

Windows Subsystem for Linux (WSL)

Tutorial

EL2208 Praktikum Pemecahan Masalah dengan C 2021/2022

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Daftar Isi

1. Mengapa perlu WSL?
2. Instalasi
3. Penggunaan

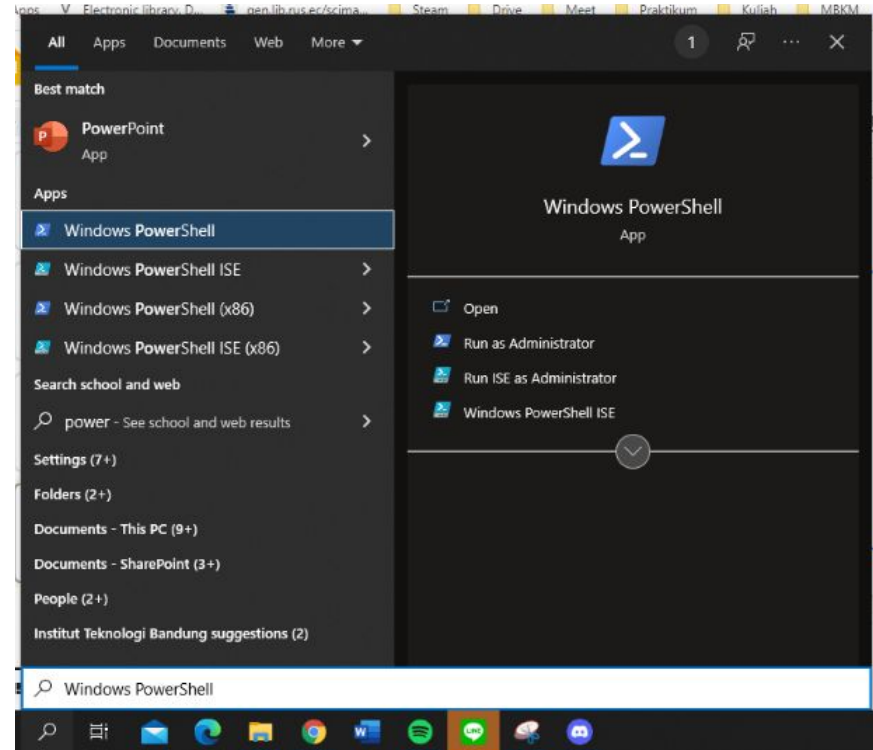
Mengapa perlu WSL?

1. *Autograder* pada GitHub Classroom bekerja dengan sistem operasi Linux
2. Sistem operasi utama pada komputer tetap dijalankan pada Windows, sehingga tidak perlu *dual* OS atau bahkan mengganti OS yang digunakan



