

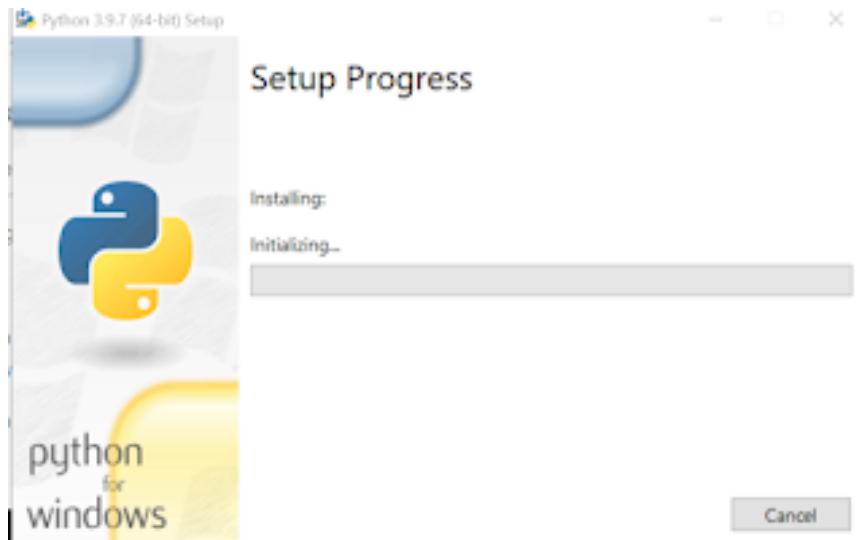
Nama : Ambar Wati  
NIM : 20.01.013.001  
Mata Kuliah : Pemrograman Python

## Instalasi Python

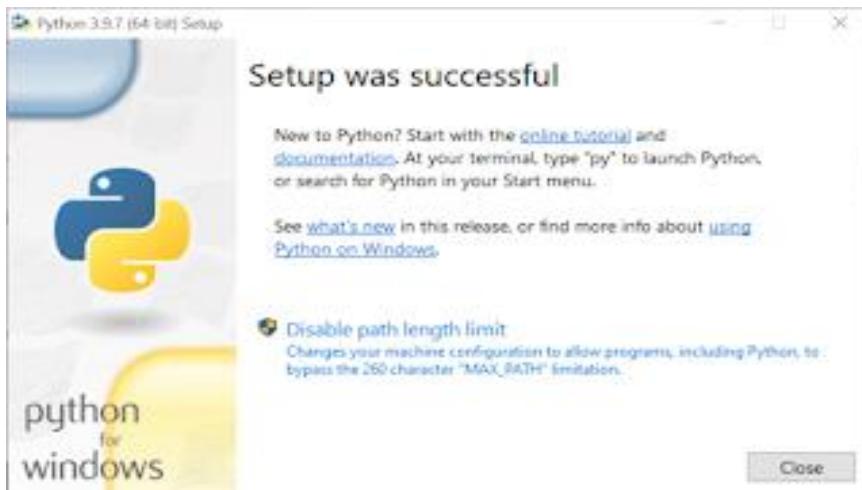
1. Pilih system python yang sesuai dengan system anda disini saya memakai python(3.9.7/64-bit)



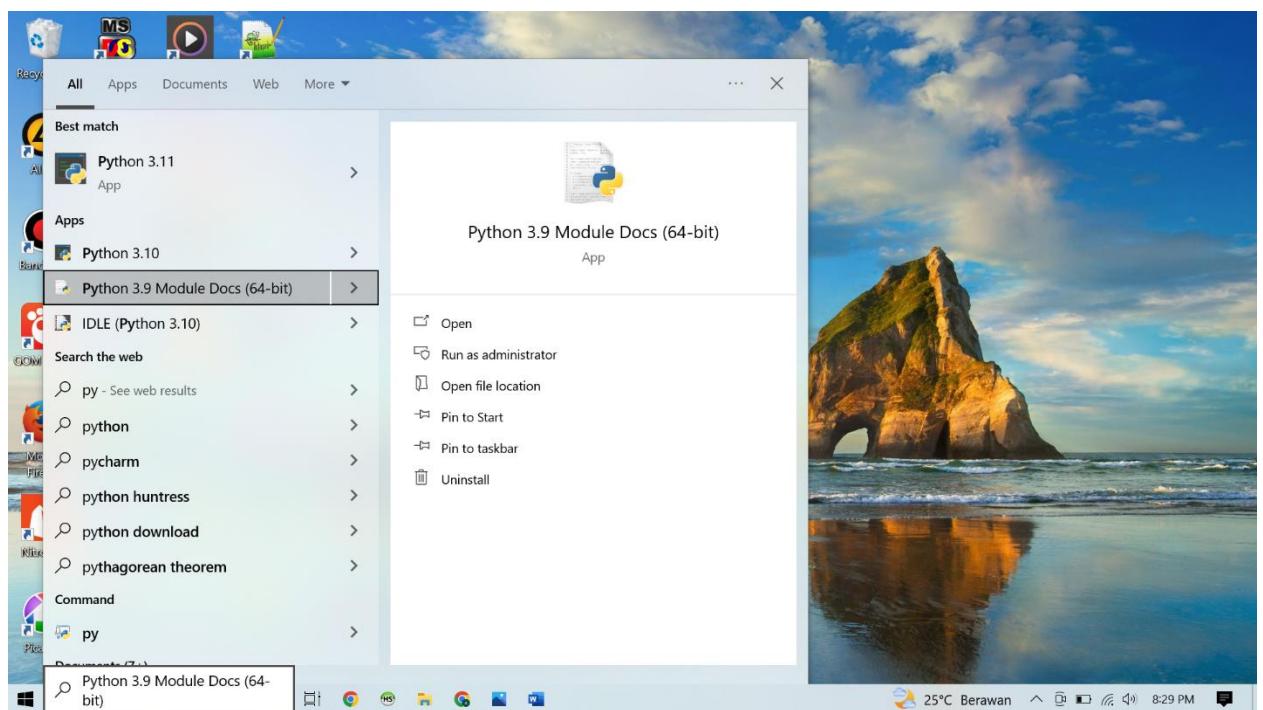
2. Tunggu hingga proses instalasi selesai



