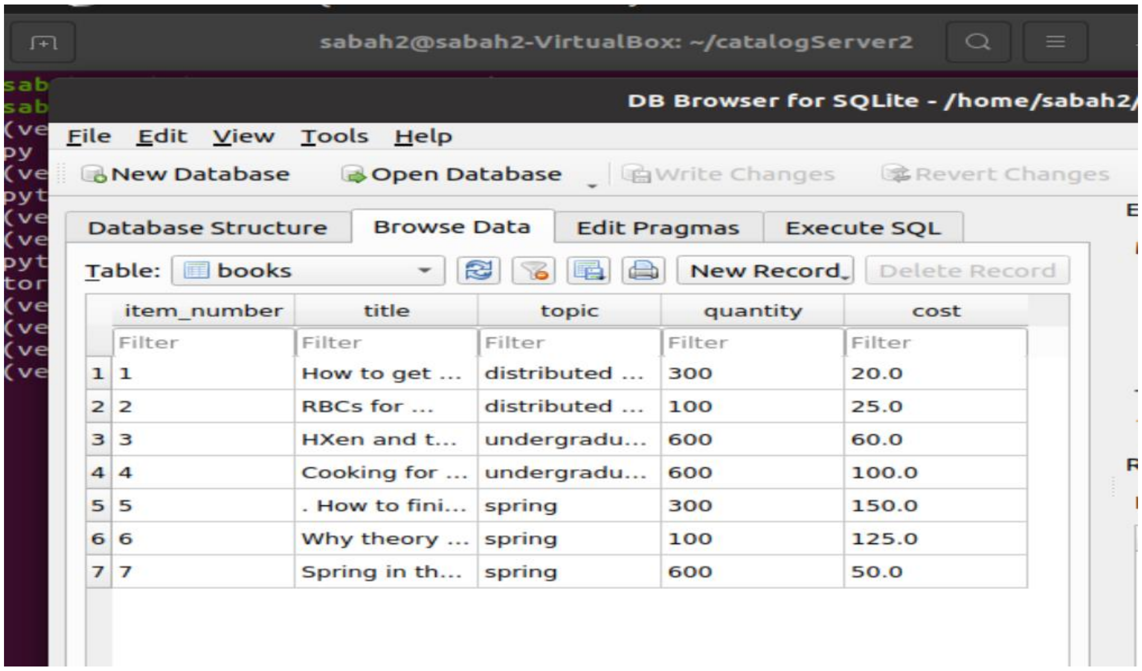
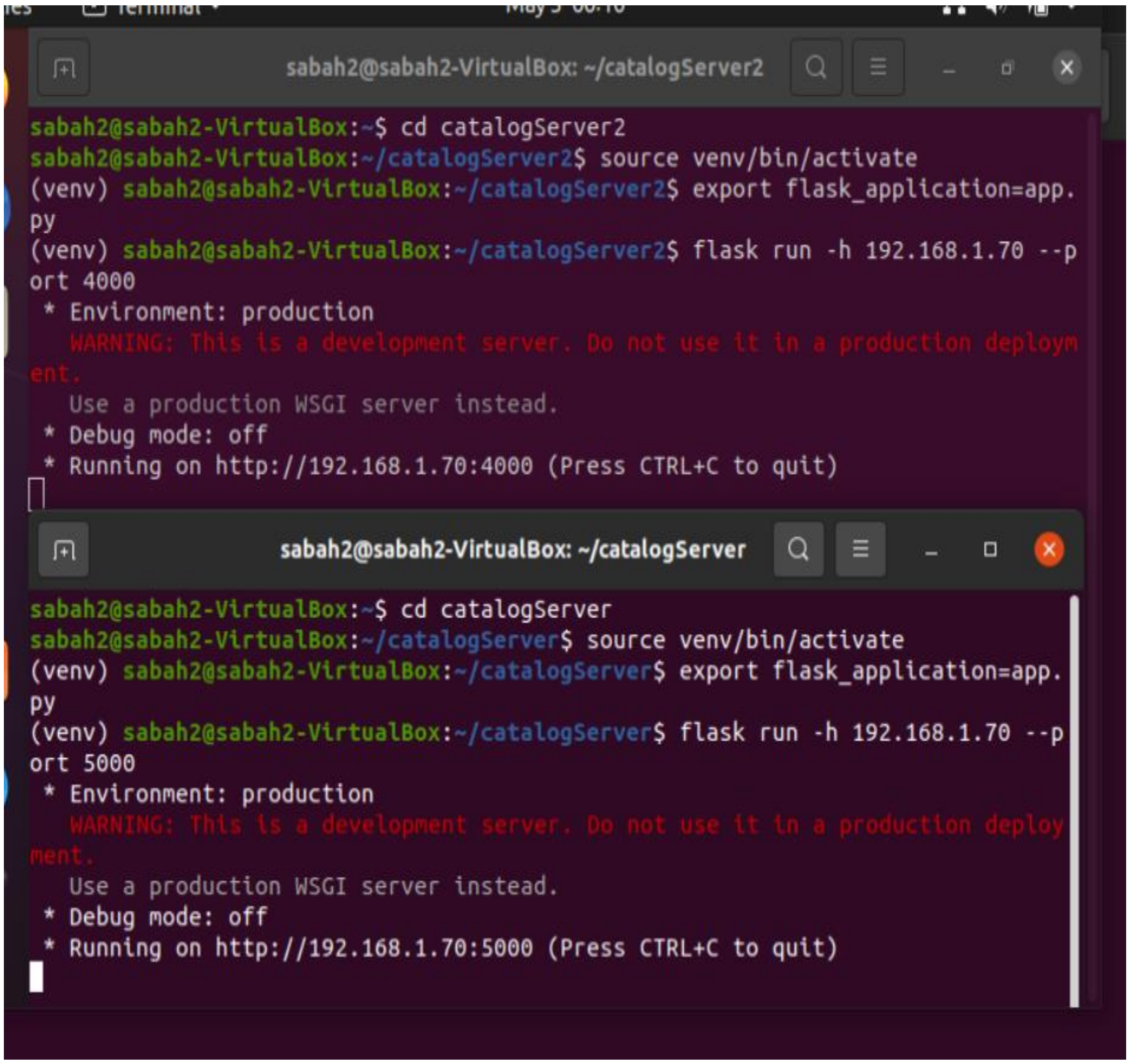
DOS PART2 PROJECT:

Database after inserting new books:



	item_number	title	topic	quantity	cost
	Filter	Filter	Filter	Filter	Filter
1	1	How to get ...	distributed ...	300	20.0
2	2	RBCs for ...	distributed ...	100	25.0
3	3	HXen and t...	undergradu...	600	60.0
4	4	Cooking for ...	undergradu...	600	100.0
5	5	. How to fini...	spring	300	150.0
6	6	Why theory ...	spring	100	125.0
7	7	Spring in th...	spring	600	50.0

