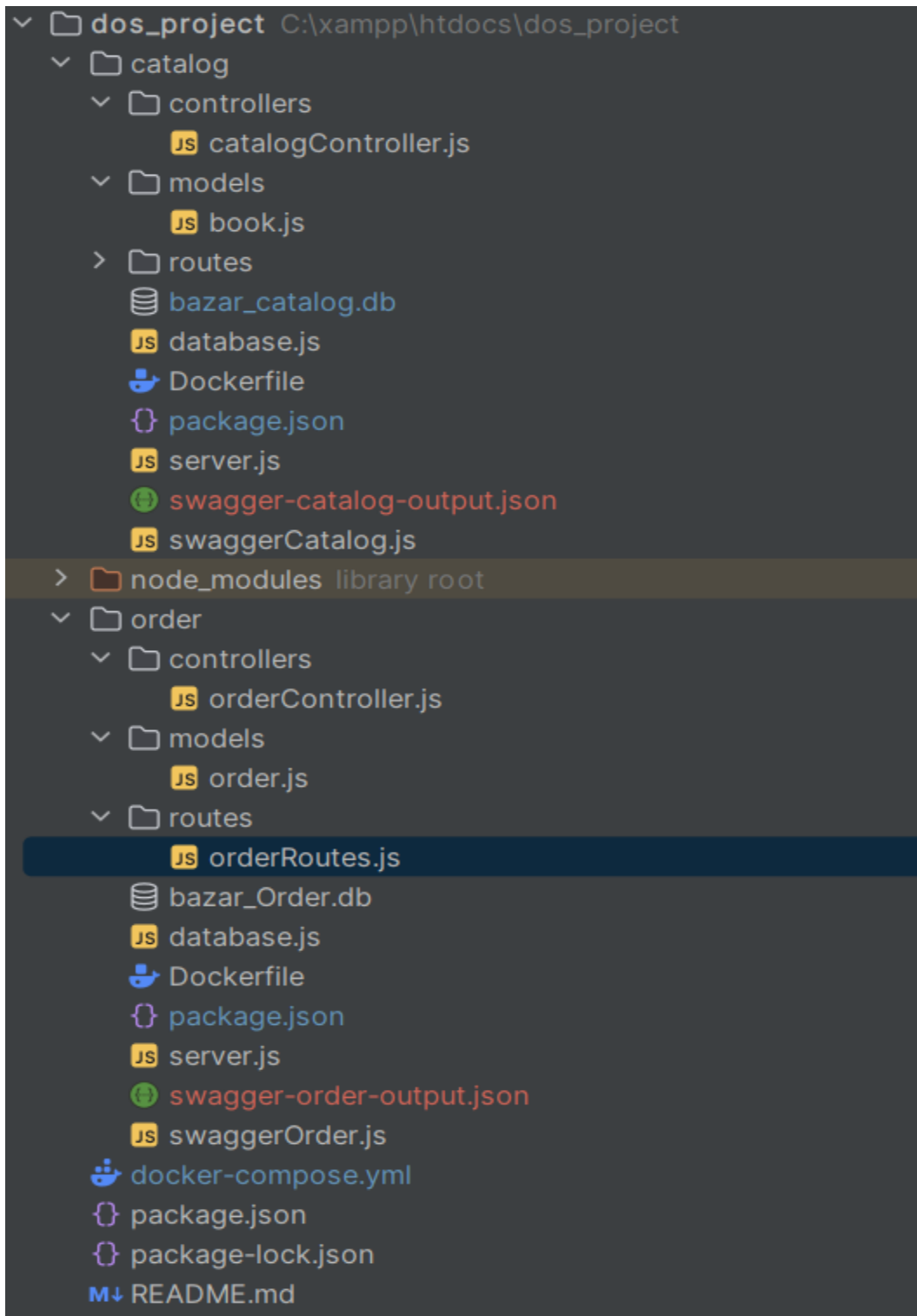


Report Part 1

file structure

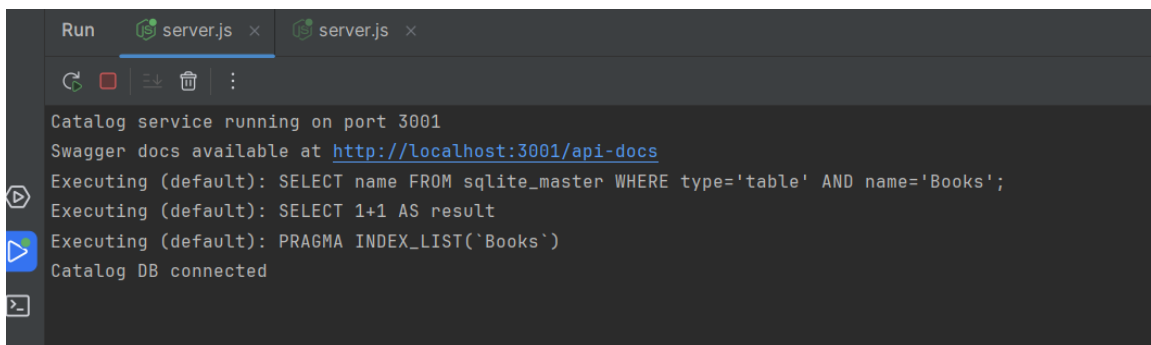


Report Part 1

Technologies Used

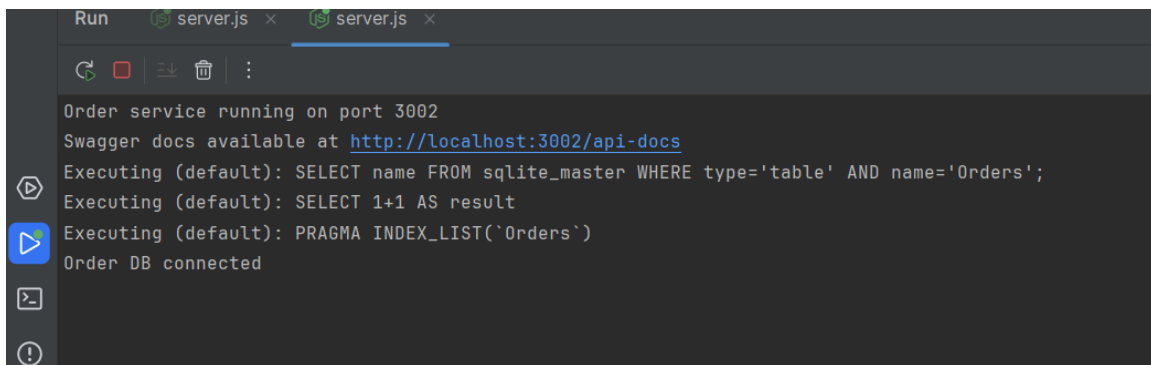
- **Node.js** with **Express.js** for backend services
- **Sequelize ORM** for database management
- **SQLite** as a lightweight database
- **MVC Pattern** for code organization
- **Docker** for containerization and environment management
- **Swagger UI** for API documentation(swagger-autogen)
- RESTful API design for communication

1-



```
Run  server.js x  server.js x
Catalog service running on port 3001
Swagger docs available at http://localhost:3001/api-docs
Executing (default): SELECT name FROM sqlite_master WHERE type='table' AND name='Books';
Executing (default): SELECT 1+1 AS result
Executing (default): PRAGMA INDEX_LIST('Books')
Catalog DB connected
```

2-



```
Run  server.js x  server.js x
Order service running on port 3002
Swagger docs available at http://localhost:3002/api-docs
Executing (default): SELECT name FROM sqlite_master WHERE type='table' AND name='Orders';
Executing (default): SELECT 1+1 AS result
Executing (default): PRAGMA INDEX_LIST('Orders')
Order DB connected
```

Report Part 1

http://localhost:3001/api-docs/

Schemes
HTTP

default ^

GET	/catalog/search/{topic}	▼
GET	/catalog/info/{id}	▼
POST	/catalog/add	▼
PUT	/catalog/update/{id}	▼
DELETE	/catalog/delete/{id}	▼

Test:

GET /catalog/info/{id} ^

Parameters Cancel

Name	Description
id * required	
string	2
(path)	

Execute Clear

Responses Response content type application/json ▼

Curl

```
curl -X 'GET' \
  'http://localhost:3001/catalog/info/2' \
  -H 'accept: application/json'
```