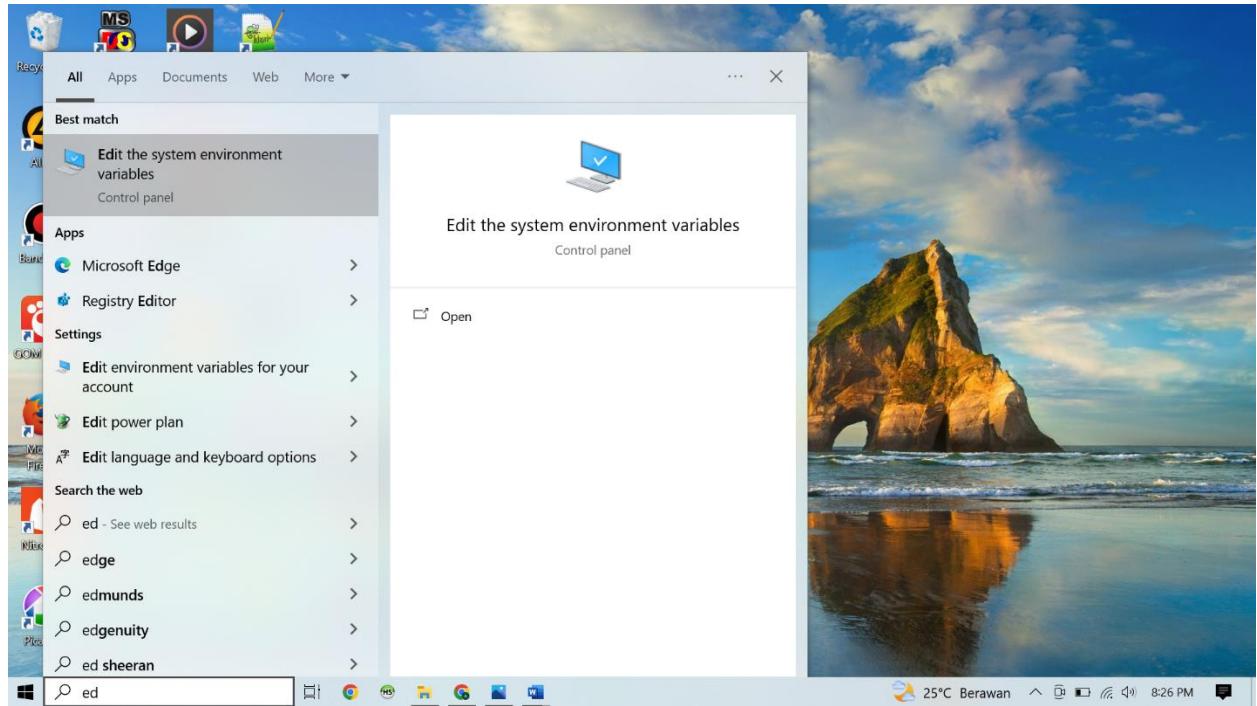
3. Setelah sukses klik Close.



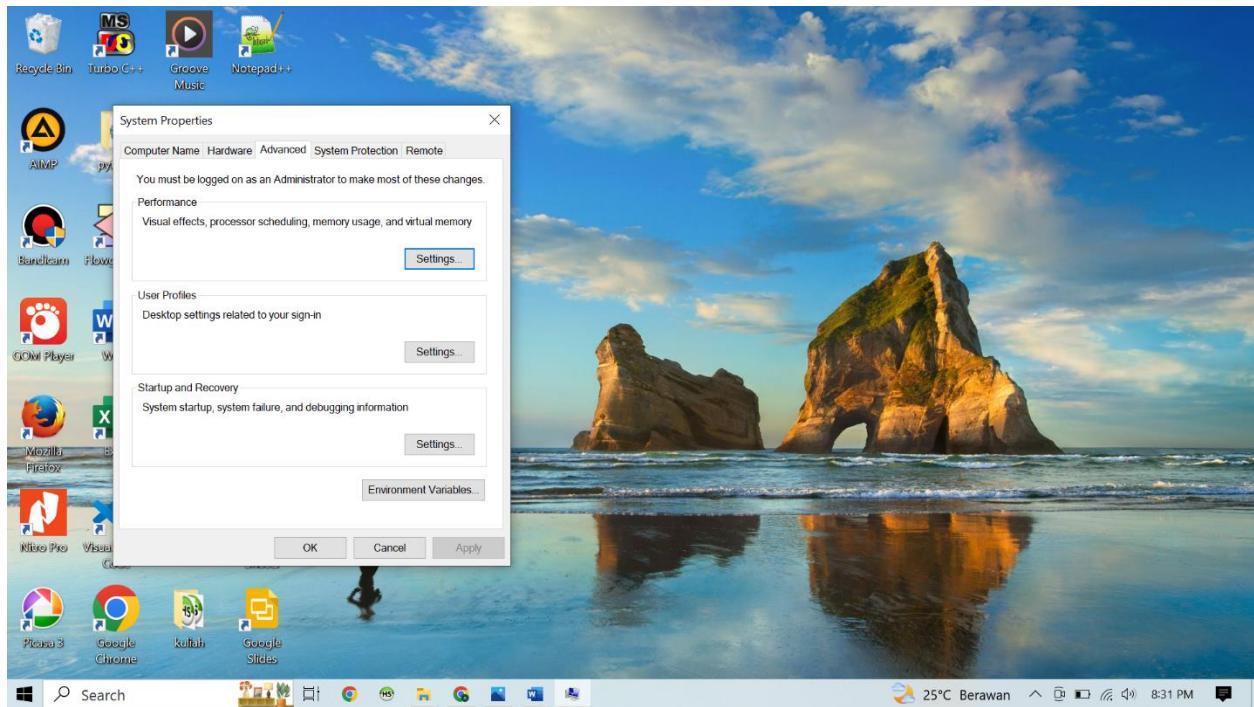
4. Kita bisa mengecek apakah python sudah terinstal atau belum.