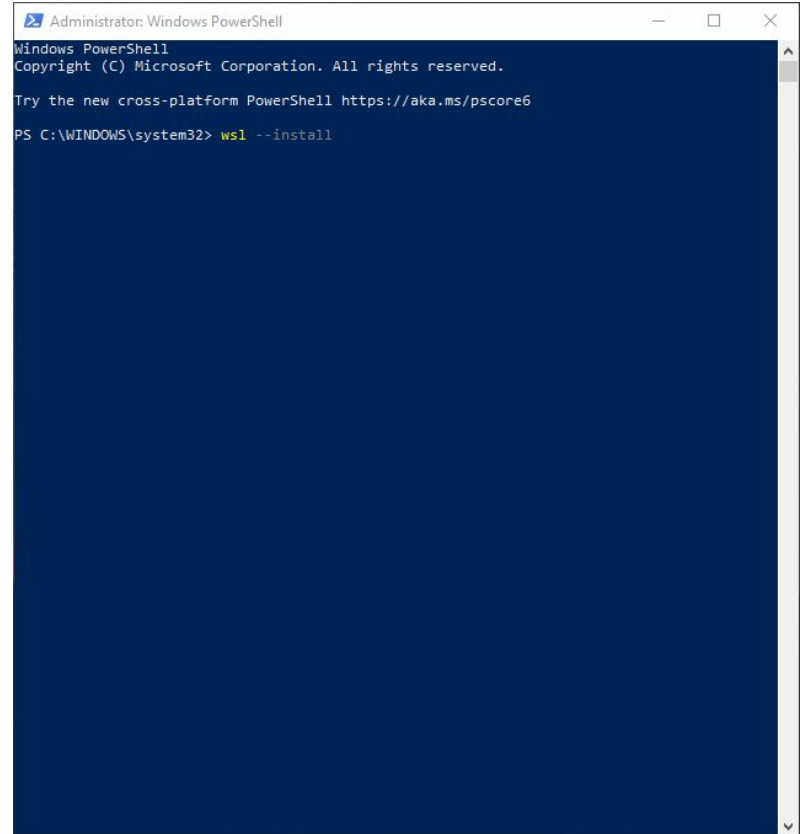
Instalasi

1. Buka Windows Power Shell dengan opsi Run as Administrator



Instalasi

2. Gunakan perintah berikut `wsl`
`--install` untuk menginstall Ubuntu
20.04. Tunggu hingga proses instalasi
selesai.

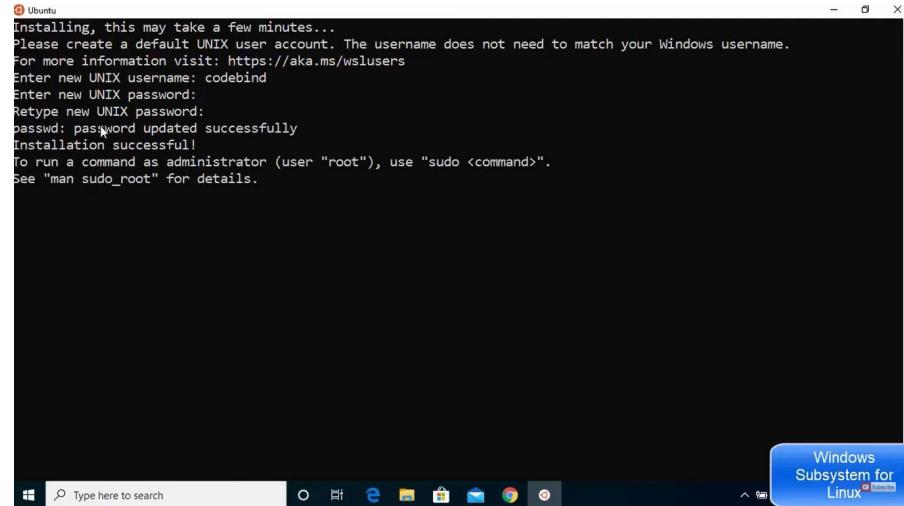
A screenshot of a Windows PowerShell terminal window titled "Administrator: Windows PowerShell". The window has a dark blue background. The text displayed in the terminal is as follows:

```
Windows PowerShell  
Copyright (C) Microsoft Corporation. All rights reserved.  
  
Try the new cross-platform PowerShell https://aka.ms/pscore6  
  
PS C:\WINDOWS\system32> wsl --install
```

Instalasi

3. Setelah proses install selesai, anda perlu melakukan restart. Selanjutnya, buka Ubuntu dari Windows start menu lalu buat UNIX account. Isilah username dan password untuk Ubuntu kalian.

Perhatikan bahwa saat mengisi password tampilan terminal tidak akan berubah (Hash).

