Students : Ru'ya Atatreh & Suha Al_Taher

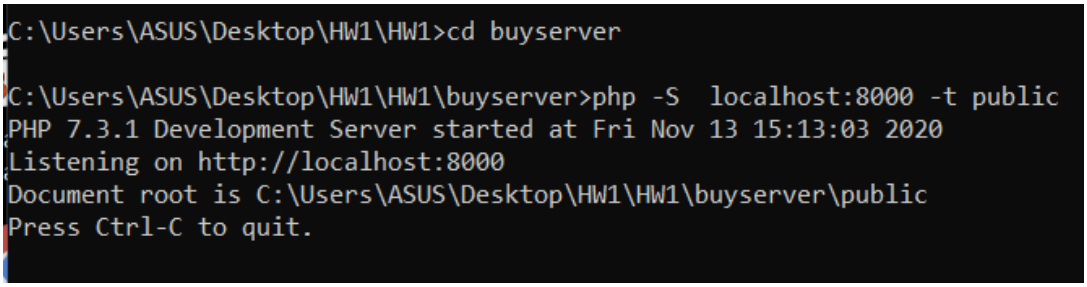
In order to solve this problem we used Lumen as our lightweight micro web framework for PHP by using it we were able to create two microservices, the first is the buyserver that allows the client to send an HTTP REST request to the server in order to buy a book base on its number and returns (bought book <BOOK_NAME>) in order to achieve that the server has to send a query to the catalog server to see if the book is in stock or not if not ,if there is it completes the buying and decrements the number of items in stock, if not it returns (no book in store) , the other server is the catalog server which contains information about the book like name , price ,item_no etc. it enables the user to find info about the book based on its number or topic. We used Postman or the browser as our client.

One of the trade-offs of this design is that it contains two servers for simple and small task which will result in lots of queries to the catalog server casing traffic between the servers, if the catalog server went down the buying operation from the buyserver will not be completed because it can't check the number of items in stock as there is a dependency between the servers.

Out code works properly but there was a problem with the IP address when sending it to the other device ,the server on the other device as the request arrives to the server but with no reply received because of an error in the IP address.

To run the program you have to have lumen installed in you device, follow the following steps:

- Open the command prompt
- Go to the directory where the files are installed
- Write this command php -S localhost:8000 -t public as in figure bellow

