DOS course

Multi-tier Online Book Store 2

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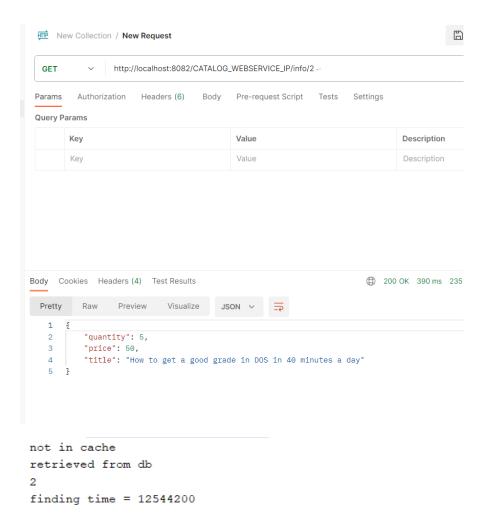
The concept:

Frontend server responsible for forwarding requests to the two servers, and implements load balancing (using round-robin algorithm). It also has an in memory cache to enhance the performance, for this we used a hash map for caching requests.

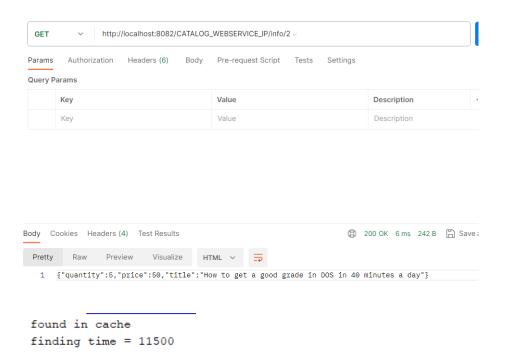
To implement replication we made two replicas of both Catalog server and order server with different ports

In this project we use Java/Spark and Netbeans IDE/Sqlite database.

Before caching:



After caching:

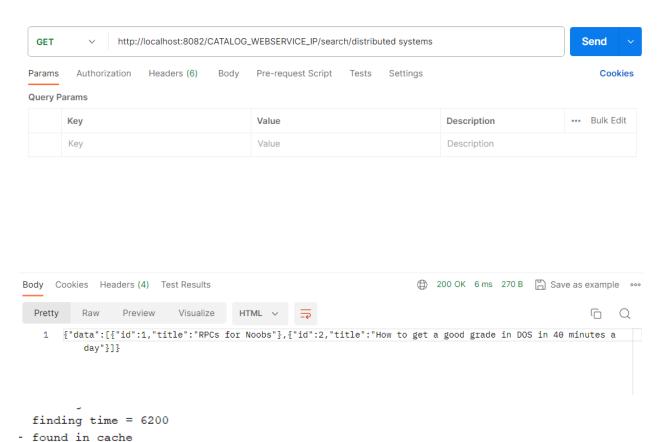


Before cache:

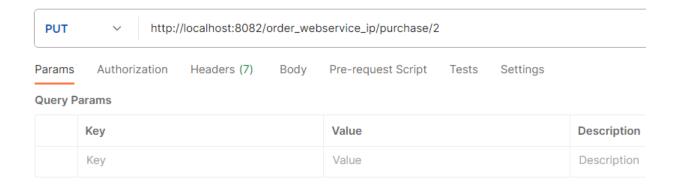


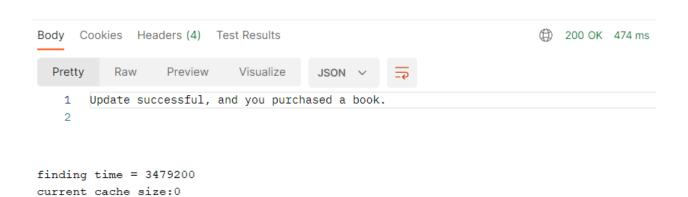
```
finding time = 427900
not found in cache
distributed+systems
retrieved from db
```

After cache:



Before cache:





After cache:

```
finding time = 26400
```

Code: https://github.com/Omnya-Hmoda/dos