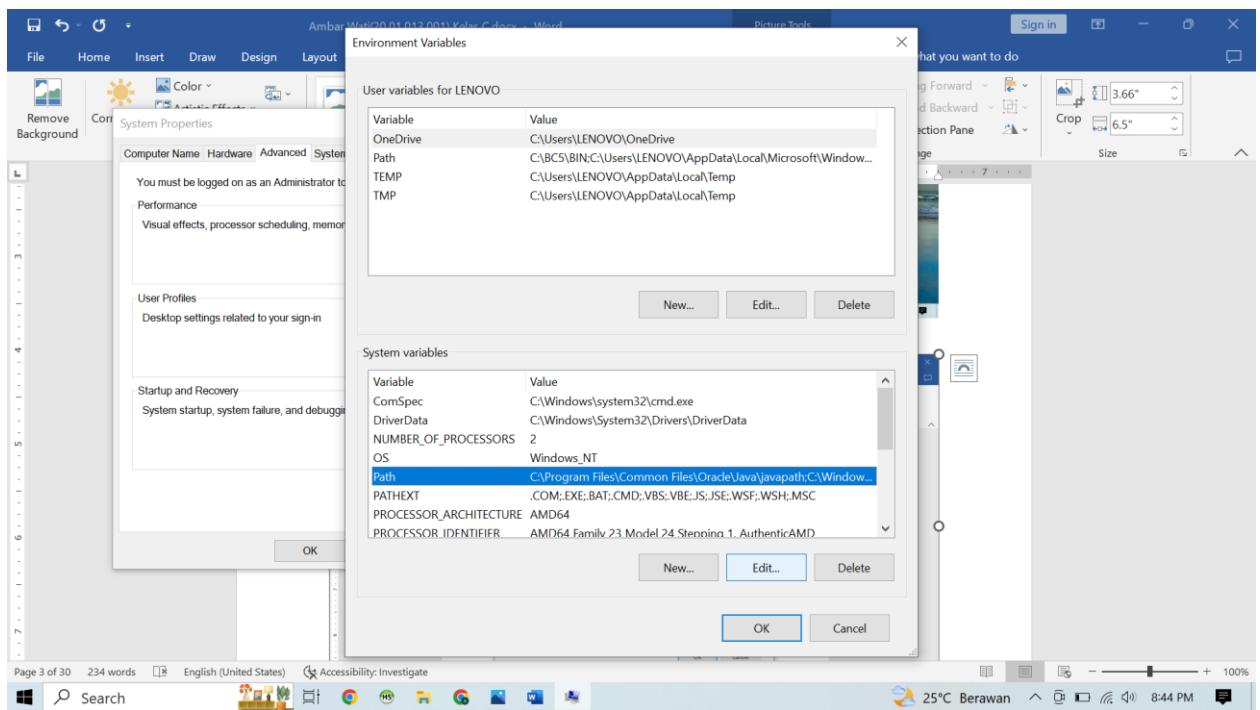
5. Selanjutnya buka sistem **enviroment variabel** untuk mensetting **path**. bisa di cek di menu searching.



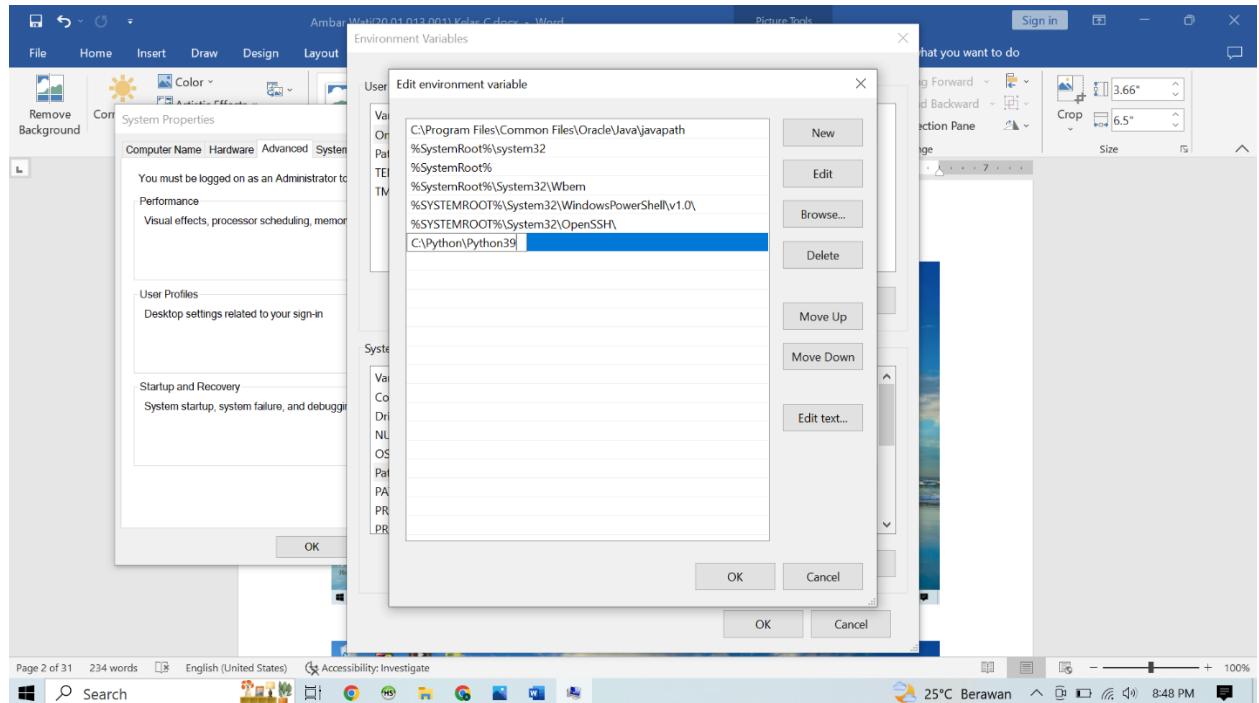
6. Setelah muncul kotak dialog klik **enviroment variabls** seperti gambar di bawah ini.