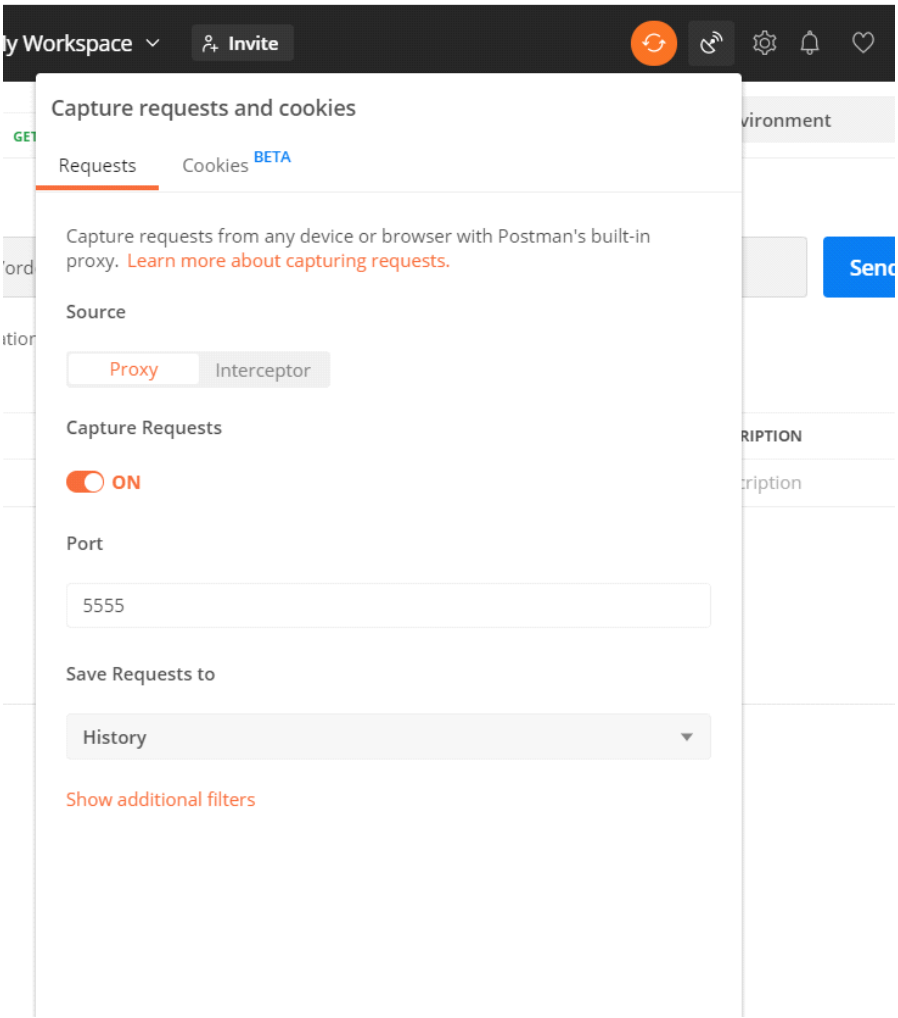


- Repeat the steps to the other server

For the client side we either use the browser or POSTMAN in this case we used both.

postman:

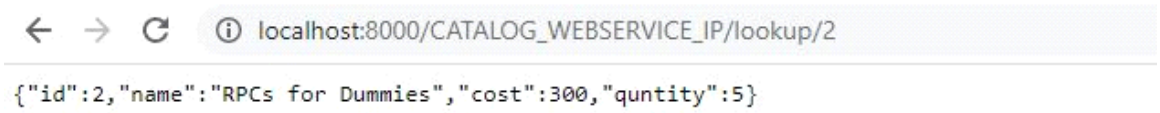
- Open the request capture

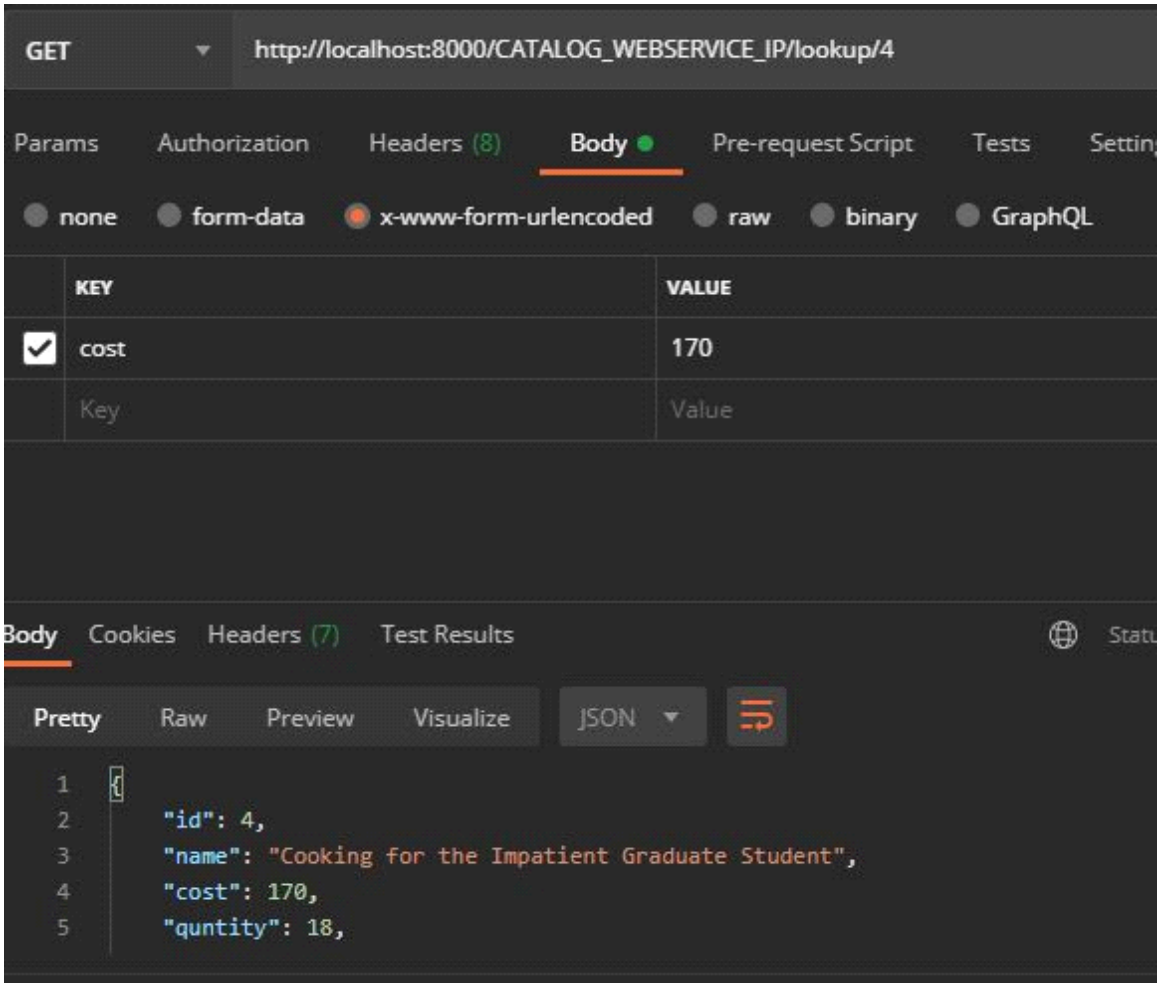


then user enter the request URI

