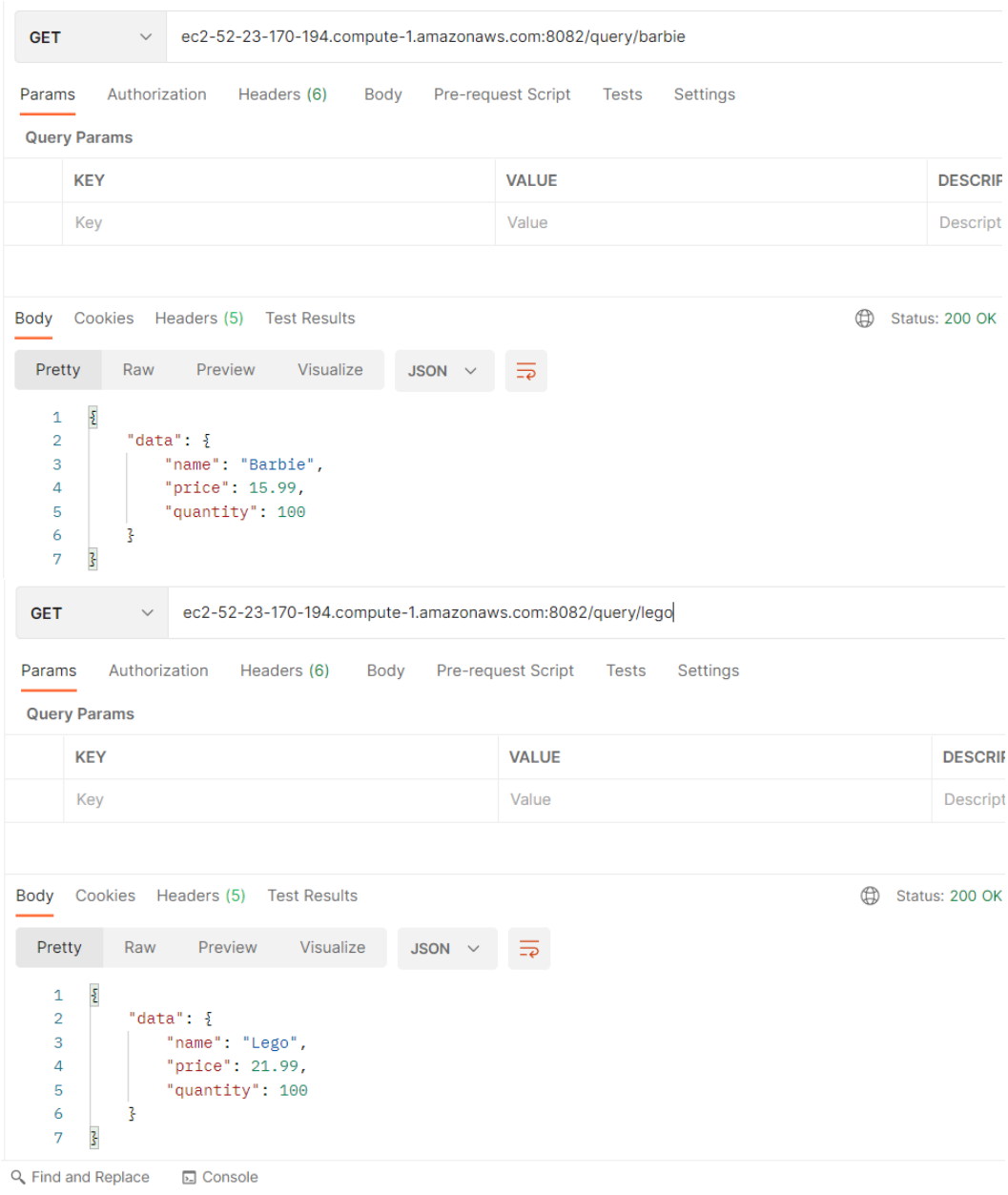
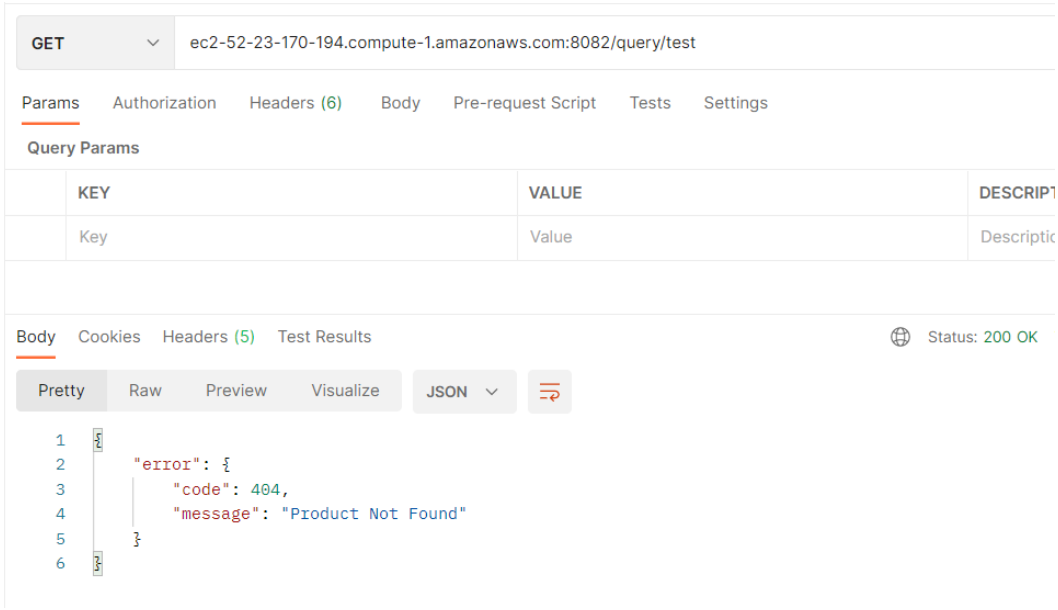
Per Microservices Tests