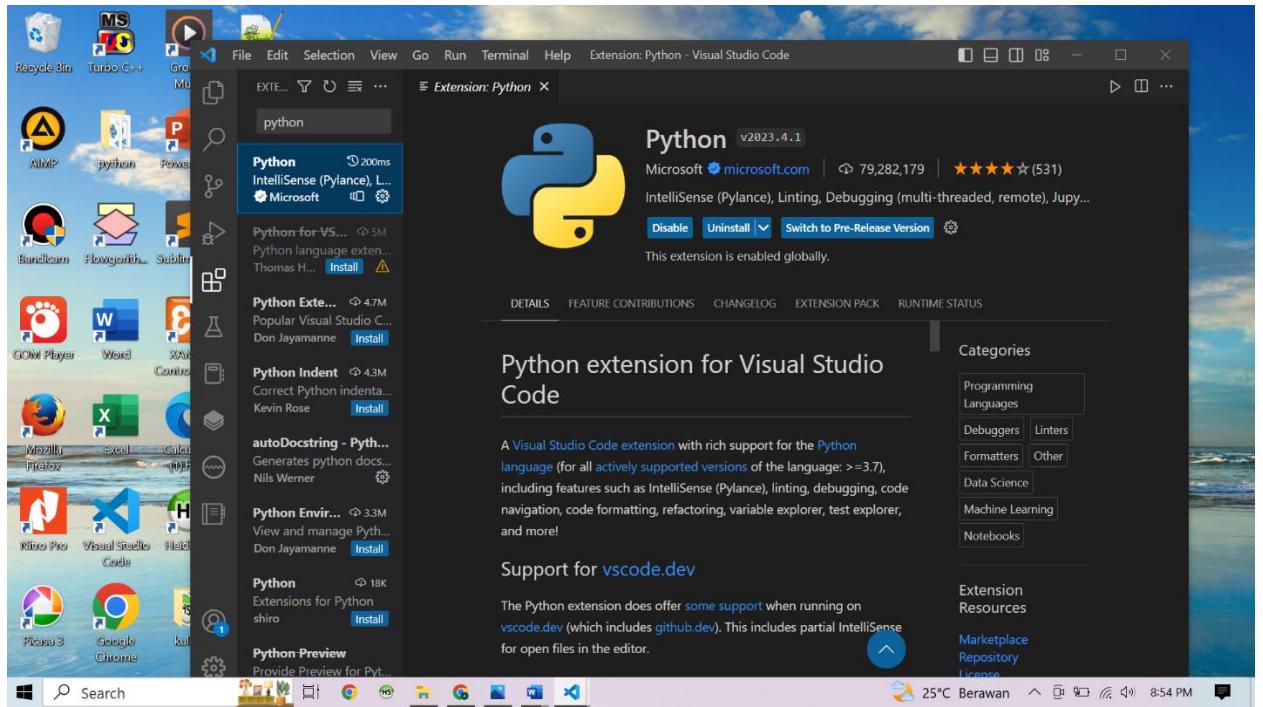
7. Pada bagian system variables path klik edit.



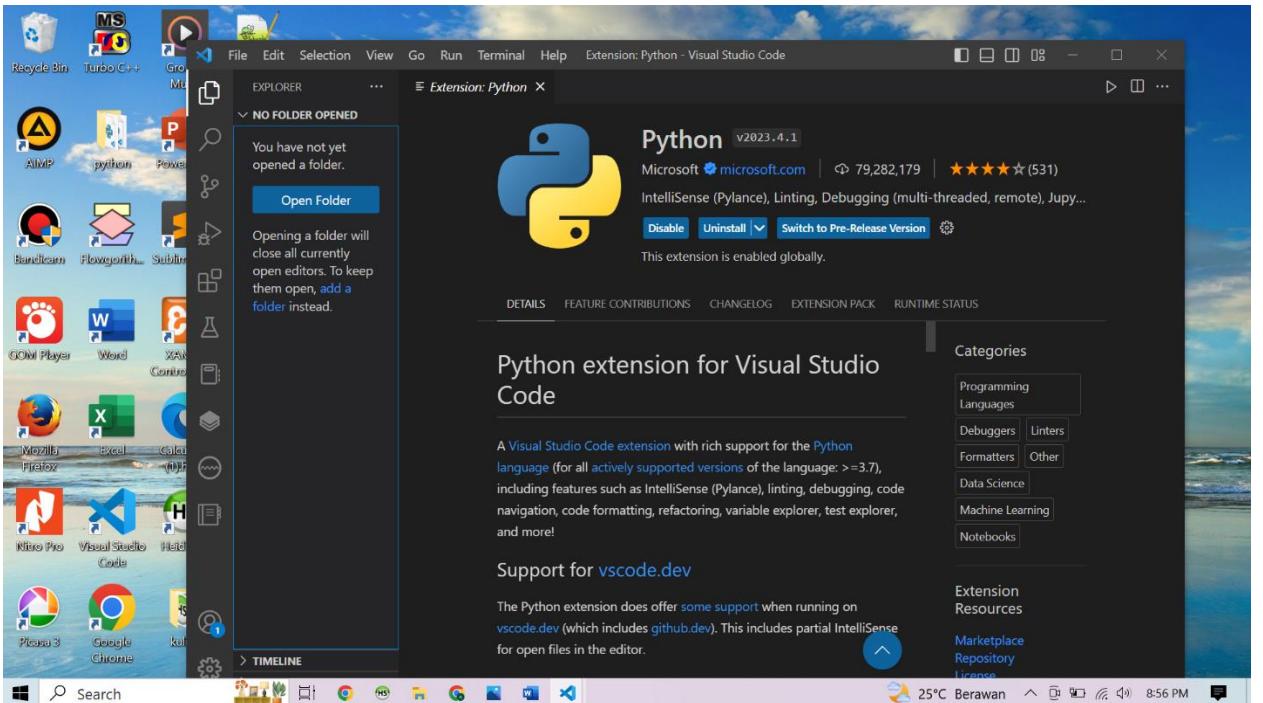
8. Klik tombol new lalu paste alamat directori yang telah di buat atau di copy



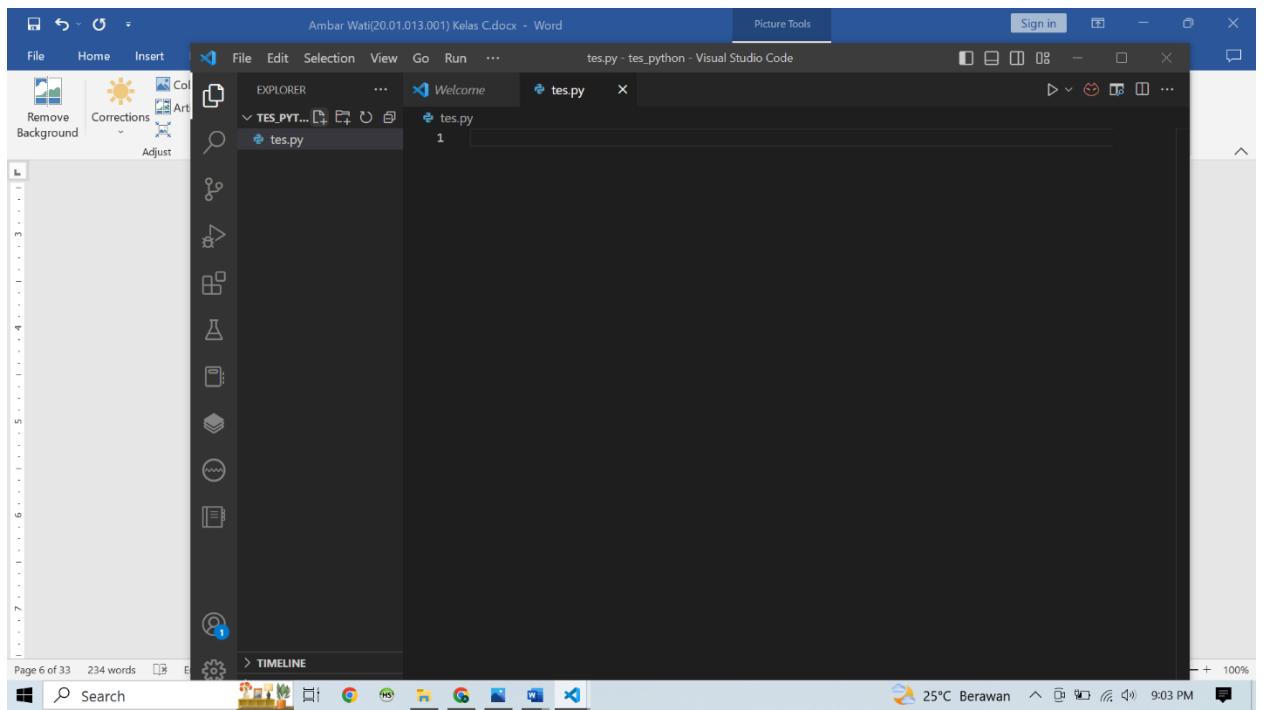
9. Lalu buka vs code pilih menu **extension** lalu searching python kemudian di install.