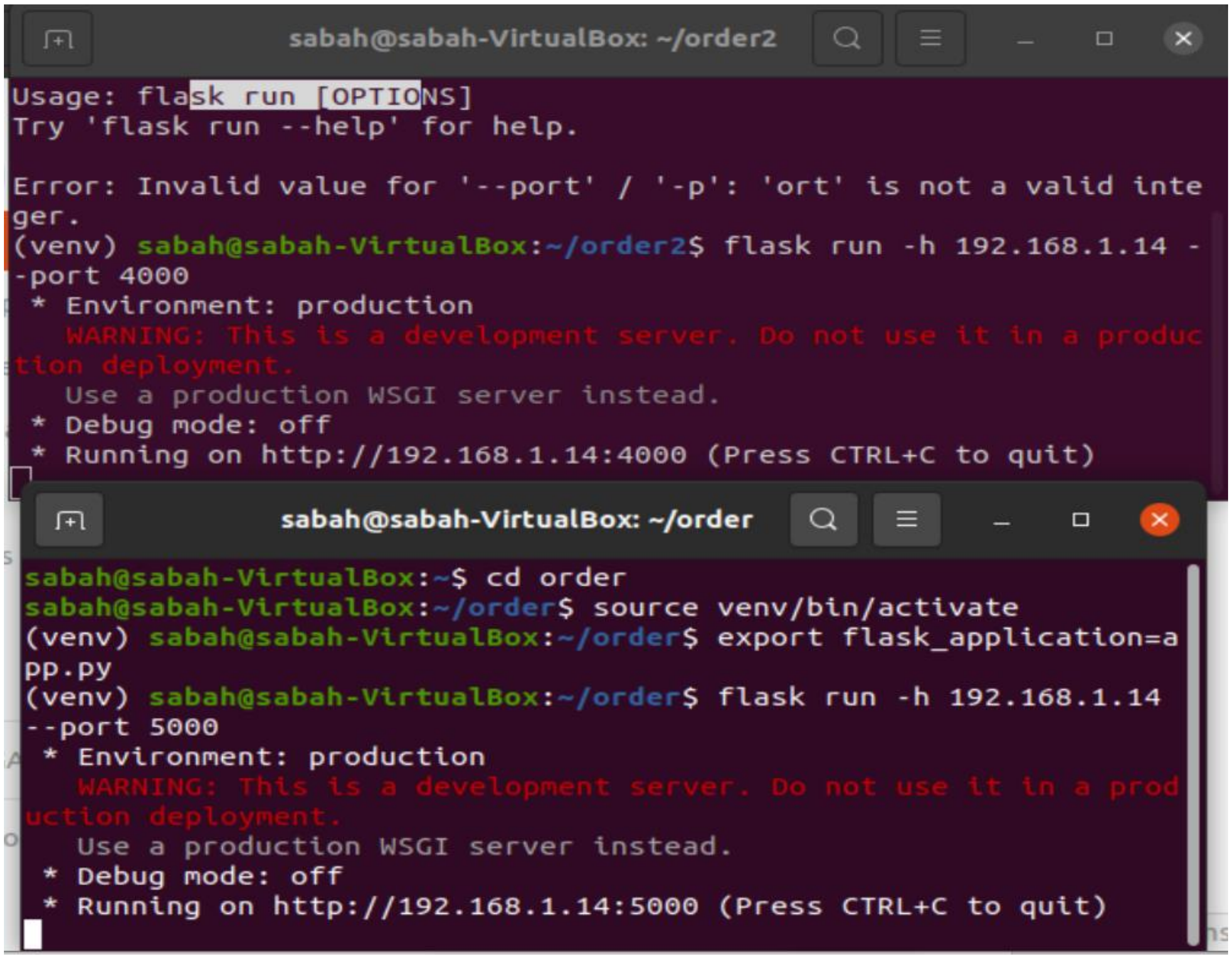
Catalog server 1 with port 4000 and Catalog server 2 with port 5000:



```
sabah2@sabah2-VirtualBox:~$ cd catalogServer2
sabah2@sabah2-VirtualBox:~/catalogServer2$ source venv/bin/activate
(venv) sabah2@sabah2-VirtualBox:~/catalogServer2$ export flask_application=app.
py
(venv) sabah2@sabah2-VirtualBox:~/catalogServer2$ flask run -h 192.168.1.70 --p
ort 4000
 * Environment: production
   WARNING: This is a development server. Do not use it in a production deploym
ent.
   Use a production WSGI server instead.
 * Debug mode: off
 * Running on http://192.168.1.70:4000 (Press CTRL+C to quit)
```

```
sabah2@sabah2-VirtualBox:~$ cd catalogServer
sabah2@sabah2-VirtualBox:~/catalogServer$ source venv/bin/activate
(venv) sabah2@sabah2-VirtualBox:~/catalogServer$ export flask_application=app.
py
(venv) sabah2@sabah2-VirtualBox:~/catalogServer$ flask run -h 192.168.1.70 --p
ort 5000
 * Environment: production
   WARNING: This is a development server. Do not use it in a production deploy
ment.
   Use a production WSGI server instead.
 * Debug mode: off
 * Running on http://192.168.1.70:5000 (Press CTRL+C to quit)
```

Order server 1 run at port 4000 and Order server 2 run at port 5000 :



