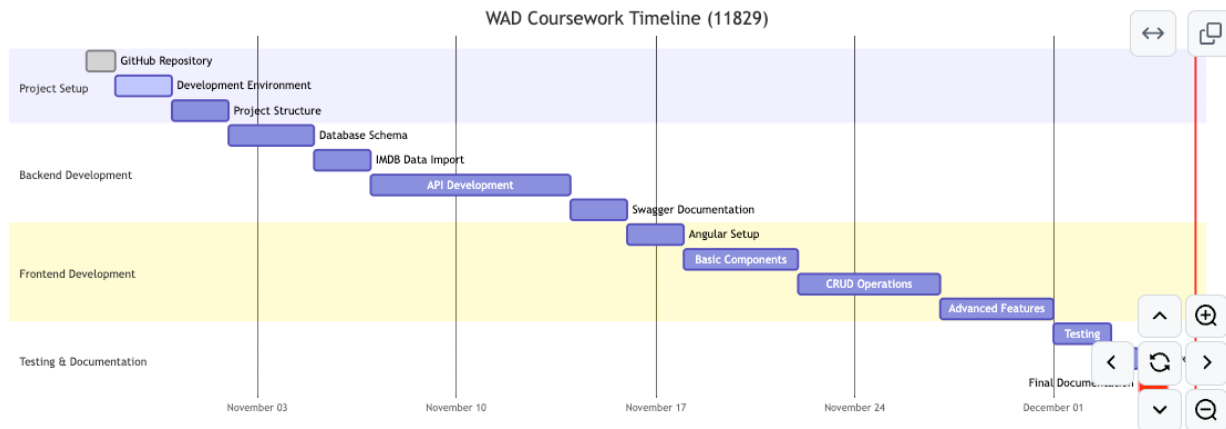


This document is a coursework report for the Web Applications Development (WAD) module by the student with ID 00011829 for Semester 1 at Westminster International University in Tashkent (WIUT).

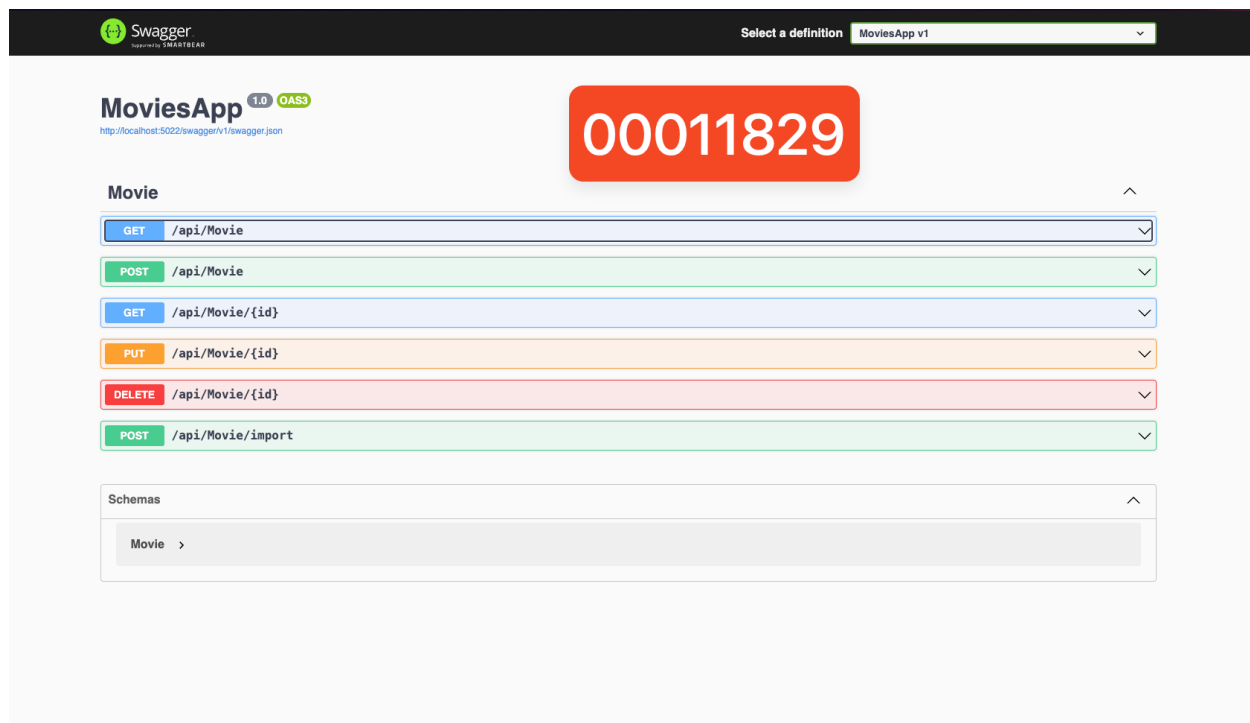
Development plan:



(Of course, I couldn't follow the timeline, but I managed to create this chart at the start of November, and can be seen in the coursework's GitHub repository).