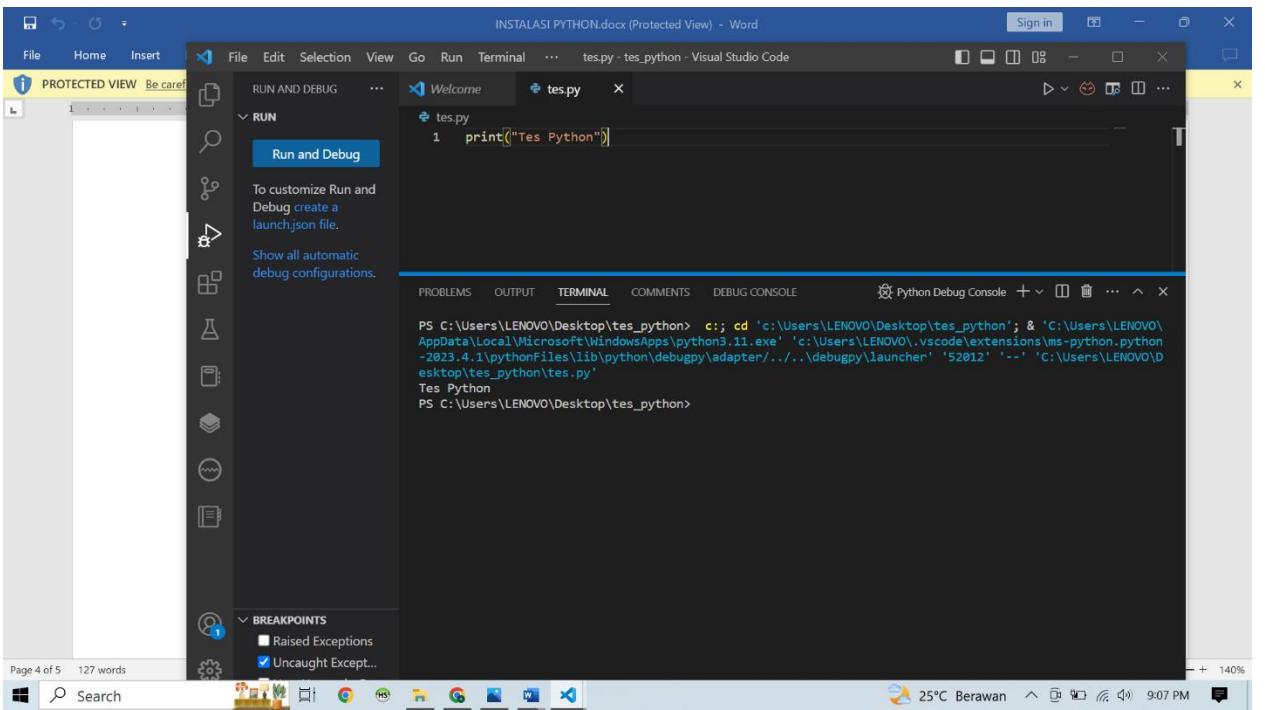
10. Lalu buat folder pada dekstop yang anda mau



## 11. Pada new file lalu buat folder tes.pyhton



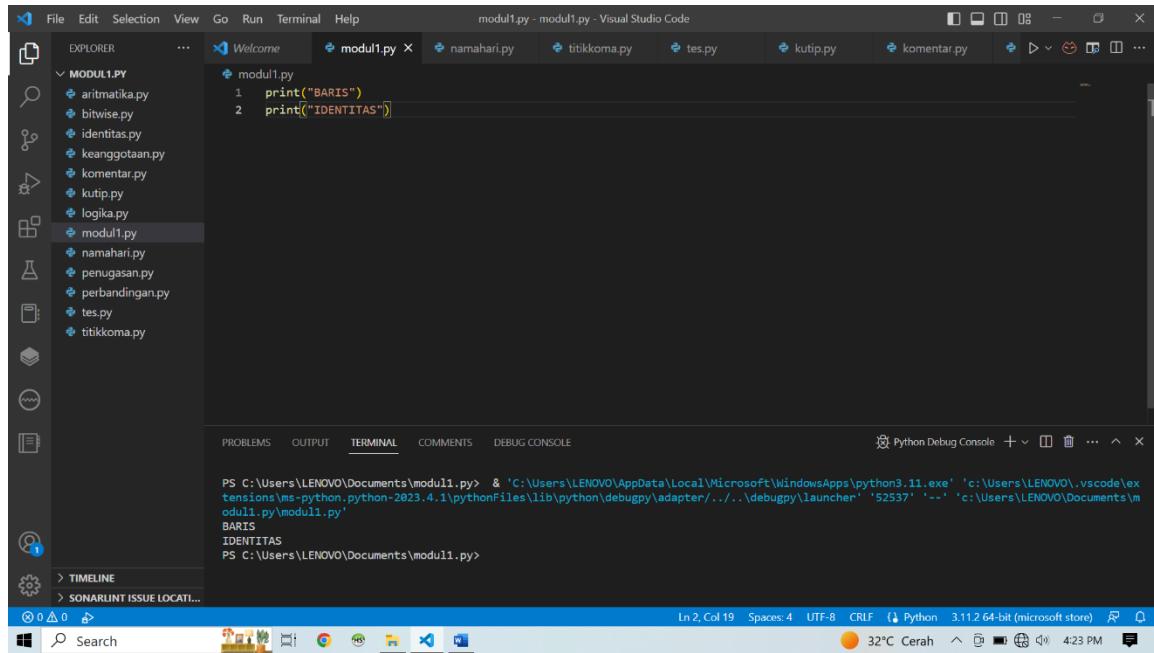
## 12. lalu run and Debug project seperti pada gambar di bawah ini



## Python – Modul 1

### 1. Baris dan identitas

Blok kode pada python menggunakan tanda identitas (spasi).