sabah@sabah-VirtualBox: ~/order2

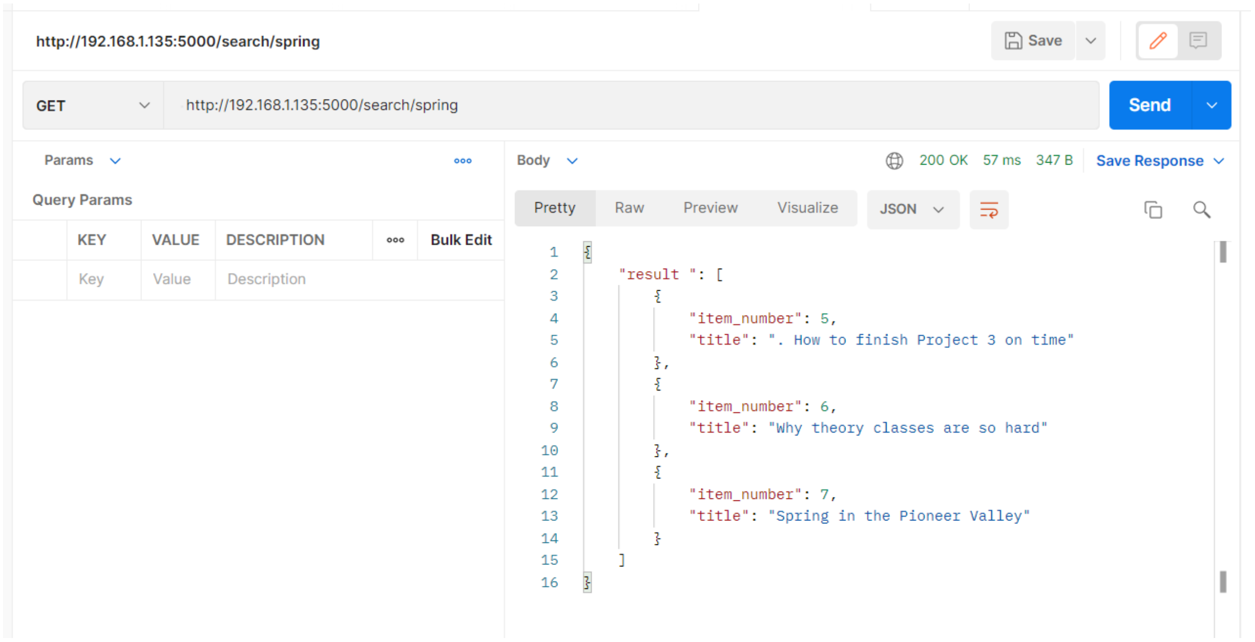
```
Usage: flask run [OPTIONS]
Try 'flask run --help' for help.

Error: Invalid value for '--port' / '-p': 'ort' is not a valid inte
ger.
(venv) sabah@sabah-VirtualBox:~/order2$ flask run -h 192.168.1.14 -
-port 4000
 * Environment: production
   WARNING: This is a development server. Do not use it in a produc
tion deployment.
   Use a production WSGI server instead.
 * Debug mode: off
 * Running on http://192.168.1.14:4000 (Press CTRL+C to quit)
```

sabah@sabah-VirtualBox: ~/order

```
sabah@sabah-VirtualBox:~$ cd order
sabah@sabah-VirtualBox:~/order$ source venv/bin/activate
(venv) sabah@sabah-VirtualBox:~/order$ export flask_application=a
pp.py
(venv) sabah@sabah-VirtualBox:~/order$ flask run -h 192.168.1.14
--port 5000
 * Environment: production
   WARNING: This is a development server. Do not use it in a prod
uction deployment.
   Use a production WSGI server instead.
 * Debug mode: off
 * Running on http://192.168.1.14:5000 (Press CTRL+C to quit)
```

Search 1 : first time (no cache) 57ms



http://192.168.1.135:5000/search/spring

GET http://192.168.1.135:5000/search/spring

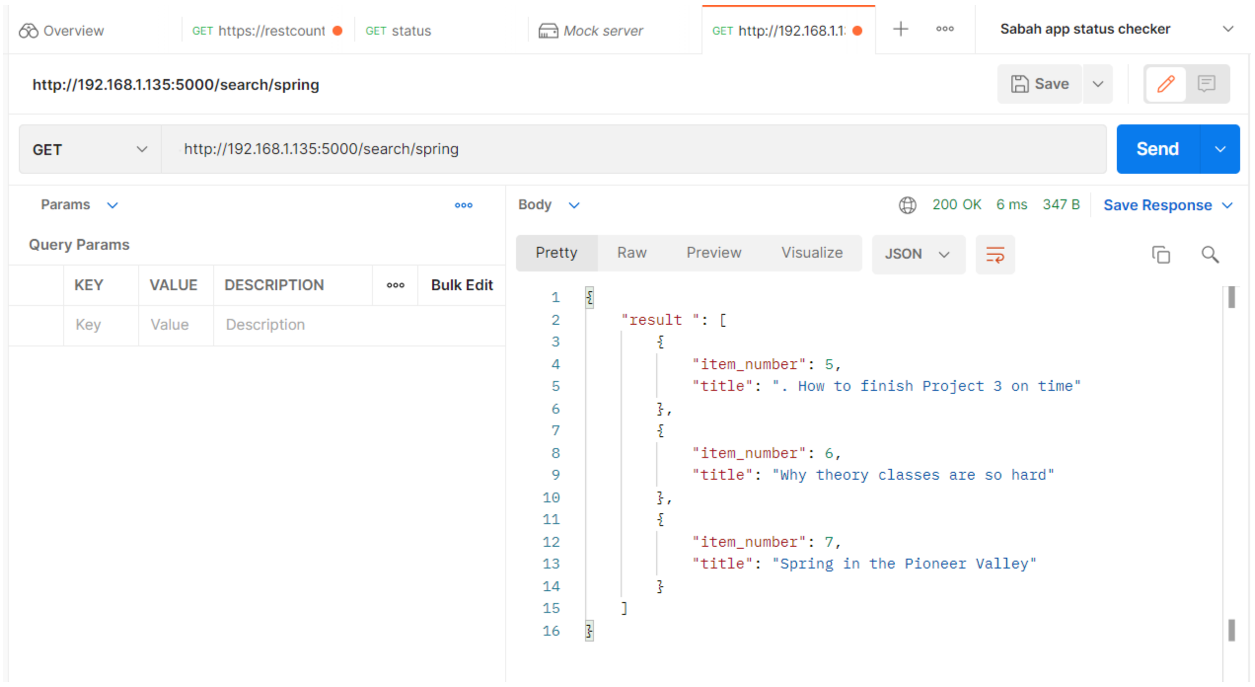
200 OK 57 ms 347 B

Query Params

KEY	VALUE	DESCRIPTION
Key	Value	Description

```
{
    "result ": [
        {
            "item_number": 5,
            "title": ". How to finish Project 3 on time"
        },
        {
            "item_number": 6,
            "title": "Why theory classes are so hard"
        },
        {
            "item_number": 7,
            "title": "Spring in the Pioneer Valley"
        }
    ]
}
```

