

Dos project

Bazar.com

Book store

Project report

Ayat abuomar

Sadeen Hawash

Bazar.com Online Bookstore Project Report

Introduction

Bazar.com is envisioned as the world's smallest online bookstore, carrying a highly selective collection of four books tailored for a niche audience. Our task was to design a scalable, distributed online bookstore utilizing a multi-tier architecture with microservices to handle operations such as searching, retrieving information, and purchasing books.

System Design

Architecture

The system is designed with a two-tier web architecture:

Front-end Tier: This tier is responsible for interfacing with the user, accepting requests, and performing initial processing.

Back-end Tier: Comprises two main components:

Catalog Server: Manages the book catalog and maintains book details like stock quantity, cost, and topic.

Order Server: Maintains a log of all book orders and handles purchase requests.

Each tier is comprised of microservices, with the front-end implemented as a singular microservice and the back-end divided into two distinct microservices for the catalog and order functionalities.

For database

Using sqlite

| | uuid | title | price | category | stock |
|---|---|---|--|---|---|
| | <input data-bbox="313 300 488 327" type="text" value="Search column..."/> | <input data-bbox="513 300 824 327" type="text" value="Search column..."/> | <input data-bbox="849 300 1024 327" type="text" value="Search column..."/> | <input data-bbox="1049 300 1224 327" type="text" value="Search column..."/> | <input data-bbox="1248 300 1424 327" type="text" value="Search column..."/> |
| 1 | b4cdf36e-ccec-4e82-... | How to get a good grade in DOS in 40 ... | 10 | distributed systems | 36 |
| 2 | ae77d6ad-635e-47ab... | RPCs for Noobs | 30 | distributed systems | 16 |
| 3 | 8a471bdc-f8ec-4ca5-... | Xen and the Art of Surviving Undergrad... | 25 | undergraduate school | 36 |
| 4 | 25278d7b-7bc5-4b9... | Cooking for the Impatient Undergrad. | 25 | undergraduate school | 29 |

For run the project

In terminal:

Cd frontend

Node book.js

List of book

For search

```

PROBLEMS  OUTPUT  TERMINAL  PORTS  SQL CONSOLE
>  TERMINAL
PS C:\Users\ayatd\OneDrive\Desktop\dos_project> cd frontend
PS C:\Users\ayatd\OneDrive\Desktop\dos_project\frontend> node book.js

Book Catalog and Ordering System
1. List all books
2. Search for a book by UUID
3. Purchase a book
4. Exit
Select an option: 1

List of Books:
1. How to get a good grade in DOS in 40 minutes a day.
2. RPCs for Noobs.
3. Xen and the Art of Surviving Undergraduate School.
4. Cooking for the Impatient Undergrad.

```

For order

```
Book Catalog and Ordering System
1. List all books
2. Search for a book by UUID
3. Purchase a book
4. Exit
Select an option: 3

Enter UUID of the book to purchase: ae77d6ad-635e-47ab-8109-188aa0aad23
Enter quantity to purchase: 2
Buying succeeded

Book Catalog and Ordering System
```

```
Book Catalog and Ordering System
1. List all books
2. Search for a book by UUID
3. Purchase a book
4. Exit
Select an option: 2

Enter UUID of the book to search: ae77d6ad-635e-47ab-8109-188aa0aad23
book details:
  2. RPCs for Noobs.
  price :30
  category : distributed system
  stock:16
```

We use Postman for testing endpoint:

POST localhost:3000/books

Save

POST

localhost:3000/books

Send

Params

Authorization

Headers (8)

Body

Pre-request Script

Tests

Settings

Cookies

Query Params

| Key | Value | Description | ... | Bulk Edit |
|-----|-------|-------------|-----|-----------|
| Key | Value | Description | | |

Body

Cookies

Headers (8)

Test Results

200 OK

614 ms

266 B

Save as example

...

Pretty

Raw

Preview

Visualize

HTML

1

success!