

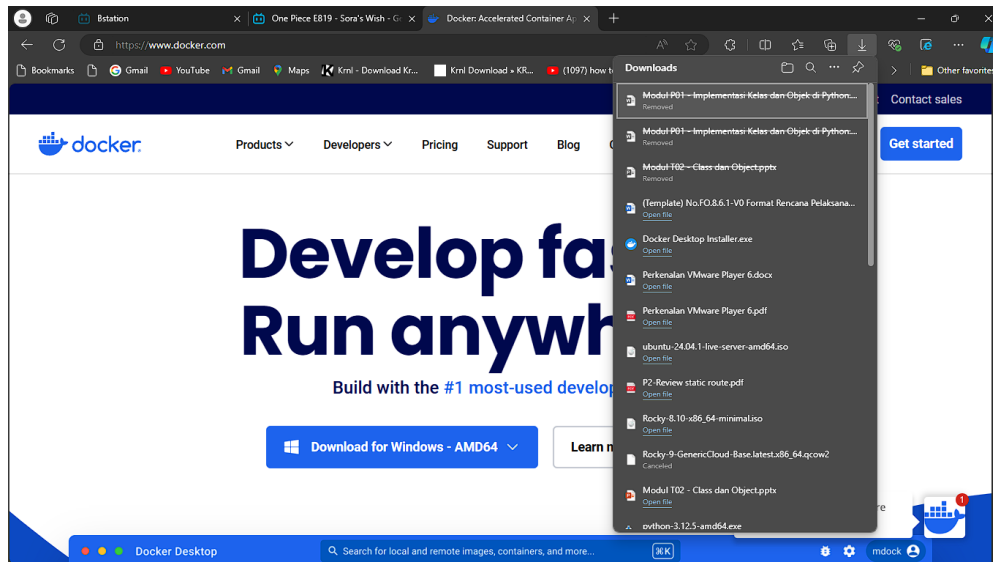
Nama : Roni Alfredo Simamora

Nim : 4332311024

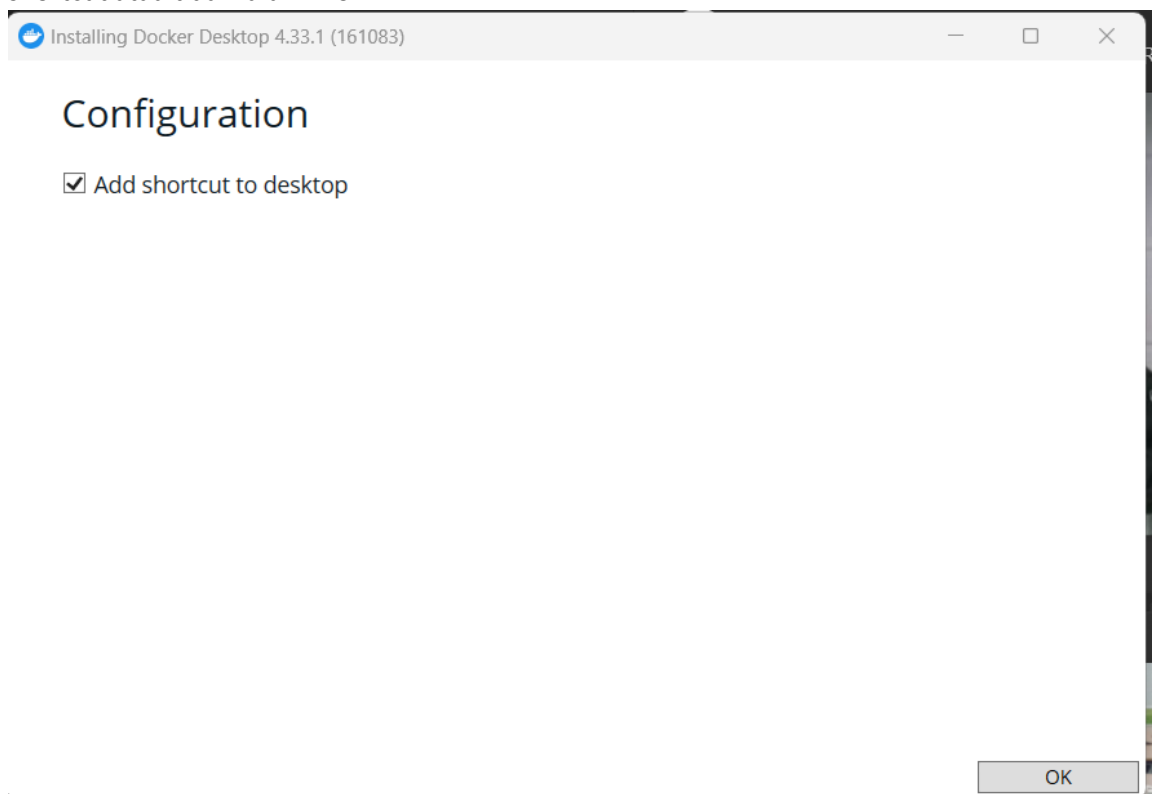
Kelas : RKS 3A Pagi