After caching : 6m



http://192.168.1.135:5000/search/spring

GET http://192.168.1.135:5000/search/spring

200 OK 6 ms 347 B

Query Params

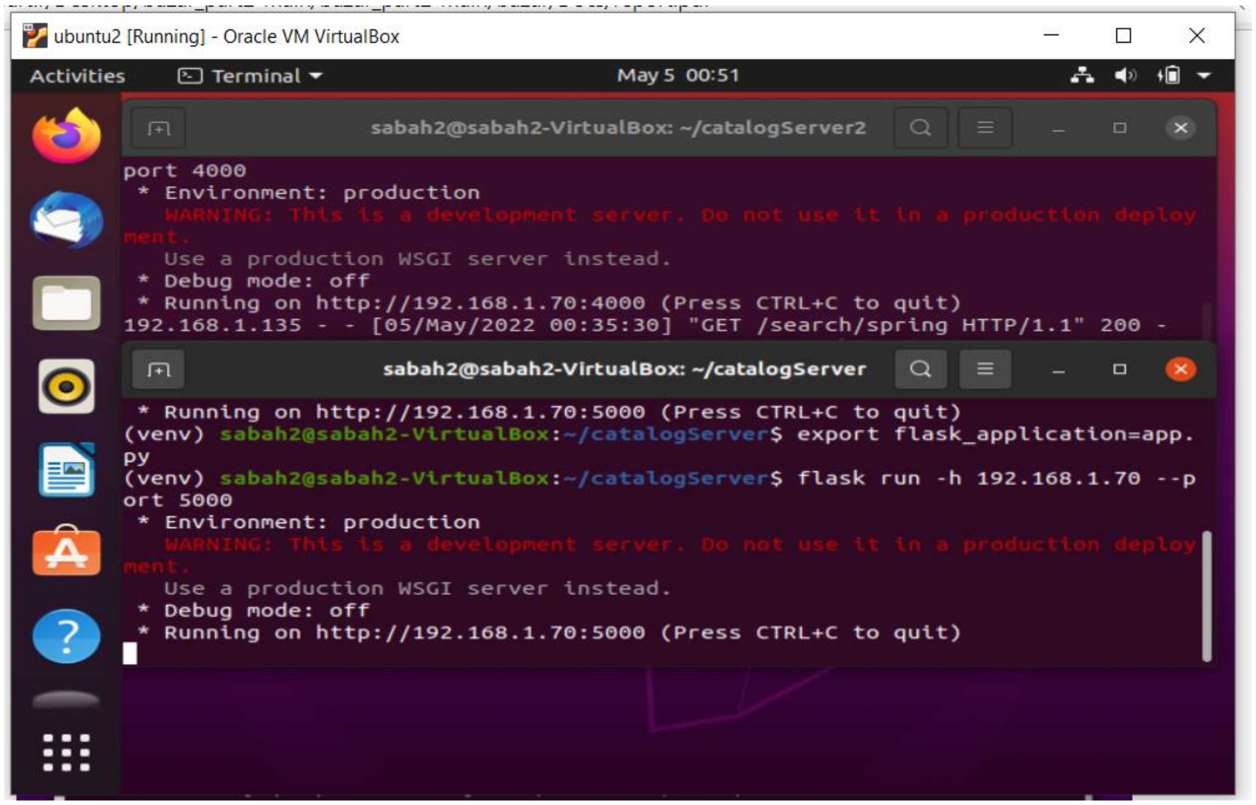
KEY	VALUE	DESCRIPTION
Key	Value	Description

```
{
    "result ": [
        {
            "item_number": 5,
            "title": ". How to finish Project 3 on time"
        },
        {
            "item_number": 6,
            "title": "Why theory classes are so hard"
        },
        {
            "item_number": 7,
            "title": "Spring in the Pioneer Valley"
        }
    ]
}
```

Making Search request for 2 times:

one for the first time and the other the second time which was taken from cache

(no request reached to the server because it was taken from cache)



ubuntu2 [Running] - Oracle VM VirtualBox
Activities
Terminal
May 5 00:51
sabah2@sabah2-VirtualBox: ~/catalogServer2
sabah2@sabah2-VirtualBox: ~/catalogServer

```
port 4000
 * Environment: production
   WARNING: This is a development server. Do not use it in a production deploy
ment.
   Use a production WSGI server instead.
 * Debug mode: off
 * Running on http://192.168.1.70:4000 (Press CTRL+C to quit)
192.168.1.135 - - [05/May/2022 00:35:30] "GET /search/spring HTTP/1.1" 200 -
```

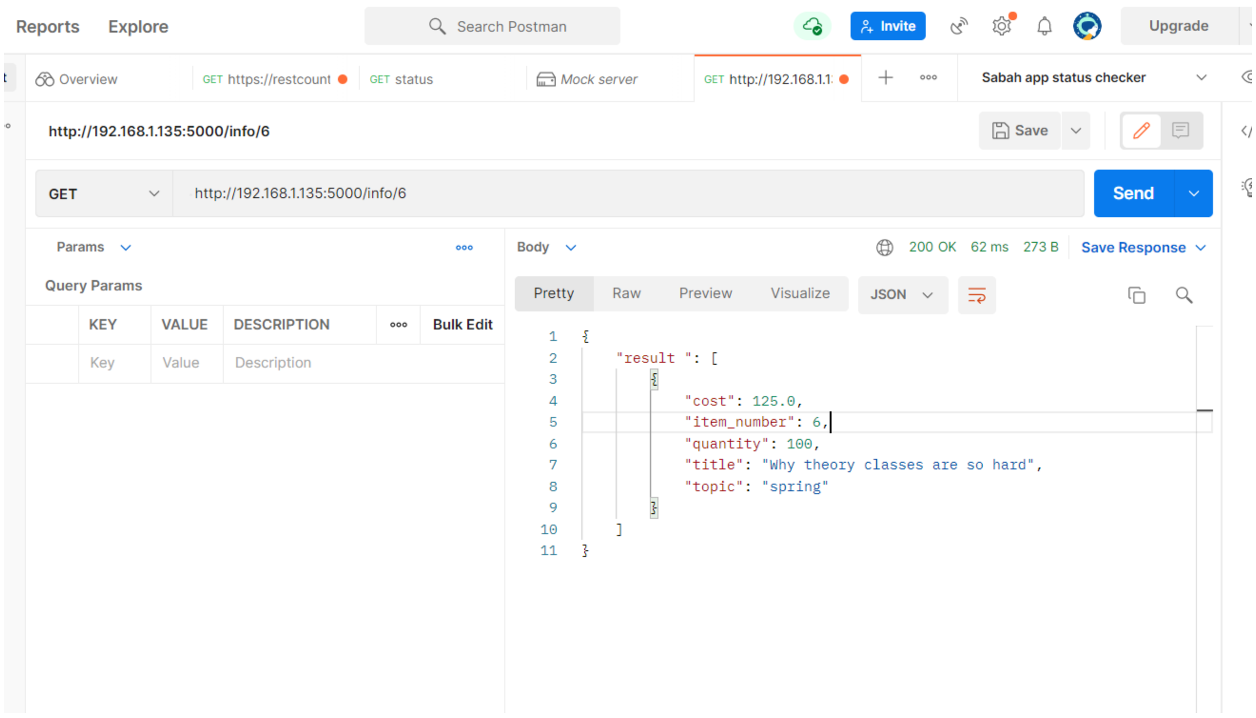
```
 * Running on http://192.168.1.70:5000 (Press CTRL+C to quit)
(venv) sabah2@sabah2-VirtualBox:~/catalogServer$ export flask_application=app.
py
(venv) sabah2@sabah2-VirtualBox:~/catalogServer$ flask run -h 192.168.1.70 --p
ort 5000
 * Environment: production
   WARNING: This is a development server. Do not use it in a production deploy
ment.
   Use a production WSGI server instead.
 * Debug mode: off
 * Running on http://192.168.1.70:5000 (Press CTRL+C to quit)
```

TRIAL2 :

INFO REQ: 56ms

This request was handled by server 2 as after applying load balancing .

