

DOKUMENTASI PROJEK PRETEST SARASTYA

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Sekolah	: SMK NEGERI 6 MALANG
Jurusan	: SIJA (SISTEM INFORMASI, JARINGAN, DAN APLIKASI)
Tanggal	: 13 Juni 2025
Nama Proyek	: Web Server Statis dengan Docker dan Nginx
Bidang PKL	: STI – Network Engineer

1. Tujuan

Membuat environment pengembangan yang mencakup instalasi Docker Desktop di Windows, menjalankan container Nginx, dan mengkonfigurasi Nginx untuk menyajikan konten web statis.

2. Prasyarat

- Windows 10/11 x64-based PC,
- Akses administrator,
- Koneksi internet,
- Docker Desktop, dan
- GitHub.

3. Langkah-langkah instalasi

- Buka CMD, dan klik sebagai *Run as Administrator*. Lalu, Aktifkan fitur Windows:
 - Windows Subsystem for Linux

```
dism.exe /online /enable-feature /featurename:Microsoft-Windows-Subsystem-Linux /all /norestart
```

- Virtual Machine Platform

```
dism.exe /online /enable-feature /featurename:VirtualMachinePlatform /all /norestart
```

Jika sudah selesai, lakukan restart pada laptop/komputer.

- Jika sudah berhasil restart, buka CMD Kembali. Jalankan di CMD admin:
wsl --install, jika tidak bisa maka melakukan instalasi secara manual.
wsl --set-default-version 2

Setelah itu ketikkan `wsl -l -v`, maka jika tampilannya seperti dibawah ini sudah berhasil

```
D:\Maul_Sarastya>wsl -l -v
  NAME                STATE          VERSION
* Ubuntu              Running        2
  docker-desktop      Running        2
```

3. Install Docker Desktop dan pilih opsi 'Use WSL 2 instead of Hyper-V'. Lalu, tunggu hingga muncul tombol 'Close and Log out'.

4. Jika sudah, buka Kembali CMD dan Verifikasi dengan:

a. `'docker --version'`

b. `'docker info'`

jika tampilannya seperti dibawah, maka sudah berhasil.

```
D:\Maul_Sarastya>docker version
Client:
Version:      28.1.1
API version:  1.49
Go version:   go1.23.8
Git commit:   4eba3777
Built:        Fri Apr 18 09:53:24 2025
OS/Arch:      windows/amd64
Context:      desktop-linux

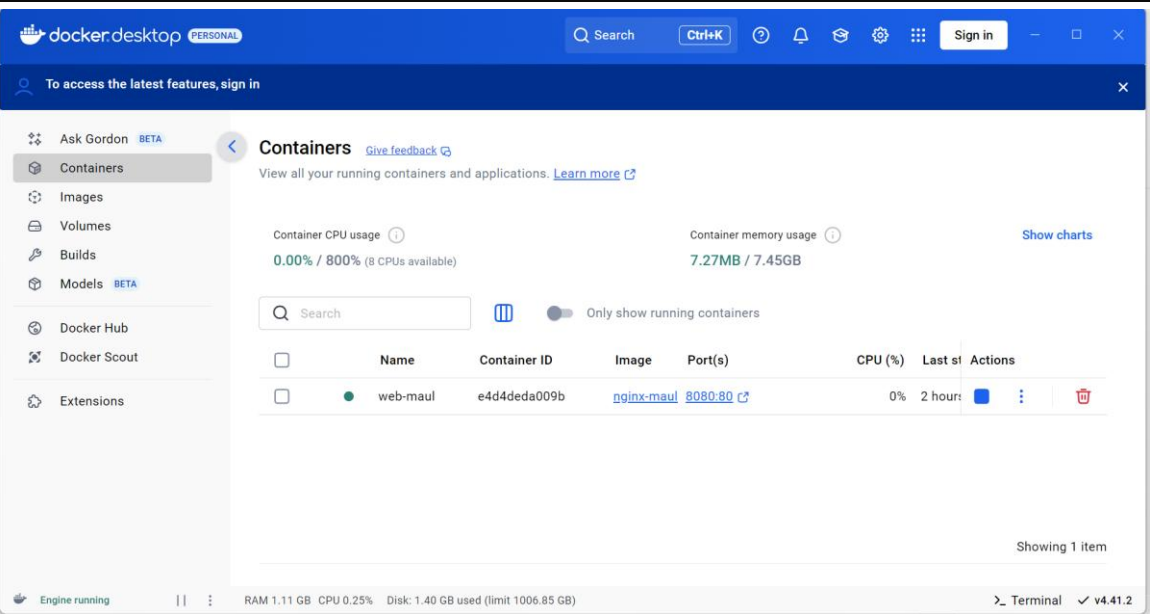
Server: Docker Desktop 4.41.2 (191736)
Engine:
Version:      28.1.1
API version:  1.49 (minimum version 1.24)
Go version:   go1.23.8
Git commit:   01f442b
Built:        Fri Apr 18 09:52:57 2025
OS/Arch:      linux/amd64
Experimental: false
containerd:
Version:      1.7.27
GitCommit:    05044ec0a9a75232cad458027ca83437aae3f4da
runc:
Version:      1.2.5
GitCommit:    v1.2.5-0-g59923ef
docker-init:
Version:      0.19.0
GitCommit:    de40ad0
```