1. Catalog
    a. Goal: The catalog service should initialize every product in its stock with 100 in quantity for each. Client should be able to query products of interest through REST GET requests.
    Step: Query catalog service at Port 8082 with two products: barbie and Lego.
    Expected: The query service should return product data for barbie and Lego with 100 quantity for each.

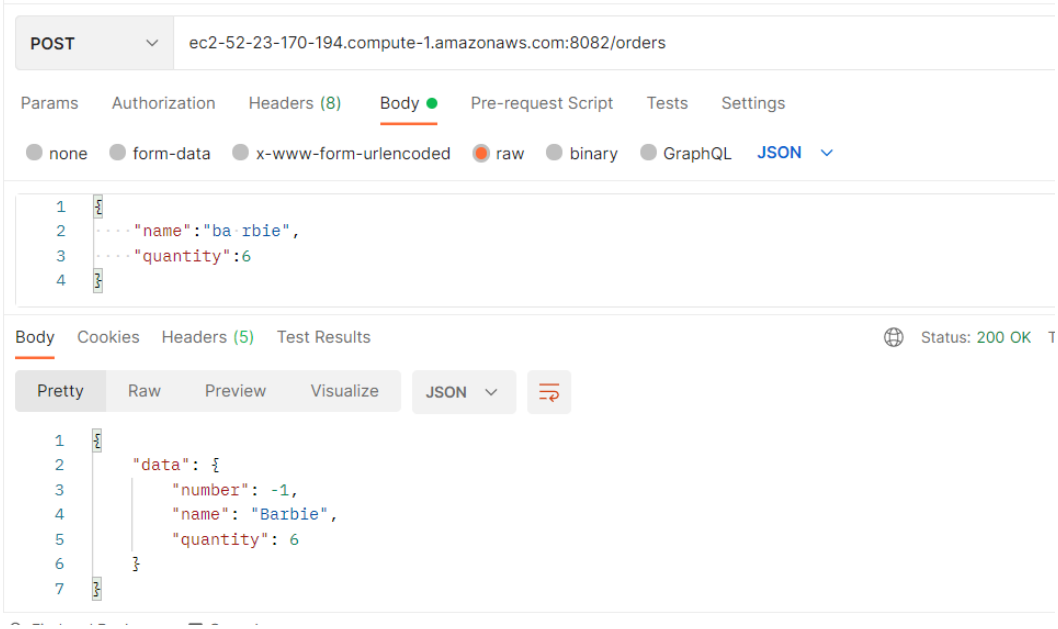


    b. Goal: The catalog service should return error message when a product that does not exists.
    Step: Query catalog service at Port 8082 with nonexistence product: test.