A. Instalasi Docker

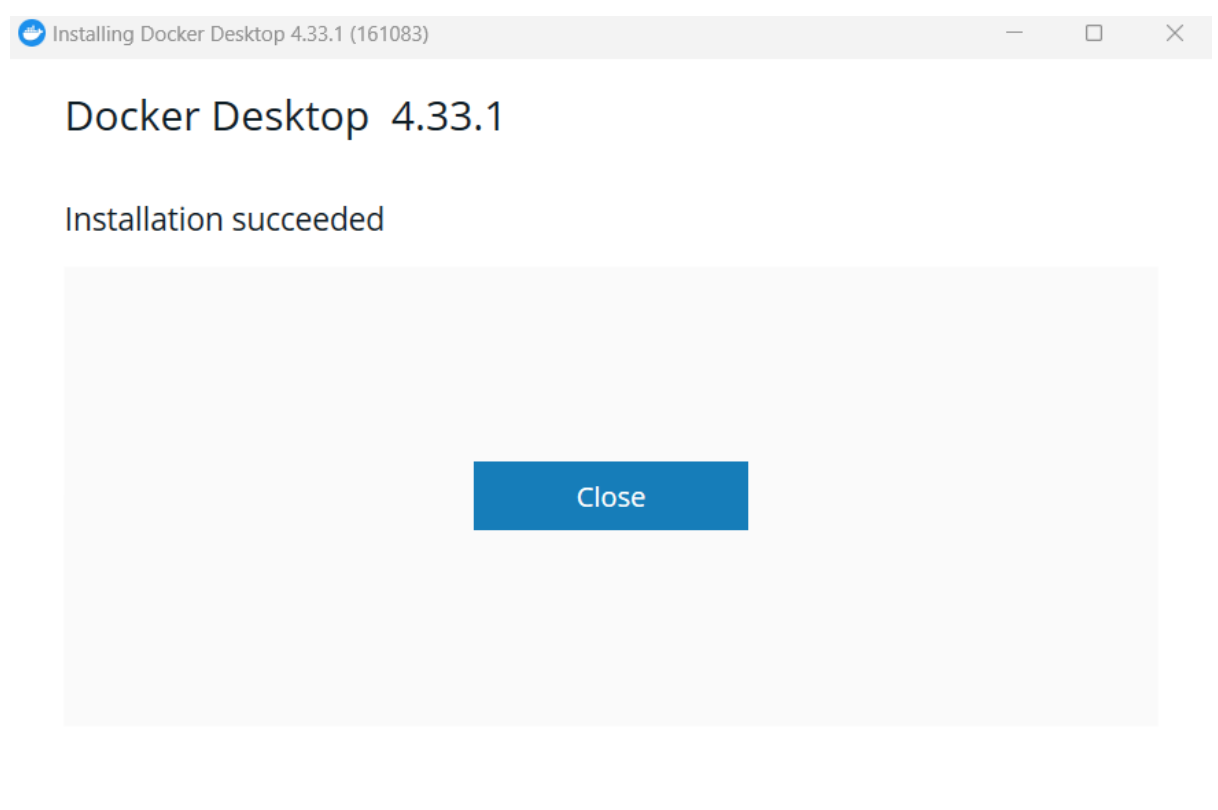
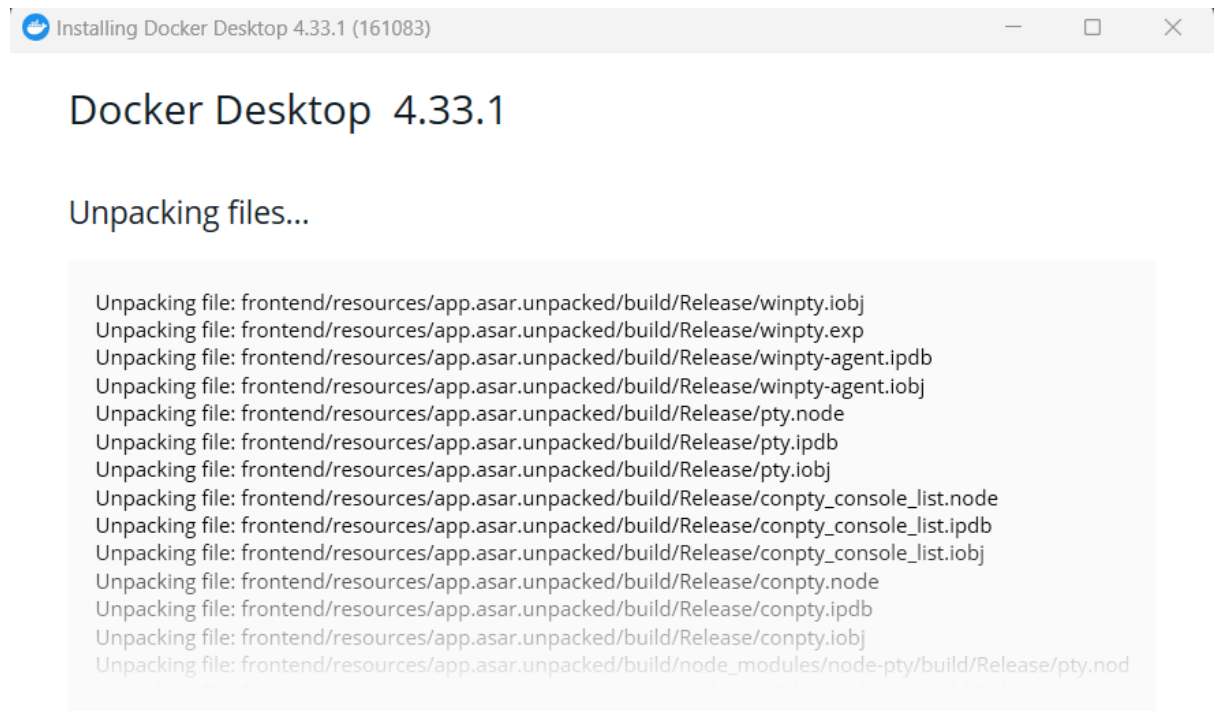
1. Download terlebih dahulu Docker



