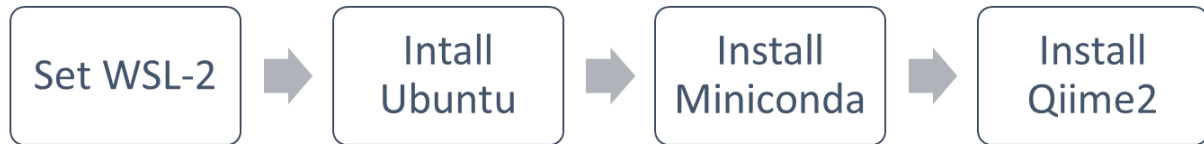


## Proses install Qiime2:



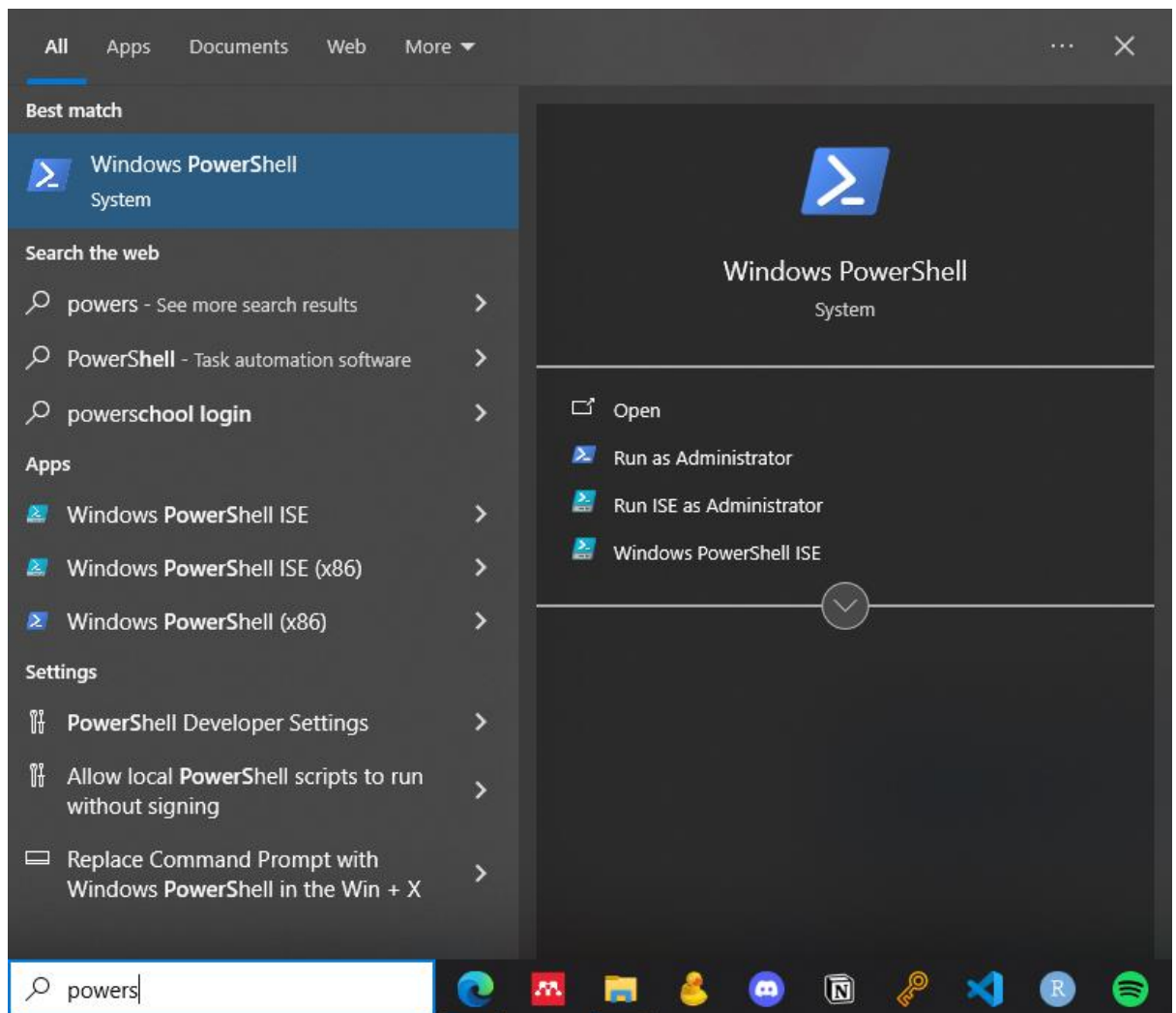
## Proses Install Windows Subsystem for Linux (WSL2) di Windows 10