Expected: Error message stating that product does not exist.

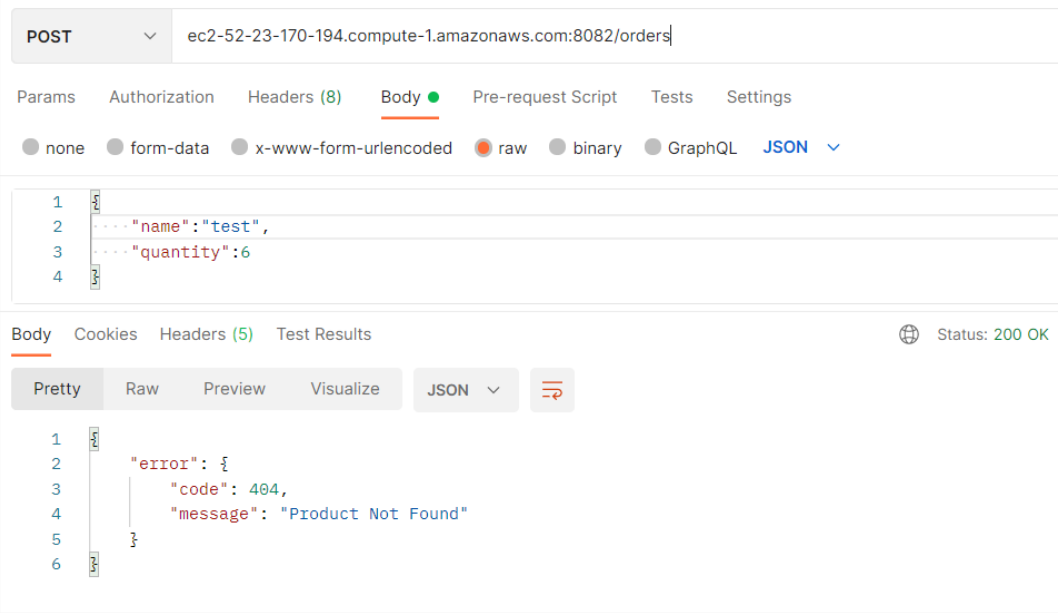


c. Goal: The catalog service should be able to process order requested by other services.
Step: Request order at catalog service at port 8082
Expected: An order should be successfully processed with order data processed, and order number should be -1 because order number is processed by order service