Catalog 2 respond : 62m before cashing , with load



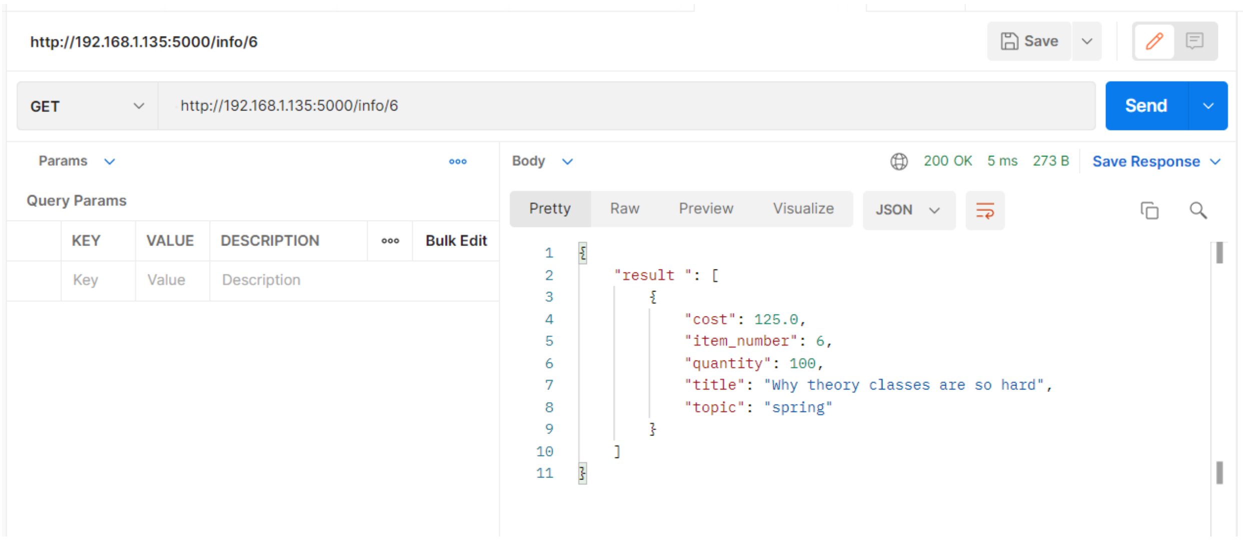
http://192.168.1.135:5000/info/6

GET http://192.168.1.135:5000/info/6

200 OK 62 ms 273 B

```
{
    "result ": [
        {
            "cost": 125.0,
            "item_number": 6,
            "quantity": 100,
            "title": "Why theory classes are so hard",
            "topic": "spring"
        }
    ]
}
```

With cashing :



http://192.168.1.135:5000/info/6

GET http://192.168.1.135:5000/info/6

200 OK 5 ms 273 B

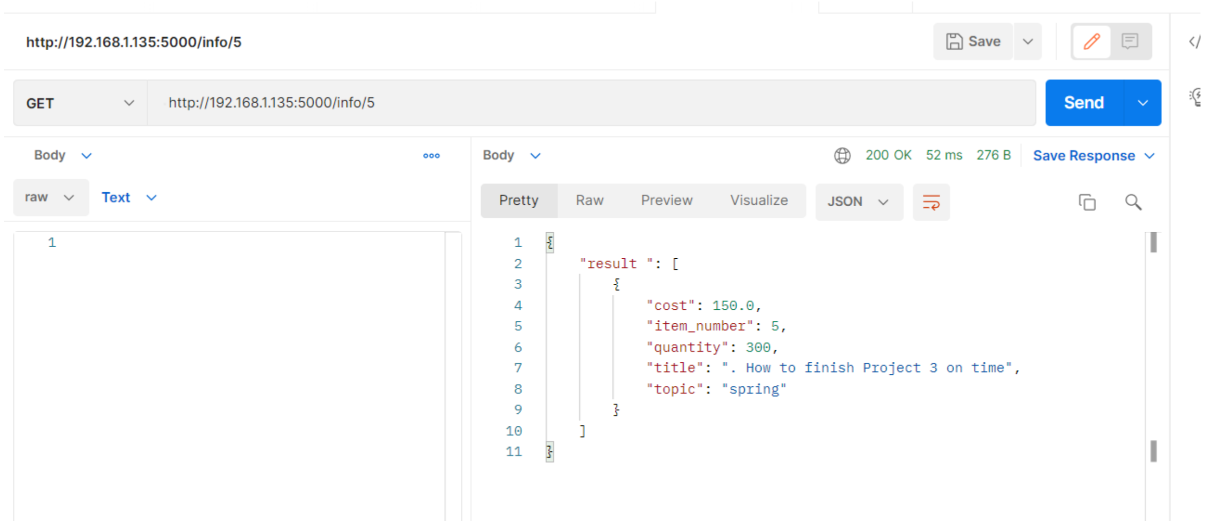
```
{
    "result ": [
        {
            "cost": 125.0,
            "item_number": 6,
            "quantity": 100,
            "title": "Why theory classes are so hard",
            "topic": "spring"
        }
    ]
}
```

TRIAL3 :

Data before purchase :