API (Backend) screenshots

Here is the screenshot of my Swagger UI after everything was set up successfully and no endpoints were run yet:



Since my app is a movies app, I decided to use [the IMDB top 1000 movies dataset from Kaggle](#). It was in a CSV format, so I wrote a quick python script to convert it into a desirable JSON format (suitable for my application, see scripts/csv_to_json.py file). Then, I created the necessary components to enable the “Import” endpoint in the API. The below screenshot shows the swagger Ui state after I click on “Try it out” and then “Execute”:

POST

/api/Movie/import

11829

Cancel

Parameters

No parameters

Execute

Clear

Responses

Curl

```
curl -X 'POST' \
  'http://localhost:5022/api/Movie/import' \
  -H 'accept: */*' \
  -d ''
```

Request URL

```
http://localhost:5022/api/Movie/import
```

Server response

Code	Details
200	<div>Response body</div> <div>Movies imported successfully</div> <div>Download</div> <div>Response headers</div> <div><pre>content-type: text/plain; charset=utf-8 date: Thu, 05 Dec 2024 18:09:35 GMT server: Kestrel transfer-encoding: chunked</pre></div>

Responses

Code	Description	Links
200	Success	No links

As you can see, I got a success message telling me the movies were imported. So, let's check out one of the movies (this is the GET endpoint before running it):

MoviesApp 1.0 OAS3

http://localhost:5022/swagger/v1/swagger.json

11829

Movie

GET

/api/Movie

Try it out

Parameters

No parameters

Responses

Code	Description	Links
200	Success	No links

Media type

text/plain

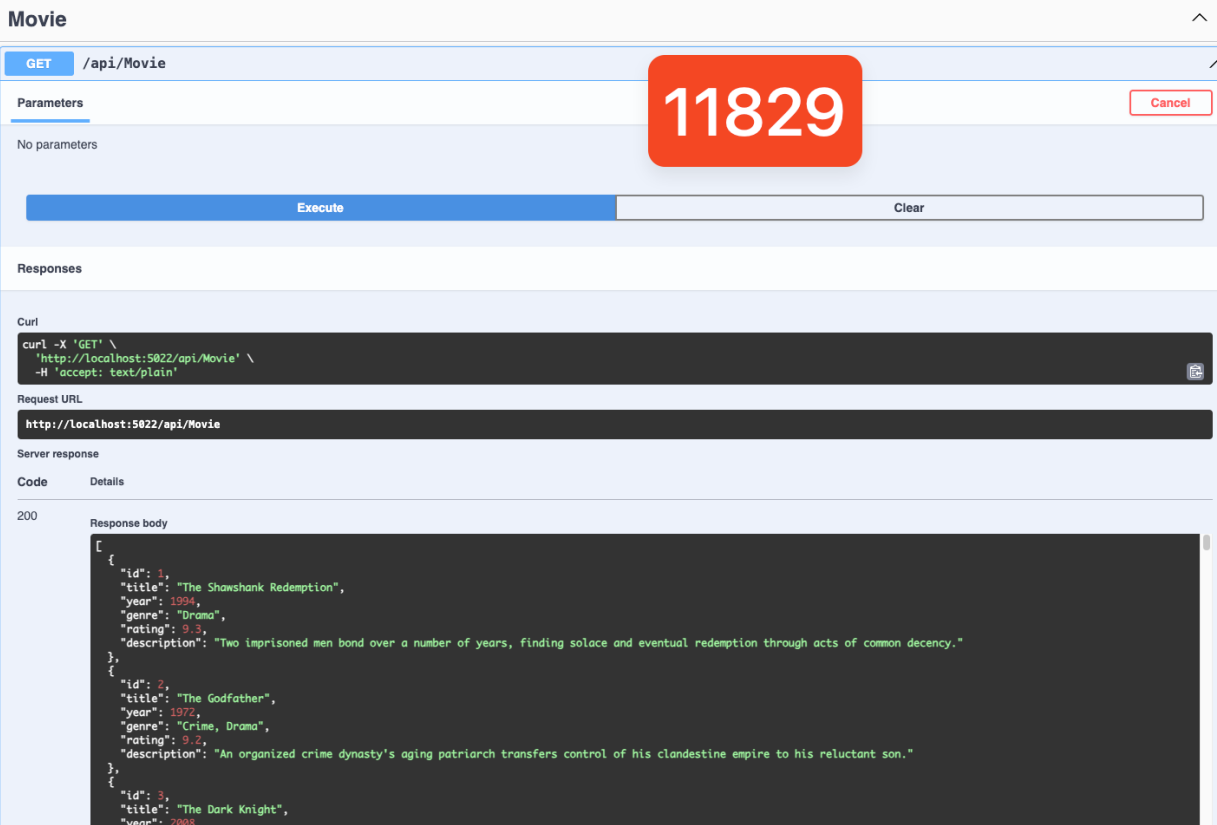
Controls Accept header.