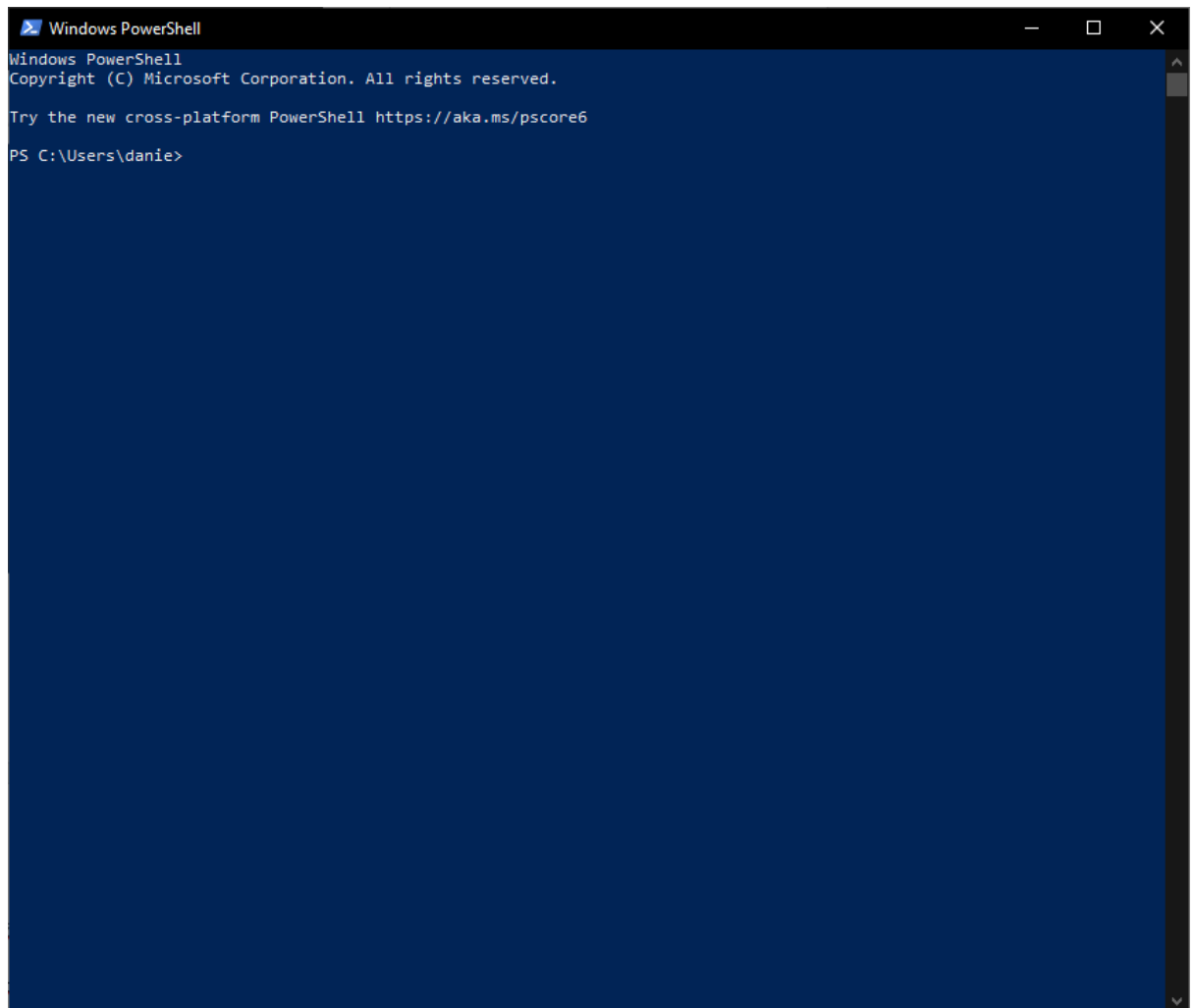
Cek versi OS melalui tekan **tombol windows + R**, lalu ketik **winver** dan Enter.



Ikuti tutorial berikut untuk install WSL2 di OS Windows 10.

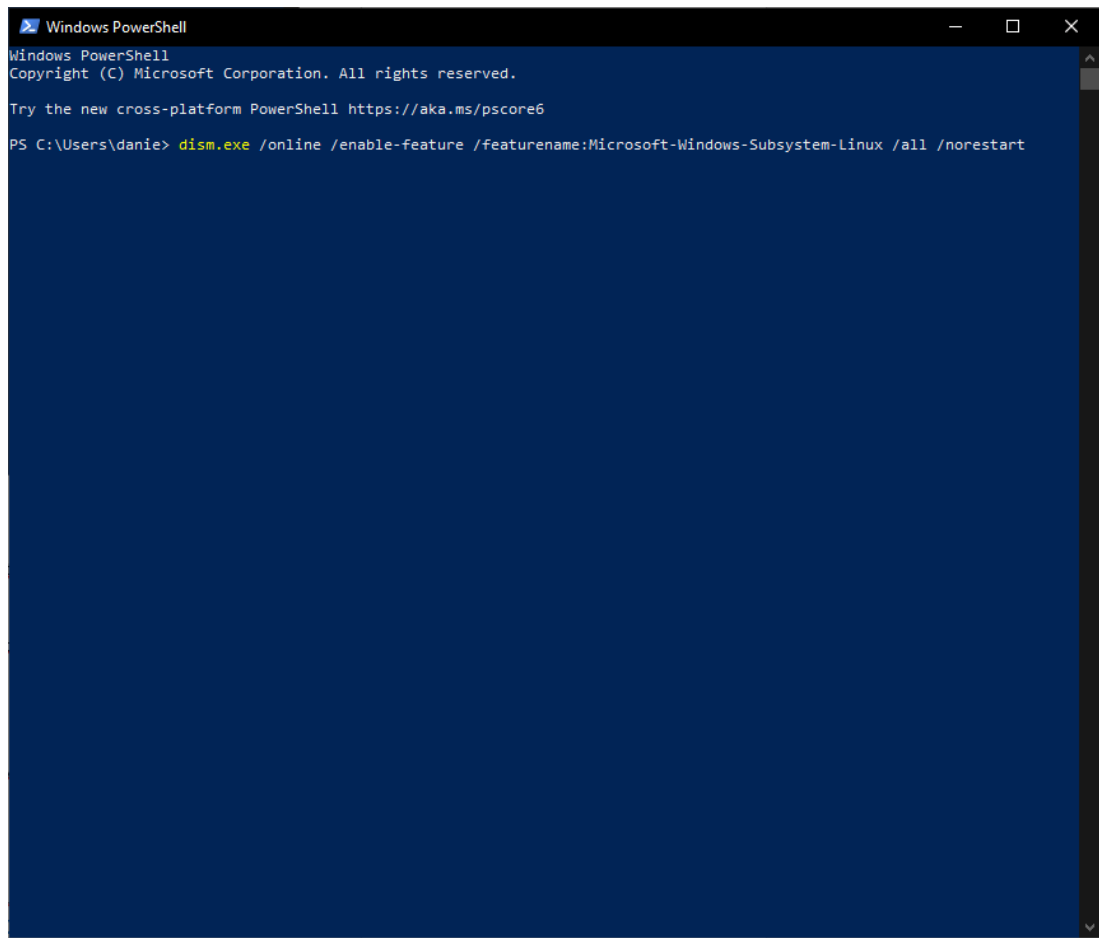
1. Buka PowerShell melalui klik tombol **start** dan ketik **powershell**, pilih *run as administrator* (lihat gambar di bawah). Klik **yes** pada jendela otorisasi keamanan yang muncul.