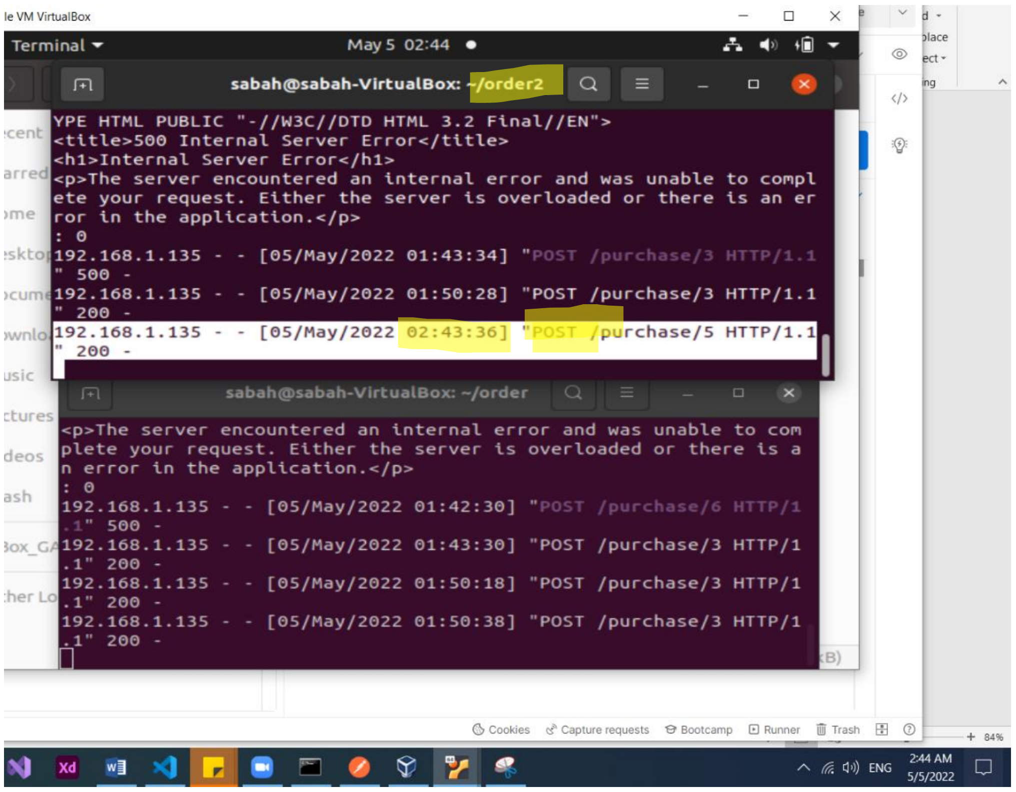
Checking consistency:

- **Get information for item with id =6 :**



```
{
    "result ": [
        {
            "cost": 150.0,
            "item_number": 5,
            "quantity": 300,
            "title": ". How to finish Project 3 on time",
            "topic": "spring"
        }
    ]
}
```

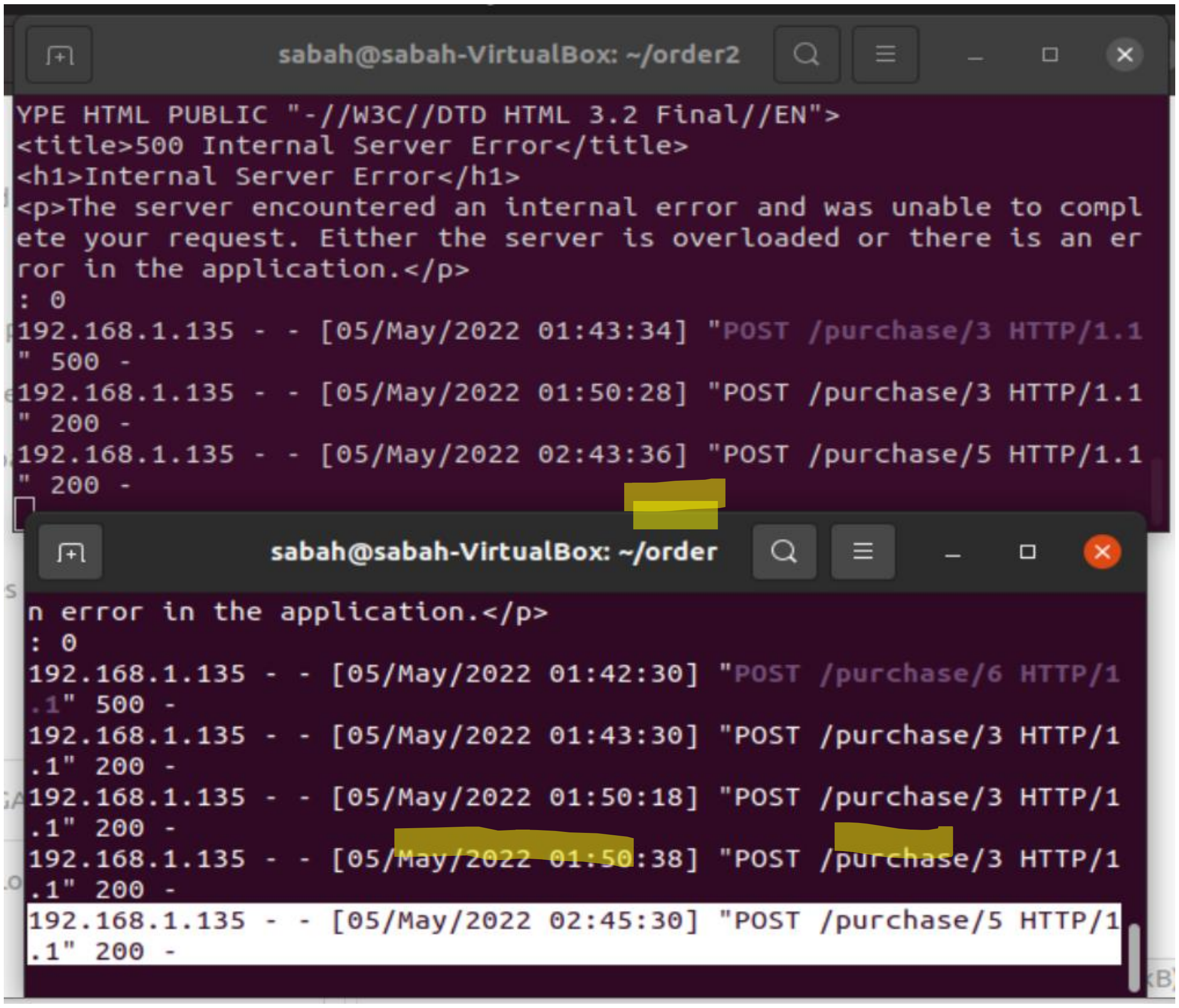
- Applying purchase: it reached only to order server #2


Terminal
May 5 02:44
sabah@sabah-VirtualBox: ~/order2
sabah@sabah-VirtualBox: ~/order
2:44 AM
5/5/2022

```
YPE HTML PUBLIC "-//W3C//DTD HTML 3.2 Final//EN">
<title>500 Internal Server Error</title>
<h1>Internal Server Error</h1>
<p>The server encountered an internal error and was unable to compl
ete your request. Either the server is overloaded or there is an er
ror in the application.</p>
: 0
192.168.1.135 - - [05/May/2022 01:43:34] "POST /purchase/3 HTTP/1.1
" 500 -
192.168.1.135 - - [05/May/2022 01:50:28] "POST /purchase/3 HTTP/1.1
" 200 -
192.168.1.135 - - [05/May/2022 02:43:36] "POST /purchase/5 HTTP/1.1
" 200 -
```

```
<p>The server encountered an internal error and was unable to com
plete your request. Either the server is overloaded or there is a
n error in the application.</p>
: 0
192.168.1.135 - - [05/May/2022 01:42:30] "POST /purchase/6 HTTP/1
.1" 500 -
192.168.1.135 - - [05/May/2022 01:43:30] "POST /purchase/3 HTTP/1
.1" 200 -
192.168.1.135 - - [05/May/2022 01:50:18] "POST /purchase/3 HTTP/1
.1" 200 -
192.168.1.135 - - [05/May/2022 01:50:38] "POST /purchase/3 HTTP/1
.1" 200 -
```

