Nama : Haikal Fadhilah Mufid

NIM : 2311104027

Index.js

```
const express = require('express');
const cors = require('cors');
const MahasiswaRouter = require('./Mahasiswa');
const swaggerUi = require('swagger-ui-express');
const swaggerSpec = require('./swagger.json');

const server = express();
const port = 8080;

server.use(cors());
server.use(express.json());

server.use('/api/Mahasiswa', MahasiswaRouter);

server.use('/docs', swaggerUi.serve, swaggerUi.setup(swaggerSpec));

server.listen(port, () => {
  console.log(`Server aktif di http://localhost:${port}`);
  console.log(`Dokumentasi tersedia di http://localhost:${port}/docs`);
});
```

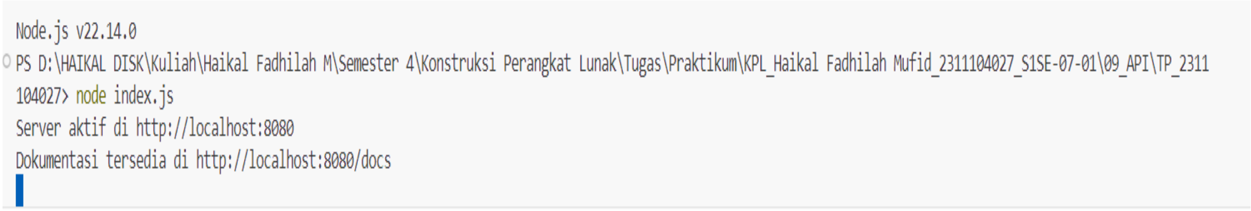
Mahasiswa.js

```
const express = require('express');
const router = express.Router();

let mahasiswaList = [
  { Nama: 'Nama Kamu', Nim: '23111040' },
  { Nama: 'Teman A', Nim: '23111040' },
  { Nama: 'Teman B', Nim: '23111040' }
];

router.get('/', (req, res) => {
  res.json(mahasiswaList);
});

router.get('/:index', (req, res) => {
  const i = parseInt(req.params.index);
  if (i >= 0 && i < mahasiswaList.length) {
    res.json(mahasiswaList[i]);
  } else {
    res.status(404).send('Mahasiswa not found');
  }
});

router.post('/', (req, res) => {
  const { Nama, Nim } = req.body;
  if (!Nama || !Nim) {
    return res.status(400).send('Data tidak lengkap');
  }
  mahasiswaList.push({ Nama, Nim });
  res.status(201).send('Mahasiswa sukses ditambahkan');
});

router.delete('/:index', (req, res) => {
  const i = parseInt(req.params.index);
  if (i >= 0 && i < mahasiswaList.length) {
    mahasiswaList.splice(i, 1);
    res.send('DELETE COMPLETE');
  } else {
    res.status(404).send('Mahasiswa not found');
  }
});

module.exports = router;
```