Example Value

Schema

```
[
  {
    "id": 0,
    "title": "string",
    "year": 0,
    "genre": "string",
    "rating": 10,
    "description": "string"
  }
]
```

Here is the same endpoint after running it:



The screenshot shows a REST client interface with the following sections:

- Movie** (Title bar)
- GET /api/Movie** (Method and URL bar)
- Parameters** (Tab): No parameters. A red box with the number **11829** is overlaid on this section.
- Execute** (Button)
- Clear** (Button)
- Responses** (Section header)
- Curl** (Text area):

```
curl -X 'GET' \  
  'http://localhost:5022/api/Movie' \  
  -H 'accept: text/plain'
```
- Request URL** (Text area): `http://localhost:5022/api/Movie`
- Server response** (Section header)
- Code** (Tab):
 - 200** (Status code)
 - Response body** (Text area):

```
{  
  "id": 1,  
  "title": "The Shawshank Redemption",  
  "year": 1994,  
  "genre": "Drama",  
  "rating": 9.3,  
  "description": "Two imprisoned men bond over a number of years, finding solace and eventual redemption through acts of common decency."  
},  
{  
  "id": 2,  
  "title": "The Godfather",  
  "year": 1972,  
  "genre": "Crime, Drama",  
  "rating": 9.2,  
  "description": "An organized crime dynasty's aging patriarch transfers control of his clandestine empire to his reluctant son."  
},  
{  
  "id": 3,  
  "title": "The Dark Knight",  
  "year": 2008,  
  "genre": "Action, Crime, Drama"
```

As you can see, the imported movies are present. Now, I will try to add a new movie with a POST request:

MoviesApp1.0OAS3

http://localhost:5022/swagger/v1/swagger.json

11829

Movie

GET/api/Movie

POST/api/Movie

Parameters

No parameters

Request body

application/json

Example Value | Schema

```
{
  "id": 0,
  "title": "string",
  "year": 0,
  "genre": "string",
  "rating": 10,
  "description": "string"
}
```

Responses

Code	Description	Links
200	Success	No links

After:

POST /api/Movie

Parameters Cancel Reset

No parameters

Request body application/json

```
{
  "id": 1001,
  "title": "Extraction 2",
  "year": 2023,
  "genre": "Action",
  "rating": 7,
  "description": "Back from the brink of death, commando Tyler Rake embarks on a dangerous mission to save a ruthless gangster's imprisoned family."
}
```

11829

Execute Clear

Responses

Curl

```
curl -X 'POST' \
  'http://localhost:5022/api/Movie' \
  -H 'accept: text/plain' \
  -H 'Content-Type: application/json' \
  -d '{
    "id": 1001,
    "title": "Extraction 2",
    "year": 2023,
    "genre": "Action",
    "rating": 7,
    "description": "Back from the brink of death, commando Tyler Rake embarks on a dangerous mission to save a ruthless gangster's imprisoned family."
  }'
```

Request URL

<http://localhost:5022/api/Movie>

Server response

Code Details

201 Undocumented

Response body

```
{
  "id": 1001,
  "title": "Extraction 2",
  "year": 2023,
  "genre": "Action",
  "rating": 7,
  "description": "Back from the brink of death, commando Tyler Rake embarks on a dangerous mission to save a ruthless gangster's imprisoned family."
}
```

Response headers

```
content-type: application/json; charset=utf-8
date: Thu, 05 Dec 2024 18:28:21 GMT
location: http://localhost:5022/api/Movie/1001
server: Kestrel
transfer-encoding: chunked
```

Responses

Code	Description	Links
------	-------------	-------

Now, I will try to get a movie using its ID. Let me try the one I just added with id 1001:

Before:

GET

/api/Movie/{id}

^

Parameters

Cancel

Name	Description
id required	
integer(\$int32)	
(path)	