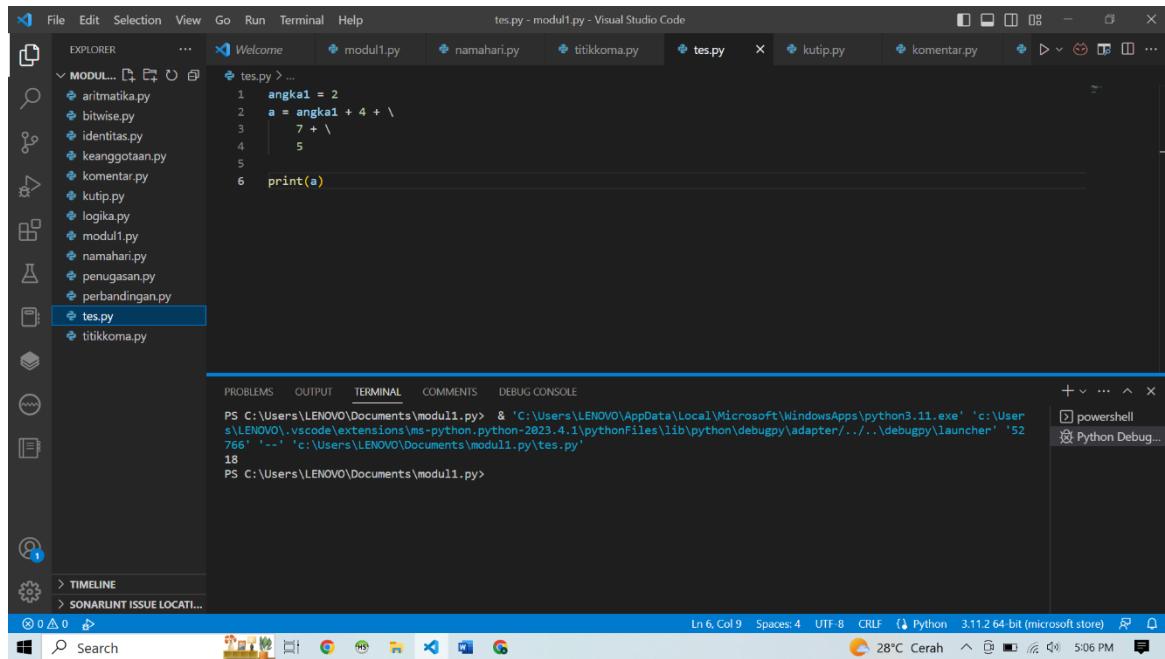


```
modul1.py - modul1.py - Visual Studio Code
File Edit Selection View Go Run Terminal Help
MODUL1.PY
modul1.py
1 print("BARIS")
2 print("IDENTITAS")

PROBLEMS OUTPUT TERMINAL COMMENTS DEBUG CONSOLE
PS C:\Users\LENOVO\Documents\modul1.py & "C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe" "c:\Users\LENOVO\vscode\extensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../..\debugpy\launcher" '52537' '--' 'c:\Users\LENOVO\Documents\modul1.py\modul1.py'
BARIS
IDENTITAS
PS C:\Users\LENOVO\Documents\modul1.py>
Ln 2, Col 19 Spaces: 4 UTF-8 CRLF Python 3.11.2 64-bit (microsoft store) 32°C Cerah 4:23 PM
```

### 2. Pernyataan Multibaris

Pada Python sebuah statement pada akhir dari baris baris menggunakan tanda (/)



```
tes.py - modul1.py - Visual Studio Code
File Edit Selection View Go Run Terminal Help
MODUL1.PY
tes.py
1 angka1 = 2
2 a = angka1 + 4 + \
3     7 + \
4     5
5
6 print(a)

PROBLEMS OUTPUT TERMINAL COMMENTS DEBUG CONSOLE
PS C:\Users\LENOVO\Documents\modul1.py & "C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe" "c:\Users\LENOVO\vscode\extensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../..\debugpy\launcher" '52766' '--' 'c:\Users\LENOVO\Documents\modul1.py\tes.py'
18
PS C:\Users\LENOVO\Documents\modul1.py>
Ln 6, Col 9 Spaces: 4 UTF-8 CRLF Python 3.11.2 64-bit (microsoft store) 28°C Cerah 5:06 PM
```

### 3. Tanda Kutip

Pada python menggunakan tanda kutip tunggal ('), ganda("), triple("")

The screenshot shows the Visual Studio Code interface. The Explorer sidebar on the left lists several Python files: aritmatika.py, bitwise.py, identitas.py, keanggotaan.py, komentar.py, kutip.py, logika.py, modul1.py, namahari.py, penugasan.py, perbandingan.py, tes.py, and titikoma.py. The 'kutip.py' file is currently selected. The code editor window displays the following code:

```
kutip.py > ...
1 kutip1 = 'BELAJAR PYTHON'
2 kutip2 = "BELAJAR PYTHONDASAR"
3 kutip3 = """BELAJAR PYTHON SIANG MALAM"""
4
5 print(kutip1)
6 print(kutip2)
7 print(kutip3)
```

Below the code editor, the terminal tab is active, showing the command-line output of running the script:

```
PS C:\Users\LENOVO\Documents\modul1.py> c:; cd 'c:\Users\LENOVO\Documents\modul1.py'; & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\.vscode\extensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../..\debugpy\launcher' '52799' '--' 'c:\Users\LENOVO\Documents\modul1.py\kutip.py'
BELAJAR PYTHON
BELAJAR PYTHONDASAR
BELAJAR PYTHON SIANG MALAM
PS C:\Users\LENOVO\Documents\modul1.py>
```

The status bar at the bottom indicates the file is ln 7, col 13, spaces 4, and the system is at 28°C Cerah.