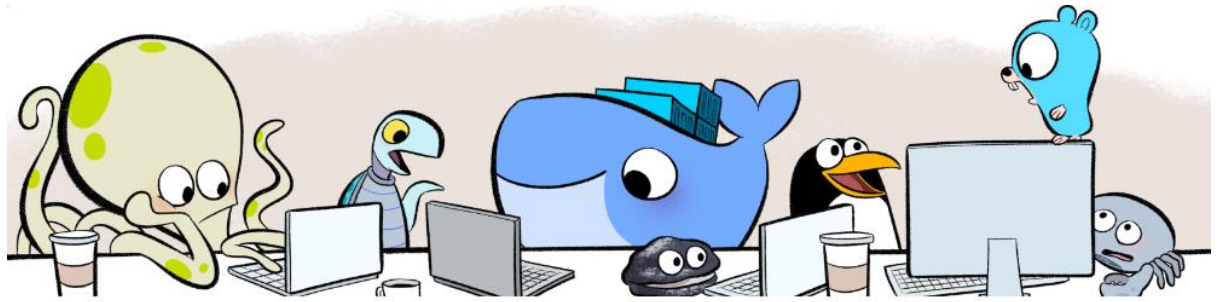
2. Jika sudah buka docker yang sudah di download dan pilih apakah ingin menambahkan shortcut atau tidak lalu klik ok