- Applying Purchase request again: only in order1 and not in order 2



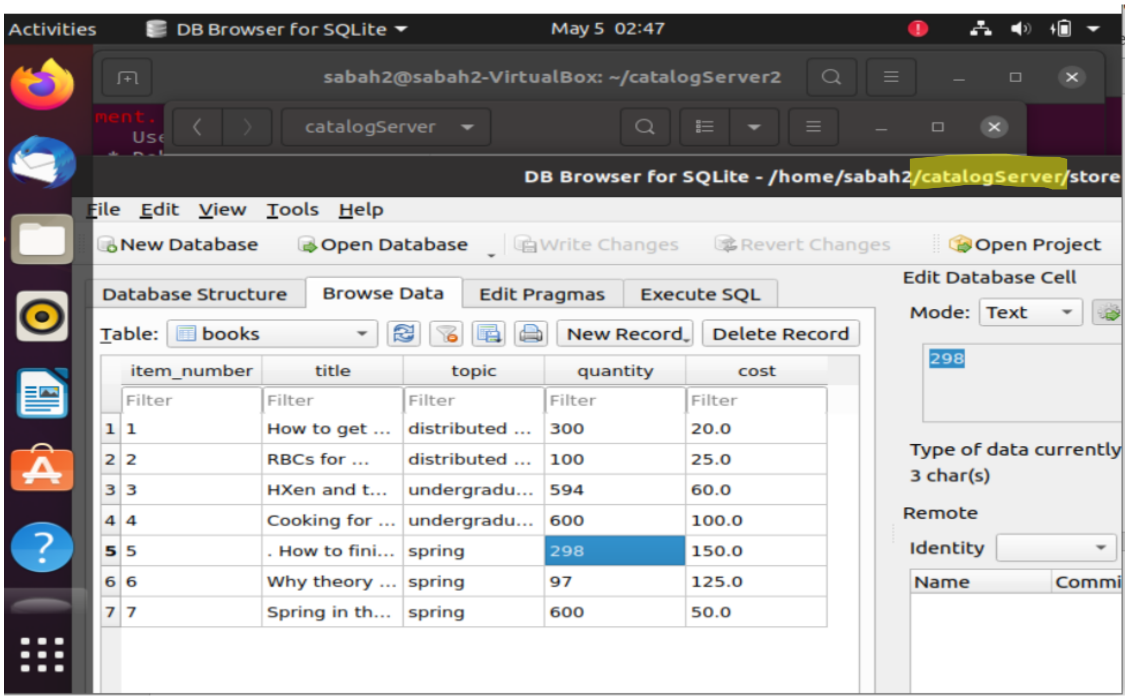
sabah@sabah-VirtualBox: ~/order2

```
YPE HTML PUBLIC "-//W3C//DTD HTML 3.2 Final//EN">
<title>500 Internal Server Error</title>
<h1>Internal Server Error</h1>
<p>The server encountered an internal error and was unable to compl
ete your request. Either the server is overloaded or there is an er
ror in the application.</p>
: 0
192.168.1.135 - - [05/May/2022 01:43:34] "POST /purchase/3 HTTP/1.1
" 500 -
192.168.1.135 - - [05/May/2022 01:50:28] "POST /purchase/3 HTTP/1.1
" 200 -
192.168.1.135 - - [05/May/2022 02:43:36] "POST /purchase/5 HTTP/1.1
" 200 -
```

sabah@sabah-VirtualBox: ~/order

```
n error in the application.</p>
: 0
192.168.1.135 - - [05/May/2022 01:42:30] "POST /purchase/6 HTTP/1
.1" 500 -
192.168.1.135 - - [05/May/2022 01:43:30] "POST /purchase/3 HTTP/1
.1" 200 -
192.168.1.135 - - [05/May/2022 01:50:18] "POST /purchase/3 HTTP/1
.1" 200 -
192.168.1.135 - - [05/May/2022 01:50:38] "POST /purchase/3 HTTP/1
.1" 200 -
192.168.1.135 - - [05/May/2022 02:45:30] "POST /purchase/5 HTTP/1
.1" 200 -
```

- Database result ***in catalog1*** after these s2 purchase : (the amount decreased 2)



DB Browser for SQLite - /home/sabah2/catalogServer/store

Table: books

	item_number	title	topic	quantity	cost
1	1	How to get …	distributed …	300	20.0
2	2	RBCs for …	distributed …	100	25.0
3	3	HXen and t…	undergradu…	594	60.0
4	4	Cooking for …	undergradu…	600	100.0
5	5	. How to fini…	spring	298	150.0
6	6	Why theory …	spring	97	125.0
7	7	Spring in th…	spring	600	50.0