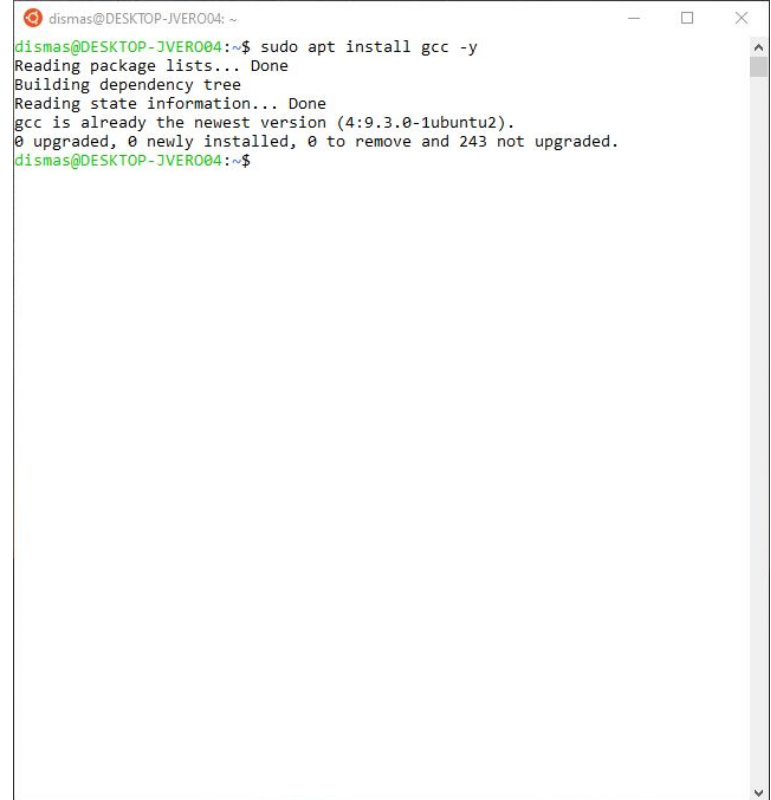


```
Installing, this may take a few minutes...
Please create a default UNIX user account. The username does not need to match your Windows username.
For more information visit: https://aka.ms/wslusers
Enter new UNIX username: codebind
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
Installation successful
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.
```

Instalasi

4. Setelah selesai membuat akun, anda sudah dapat menggunakan terminal Ubuntu. Lakukan instalasi compiler gcc dengan perintah `sudo apt install gcc -y`, tunggu hingga proses download dan instalasi selesai.

*Karena saya sudah melakukan instalasi sebelumnya maka tampilan di samping akan sedikit berbeda.

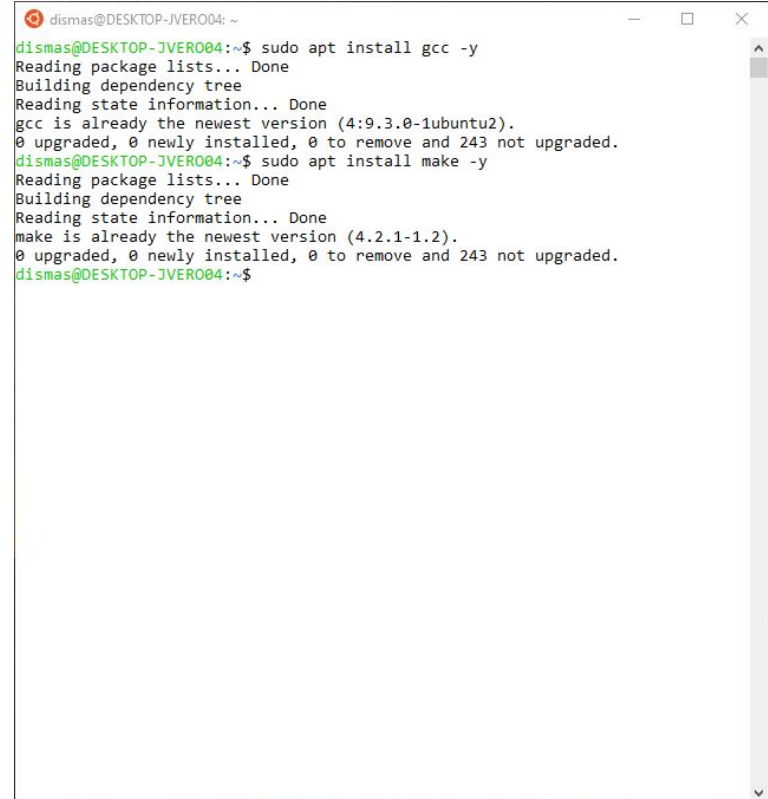
A terminal window titled 'dismas@DESKTOP-JVER004: ~' with standard window controls. It shows the command 'sudo apt install gcc -y' being executed. The output indicates that the package lists are read, the dependency tree is built, and state information is read. It then states that gcc is already the newest version (4:9.3.0-1ubuntu2) and that no packages need to be upgraded, newly installed, or removed, with 243 packages not upgraded. The prompt returns to 'dismas@DESKTOP-JVER004:~\$'.

```
dismas@DESKTOP-JVER004: ~  
dismas@DESKTOP-JVER004:~$ sudo apt install gcc -y  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
gcc is already the newest version (4:9.3.0-1ubuntu2).  
0 upgraded, 0 newly installed, 0 to remove and 243 not upgraded.  
dismas@DESKTOP-JVER004:~$
```