3. Jika sudah makan akan muncul tampilan seperti dibawah tunggu hingga selesai lalu klik close



- Setelah itu kalian bisa membuka docker yang sudah di install lalu klik accept dan akan ada pilihan kalian bisa tentukan sesuai kebutuhan



Docker Subscription Service Agreement

By selecting **accept**, you agree to the [Subscription Service Agreement](#), the [Docker Data Processing Agreement](#), and the [Data Privacy Policy](#).

Commercial use of Docker Desktop at a company of more than 250 employees OR more than \$10 million in annual revenue requires a paid subscription (Pro, Team, or Business). [See subscription details](#)

[View Full Terms](#)

Accept

Close

- Jika sudah kalian akan diminta untuk login, disini kalian bisa menekan tombol skip, atau login sesuai keinginan kalian



Welcome to Docker [Skip](#)

Work

Personal

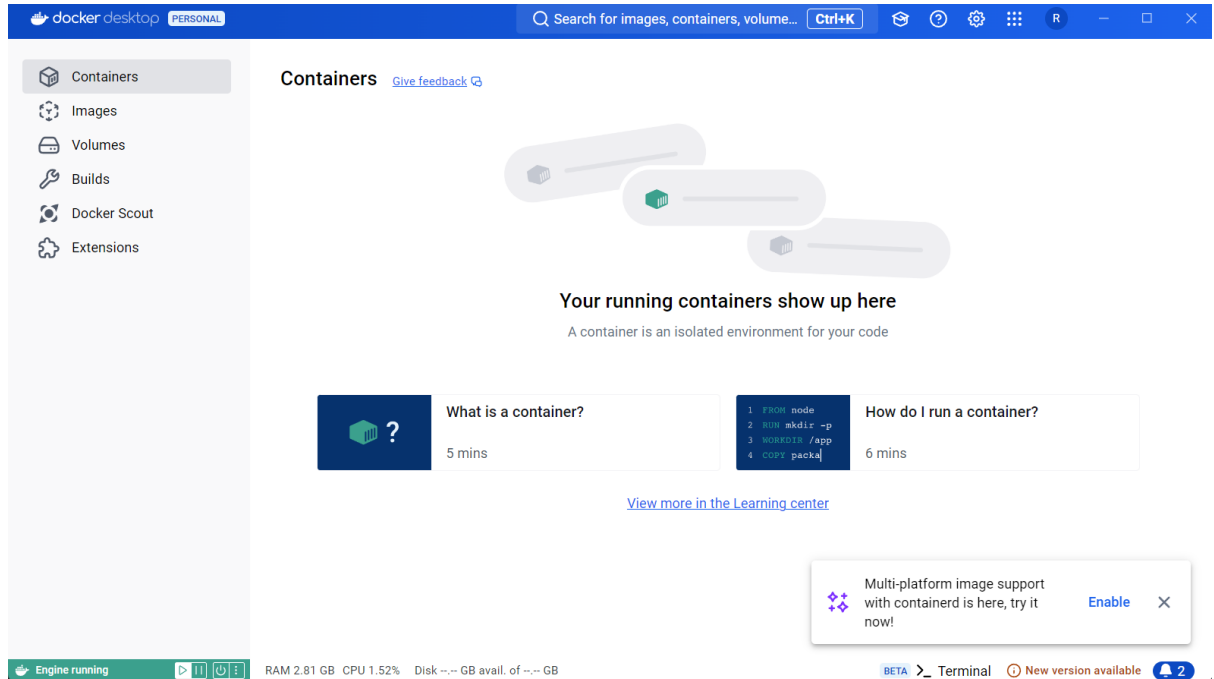
Email address
roniafred05@gmail.com

Continue

Or

Create an account

6. Jika sudah maka kita akan diarahkan ke tampilan utama docker



7. Pengujian apakah docker sudah terinstall dengan cli

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\hp> docker --version
Docker version 27.1.1, build 6312585
PS C:\Users\hp> docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
c1ec31eb5944: Pull complete
Digest: sha256:53cc4d415d839c98be39331c948609b659ed725170ad2ca8eb36951288f81b75
Status: Downloaded newer image for hello-world:latest

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
1. The Docker client contacted the Docker daemon.
2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
   (amd64)
3. The Docker daemon created a new container from that image which runs the
   executable that produces the output you are currently reading.
4. The Docker daemon streamed that output to the Docker client, which sent
   it to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
$ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
https://hub.docker.com/

For more examples and ideas, visit:
https://docs.docker.com/get-started/

PS C:\Users\hp>
```

B. Menjalankan Mariadb dan membuat database di docker

