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Jurnal 9 Code_Reuse_and_Libraries

I. Link Github

<https://github.com/faishalstwn>

II. Source code

Moviescontroller.cs

```
using Microsoft.AspNetCore.Mvc;  
using Jurnal9.Models;  
using System.Collections.Generic;
```

- Microsoft.AspNetCore.Mvc: Digunakan untuk membuat Web API Controller.
- Jurnal9.Models: Namespace di mana class Movie berada.
- System.Collections.Generic: Untuk menggunakan List<T>.

```
[ApiController]  
[Route("api/[controller]")]  
0 references  
public class MoviesController : ControllerBase  
{
```

- ApiController: Menandakan bahwa ini adalah controller khusus Web API.
- [Route("api/[controller]")]: Routing otomatis. [controller] akan diganti dengan nama controller (movies), jadi rute dasarnya adalah api/movies.
- ControllerBase: Kelas dasar untuk controller Web API (tanpa fitur view seperti MVC).

```
private static List<Movie> Movies = new List<Movie>
```

Daftar Movie disimpan dalam memori.

Masing-masing Movie memiliki: Title, Director, Stars (list nama aktor), dan Description.

```
[HttpGet]
0 references
public IActionResult GetAll()
{
    return Ok(Movies);
}
```

- endpoint: GET /api/movies
- Mengembalikan seluruh list movie dalam format JSON.

```
[HttpGet("{id}")]
1 reference
public IActionResult GetById(int id)
{
    if (id < 0 || id >= Movies.Count)
        return NotFound();
    return Ok(Movies[id]);
}
```

- Endpoint: GET /api/movies/{id}
- Mengambil 1 movie berdasarkan index-nya di list.
- Jika id tidak valid (di luar batas list), akan mengembalikan 404 NotFound.

```
[HttpPost]
0 references
public IActionResult Add(Movie movie)
{
    Movies.Add(movie);
    return CreatedAtAction(nameof(GetById), new { id = Movies.Count - 1 }, movie);
}
```

- Endpoint: POST /api/movies
- Menerima data movie dari body request (dalam format JSON), menambahkannya ke list.
- CreatedAtAction mengembalikan 201 Created dengan lokasi dan data movie yang baru ditambahkan.

```

[HttpDelete("{id}")]
0 references
public IActionResult Delete(int id)
{
    if (id < 0 || id >= Movies.Count)
        return NotFound();
    Movies.RemoveAt(id);
    return NoContent();
}

```

- Endpoint: DELETE /api/movies/{id}
- Menghapus movie dari list berdasarkan index.
- Jika tidak ditemukan, mengembalikan 404 NotFound. Jika berhasil, mengembalikan 204 NoContent.

Program.cs

```

var builder = WebApplication.CreateBuilder(args);

// Add services
builder.Services.AddControllers();
builder.Services.AddEndpointsApiExplorer();
builder.Services.AddSwaggerGen();

var app = builder.Build();

// Enable Swagger
if (app.Environment.IsDevelopment())
{
    app.UseSwagger();
    app.UseSwaggerUI();
}

app.UseHttpsRedirection();
app.UseAuthorization();
app.MapControllers();
app.Run();

```

Membuat W

ebApplication Builder:

```
var builder = WebApplication.CreateBuilder(args);
```

Membuat builder untuk mengatur konfigurasi aplikasi, dependency injection, dan environment.

Menambahkan Layanan (Services) ke Container DI:

```
builder.Services.AddControllers();
```

Menambahkan support untuk Web API Controller ([ApiController]).

```
builder.Services.AddEndpointsApiExplorer();
```

- Mendukung eksplorasi endpoint untuk dokumentasi (digunakan oleh Swagger).

```
builder.Services.AddSwaggerGen();
```

Menambahkan layanan untuk Swagger, yaitu dokumentasi interaktif untuk API

Build Aplikasi:

```
var app = builder.Build();
```

- Membuat WebApplication dari konfigurasi yang sudah disiapkan.

Mengaktifkan Swagger di Mode Development:

```
if (app.Environment.IsDevelopment())  
{  
    app.UseSwagger();  
    app.UseSwaggerUI();  
}
```

- Hanya menjalankan Swagger jika environment-nya adalah Development.
- UseSwagger() untuk menghasilkan file JSON dokumentasi.
- UseSwaggerUI() untuk menampilkan halaman Swagger interaktif di browser.

III.Output

GET

/api/Movies

```
'https://localhost:7145/api/Movies' \
-N 'accept: */*'

```

Request URL

https://localhost:7145/api/Movies

Server response

Code

Details

200

Response body

```
{
  "title": "The Shawshank Redemption",
  "director": "Frank Darabont",
  "stars": [
    "Tim Robbins",
    "Morgan Freeman"
  ],
  "description": "Two imprisoned men bond over a number of years."
},
{
  "title": "The Godfather",
  "director": "Francis Ford Coppola",
  "stars": [
    "Marlon Brando",
    "Al Pacino"
  ],
  "description": "The aging patriarch of an organized crime dynasty transfers control to his reluctant son."
},
{
  "title": "The Dark Knight",
  "director": "Christopher Nolan",
  "stars": [
    "Christian Bale",
    "Heath Ledger"
  ],
  "description": "Batman battles the Joker who seeks to undermine Gotham."
}

```

Download

Response headers

```
content-type: application/json; charset=utf-8
date: Thu, 01 May 2025 15:04:50 GMT
server: Festrel

```

POST

/api/Movies

Request URL

https://localhost:7145/api/Movies

Server response

Code

Details

201

undocumented

Response body

```
{
  "title": "12 Angry Men",
  "director": "Sidney Lumet",
  "stars": [
    "Henry Fonda",
    "Lee J. Cobb"
  ],
  "description": "A jury holdout attempts to prevent a miscarriage of justice."
}

```

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Response headers

```
content-type: application/json; charset=utf-8
date: Thu, 01 May 2025 15:16:27 GMT
location: https://localhost:7145/api/Movies/3
server: Kestrel

```

Responses

Code	Description	Links
200	OK	No links

GET

/api/Movies/{id}

integer(\$int32) 2
(path)

Execute

Clear

Responses

Curl

curl -X 'GET' \n'https://localhost:7145/api/Movies/2' \n-H 'accept: */*'

Request URL

https://localhost:7145/api/Movies/2

Server response

Code

Details

200

Response body

{\n "title": "The Dark Knight",\n "director": "Christopher Nolan",\n "stars": [\n "Christian Bale",\n "Heath Ledger"\n],\n "description": "Batman battles the Joker who seeks to undermine Gotham."\n}

Download

Response headers

DELETE

/api/Movies/{id}

Parameters

Cancel

Name

Description

id * required

integer(\$int32) 1

(path)

Execute

Clear

Responses

Curl

curl -X 'DELETE' \n'https://localhost:7145/api/Movies/1' \n-H 'accept: */*'

Request URL

https://localhost:7145/api/Movies/1

Server response

Code

Details

204

Response headers

date: Thu, 01 May 2025 15:19:02 GMT\nserver: Kestrel