search for book :https:// CATALOG_WEBSERVICE_IP/search/<book name>

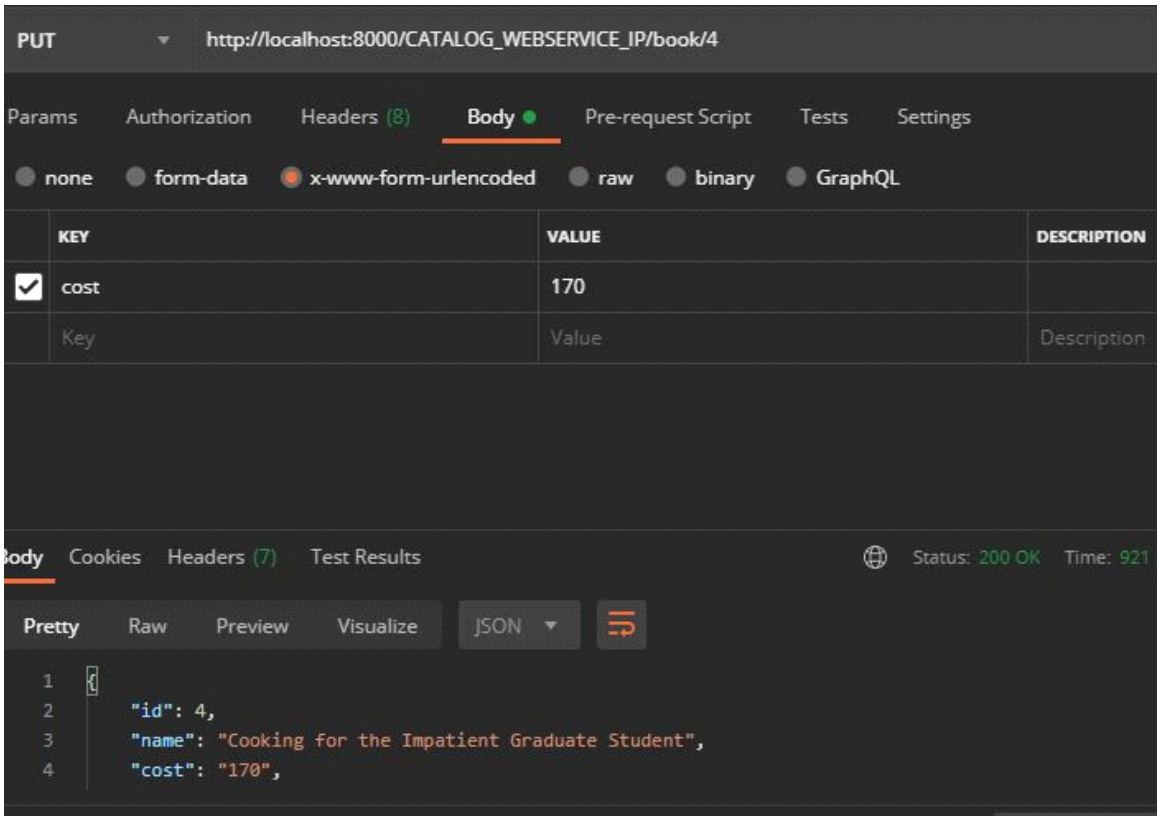
lookup book enter:https:// CATALOG_WEBSERVICE_IP/lookup/<book_id>