Instalasi

5. Berikutnya lakukan instalasi library make untuk makefile dengan perintah `sudo apt install make -y`, tunggu hingga proses download dan instalasi selesai.

*Karena saya sudah melakukan instalasi sebelumnya maka tampilan di samping akan sedikit berbeda.

A terminal window titled 'dismas@DESKTOP-JVER004: ~' with standard window controls. It shows two terminal commands and their outputs. The first command is 'sudo apt install gcc -y', which outputs that gcc is already the newest version (4:9.3.0-1ubuntu2) and that 0 packages are upgraded, 0 are newly installed, 0 are to be removed, and 243 are not upgraded. The second command is 'sudo apt install make -y', which outputs that make is already the newest version (4.2.1-1.2) and that 0 packages are upgraded, 0 are newly installed, 0 are to be removed, and 243 are not upgraded. The prompt returns to 'dismas@DESKTOP-JVER004:~\$' after each command.

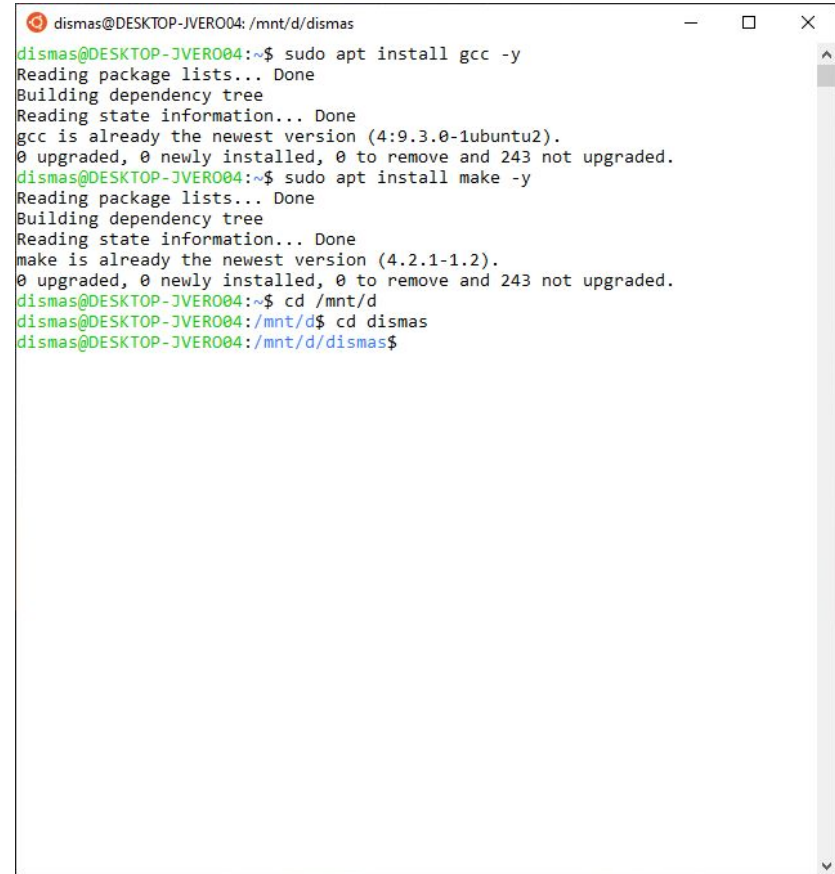
```
dismas@DESKTOP-JVER004:~$ sudo apt install gcc -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
gcc is already the newest version (4:9.3.0-1ubuntu2).
0 upgraded, 0 newly installed, 0 to remove and 243 not upgraded.
dismas@DESKTOP-JVER004:~$ sudo apt install make -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
make is already the newest version (4.2.1-1.2).
0 upgraded, 0 newly installed, 0 to remove and 243 not upgraded.
dismas@DESKTOP-JVER004:~$
```

