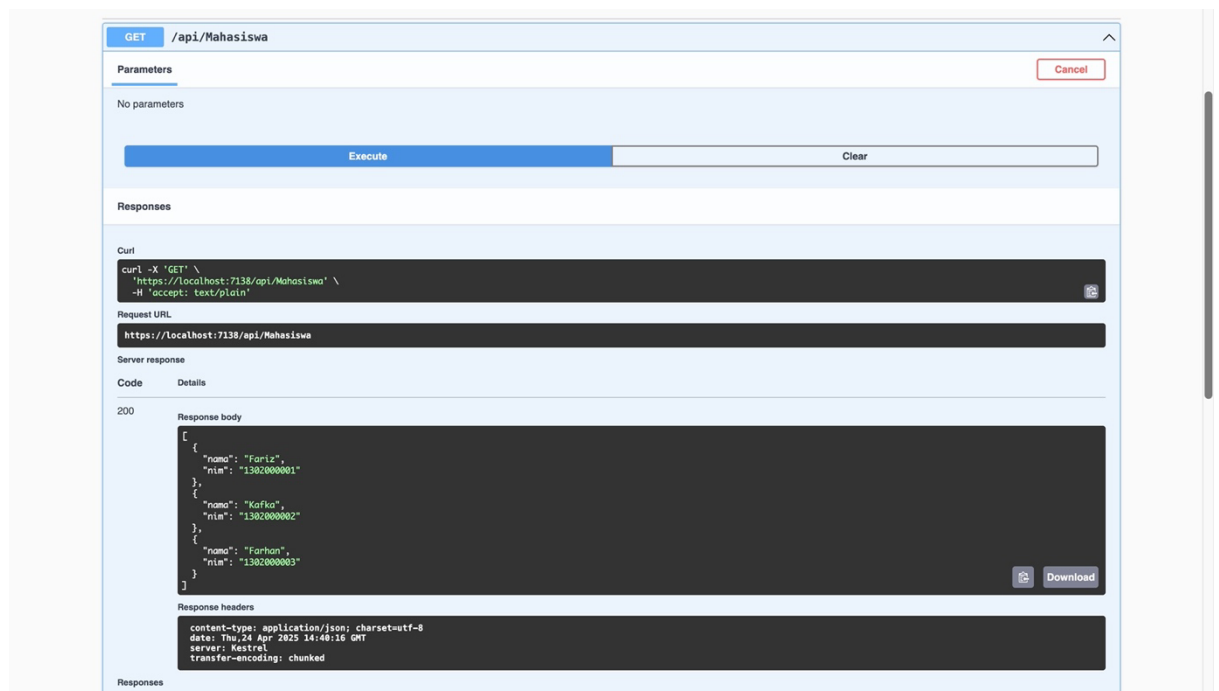


Nama: Ahmad Al – Farizi

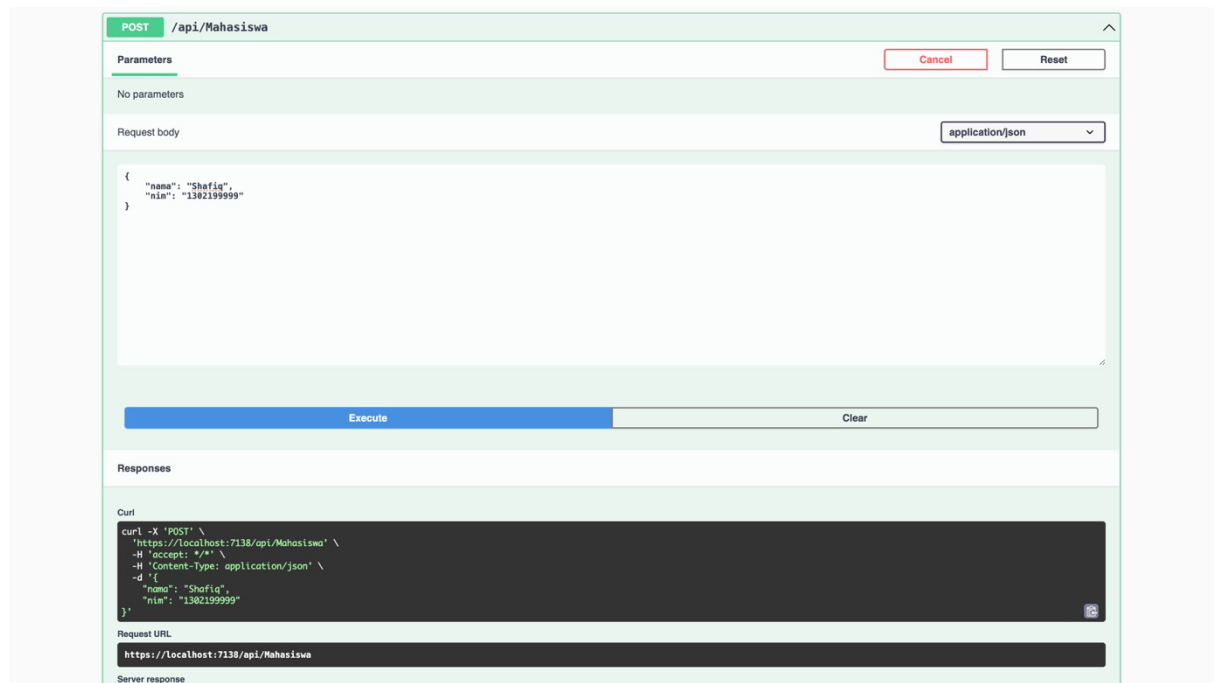
NIM: 2311104054

- i. Link Github: https://github.com/alxfarizi/KPL_AHMAD-AL-FARIZI_2311