2. Jalankan script ini dengan *Copy* dan *paste* perintah berikut ke PowerShell, (klik kanan pada PowerShell untuk *paste*) lalu klik Enter:

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



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

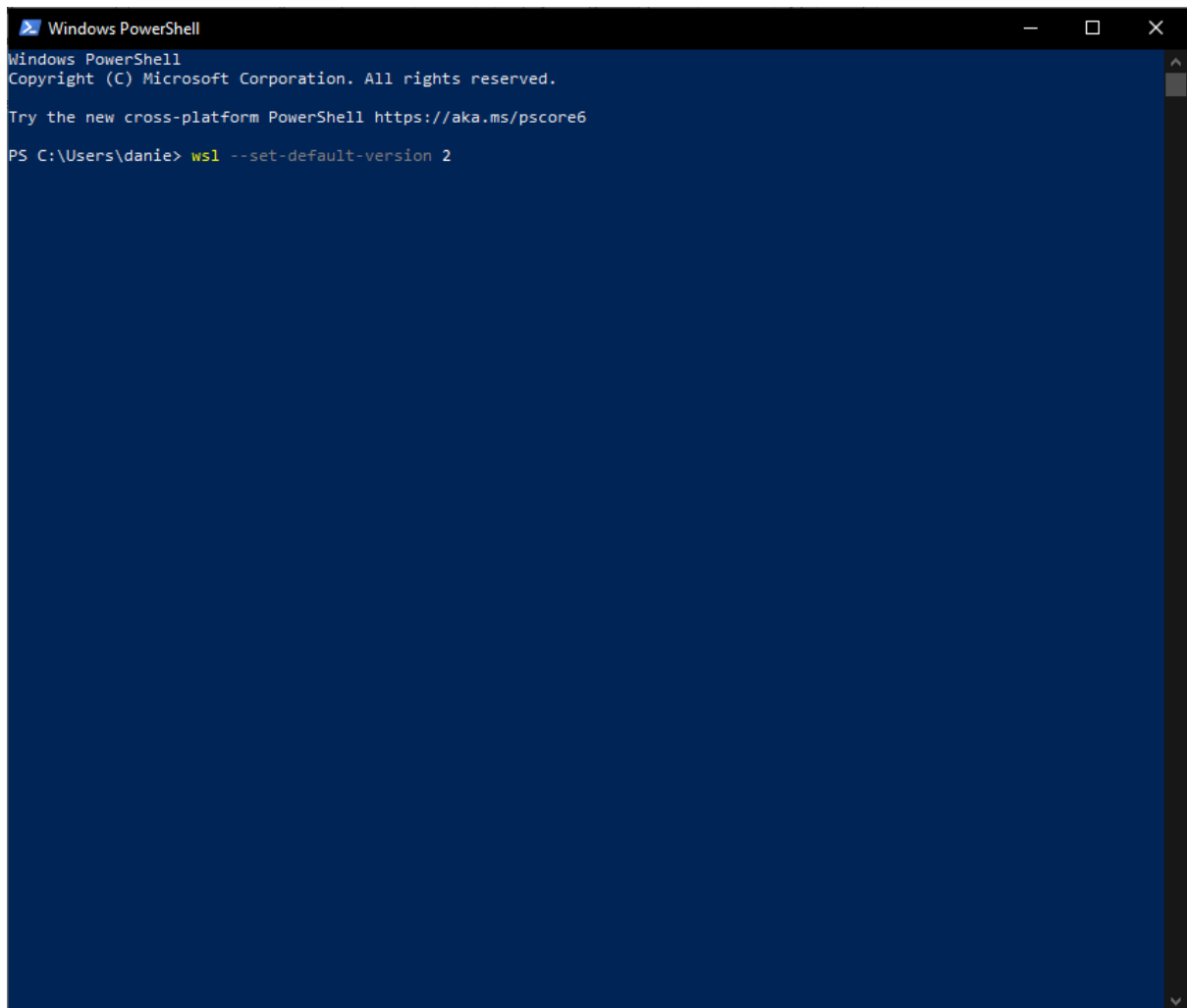
Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\danie> dism.exe /online /enable-feature /featurename:Microsoft-Windows-Subsystem-Linux /all /norestart
```

3. Selanjutnya *copy* dan *paste* script perintah berikut ke dalam PowerShell lalu klik Enter (tahapan sama dengan No 2):

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

4. Restart PC anda
5. Unduh linux kernel pada PC anda melalui tautan di bawah ini di browser masing-masing PC:  
[https://wslstorestorage.blob.core.windows.net/wslblob/wsl\\_update\\_x64.msi](https://wslstorestorage.blob.core.windows.net/wslblob/wsl_update_x64.msi)
6. Jalankan linux kernel, pilih **next** pada jendela yang muncul. Linux kernel akan otomatis terupdate dan jendela instalasi akan tertutup dengan sendirinya
7. Selanjutnya membuat set-up WSL2 sebagai versi *default* di PC dengan *paste* script berikut pada Windows PowerShell lalu Enter:  
**wsl --set-default-version 2**

A screenshot of a Windows PowerShell terminal window. The window has a dark blue background and a title bar that says "Windows PowerShell". The text inside the terminal reads: "Windows PowerShell", "Copyright (C) Microsoft Corporation. All rights reserved.", "Try the new cross-platform PowerShell https://aka.ms/pscore6", and "PS C:\Users\danie> wsl --set-default-version 2".

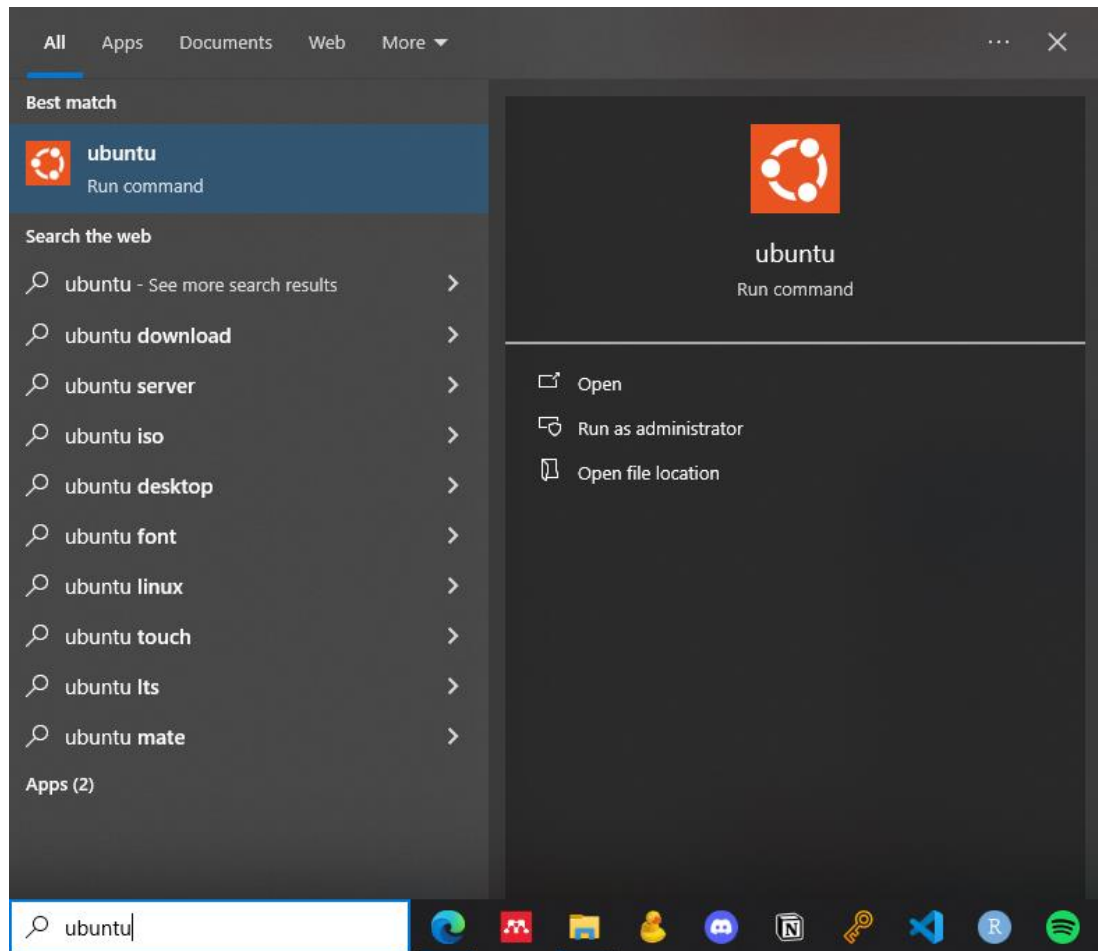
```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/pscore6