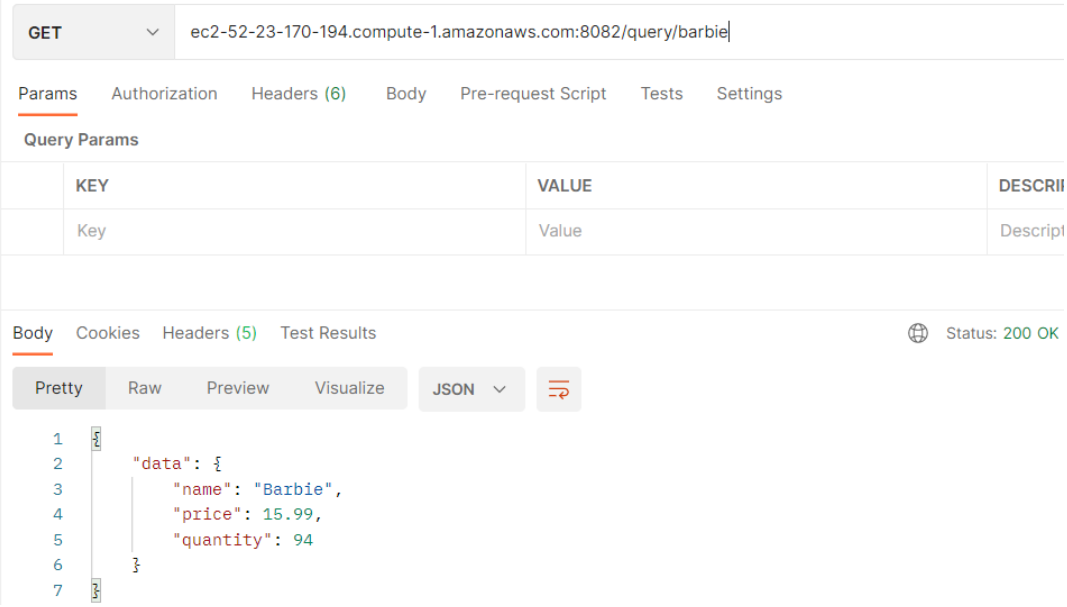


d. Goal: The catalog service should be able to respond error message when an product does not exist in stock
Step: Request order at catalog service at port 8082

Expected: An error message should be returned

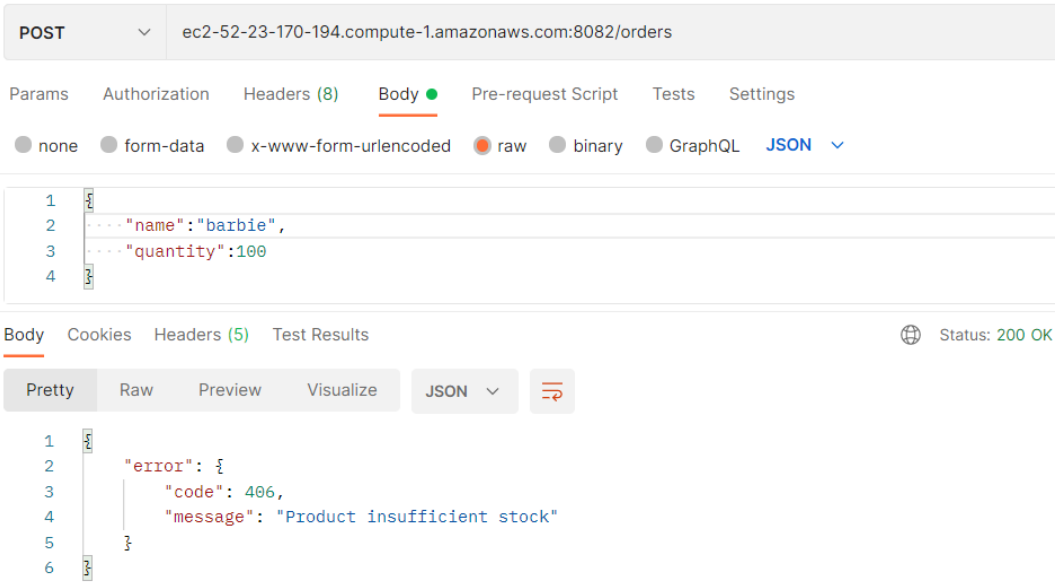


e. Goal: The stock should be updated according to successful orders
Step: Query catalog service with purchased product: barbie
Expected: Product data with updated quantity that reflects prior purchase