Request URL

```
http://localhost:3001/catalog/info/2
```

Server response

Code	Details
200	<p>Response body</p> <pre>{ "id": 2, "title": "Database Systems", "topic": "database", "quantity": 9, "price": 30.5 }</pre> Download

Report Part 1

<http://localhost:3002/api-docs/>

REST API 1.0.0 OAS 2.0
[Base URL: localhost:3002/]

Schemes
HTTP

default

POST /order/purchase/{id}

PUT /order/update-stock/{id}

Test:

POST /order/purchase/{id}

Parameters

Name	Description
id * required	
string	3
(path)	

Execute Clear

Responses

Response content type application/json

Curl

curl -X 'POST' \n 'http://localhost:3002/order/purchase/3' \n -H 'accept: application/json' \n -d ''

Request URL

http://localhost:3002/order/purchase/3

Server response

Code	Details
200	<div>Response body</div> <div>{\n "message": "Book purchased successfully",\n "order": {\n "id": 5,\n "bookId": "3",\n "quantity": 1\n }\n}</div> <div>Download</div>

Response headers

Report Part 1

Dokcer:

```
1  version: '3'
2
3  >> services:
4  > catalog_api:
5  >   build:
6  >     context: ./catalog
7  >   ports:
8  >     - "3001:3001"
9  >   container_name: catalog_service
10
11 > order_api:
12 >   build:
13 >     context: ./order
14 >   ports:
15 >     - "3002:3002"
16 >   container_name: order_service
17
```

```
PS C:\xampp\htdocs\dos_project> docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS        NAMES
PS C:\xampp\htdocs\dos_project> docker-compose up --build -d
```

Report Part 1

```
=> [order_api] resolving provenance for metadata file
=> [catalog_api] resolving provenance for metadata file
[+] Running 2/2
✓ Container catalog_service Started
✓ Container order_service Started
PS C:\xampp\htdocs\dos_project>
```

☐ Only show running containers Delete ▶ ⏸ □

<input checked="" type="checkbox"/>	Name	Image	Status	Port(s)	CPU (%)	La	Actions
<input checked="" type="checkbox"/>	dos_project		Running (2/5)		0%	14	□ ⋮ 🗑
<input checked="" type="checkbox"/>	eloquent_ellis c0d904cc2735	dos_project-catalog_service:latest	Exited (137)		0%	15	▶ ⋮ 🗑
<input checked="" type="checkbox"/>	elegant_shannon bc8d3e967aca	dos_project-catalog_service:latest	Exited (137)		0%	15	▶ ⋮ 🗑

Docker

Docker-compose: dos_project

catalog_api

catalog_service

order_api

Docker-compose: rentitout

Dev Containers

Containers

elegant_moser

exciting_cray

feature_flag

Docker-compose: dos_project Running: (2/3)

Start All

Restart

Stop

Down

eloquent_shannon: Executing (default): CREATE TABLE IF NOT EXISTS BOOKS (ID INTEGER PRIMARY KEY AUTOINCREMENT, TITLE

elegant_shannon: Catalog DB connected

elegant_shannon: Executing (default): PRAGMA INDEX_LIST('Books')

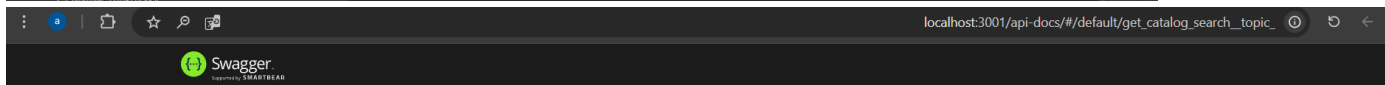
elegant_shannon: Catalog service running on port 3001

elegant_shannon: Executing (default): SELECT name FROM sqlite_master WHERE type='table' AND name='Books';

elegant_shannon: Executing (default): SELECT 1+1 AS result

elegant_shannon: Executing (default): PRAGMA INDEX_LIST('Books')

elegant_shannon: Catalog DB connected



REST API 1.0.0 OAS 2.0

[Base URL: localhost:3001/]

Schemes

HTTP

default

GET	/catalog/search/{topic}
Parameters	
Try it out	
Name	Description
topic * required	topic
string	(path)
Responses	
Response content type application/json	
Code	Description
200	OK
500	Internal Server Error

Its Run !!