5. Build docker

```
C:\WINDOWS\system32\cmd. x + v
D:\Maul_Sarastya>docker build -t nginx-maul -f docker\Dockerfile .
[+] Building 79.2s (8/8) FINISHED
=> [internal] load build definition from Dockerfile
=> transferring dockerfile: 148B
=> [internal] load metadata for docker.io/library/nginx:latest
=> [internal] load .dockerignore
=> transferring context: 2B
=> [1/3] FROM docker.io/library/nginx:latest@sha256:6784fb8834aa7dbb12e3d7471e69c290df3e6ba810dc38b34ae33d3c1c 71.4s
=> resolve docker.io/library/nginx:latest@sha256:6784fb8834aa7dbb12e3d7471e69c290df3e6ba810dc38b34ae33d3c1c 0.1s
=> sha256:32e44235e1d55a34be577baa12271f067c0bf79ba4e1ca4e6ec484424540132a 1.40kB / 1.40kB
=> sha256:d2a7ba8dbf4e222961ad1449648ab46a6cea044e4cfb374450325ecee8f67f 1.21kB / 1.21kB
=> sha256:979e6233a40af9a51ee2c9894bd42ebf78a79c87cbcd70cc6a3840a0952f3d57 405B / 405B
=> sha256:1bc5dc8b475d9de62c94cf69a139df17aaf7fe7bac76b5133d8048a058fb3c3b 956B / 956B
=> sha256:56b81cfa547d78176e719c9cd387e35fbd95ce6e8500efb26d9fbcba4d4bc4f6 628B / 628B
=> sha256:3b08567da96412a0298328fad6b96aadd3bc9ca97e6683534da152b0b9e8a977 44.15MB / 44.15MB
=> sha256:dad67da3f26bce15939543965e09c4089533b025f707aad72ed3d3f3a09c66f8 28.23MB / 28.23MB
=> extracting sha256:dad67da3f26bce15939543965e09c4089533b025f707aad72ed3d3f3a09c66f8 1.1s
=> extracting sha256:3b08567da96412a0298328fad6b96aadd3bc9ca97e6683534da152b0b9e8a977 1.0s
=> extracting sha256:56b81cfa547d78176e719c9cd387e35fbd95ce6e8500efb26d9fbcba4d4bc4f6 0.1s
=> extracting sha256:1bc5dc8b475d9de62c94cf69a139df17aaf7fe7bac76b5133d8048a058fb3c3b 0.1s
=> extracting sha256:979e6233a40af9a51ee2c9894bd42ebf78a79c87cbcd70cc6a3840a0952f3d57 0.1s
=> extracting sha256:d2a7ba8dbf4e222961ad1449648ab46a6cea044e4cfb374450325ecee8f67f 0.0s
=> extracting sha256:32e44235e1d55a34be577baa12271f067c0bf79ba4e1ca4e6ec484424540132a 0.1s
=> [internal] load build context
=> transferring context: 466B
=> [2/3] COPY ./html /usr/share/nginx/html
=> [3/3] COPY ./docker/default.conf /etc/nginx/conf.d/default.conf
=> exporting to image
=> exporting layers
=> exporting manifest sha256:59d1c404a09a875847569f36cc2c247ad3588cd6fcaed4c56fa71a76ac47c440 0.0s
=> exporting config sha256:b4b2d80dce9070f987d0138f637553e7bb7d76afabeea3aff6d570e1069d0275 0.0s
=> exporting attestation manifest sha256:6bf26ca9f752ad8alc5aa7c861228a37e9adc48ffe13c939890c5455333e4ef6 0.1s
=> exporting manifest list sha256:f85737d0651fd1eb7f712ff5bad5022a75ce8a6508dbd80b7c60b94e36990d3 0.0s
```

6. Jalankan container

```
D:\Maul_Sarastya>docker run -d -p 8080:80 --name web-maul nginx-maul
e4d4deda009bb87e662403508e771fdd3de27baed9653fe4fcb508327351bc8a
```



7. Uji coba

localhost:8080

Berhasil! Ini dijalankan dari container Nginx!