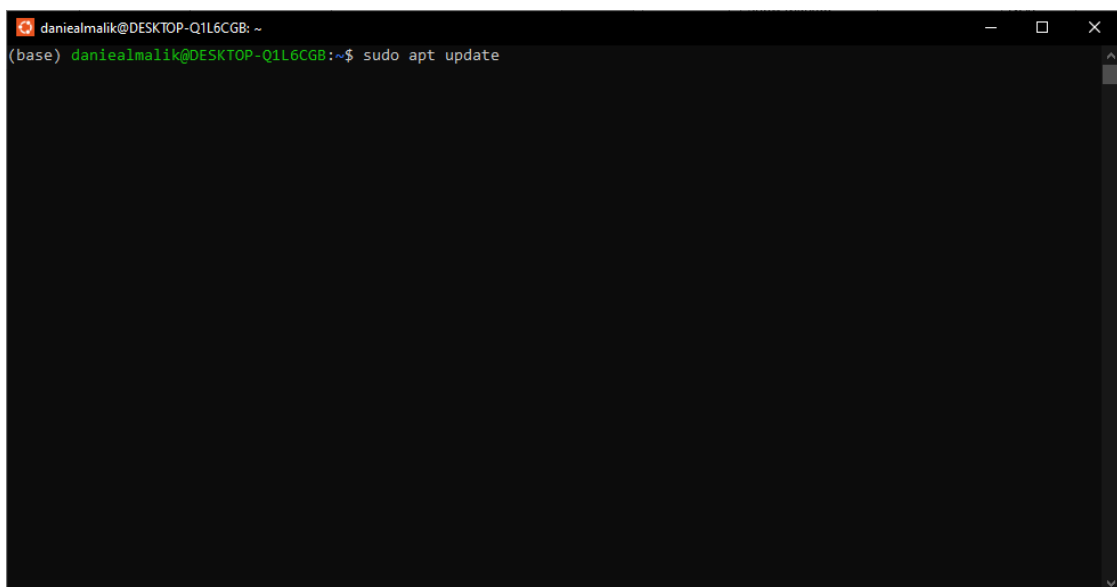
PS C:\Users\danie> wsl --set-default-version 2
```

## Proses install Ubuntu

1. Buka Microsoft Store pada PC/Laptop Bapak/Ibu sekalian, lalu pada kolom pencarian ketikkan **Ubuntu** (buat terlebih dahulu akun Microsoft store bila belum punya)
2. Pada hasil pencarian, pilih **Ubuntu 22.04**. Lalu klik tombol **Get** untuk menginstall Ubuntu tersebut. Jika proses instalasi Ubuntu 22.04 gagal pada sistem anda, coba pilih versi yang lebih lama Ubuntu 20.04 atau Ubuntu 18.04.
3. Setelah selesai menginstall Ubuntu, jalankan ubuntu pada menu **Start**, dan cari Ubuntu yang telah terinstall pada PC



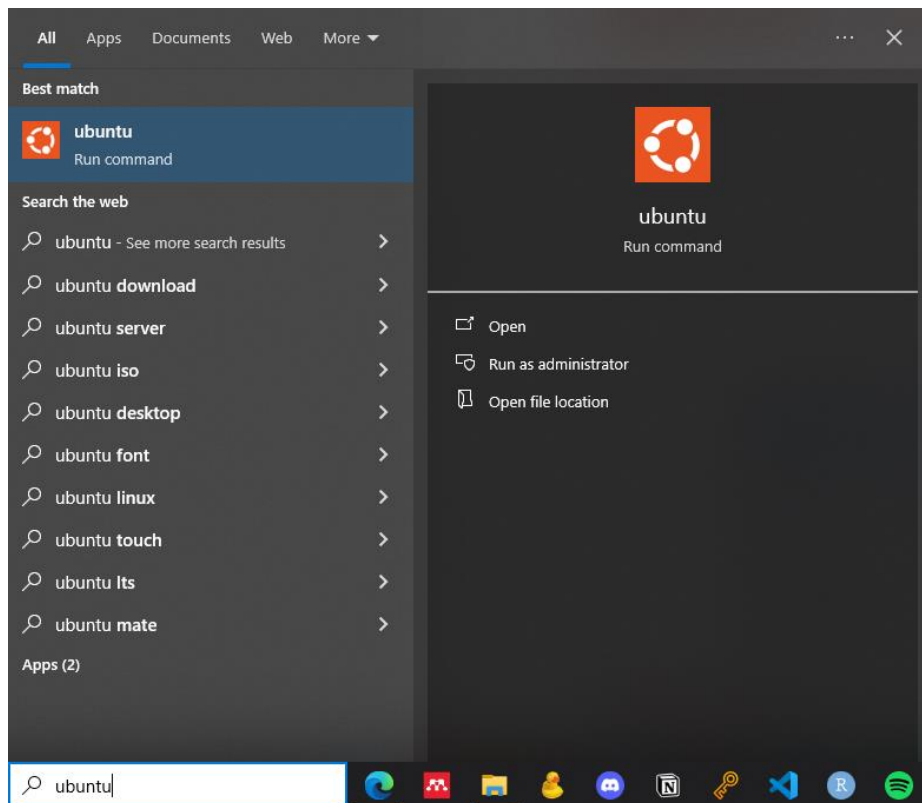
4. Selanjutnya setelah buka aplikasi Ubuntu yang terinstall dalam system PC, diperlukan pembuatan *user account* dan *password*.
5. Setelah membuat akun, silakan update system Ubuntu melalui script ini, lalu klik Enter:  