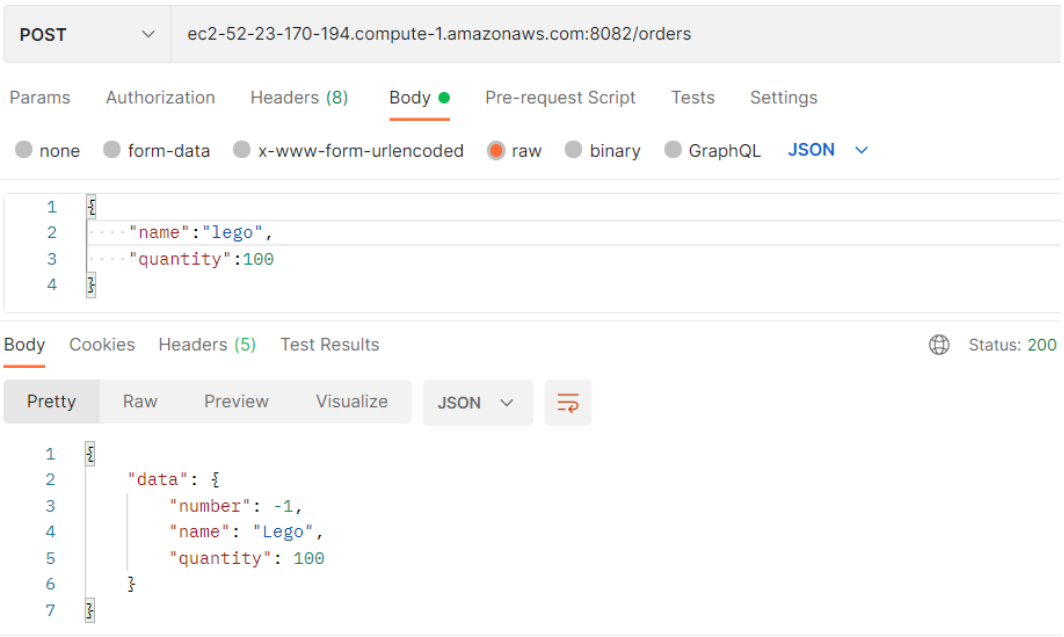


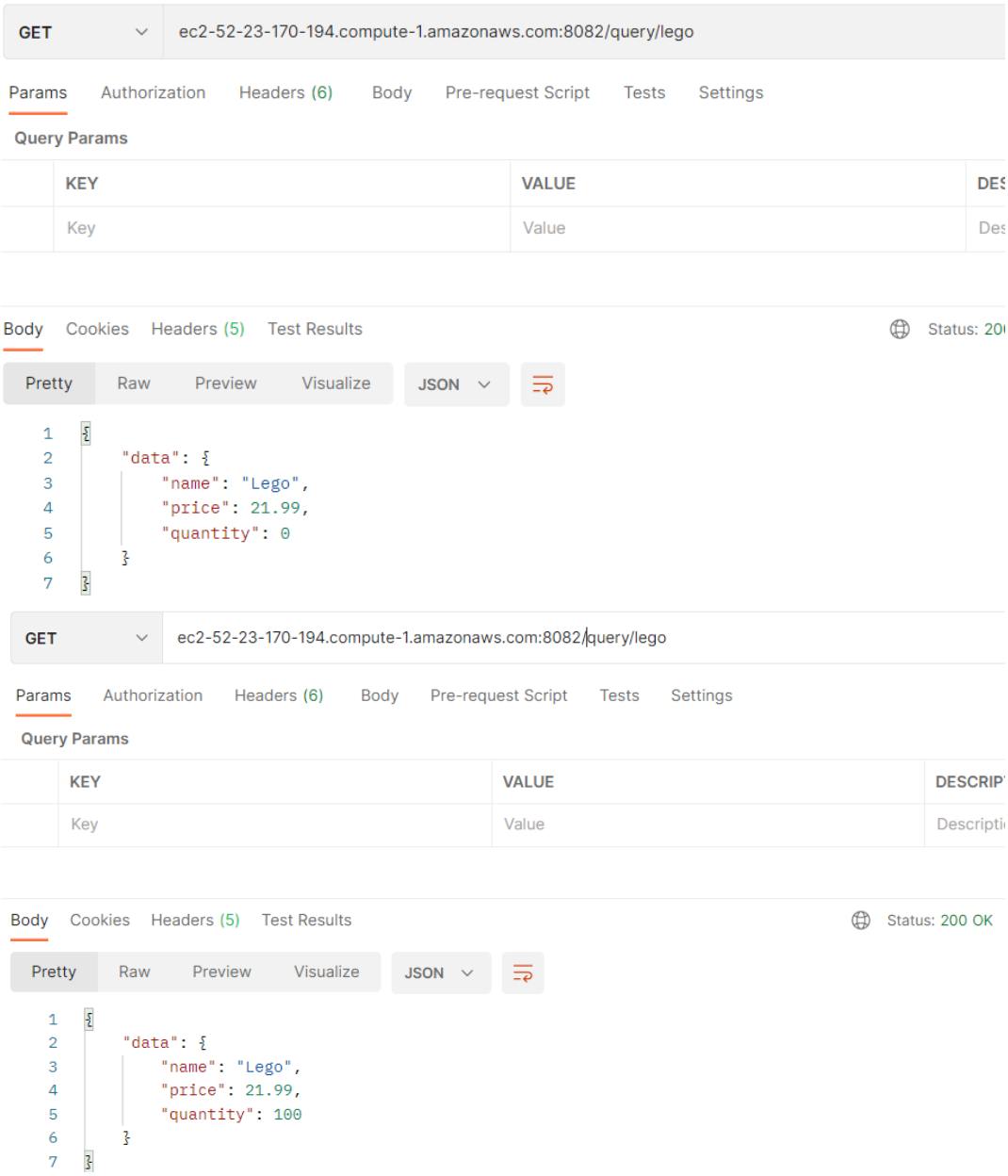
f. Goal: The catalog service should report insufficient stock when requesting quantity is greater than stock, the same test also applies to stock that is 0
Step: Request order with quantity greater than 94

