Output for Bazar.com: A Multi-tier Online Book Store

Leen Sharaf & Lana Atabeh

Curl command:

Search:

curl http://localhost:5000/search/distributed%20systems

```
C:\Users\Msys\pro\venv>curl http://localhost:5000/search/distributed%20systems
{
  "Items": [
    {
      "ID": "1",
      "Title": "How to get a good grade in DOS in 40 minutes a day",
      "cost": "85",
      "stock": "16",
      "topic": "distributed systems"
    },
    {
      "ID": "2",
      "Title": "RPCs for Noobs",
      "cost": "55",
      "stock": "2",
      "topic": "distributed systems"
    }
  ]
}
```

Info:

curl http://localhost:5000/info/1

```
C:\Users\Msys\pro\venv>curl http://localhost:5000/info/1
{
  "cost": 55,
  "stock": 10,
  "title": "How to get a good grade in DOS in 40 minutes a day",
  "topic": "distributed systems"
}
```

curl http://localhost:5001/query-by-item/4

```
C:\Users\Msys\pro\venv>curl http://localhost:5001/query-by-item/4
{
  "cost": "65",
  "stock": "13",
  "title": "Cooking for the Impatient Undergrad",
  "topic": "undergraduate school"
}

C:\Users\Msys\pro\venv>
```

curl http://localhost:5001/query-by-subject/distributed systems

```
C:\Users\Msys\pro\venv>curl http://localhost:5001/query-by-subject/distributed systems
{
  "items": [
    {
      "ID": "1",
      "Title": "How to get a good grade in DOS in 40 minutes a day",
      "cost": "85",
      "stock": "16",
      "topic": "distributed systems"
    },
    {
      "ID": "2",
      "Title": "RPCs for Noobs",
      "cost": "55",
      "stock": "2",
      "topic": "distributed systems"
    }
  ]
}
```

Update cost or stock or (cost & stock) :

- Update stock:

curl -X PUT -H "Content-Type: application/json" -d "{\"new_stock\": 5 }"
http://localhost:5001/update-stock/1

```
C:\Users\Msys\pro\venv>curl -X PUT -H "Content-Type: application/json" -d "{\"new_stock\": 5 }" http://localhost:5001/update-stock/1
{
  "Message": "Stock updated successfully",
  "item": {
    "ID": "1",
    "Title": "How to get a good grade in DOS in 40 minutes a day",
    "cost": "85",
    "stock": 5,
    "topic": "distributed systems"
  }
}
```

data.csv :

```
1  ID,Title,stock,cost,topic
2  1,How to get a good grade in DOS in 40 minutes a day,5,85,distributed systems
3  2,RPCs for Noobs,2,55,distributed systems
4  3,Xen and the Art of Surviving Undergraduate School,0,70,undergraduate school
5  4,Cooking for the Impatient Undergrad,13,65,undergraduate school
6
```

- Update cost :

curl -X PUT -H "Content-Type: application/json" -d "{\"new_cost\": 2}"
http://localhost:5001/update-cost/1

```
C:\Users\Msys\pro\venv>curl -X PUT -H "Content-Type: application/json" -d "{\"new_cost\": 70 }" http://localhost:5001/up
date-cost/1
{
  "Message": "Cost updated successfully",
  "item": {
    "ID": "1",
    "Title": "How to get a good grade in DOS in 40 minutes a day",
    "cost": 70,
    "stock": 5,
    "topic": "distributed systems"
  }
}
```

data.csv :

```
env > catalog > data.csv
1  ID,Title,stock,cost,topic
2  1,How to get a good grade in DOS in 40 minutes a day,5,70,distributed systems
3  2,RPCs for Noobs,2,55,distributed systems
4  3,Xen and the Art of Surviving Undergraduate School,0,70,undergraduate school
5  4,Cooking for the Impatient Undergrad,13,65,undergraduate school
6
```

Update stock & cost :

curl -X PUT -H "Content-Type: application/json" -d "{\"new_stock\": 12,
\"new_cost\": 55}" http://localhost:5001/update-stock-and-cost/1

```
C:\Users\Msys\pro\venv>curl -X PUT -H "Content-Type: application/json" -d "{\"new_stock\": 12 ,\"new_cost\": 55 }" http:
//localhost:5001/update-stock-and-cost/1
{
  "Message": "Stock and Cost updated successfully",
  "item": {
    "ID": "1",
    "Title": "How to get a good grade in DOS in 40 minutes a day",
    "cost": 55,
    "stock": 12,
    "topic": "distributed systems"
  }
}
```

data.csv :

```
venv > catalog > ⊞ data.csv
  1    ID,Title,stock,cost,topic
  2    1,How to get a good grade in DOS in 40 minutes a day,12,55,distributed systems
  3    2,RPCs for Noobs,2,55,distributed systems
  4    3,Xen and the Art of Surviving Undergraduate School,0,70,undergraduate school
  5    4,Cooking for the Impatient Undergrad,13,65,undergraduate school
  6    |
```

Purchase:

curl -X POST http://localhost:5002/purchase/1

```
C:\Users\Msys\pro\venv>
C:\Users\Msys\pro\venv>curl -X POST http://localhost:5002/purchase/1
{
  "ItemNumber": 1,
  "Status": "Purchase Successful",
  "Time": "19:33:34",
  "Title": "How to get a good grade in DOS in 40 minutes a day"
}
```