1001

11829

Execute

Responses

Code	Description	Links
200	Success	No links

Media type

text/plain

Controls Accept header

Example Value | Schema

```
{
  "id": 0,
  "title": "string",
  "year": 0,
  "genre": "string",
  "rating": 10,
  "description": "string"
}
```

After:

GET

/api/Movie/{id}

Parameters

Cancel

Name	Description
id <small>required</small>	
integer(int32)	1001
(path)	

Execute

Clear

Responses

Curl

curl -X 'GET' \
'http://localhost:5022/api/Movie/1001' \
-H 'accept: text/plain'

Request URL

http://localhost:5022/api/Movie/1001

Server response

Code	Details
200	<div><div>Response body</div><div><pre>{ "id": 1001, "title": "Extraction 2", "year": 2023, "genre": "Action", "rating": 7, "description": "Back from the brink of death, commando Tyler Rake embarks on a dangerous mission to save a ruthless gangster's imprisoned family." }</pre></div><div><div>Download</div></div></div> <div><div>Response headers</div><div><pre>content-type: application/json; charset=utf-8 date: Thu, 05 Dec 2024 18:39:34 GMT server: Kestrel transfer-encoding: chunked</pre></div></div>

Responses

Code	Description	Links
200	Success	No links

Media type

text/plain

Controls Accept header.

Now, I will update the details of one of the films using a PUT request:

Before:

PUT

/api/Movie/{id}

Cancel

Reset

Parameters

Name	Description
id <small>required</small>	
<small>integer(int32)</small>	<input type="text" value="123"/>
<small>(path)</small>	<div>11829</div>

Request body

application/json

```
{
  "id": 123,
  "title": "This is a new title",
  "year": 10000,
  "genre": "No genre",
  "rating": 10,
  "description": "string"
}
```

Execute

Responses

Code	Description	Links
200	Success	No links

As you can see, I am updating a movie with 123 ID with some gibberish content. Here is what the endpoint looks like after execution:

```
{
  "id": 123,
  "title": "This is a new title",
  "year": 10000,
  "genre": "No genre",
  "rating": 10,
  "description": "string"
}
```

11829

ExecuteClear

Responses

Curl

```
curl -X 'PUT' \
  'http://localhost:5022/api/Movie/123' \
  -H 'accept: */*' \
  -H 'Content-Type: application/json' \
  -d '{
    "id": 123,
    "title": "This is a new title",
    "year": 10000,
    "genre": "No genre",
    "rating": 10,
    "description": "string"
  }'
```

Request URL

```
http://localhost:5022/api/Movie/123
```

Server response

Code	Details
204	<div>Response headers<pre>date: Thu, 05 Dec 2024 18:33:18 GMT server: Kestrel</pre></div>

Responses

Code	Description	Links
200	Success	No links

Now, I will delete this movie since it makes no sense to keep it in my database:

Before:

DELETE /api/Movie/{id}

Parameters

Name	Description
id * required	
integer(int32)	
(path)	

123

11829

Execute

Responses

Code	Description	Links
200	Success	No links

After:

DELETE

/api/Movie/{id}

⌵

Parameters

Cancel

Name	Description
id required	
integer(\$int32)	123
(path)	

11829

ExecuteClear

Responses

Curl

```
curl -X 'DELETE' \
'http://localhost:5022/api/Movie/123' \
-H 'accept: */*'
```

Request URL

```
http://localhost:5022/api/Movie/123
```

Server response

Code	Details
204	

Undocumented

Response headers

```
date: Thu, 05 Dec 2024 18:34:39 GMT
server: Kestrel
```

Responses

Code	Description	Links
200	Success	No links

To double-check, let's do a GET request for that deleted movie:

GET

/api/Movie/{id}

⌵

Parameters

Cancel

Name	Description
id required	
integer(int32)	123
(path)	

Execute

Clear

Responses

Curl

```
curl -X 'GET' \
'http://localhost:5022/api/Movie/123' \
-H 'accept: text/plain'
```

Request URL

```
http://localhost:5022/api/Movie/123
```

Server response

Code	Details
404	Undocumented Error: Not Found

Response body

```
{
  "type": "https://tools.ietf.org/html/rfc9110#section-15.5.5",
  "title": "Not Found",
  "status": 404,
  "traceId": "00-55a0b79f8037932094d3adeb698a0fd8-62aa49a937854cf-d-00"
}
```

Download

Response headers

```
content-type: application/problem+json; charset=utf-8
date: Thu, 05 Dec 2024 18:35:59 GMT
server: Kestrel
transfer-encoding: chunked
```

Responses

Code	Description	Links
200	Success	No links

Media type

text/plain

Controls Accept header.

Example Value | Schema

As you can see, I got a not found error.