**sudo apt update**



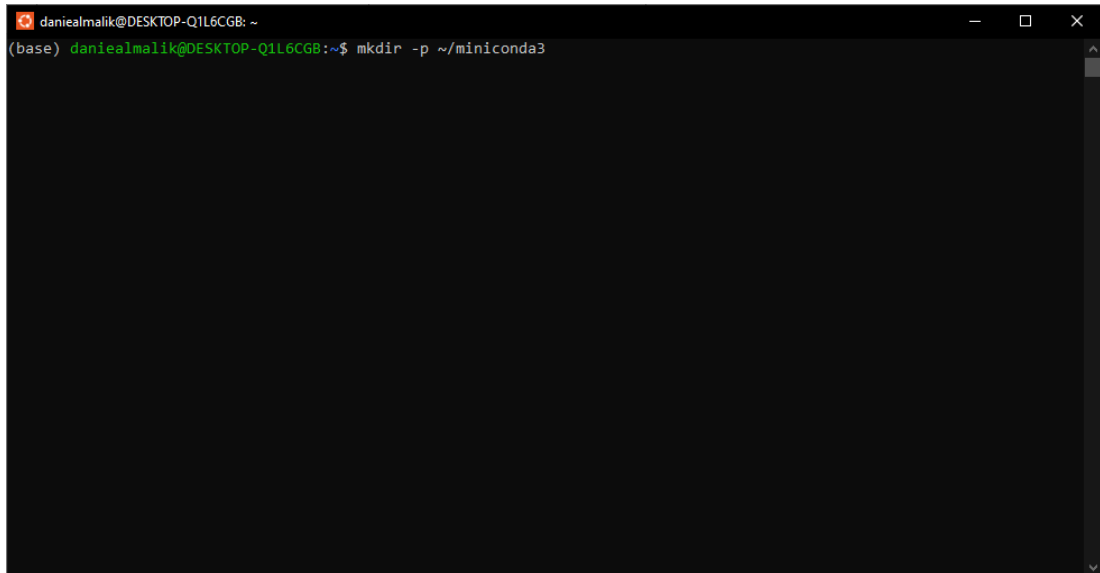
6. Setelah update, silakan upgrade system Ubuntu melalui script ini (*copy dan paste*), lalu klik Enter:  
**sudo apt upgrade -y**
7. Selanjutnya melakukan install Qiime2 via miniconda dengan cara dibawah

### Proses Install Miniconda via Ubuntu

1. Buka ubuntu yang telah di install via WSL-2 melalui klik menu Start, dan cari Ubuntu yang telah terinstall pada PC

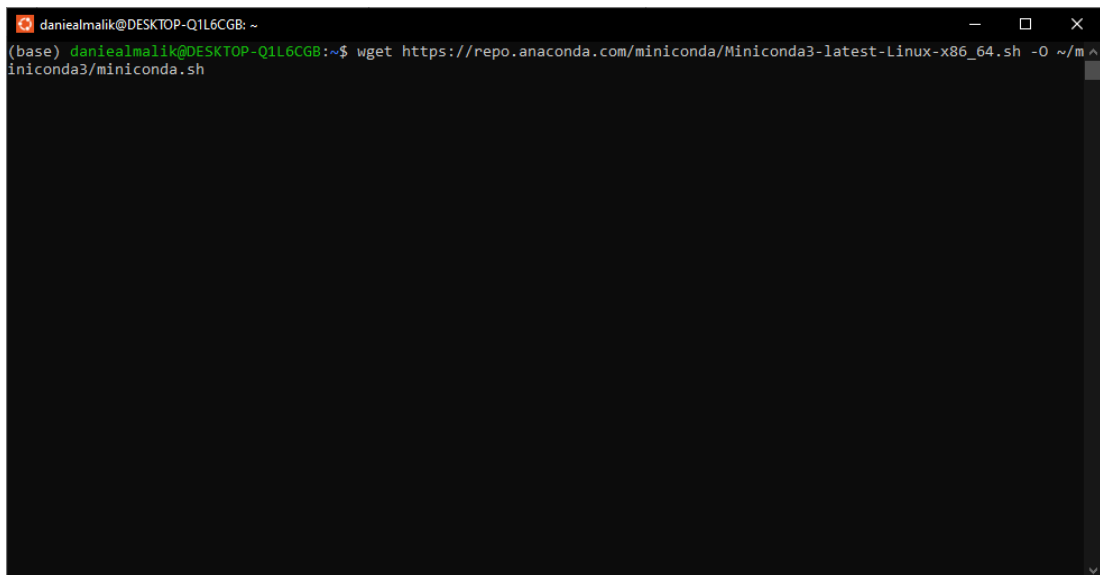


2. Buat folder “miniconda” melalui script, copy dan paste script ke ubuntu dan tekan Enter:  
**mkdir -p ~/miniconda3**

A terminal window with a black background and white text. The title bar shows 'daniealmalik@DESKTOP-Q1L6CGB: ~'. The prompt is '(base) daniealmalik@DESKTOP-Q1L6CGB:~\$'. The command 'mkdir -p ~/miniconda3' has been entered and executed.