1. Pertama ketik **docker pull mariadb** untuk mendapatkan library mariadb

```
PS C:\Users\hp> docker pull mariadb
Using default tag: latest
latest: Pulling from library/mariadb
31e907dcc94a: Pull complete
5f1ca115b417: Pull complete
5f79816720d8: Pull complete
1a674d3e0d95: Pull complete
2f5436342963: Pull complete
11d8a022d3df: Pull complete
a0478840c499: Pull complete
ecc1ceb4f1da: Pull complete
Digest: sha256:346f3a6792bf88014a9d9290927c12c13522a50e0e7e6d40aaa9add73df0b
cc6
Status: Downloaded newer image for mariadb:latest
docker.io/library/mariadb:latest
PS C:\Users\hp>
```

2. Setelah itu kalian dapat menambahkan container mariadb di docker dengan **docker run --name "penamaan sesuai keinginan kalian" -e MYSQL_ROOT_PASSWORD="password sesuai keinginan kalian" -d mariadb**

```
PS C:\Users\hp> docker run --name 4332311024_Roni_Alfredo-container -e MYSQL
_ROOT_PASSWORD=my-secret-pw -d mariadb
1a2ab8b3e7e9d2a90f38c10a3e3c12b1c61e66a3c397efe40140dfe3d03ceada
PS C:\Users\hp>
```

3. Lalu kalian bisa uji apakah docker tadi sudah ada dengan **docker ps** atau **docker ps -a**

```
PS C:\Users\hp> docker ps -a
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS
1a2ab8b3e7e9   mariadb    "docker-entrypoint.s..." 25 seconds ago Up 23
seconds       3306/tcp  4332311024_Roni_Alfredo-container
a237975c6f3e   hello-world "/hello"                2 minutes ago   Exite
d (0) 2 minutes ago          cool_blackburn
PS C:\Users\hp> docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS
PORTS         NAMES
1a2ab8b3e7e9   mariadb    "docker-entrypoint.s..." 36 seconds ago Up 34 sec
onds 3306/tcp  4332311024_Roni_Alfredo-container
PS C:\Users\hp> |
```

4. Lalu execute container tadi dengan **docker exec -it "sesuai nama yang sudah kalian buat" mariadb -u** dan kalian akan dibawa ke dalam database

```
PS C:\Users\hp> docker exec -it 4332311024_Roni_Alfredo-container mariadb -u
root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 3
Server version: 11.5.2-MariaDB-ubu2404 mariadb.org binary distribution

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statemen
t.