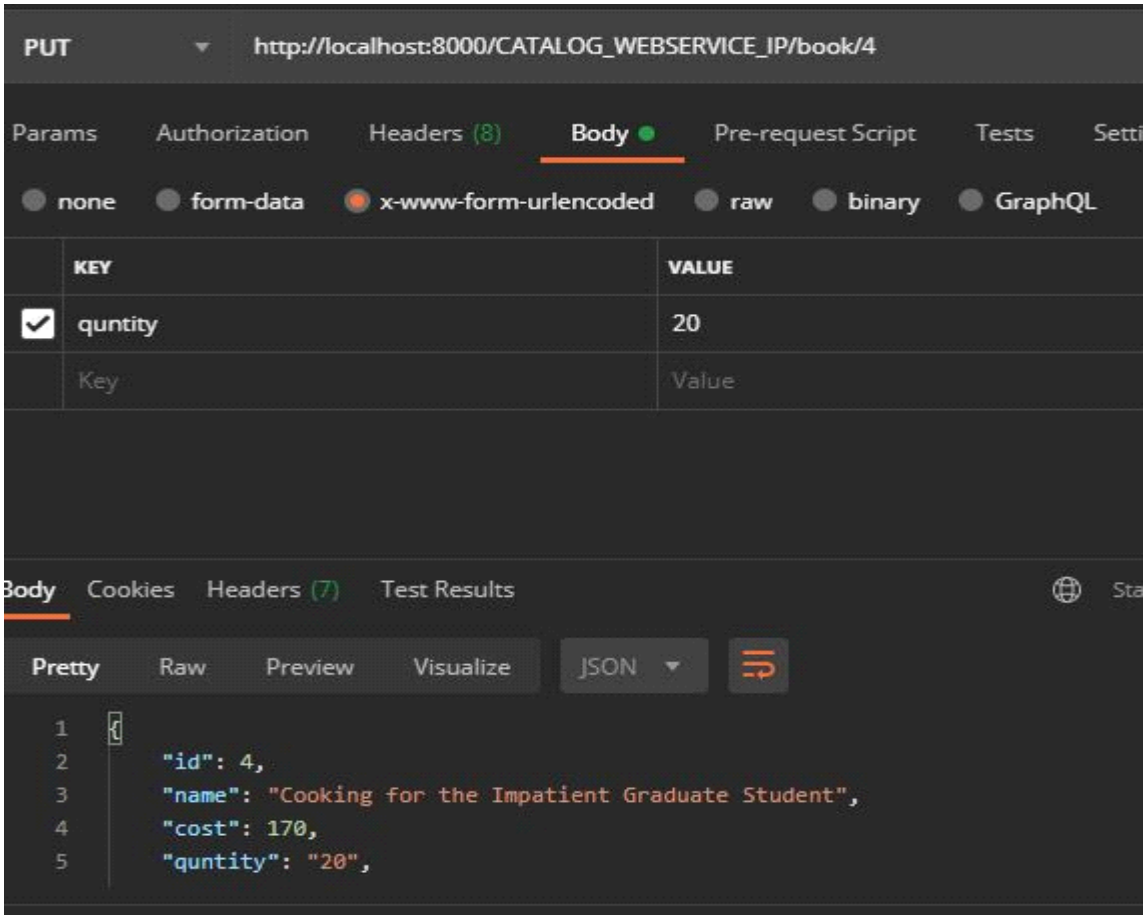




update book information:https:// CATALOG_WEBSERVICE_IP/book/<book_id>

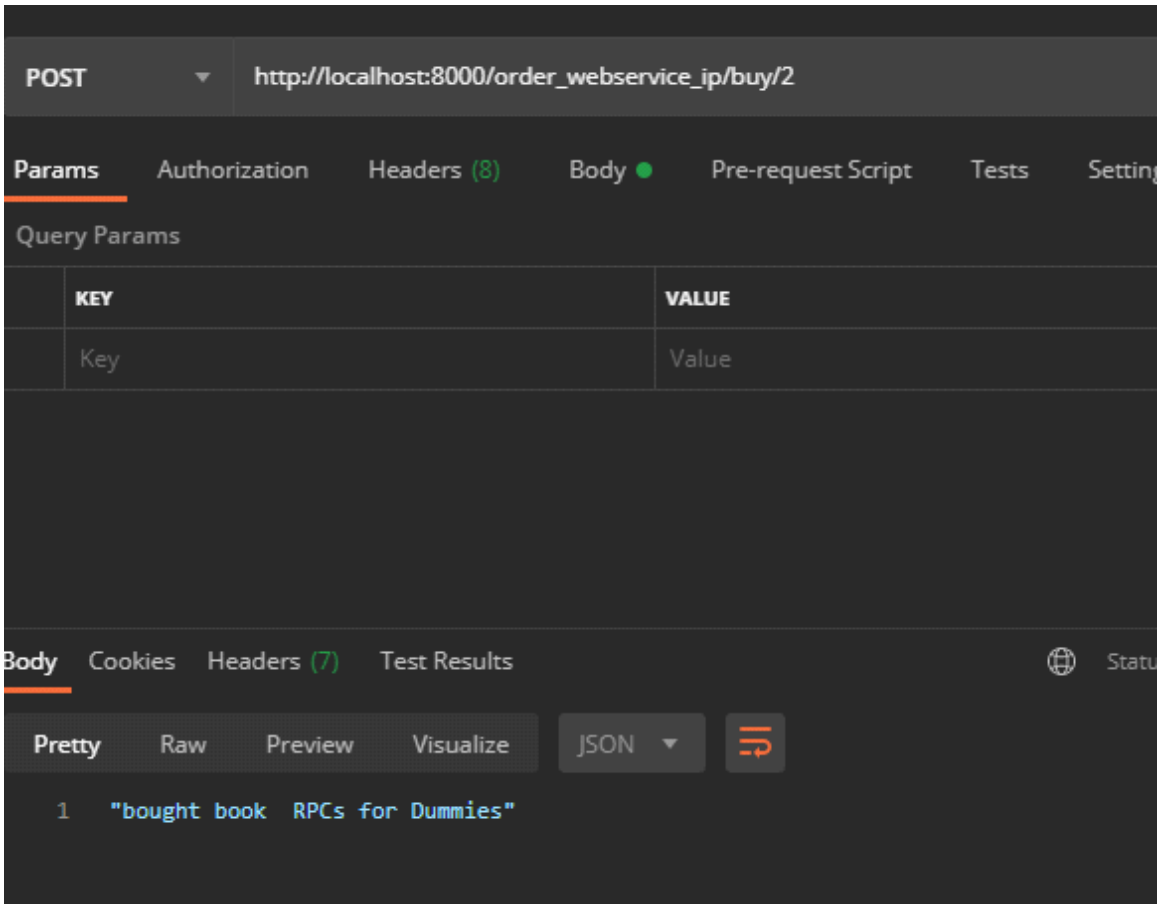
the type of method:PUT



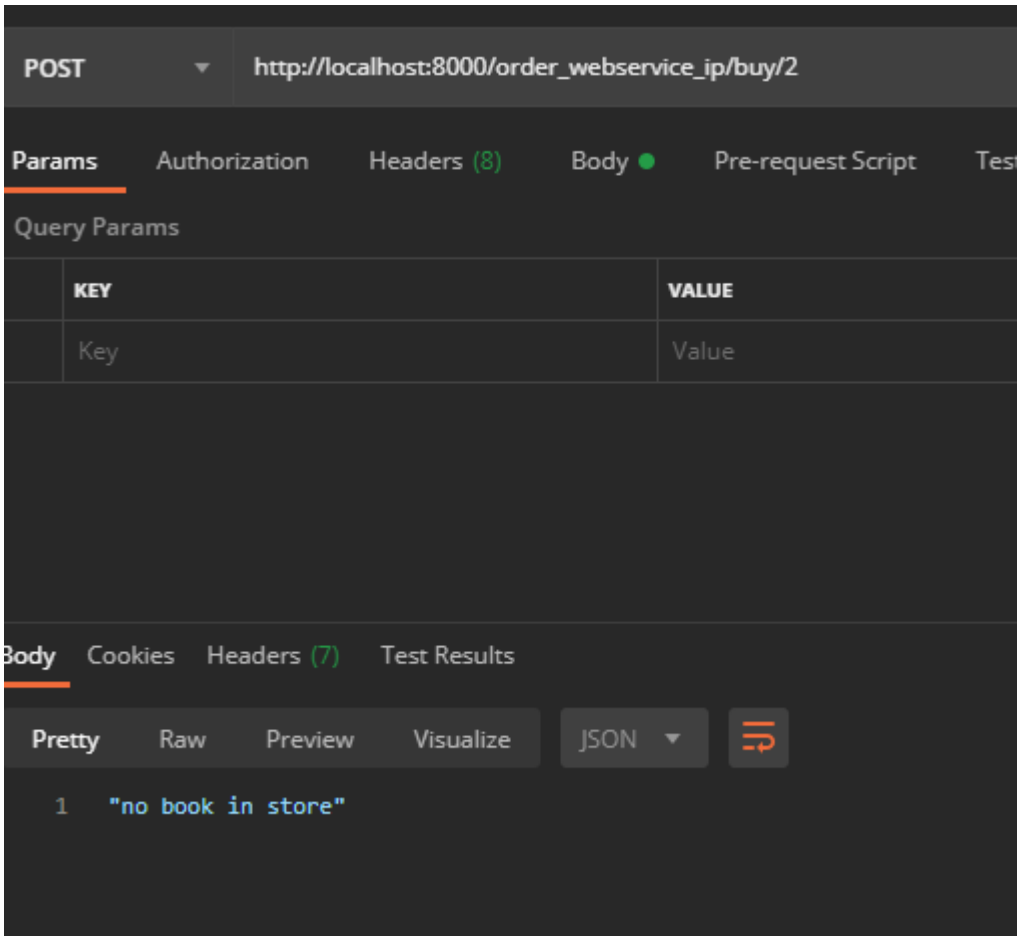


if user want to buy a book enter:https://order_webservice_ip/buy/<book_id>

if book is exist the program print a message "bought book book_name " :



if not:



Appendix :

https://github.com/suhaTaher/HW1

github code:https://github.com/ruyaatatreh99/DosPro.git