### 4. Komentar

The screenshot shows the Visual Studio Code interface. The Explorer sidebar on the left lists the same set of Python files as the previous screenshot. The 'komentar.py' file is currently selected. The code editor window displays the following code:

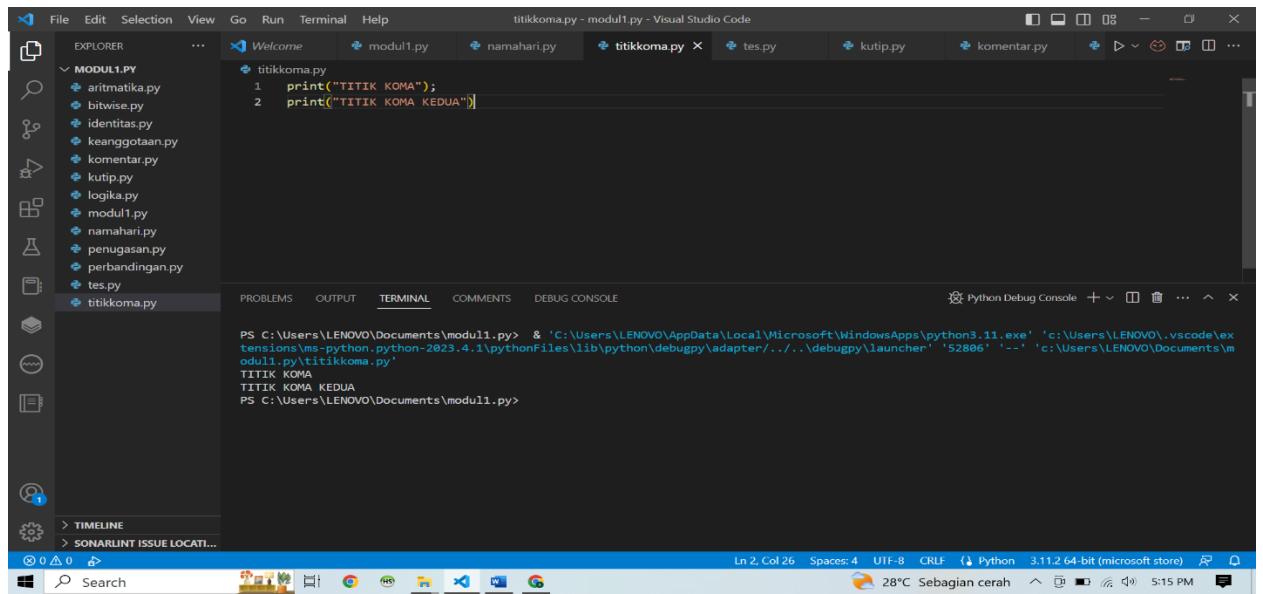
```
komentar.py
1 print("INI ADALAH KOMENTAR") #contoh komentar
```

Below the code editor, the terminal tab is active, showing the command-line output of running the script:

```
PS C:\Users\LENOVO\Documents\modul1.py> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\.vscode\extensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../..\debugpy\launcher' '52794' '--' 'c:\Users\LENOVO\Documents\modul1.py\komentar.py'
INI ADALAH KOMENTAR
PS C:\Users\LENOVO\Documents\modul1.py>
```

The status bar at the bottom indicates the file is ln 1, col 46, spaces 4, and the system is at 28°C Cerah.

## 5. Dua pernyataan dalam satu baris



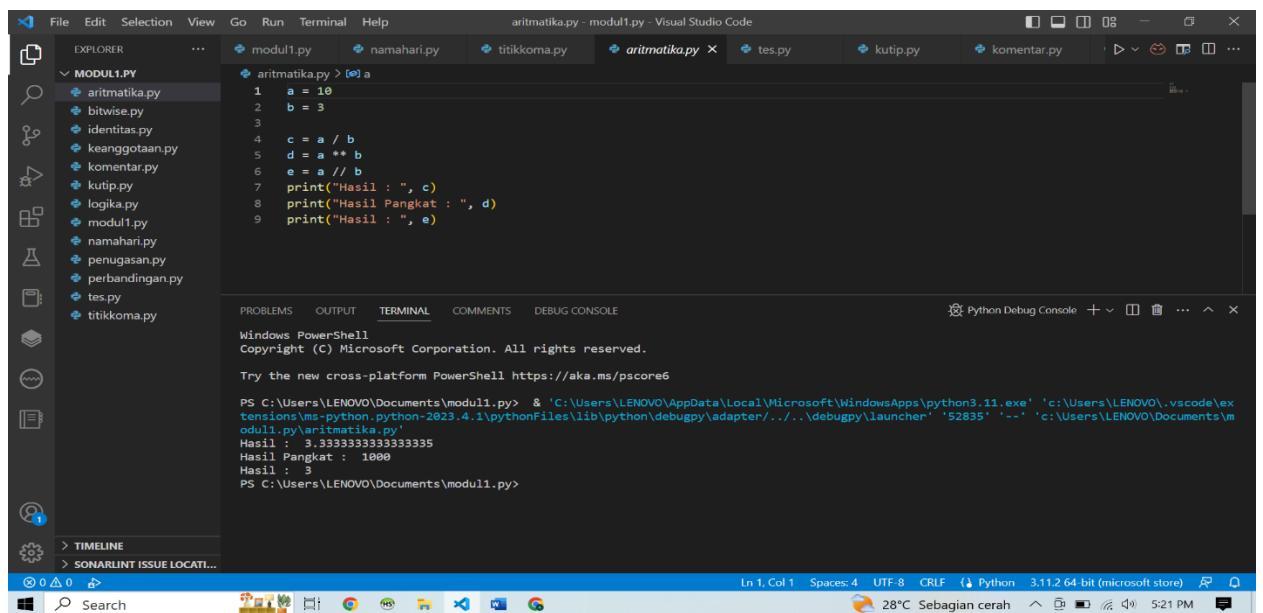
A screenshot of Visual Studio Code showing a Python file named `titikkoma.py`. The code contains two lines of print statements:

```
titikkoma.py
1 print("TITIK KOMA");
2 print("TITIK KOMA KEDUA")
```

The terminal window shows the output of running the script:

```
PS C:\Users\LENOVO\Documents\modul1.py> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\.vscode\extensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../..\debugpy\launcher' '52896' '--' 'c:\Users\LENOVO\Documents\modul1.py\titikkoma.py'
TITIK KOMA
TITIK KOMA KEDUA
PS C:\Users\LENOVO\Documents\modul1.py>
```