MariaDB [(none)]>
```

5. Jika sudah kalian dapat menambahkan suatu database didalamnya dengan **CREATE DATABASES** “nama sesuai keinginan”; lalu enter

```
MariaDB [(none)]> CREATE DATABASE mahasiswa_db;
Query OK, 1 row affected (0.001 sec)
```

6. Lalu gunakan database yang sudah anda buat agar dapat membuat tabel didalamnya dengan **USE DATABASE** “sesuai nama yang sudah di buat”;

```
MariaDB [(none)]> USE mahasiswa_db;
Database changed
```

7. Lalu mulai lah membuat tabel databasenya dengan **CREATE TABLE (OPTIONAL) (“ISI DATA YANG KALIAN INGINKAN”);**

```
MariaDB [mahasiswa_db]> CREATE TABLE mahasiswa (
->      id INT PRIMARY KEY AUTO_INCREMENT,
->      nama VARCHAR(100),
->      jurusan VARCHAR(50)
-> );
Query OK, 0 rows affected (0.019 sec)
```

8. Lalu masukkan data ke table yang sudah kalian buat dengan **INSERT INTO** “sesuai table database yang sudah dibuat” (“sesuai data yang ada pada tabel”)(“sesuai keinginan kalian”);

```
MariaDB [mahasiswa_db]> INSERT INTO mahasiswa (nama, jurusan) VALUES ('Andi'
, 'Informatika'), ('Budi', 'Sistem Informasi');
Query OK, 2 rows affected (0.009 sec)
Records: 2  Duplicates: 0  Warnings: 0
```

9. Jika sudah kalian bisa memastikan apakah table sudah terisi dengan **SELECT * FROM** “sesuai table tujuan” ;

```
MariaDB [mahasiswa_db]> SELECT * FROM mahasiswa;
+----+-----+-----+
| id | nama | jurusan |
+----+-----+-----+
| 1  | Andi | Informatika |
| 2  | Budi | Sistem Informasi |
+----+-----+-----+
2 rows in set (0.001 sec)

MariaDB [mahasiswa_db]> |
```

C. Membuat dan mengisi table dosen

1. Masuk ke container mariadb yang sudah kalian buat dan ketik **CREATE DATABASE dosen_db;** untuk membuat database dosen

```
MariaDB [(none)]> CREATE DATABASE dosen_db;  
Query OK, 1 row affected (0.001 sec)
```

2. Lalu gunakan database dosen agar bisa membuat table database dengan **USE DATABASE dosen_db;** agar database dosen terpakai

```
MariaDB [(none)]> USE dosen_db;  
Database changed
```

3. Jika sudah mulailah membuat table sesuai keinginan kalian seperti dibawah ini

```
MariaDB [dosen_db]> CREATE TABLE dosen (  
-> id INT PRIMARY KEY AUTO_INCREMENT,  
-> nidn INT(10),  
-> nama VARCHAR(100),  
-> program_studi VARCHAR(50)  
-> );  
Query OK, 0 rows affected (0.021 sec)
```

4. Setelah itu masukkan data ke table database yang sudah kalian buat

```
MariaDB [dosen_db]> INSERT INTO dosen (nidn, nama, program_studi) VALUES ('1  
17175', 'Hamdani Arif', 'Teknik Rekayasa Keamanan Siber'), ('106044', 'Nur C  
ahyono Kushardianto', 'Teknik Rekayasa Keamanan Siber'), ('122276', 'Antoni  
Haikal', 'Teknik Rekayasa Keamanan Siber');  
Query OK, 3 rows affected (0.008 sec)  
Records: 3 Duplicates: 0 Warnings: 0
```

5. Sekarang pastikan apakah data sudah berhasil dimasukkan jika sudah kalian dapat mengetik **exit** jika ingin keluar dari database

```
MariaDB [dosen_db]> SELECT * FROM dosen;
```

id	nidn	nama	program_studi
1	117175	Hamdani Arif	Teknik Rekayasa Keamanan Siber
2	106044	Nur Cahyono Kushardianto	Teknik Rekayasa Keamanan Siber
3	122276	Antoni Haikal	Teknik Rekayasa Keamanan Siber

3 rows in set (0.000 sec)

```
MariaDB [dosen_db]> |
```

Jika semua sudah kalian bisa memberhentikan container database mariadb dengan **docker stop** "sesuai container kalian"

```
PS C:\Users\hp> docker stop 4332311024_Roni_Alfredo-container
4332311024_Roni_Alfredo-container
PS C:\Users\hp> |
```