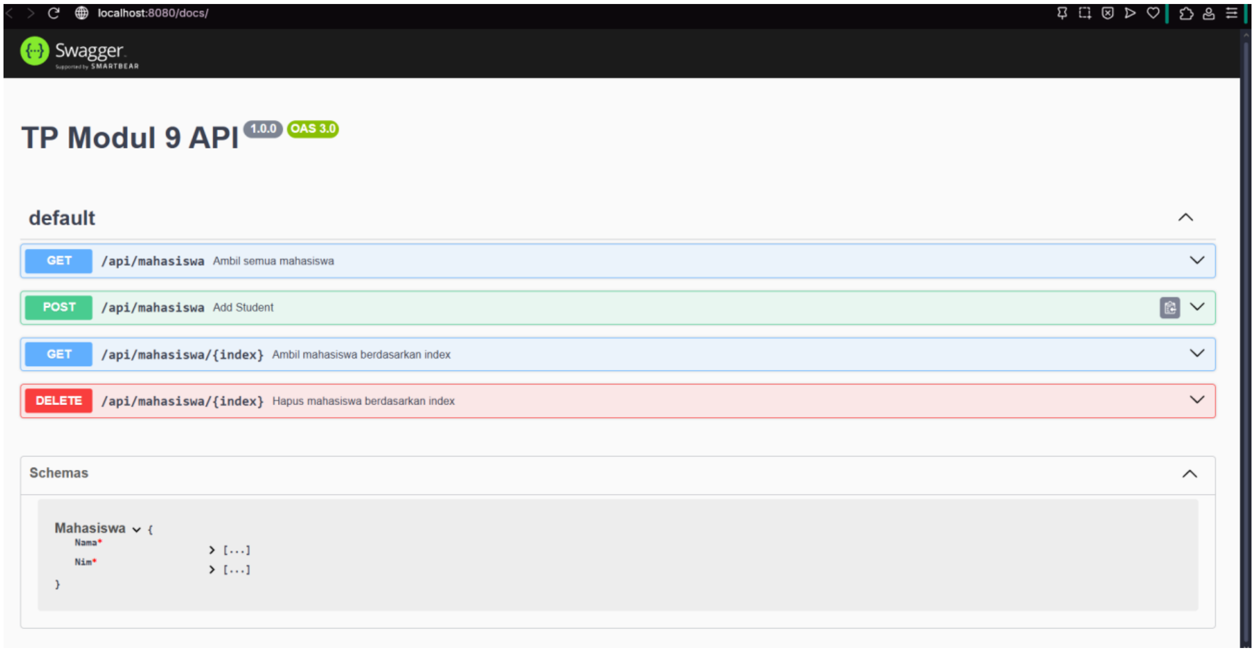
Swagger.json

```
{
  "openapi": "3.0.0",
  "info": {
    "title": "TP Modul 9 API",
    "version": "1.0.0"
  },
  "paths": {
    "/api/mahasiswa": {
      "get": {
        "summary": "Ambil semua mahasiswa",
        "responses": {
          "200": {
            "description": "Daftar mahasiswa",
            "content": {
              "application/json": {
                "schema": {
                  "type": "array",
                  "items": { "$ref": "#/components/schemas/Mahasiswa" }
                }
              }
            }
          }
        }
      },
      "post": {
        "summary": "Add Student",
        "requestBody": {
          "required": true,
          "content": {
            "application/json": {
              "schema": { "$ref": "#/components/schemas/Mahasiswa" }
            }
          }
        },
        "responses": {
          "201": { "description": "Mahasiswa ditambahkan" }
        }
      }
    },
    "/api/mahasiswa/{index}": {
      "get": {
        "summary": "Ambil mahasiswa berdasarkan index",
        "parameters": [
          {
            "name": "index",
            "in": "path",
            "required": true,
            "schema": { "type": "integer" }
          }
        ],
        "responses": {
          "200": {
            "description": "Data mahasiswa",
            "content": {
              "application/json": {
                "schema": { "$ref": "#/components/schemas/Mahasiswa" }
              }
            }
          },
          "404": { "description": "Mahasiswa Not Found" }
        }
      },
      "delete": {
        "summary": "Hapus mahasiswa berdasarkan index",
        "parameters": [
          {
            "name": "index",
            "in": "path",
            "required": true,
            "schema": { "type": "integer" }
          }
        ],
        "responses": {
          "200": { "description": "DELETE COMPLETE" },
          "404": { "description": "Mahasiswa Not Found" }
        }
      }
    }
  },
  "components": {
    "schemas": {
      "Mahasiswa": {
        "type": "object",
        "properties": {
          "Nama": { "type": "string" },
          "Nim": { "type": "string" }
        },
        "required": ["Nama", "Nim"]
      }
    }
  }
}
```

Output :



```
Node.js v22.14.0
PS D:\HAIKAL DISK\Kuliah\Haikal Fadhilah M\Semester 4\Konstruksi Perangkat Lunak\Tugas\Praktikum\KPL_Haikal Fadhilah Mufid_2311104027_S1SE-07-01\09_API\TP_2311
104027> node index.js
Server aktif di http://localhost:8080
Dokumentasi tersedia di http://localhost:8080/docs
```



TP Modul 9 API 1.0.0 OAS 3.0

default

GET /api/mahasiswa Ambil semua mahasiswa

POST /api/mahasiswa Add Student

GET /api/mahasiswa/{index} Ambil mahasiswa berdasarkan index

DELETE /api/mahasiswa/{index} Hapus mahasiswa berdasarkan index

Schemas

```
Mahasiswa ⌄ {
    Nama*        > [...]
    Nim*         > [...]
}
```