YUK BELAJAR Nginx

4. Struktur Folder Proyek

Maul_Sarastya	13/06/2025 19:45	File folder
conf	13/06/2025 07:23	File folder
docker	13/06/2025 19:49	File folder
html	13/06/2025 07:30	File folder
Docker Desktop Installer (1)	13/06/2025 19:23	Application593.659 KB
run	13/06/2025 07:31	Windows PowerShell ...0 KB
wsl_update_x64	13/06/2025 08:43	Windows Installer Pa...16.704 KB

Folder conf

 nginx.conf	13/06/2025 07:21	CONF File	0 KB
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Folder docker

 default.conf	13/06/2025 19:44	CONF File
 Dockerfile	13/06/2025 19:46	File

Folder html

 index	13/06/2025 19:56	Microsoft Edge HTM...
---	------------------	-----------------------

5. Isi File Penting

Dockerfile:

```
FROM nginx:latest
COPY ./html /usr/share/nginx/html
COPY ./docker/default.conf /etc/nginx/conf.d/default.conf
```

Nginx/default.conf:

```
server {
    listen 80;
    server_name localhost;

    location / {
        root /usr/share/nginx/html;
        index index.html;
    }
}
```

index.html:

```
<!DOCTYPE html>
<html>
<head>
    <title>Halo dari Nginx + Docker</title>
</head>
<body>
    <h1>Berhasil! Ini dijalankan dari container Nginx!</h1>
    <h4>YUK BELAJAR Nginx</h4>
</body>
</html>
```

8. Troubleshooting

- Port 8080 sudah dipakai → ubah ke 8081 atau lainnya
- Nama container sudah ada → ``docker rm -f web-maul``
- Dockerfile tidak ditemukan → pastikan nama file dan path benar
- Docker Desktop tidak berjalan → pastikan sudah start dari Desktop

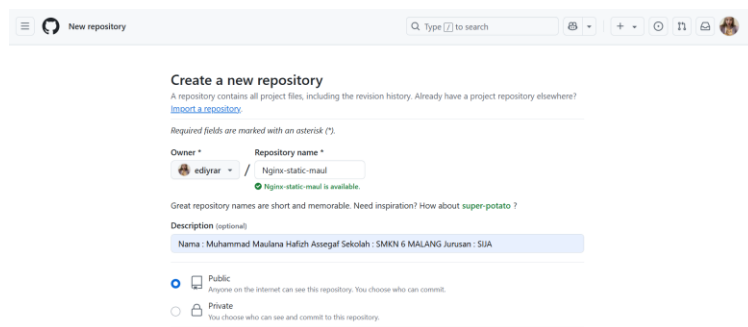
9. Upload ke GitHub dan Validasi

1. Membuat repositori

Top repositories



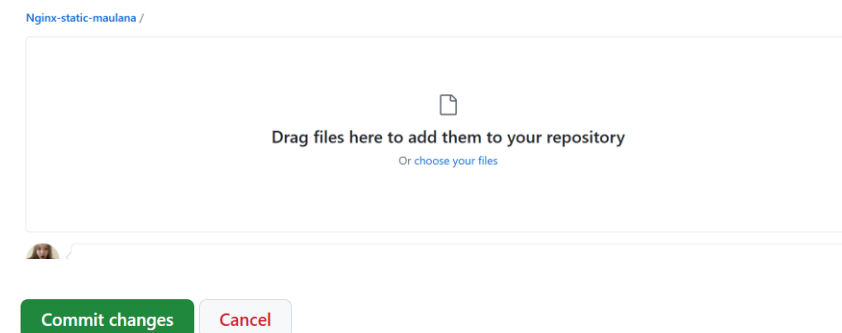
2. Atur bagian repositori

A screenshot of the GitHub "Create a new repository" form. The form includes fields for "Owner" (set to "ediyar"), "Repository name" (set to "Nginx-static-maul" with a green checkmark indicating it's available), and "Description" (set to "Nama : Muhammad Maulana Hafid Assegaf Sekolah : SMKN 6 MALANG Jurusan : SUA"). There are also radio buttons for "Public" (selected) and "Private".

3. Klik uploading an existing file

A screenshot of the GitHub "Quick setup" section. It shows a "Set up in Desktop" button, an "or" separator, and "HTTPS" and "SSH" options. The "HTTPS" option is selected, and the URL "https://github.com/ediyar/nginx-static-maulana.git" is displayed in a text box. Below this, it says "Get started by [creating a new file](#) or [uploading an existing file](#). We recommend every repository include a [README](#), [LICENSE](#), and [.gitignore](#)."

4. Masukkan file dan klik commit changes

A screenshot of the GitHub "Drag files here" section. It shows a large white box with a file icon and the text "Drag files here to add them to your repository" and "Or [choose your files](#)". Below the box, there is a "Commit changes" button and a "Cancel" button.

5. undang kolabolator

General

Access

Collaborators

Moderation options

Code and automation

Branches

Tags

Rules

Actions

Models

Webhooks

Environments

Codespaces

Pages

Security

Advanced Security

Collaborators and teams

Public repository

This repository is public and visible to anyone

Manage visibility

Direct access

1 user has access to this repository.

0 collaborators, 1 invitation

Manage access

Add people

Select all

Type

Find a collaborator...

Gunarno

Awaiting gunarno's response

Pending Invite