"}}

PS C:\Users\lenovo\Desktop\lab2parentxxxx>