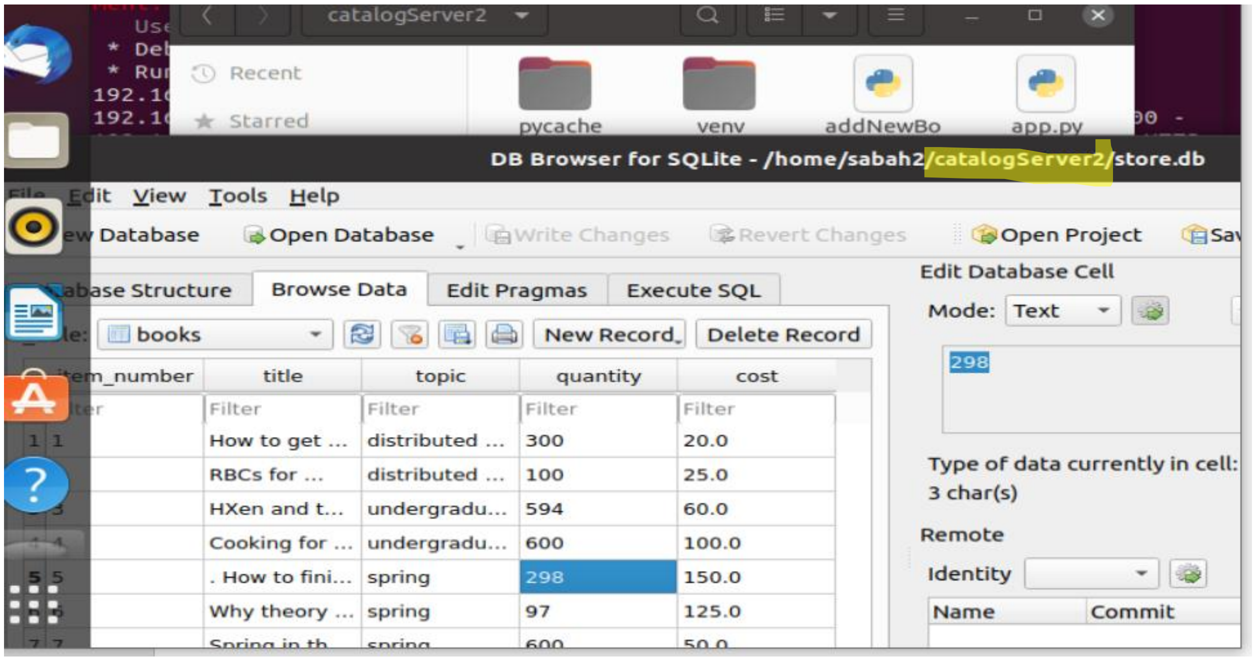
Edit Database Cell

Mode: Text

298

Type of data currently
3 char(s)

- Result from database in catalog 2 : (it decreased here too automatically)



DB Browser for SQLite - /home/sabah2/catalogServer2/store.db

books

item_number	title	topic	quantity	cost
1	How to get …	distributed …	300	20.0
	RBCs for …	distributed …	100	25.0
	HXen and t…	undergradu…	594	60.0
	Cooking for …	undergradu…	600	100.0
5	. How to fini…	spring	298	150.0
	Why theory …	spring	97	125.0
	Spring in th…	spring	600	50.0

Edit Database Cell

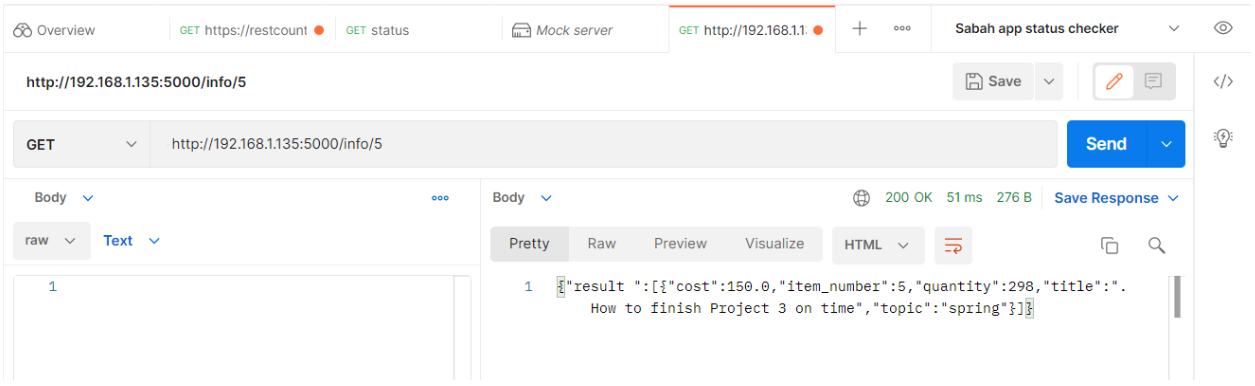
Mode: Text

298

Type of data currently in cell:
3 char(s)

Try get info for item 5 after making changes in the database from the purchase process:

From front: (cache doesn't work here) it give the long time



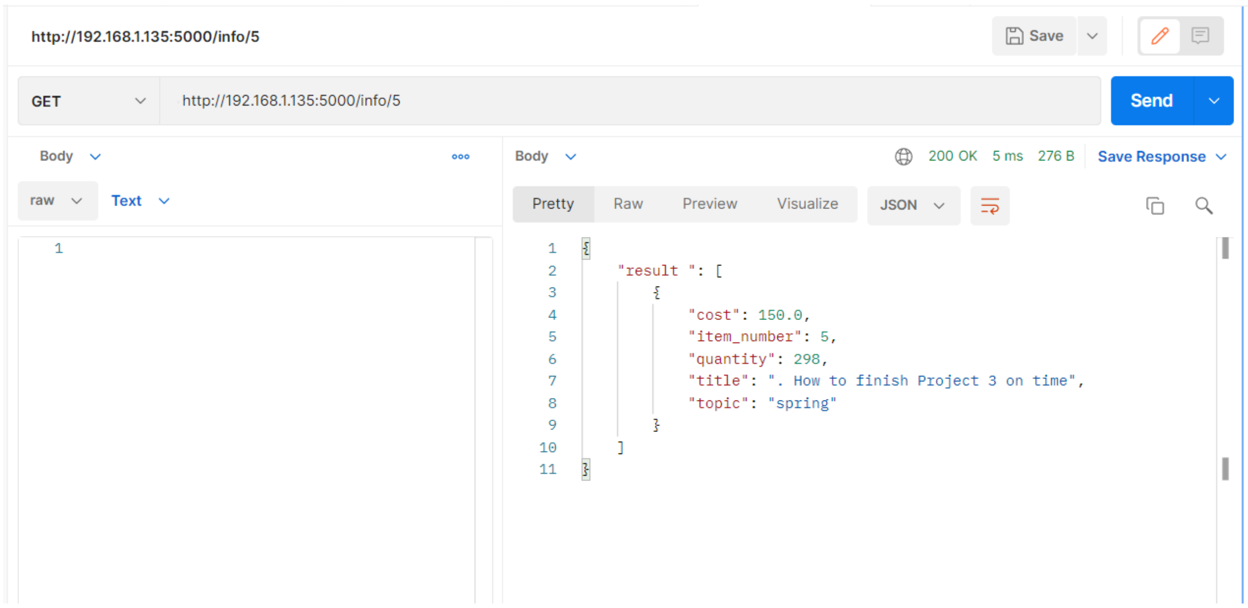
http://192.168.1.135:5000/info/5

GET http://192.168.1.135:5000/info/5

200 OK 51 ms 276 B

```
{"result ":[{"cost":150.0,"item_number":5,"quantity":298,"title":". 
    How to finish Project 3 on time","topic":"spring"}]}
```

Trying again to test cache for info 5:



http://192.168.1.135:5000/info/5

GET http://192.168.1.135:5000/info/5

200 OK 5 ms 276 B

```
{
    "result ": [
        {
            "cost": 150.0,
            "item_number": 5,
            "quantity": 298,
            "title": ". How to finish Project 3 on time",
            "topic": "spring"
        }
    ]
}
```