Data.csv :

```
nv > catalog > ⊞ data.csv
  1    ID,Title,stock,cost,topic
  2    1,How to get a good grade in DOS in 40 minutes a day,11,55,distributed systems
  3    2,RPCs for Noobs,2,55,distributed systems
  4    3,Xen and the Art of Surviving Undergraduate School,0,70,undergraduate school
  5    4,Cooking for the Impatient Undergrad,13,65,undergraduate school
  6    |
```

Order_log.csv :

```
  8    1,How to get a good grade in DOS in 40 minutes a day,Purchase Successful,19:33:34
  9    3,Xen and the Art of Surviving Undergraduate School,Sold out,19:33:58
 10
```

Book Sold out:

curl -X POST http://localhost:5002/purchase/3

```
C:\Users\Msys\pro\venv>curl -X POST http://localhost:5002/purchase/3
{
  "Error": "Item sold out "
}
```

Order_log.csv :

```
     8      1,How to get a good grade in DOS in 40 minutes a day,Purchase Successful,19:33:34
     9      3,Xen and the Art of Surviving Undergraduate School,Sold out,19:33:58
    10
```

From frontend server:
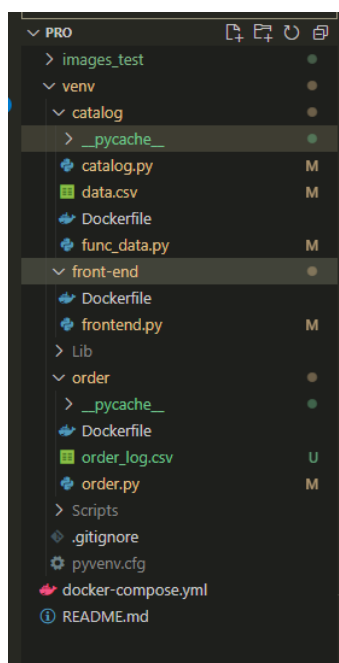
http://localhost:5002/purchase/3

```
C:\Users\Msys\pro\venv>curl -X POST http://localhost:5000/purchase/1
{
  "ItemNumber": 1,
  "Status": "Purchase Successful",
  "Time": "19:40:19",
  "Title": "How to get a good grade in DOS in 40 minutes a day"
}
```

```
nv > catalog > ⊞ data.csv
 1    ID,Title,stock,cost,topic
 2    1,How to get a good grade in DOS in 40 minutes a day,10,55,distributed systems
 3    2,RPCs for Noobs,2,55,distributed systems
 4    3,Xen and the Art of Surviving Undergraduate School,0,70,undergraduate school
 5    4,Cooking for the Impatient Undergrad,13,65,undergraduate school
 6
```

Docker:

We created a Docker file for each server

Build docker:

```
Windows PowerShell                                                         —   □   ×

PS C:\Users\Msys\pro\venv\catalog> docker build -t prodos_python .
[+] Building 164.9s (11/11) FINISHED                                        docker:default
 => [internal] load .dockerignore                                                     0.0s
 => => transferring context: 2B                                                       0.0s
 => [internal] load build definition from Dockerfile                                  0.0s
 => => transferring dockerfile: 399B                                                  0.0s
 => [internal] load metadata for docker.io/library/ubuntu:latest                     0.0s
 => [1/6] FROM docker.io/library/ubuntu:latest                                        0.0s
 => [internal] load build context                                                     0.0s
 => => transferring context: 32B                                                      0.0s
 => CACHED [2/6] WORKDIR /home/catalog                                                0.0s
 => CACHED [3/6] RUN apt-get update -y                                                0.0s
 => [4/6] RUN apt-get install -y python3 python3-pip nano gcc                       155.6s
 => [5/6] RUN pip3 install flask requests                                             6.3s
 => [6/6] COPY catalog.py ./                                                          0.0s
 => exporting to image                                                                2.8s
 => => exporting layers                                                               2.8s
 => => writing image sha256:a9f23b5e43cc43c68f6cd3eefd813b466ee5c83e57ae23f9eb2896336dadd9de  0.0s
 => => naming to docker.io/library/prodos_python                                      0.0s

What's Next?
  View a summary of image vulnerabilities and recommendations → docker scout quickview
PS C:\Users\Msys\pro\venv\catalog> docker images
REPOSITORY                    TAG       IMAGE ID       CREATED          SIZE
prodos_python                 latest    a9f23b5e43cc   10 seconds ago   480MB
myubuntu/ubuntu-gcc-nano      latest    3bcb7207e3d0   2 hours ago      294MB
nginx                         latest    c20060033e06   2 weeks ago      187MB
ubuntu                        latest    e4c58958181a   6 weeks ago      77.8MB
hello-world                   latest    9c7a54a9a43c   6 months ago     13.3kB
PS C:\Users\Msys\pro\venv\catalog>
```

Frontend server on command:

```
 * Serving Flask app 'frontend'
 * Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
 * Running on http://127.0.0.1:5000
Press CTRL+C to quit
 * Restarting with stat
 * Debugger is active!
 * Debugger PIN: 979-579-681
127.0.0.1 - - [20/Nov/2023 19:06:41] "GET /info/1 HTTP/1.1" 200 -
127.0.0.1 - - [20/Nov/2023 19:07:24] "GET /search/%20undergraduate%20school HTTP/1.1" 200 -
127.0.0.1 - - [20/Nov/2023 19:07:31] "GET /search/undergraduate%20school HTTP/1.1" 200 -
 * Detected change in 'C:\\Users\\Msys\\pro\\venv\\front-end\\frontend.py', reloading
 * Restarting with stat
 * Debugger is active!
 * Debugger PIN: 979-579-681
```