```
daniealmalik@DESKTOP-Q1L6CGB: ~  
(base) daniealmalik@DESKTOP-Q1L6CGB:~$ mkdir -p ~/miniconda3
```


3. Unduh file install miniconda melalui script berikut, copy dan paste script ke ubuntu dan tekan Enter:  
**wget [https://repo.anaconda.com/miniconda/Miniconda3-latest-Linux-x86\\_64.sh](https://repo.anaconda.com/miniconda/Miniconda3-latest-Linux-x86_64.sh) -O ~/miniconda3/miniconda.sh**

A terminal window with a black background and white text. The title bar shows 'daniealmalik@DESKTOP-Q1L6CGB: ~'. The prompt is '(base) daniealmalik@DESKTOP-Q1L6CGB:~\$'. The command 'wget https://repo.anaconda.com/miniconda/Miniconda3-latest-Linux-x86\_64.sh -O ~/miniconda3/miniconda.sh' has been entered and executed.

```
daniealmalik@DESKTOP-Q1L6CGB: ~  
(base) daniealmalik@DESKTOP-Q1L6CGB:~$ wget https://repo.anaconda.com/miniconda/Miniconda3-latest-Linux-x86_64.sh -O ~/miniconda3/miniconda.sh
```

4. Inisiasi file tersebut menjadi file bash melalui script berikut, copy dan paste script ke ubuntu dan tekan Enter, lalu proses install akan berlangsung:  
**bash ~/miniconda3/miniconda.sh -b -u -p ~/miniconda3**

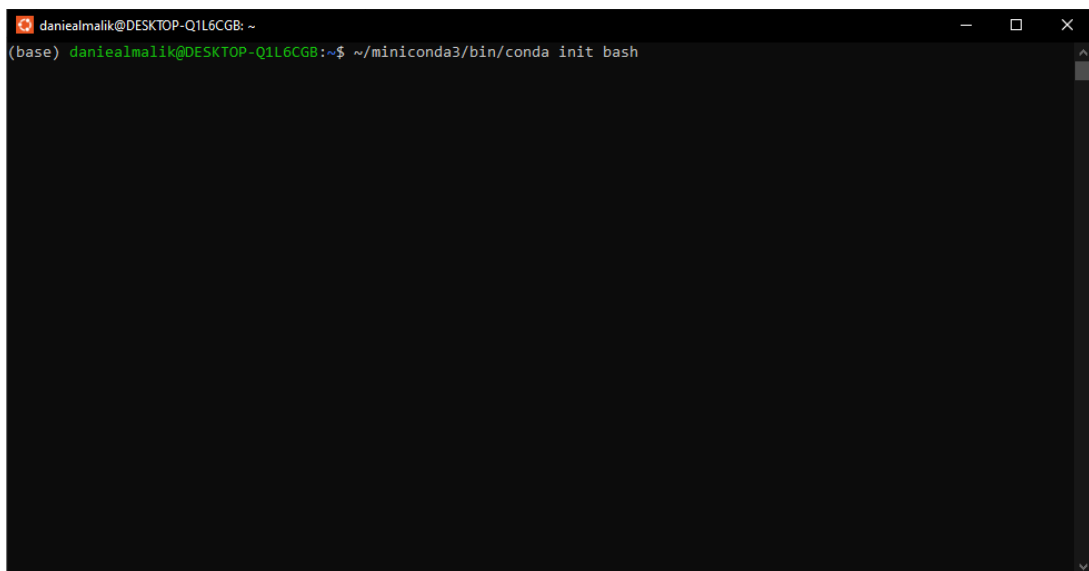