Expected: Error message indicating that there is insufficient stocks.



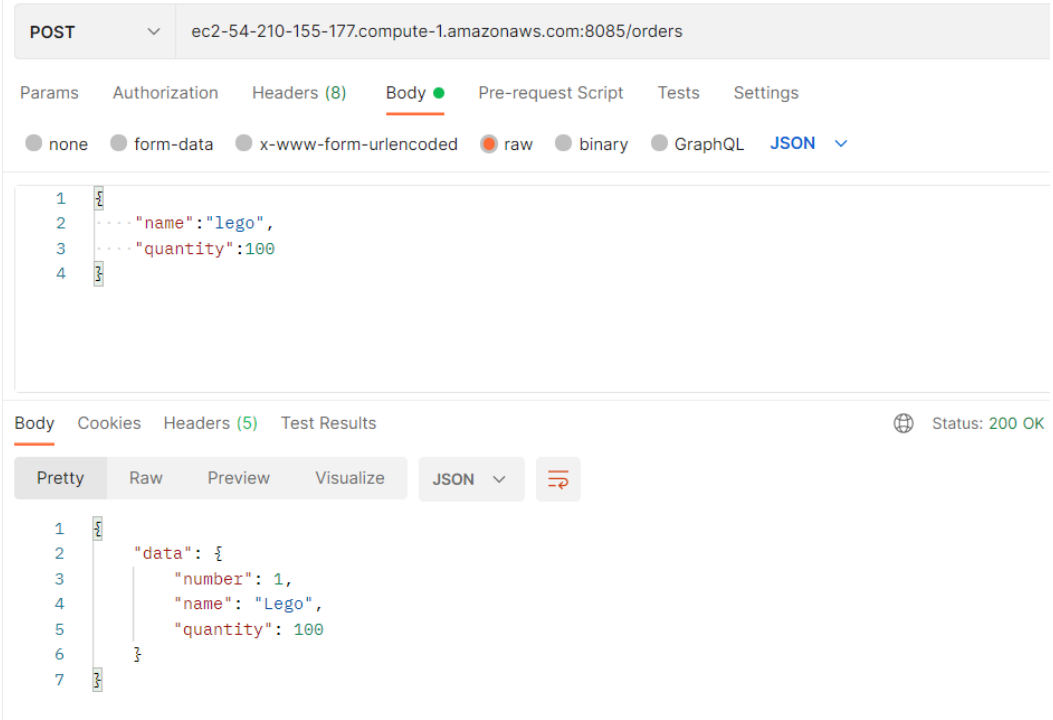
g. Goal: catalog service should be able to restock commodity when quantity reaches zero
Step: Order a product so that its quantity becomes zero, query current stock, after 10 seconds, query the product
Expected: the product quantity should be 0 immediately after ordering and after 10 seconds the quantity has restocked to 100





2. Order
    a. The order service should be able to process order requests and return the order information
    Send order request to order service at port 8083

Expecting order data successfully from response



b. The order service should be able query a successful order placed before.
Send order query to order service at port 8083
Expecting previously placed order information

c. The order service should be able to replicate order information across three replicas
Send order query to other order services at port 8084 and 8085

Expecting same order information as before