Instalasi

6. Setelah melakukan instalasi beberapa library, anda sekarang sudah dapat menggunakan Ubuntu untuk melakukan kompilasi dan menjalankan program anda.

Anda dapat menggunakan perintah berikut untuk berpindah folder `cd /mnt/<disk>`.

Gambar di samping menunjukkan perpindahan folder ke Disk D, kemudian masuk ke folder Dismas



```
dismas@DESKTOP-JVER004: /mnt/d/dismas
dismas@DESKTOP-JVER004:~$ sudo apt install gcc -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
gcc is already the newest version (4:9.3.0-1ubuntu2).
0 upgraded, 0 newly installed, 0 to remove and 243 not upgraded.
dismas@DESKTOP-JVER004:~$ sudo apt install make -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
make is already the newest version (4.2.1-1.2).
0 upgraded, 0 newly installed, 0 to remove and 243 not upgraded.
dismas@DESKTOP-JVER004:~$ cd /mnt/d
dismas@DESKTOP-JVER004:/mnt/d$ cd dismas
dismas@DESKTOP-JVER004:/mnt/d/dismas$
```

Penggunaan

1. Gunakan perintah dari makefile untuk kompilasi

```
dismas@DESKTOP-JVER004: /mnt/d/dismas/itb/semestervi/asisten/m01/soal
dismas@DESKTOP-JVER004: /mnt/d/dismas/itb/semestervi/asisten/m01/soal$ make Soal_M01
gcc -lm -o Soal_M01 Soal_M01.c
dismas@DESKTOP-JVER004: /mnt/d/dismas/itb/semestervi/asisten/m01/soal$
```



Penggunaan

2. Gunakan perintah `./<namafile>` untuk menjalankan program

```
dismas@DESKTOP-JVER004: /mnt/d/diskas/itb/semestervi/asisten/m01/soal
dismas@DESKTOP-JVER004: /mnt/d/diskas/itb/semestervi/asisten/m01/soal$ make Soal_M01
gcc -lm -o Soal_M01 Soal_M01.c
dismas@DESKTOP-JVER004: /mnt/d/diskas/itb/semestervi/asisten/m01/soal$ ./Soal_M01
Masukkan Panjang Deret: 5
Banyak Bilangan Ganjil: 4
Deret:
1 1 2 3 5 dismas@DESKTOP-JVER004: /mnt/d/diskas/itb/semestervi/asisten/m01/soal$
```

Penggunaan

3. Gunakan perintah dari makefile untuk membersihkan program



```
dismas@DESKTOP-JVER004: /mnt/d/dismas/itb/semestervi/asisten/m01/soal
dismas@DESKTOP-JVER004: /mnt/d/dismas/itb/semestervi/asisten/m01/soal$ make Soal_M01
gcc -lm -o Soal_M01 Soal_M01.c
dismas@DESKTOP-JVER004: /mnt/d/dismas/itb/semestervi/asisten/m01/soal$ ./Soal_M01
Masukkan Panjang Deret: 5
Banyak Bilangan Ganjil: 4
Deret:
1 1 2 3 5
dismas@DESKTOP-JVER004: /mnt/d/dismas/itb/semestervi/asisten/m01/soal$ make clean
rm Soal_M01
dismas@DESKTOP-JVER004: /mnt/d/dismas/itb/semestervi/asisten/m01/soal$
```

Further Reading

1. <https://docs.microsoft.com/en-us/windows/wsl/install>
2. <https://docs.microsoft.com/en-us/windows/wsl/setup/environment#set-up-your-linux-username-and-password>