104054_SISE-07-02/tree/main/09_API_Design_dan_Construction_Using_Swagger/TP/tpmodul9_2311104054/tpmodul9_2311104054/Controllers

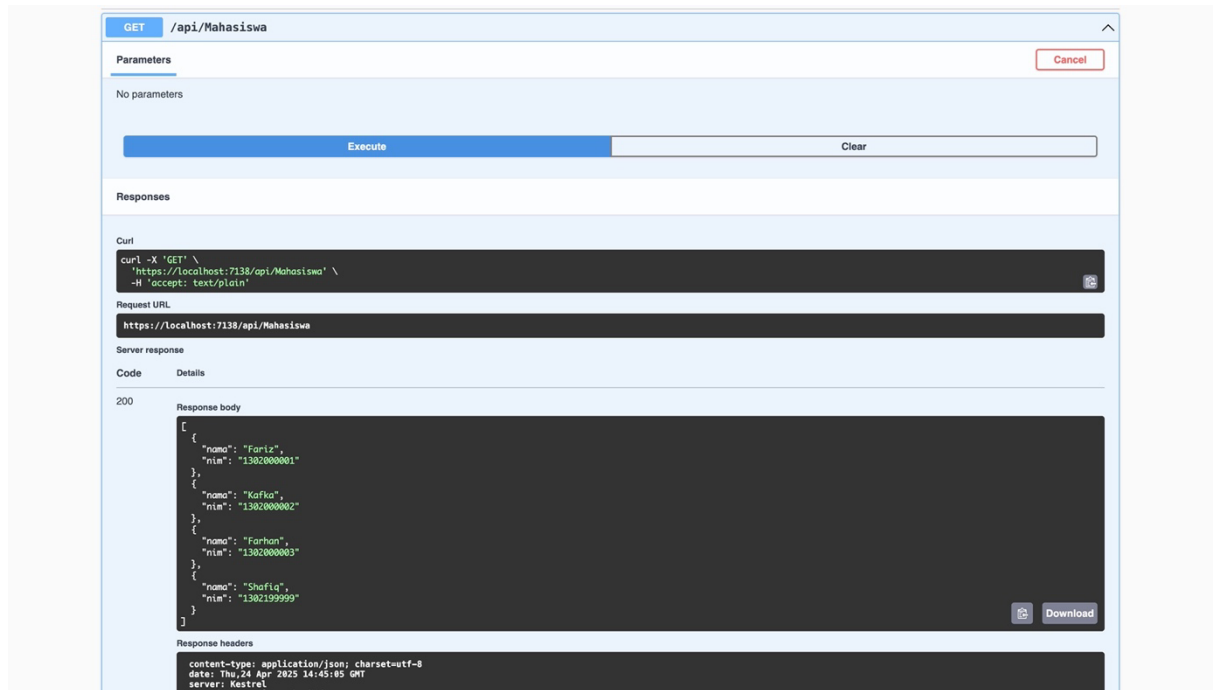
- ii. Hasil Running:



Menambahkan mahasiswa dengan nama dan nim:



Cek list dari penambahan mahasiswa:



GET /api/Mahasiswa

Parameters

No parameters

Execute Clear

Responses

Curl

```
curl -X 'GET' \
'https://localhost:7138/api/Mahasiswa' \
-H 'accept: text/plain'
```

Request URL

```
https://localhost:7138/api/Mahasiswa
```

Server response

Code Details

200

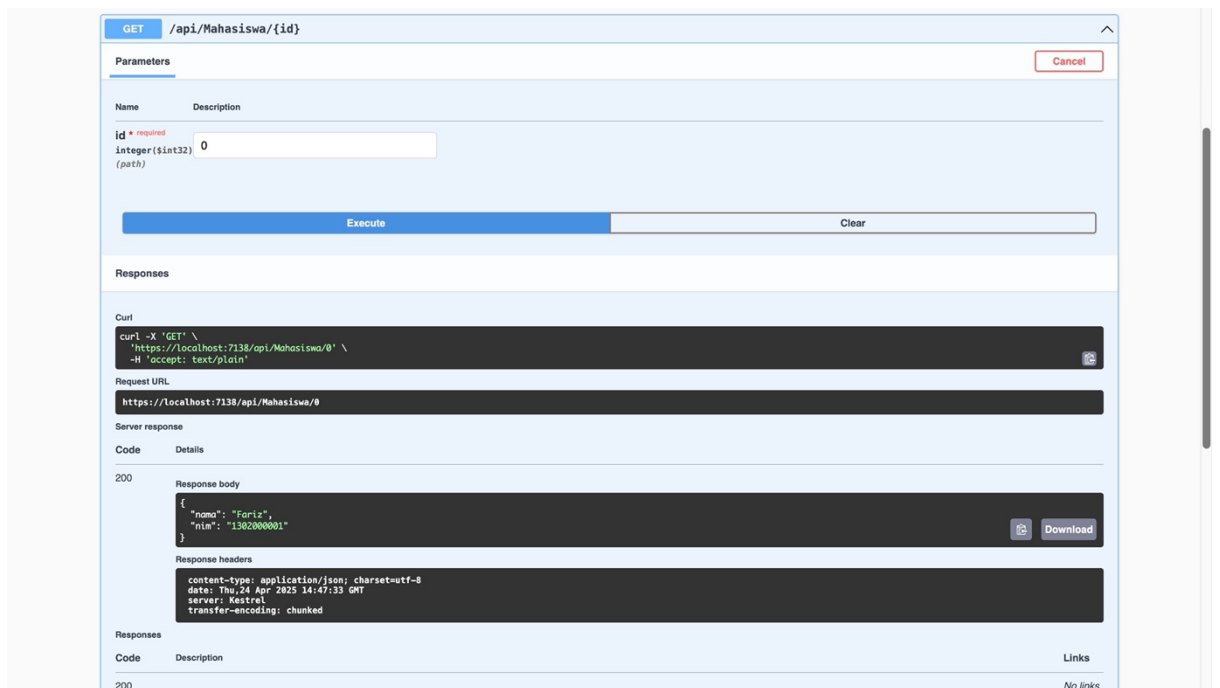
Response body

```
[
  {
    "nama": "Fariz",
    "nim": "1302000001"
  },
  {
    "nama": "Kafka",
    "nim": "1302000002"
  },
  {
    "nama": "Farhan",
    "nim": "1302000003"
  },
  {
    "nama": "Shafiq",
    "nim": "1302199999"
  }
]
```

Response headers

```
content-type: application/json; charset=utf-8
date: Thu, 24 Apr 2025 14:45:55 GMT
server: Kestrel
```

Menampilkan nama dan nim mahasiswa dengan menggunakan index(0) nya:



GET /api/Mahasiswa/{id}

Parameters

Name Description

id * required integer(\$int32) (path) 0

Execute Clear

Responses

Curl

```
curl -X 'GET' \
'https://localhost:7138/api/Mahasiswa/0' \
-H 'accept: text/plain'
```