```
daniealmalik@DESKTOP-Q1L6CGB: ~  
(base) daniealmalik@DESKTOP-Q1L6CGB:~$ bash ~/miniconda3/miniconda.sh -b -u -p ~/miniconda3
```

5. Inisiasi miniconda yang telah terinstall melalui bash dan zsh shell di ubuntu, melalui script berikut, copy dan paste script ke ubuntu dan tekan Enter:

**~/miniconda3/bin/conda init bash**



```
daniealmalik@DESKTOP-Q1L6CGB: ~  
(base) daniealmalik@DESKTOP-Q1L6CGB:~$ ~/miniconda3/bin/conda init bash
```

6. Lalu, ketik script berikut, copy dan paste script ke ubuntu dan tekan Enter:

**~/miniconda3/bin/conda init zsh**

```
daniealmalik@DESKTOP-Q1L6CGB: ~  
(base) daniealmalik@DESKTOP-Q1L6CGB:~$ ~/miniconda3/bin/conda init zsh_
```

7. Lalu keluar dari Ubuntu, lalu masuk lagi dan ketik script berikut, untuk memastikan conda terinstal melalui:

**conda --help**

```
daniealmalik@DESKTOP-Q1L6CGB: ~  
(base) daniealmalik@DESKTOP-Q1L6CGB:~$ conda --help  
usage: conda [-h] [-v] [--no-plugins] [-V] COMMAND ...  
  
conda is a tool for managing and deploying applications, environments and packages.  
  
options:  
  -h, --help            Show this help message and exit.  
  -v, --verbose          Can be used multiple times. Once for detailed output, twice for INFO logging, thrice for DEBUG  
                        logging, four times for TRACE logging.  
  --no-plugins           Disable all plugins that are not built into conda.  
  -V, --version          Show the conda version number and exit.  
  
commands:  
  The following built-in and plugins subcommands are available.  
  
  COMMAND  
  activate              Activate a conda environment.  
  clean                 Remove unused packages and caches.  
  compare               Compare packages between conda environments.  
  config                Modify configuration values in .condarc.  
  content-trust          Signing and verification tools for Conda  
  create                Create a new conda environment from a list of specified packages.  
  deactivate            Deactivate the current active conda environment.  
  doctor                Display a health report for your environment.  
  export                Export a given environment  
  info                  Display information about current conda install.  
  init                  Initialize conda for shell interaction.  
  install               Install a list of packages into a specified conda environment.  
  list                  List installed packages in a conda environment.  
  notices               Retrieve latest channel notifications.
```

**Jika sudah muncul seperti itu tandanya conda sudah terinstall dan siap untuk install Qiime2**

### Proses Install Qiime2 via Conda

1. Buka ubuntu yang telah terinstall
2. Update conda melalui script berikut, copy dan paste script ke ubuntu dan tekan Enter:  
**conda update conda**

```
daniealmalik@DESKTOP-Q1L6CGB: ~  
(base) daniealmalik@DESKTOP-Q1L6CGB:~$ conda update conda  
Retrieving notices: ...working... done  
Channels:  
- defaults  
- conda-forge  
Platform: linux-64  
Collecting package metadata (repodata.json): | _
```

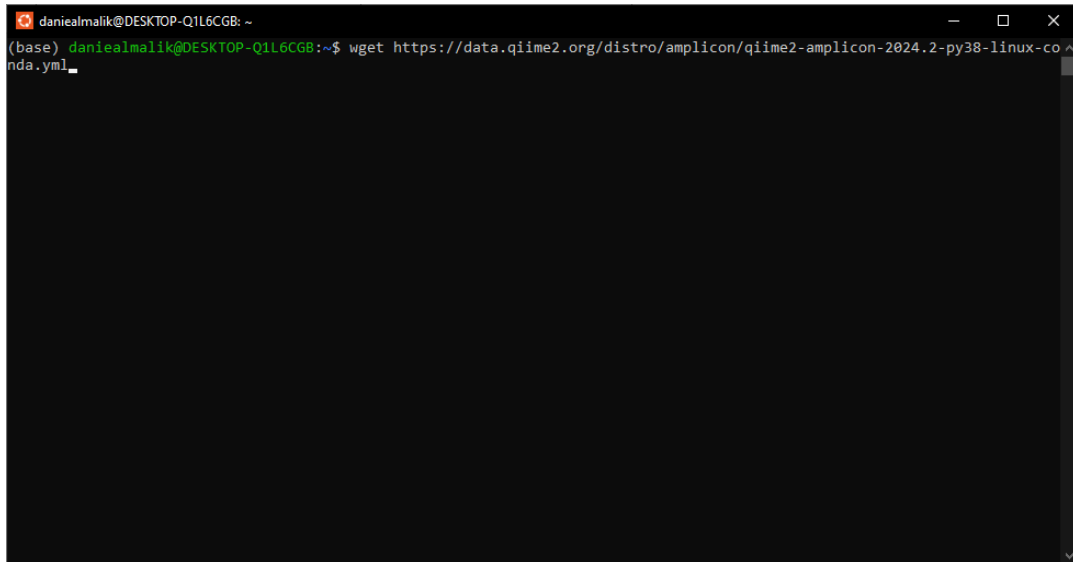
3. Install wget di conda melalui script berikut, copy dan paste script ke ubuntu dan tekan Enter:

conda install wget