Request URL

```
https://localhost:7138/api/Mahasiswa/0
```

Server response

Code Details

200

Response body

```
{
  "nama": "Fariz",
  "nim": "1302000001"
}
```

Response headers

```
content-type: application/json; charset=utf-8
date: Thu, 24 Apr 2025 14:47:33 GMT
server: Kestrel
transfer-encoding: chunked
```

Responses

Code	Description	Links
200		No links

Menghapus mahasiswa dengan index(3) nya:

DELETE /api/Mahasiswa/{id}

Parameters

Name	Description
id * required integer(\$int32) (path)	3

Execute Clear

Responses

Curl

```
curl -X 'DELETE' \
'https://localhost:7138/api/Mahasiswa/3' \
-H 'accept: */*'
```

Request URL

```
https://localhost:7138/api/Mahasiswa/3
```

Server response

Code	Details
200	<p>Response headers</p> <pre>content-length: 8 date: Thu, 24 Apr 2025 14:49:49 GMT server: Kestrel</pre>

Responses

Code	Description	Links
200	Success	No links

WeatherForecast

Cek list dari penghapusan mahasiswa:

GET /api/Mahasiswa

Parameters

No parameters

Execute Clear

Responses

Curl

```
curl -X 'GET' \
'https://localhost:7138/api/Mahasiswa' \
-H 'accept: text/plain'
```

Request URL

```
https://localhost:7138/api/Mahasiswa
```

Server response

Code	Details
200	<p>Response body</p> <pre>[{ "nama": "Foriz", "nim": "1302000001" }, { "nama": "Kafka", "nim": "1302000002" }, { "nama": "Farhan", "nim": "1302000003" }]</pre> <p>Response headers</p> <pre>content-type: application/json; charset=utf-8 date: Thu, 24 Apr 2025 14:49:49 GMT server: Kestrel transfer-encoding: chunked</pre>

Responses

Download

iii. Penjelasan Source Code:

Kelas MahasiswaController.cs di dalam folder Controller:

```
1  using System;
2  using Microsoft.AspNetCore.Mvc;
3
4  namespace MahasiswaAPI.Controllers
5  {
6      [Route("api/[controller]")]
7      [ApiController]
8      public class MahasiswaController : ControllerBase
9      {
10         private static List<Mahasiswa> mahasiswas = new List<Mahasiswa>
11         {
12             new Mahasiswa { Nama = "Fariz", Nim = "1302000001" },
13             new Mahasiswa { Nama = "Kafka", Nim = "1302000002" },
14             new Mahasiswa { Nama = "Farhan", Nim = "1302000003" }
15         };
16
17         [HttpGet]
18         public ActionResult<IEnumerable<Mahasiswa>> Get()
19         {
20             return mahasiswas;
21         }
22
23         [HttpGet("{id}")]
24         public ActionResult<Mahasiswa> Get(int id)
25         {
26             if (id >= 0 && id < mahasiswas.Count)
27             {
28                 return mahasiswas[id];
29             }
30             return NotFound();
31         }
32
33         [HttpPost]
34         public void Post([FromBody] Mahasiswa value)
35         {
36             mahasiswas.Add(value);
37         }
38
39         [HttpDelete("{id}")]
40         public void Delete(int id)
41         {
42             if (id >= 0 && id < mahasiswas.Count)
43             {
44                 mahasiswas.RemoveAt(id);
45             }
46         }
47     }
48
49     public class Mahasiswa
50     {
51         public string Nama { get; set; }
52         public string Nim { get; set; }
53     }
54 }
```

Source code tersebut adalah API controller ASP.NET Core untuk mengelola data mahasiswa dengan operasi CRUD. Controller `MahasiswaController` memiliki endpoint:

1. `GET /api/mahasiswa` → Menampilkan semua mahasiswa.
2. `GET /api/mahasiswa/{id}` → Menampilkan mahasiswa berdasarkan indeks.
3. `POST /api/mahasiswa` → Menambah data mahasiswa baru.
4. `DELETE /api/mahasiswa/{id}` → Menghapus data berdasarkan indeks.

Data disimpan dalam list statis `mahasiswas` dengan model `Mahasiswa` yang memiliki properti `Nama` dan `Nim`. API ini sederhana dan tidak menggunakan database, sehingga data hanya tersimpan di memori saat aplikasi berjalan.