```
daniealmalik@DESKTOP-Q1L6CGB: ~  
(base) daniealmalik@DESKTOP-Q1L6CGB:~$ conda install wget
```

4. Download file install Qiime2 melalui script berikut, copy dan paste script ke ubuntu dan tekan Enter:

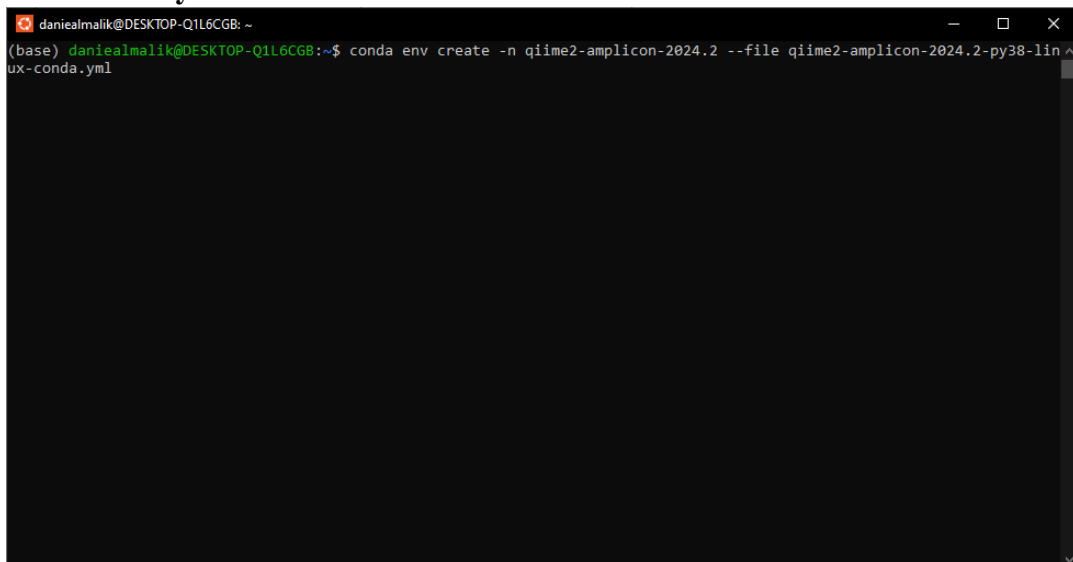
wget <https://data.qiime2.org/distro/amplicon/qiime2-amplicon-2024.2-py38-linux-conda.yml>



```
daniealmalik@DESKTOP-Q1L6CGB: ~  
(base) daniealmalik@DESKTOP-Q1L6CGB:~$ wget https://data.qiime2.org/distro/amplicon/qiime2-amplicon-2024.2-py38-linux-conda.yml
```

5. Install file Qiime2 melalui script berikut, copy dan paste script ke ubuntu dan tekan Enter:

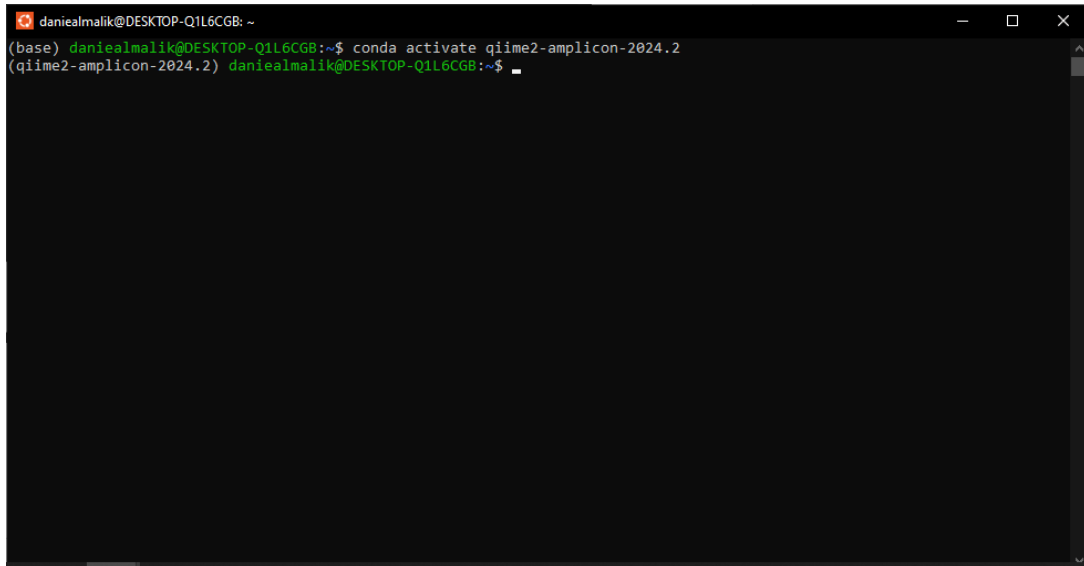
**conda env create -n qiime2-amplicon-2024.2 --file qiime2-amplicon-2024.2-py38-linux-conda.yml**



```
daniealmalik@DESKTOP-Q1L6CGB: ~  
(base) daniealmalik@DESKTOP-Q1L6CGB:~$ conda env create -n qiime2-amplicon-2024.2 --file qiime2-amplicon-2024.2-py38-linux-conda.yml
```

6. Jika sudah terinstall, panggil environment conda untuk diaktifkan melalui script berikut

**conda activate qiime2-amplicon-2024.2**

A terminal window with a black background and green text. The window title is 'daniealmalik@DESKTOP-Q1L6CGB: ~'. The first line shows the prompt '(base) daniealmalik@DESKTOP-Q1L6CGB:~\$' followed by the command 'conda activate qiime2-amplicon-2024.2'. The second line shows the prompt '(qiime2-amplicon-2024.2) daniealmalik@DESKTOP-Q1L6CGB:~\$' followed by a cursor. The window has standard Linux window controls (minimize, maximize, close) in the top right corner.

```
daniealmalik@DESKTOP-Q1L6CGB: ~  
(base) daniealmalik@DESKTOP-Q1L6CGB:~$ conda activate qiime2-amplicon-2024.2  
(qiime2-amplicon-2024.2) daniealmalik@DESKTOP-Q1L6CGB:~$
```

Pastikan lokasi (base) berubah menjadi (**qiime2-amplicon-2024.2**) yang menandakan bahwa Qiime2 sudah aktif

### Referensi:

- Untuk melakukan instalasi Qiime2 melalui miniconda di Ubuntu silakan check tutorial link berikut:  
[Natively installing QIIME 2 — QIIME 2 2024.2.0 documentation](#)
- Install miniconda melalui link:  
[Miniconda — Anaconda documentation](#)