## 6. Operator Aritmatika



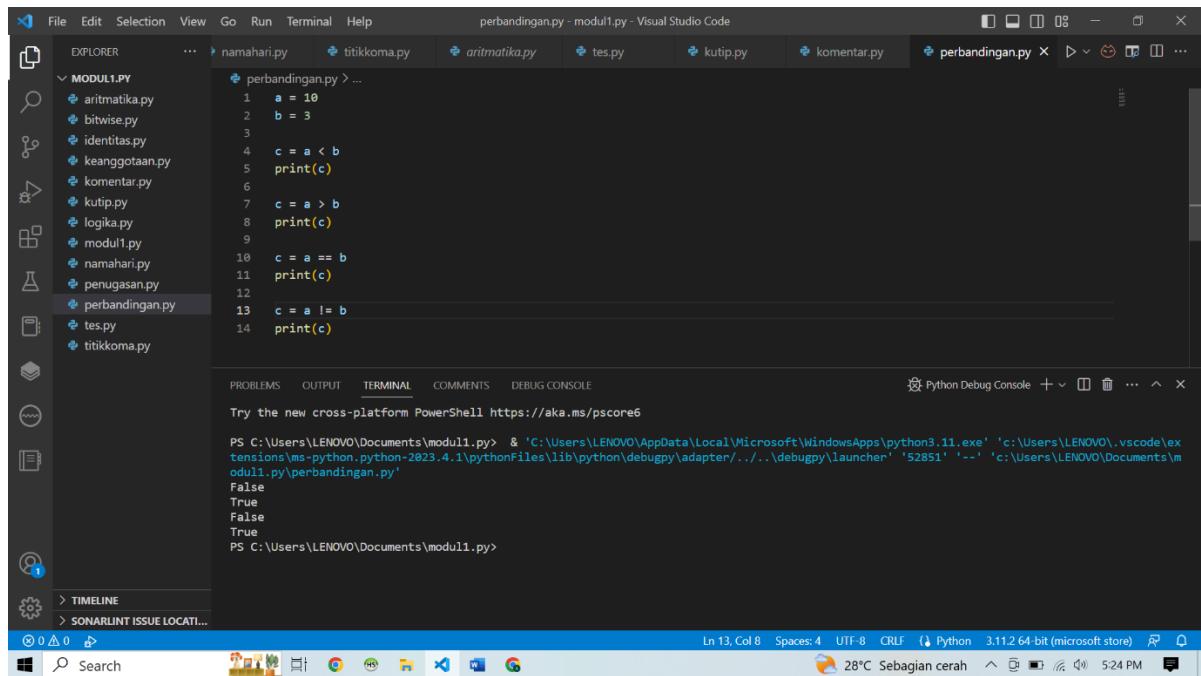
A screenshot of Visual Studio Code showing a Python file named `aritmatika.py`. The code performs various arithmetic operations:

```
aritmatika.py
1 a = 10
2 b = 3
3
4 c = a / b
5 d = a ** b
6 e = a // b
7 print("Hasil : ", c)
8 print("Hasil Pangkat : ", d)
9 print("Hasil : ", e)
```

The terminal window shows the output of running the script:

```
PS C:\Users\LENOVO\Documents\modul1.py> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\.vscode\extensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../..\debugpy\launcher' '52895' '--' 'c:\Users\LENOVO\Documents\modul1.py\aritmatika.py'
Hasil :  3.3333333333333335
Hasil Pangkat :  1000
Hasil :  3
PS C:\Users\LENOVO\Documents\modul1.py>
```

## 7. Operator Perbandingan



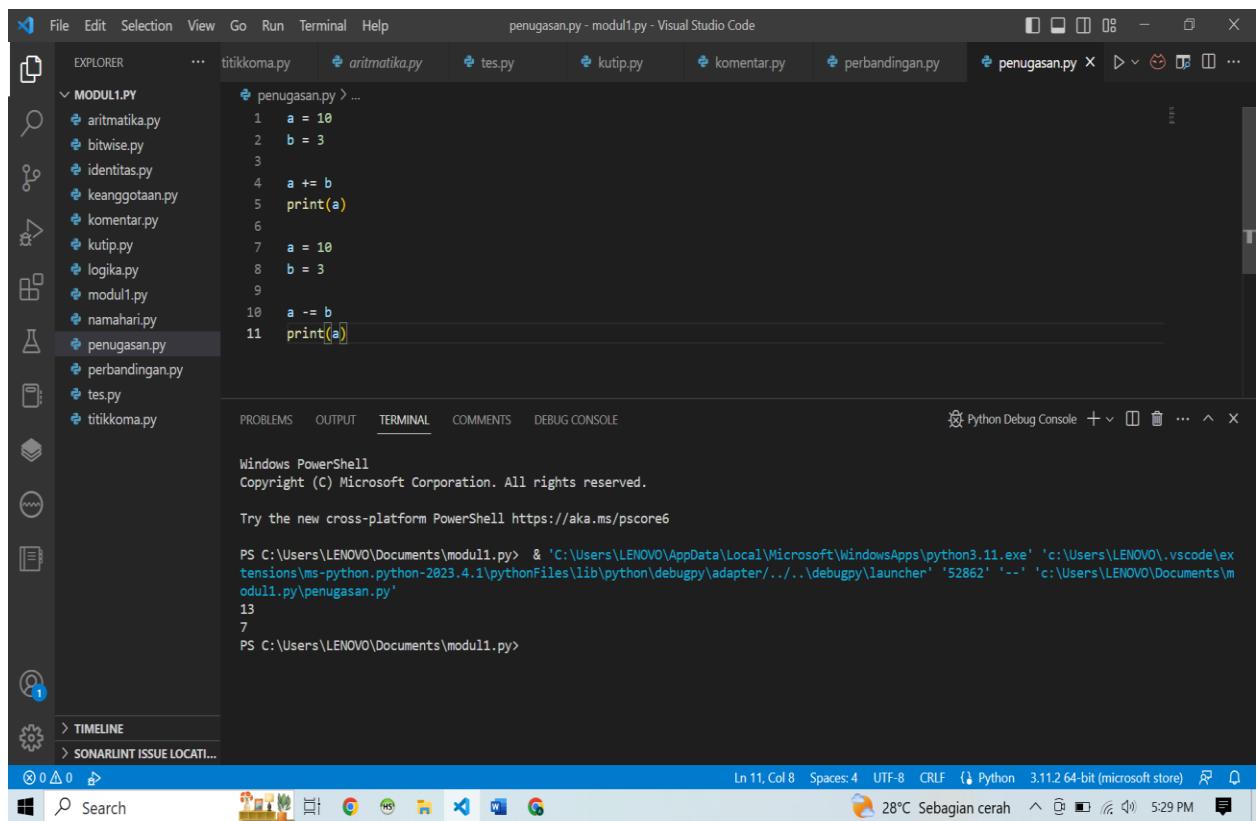
The screenshot shows the Visual Studio Code interface with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, Terminal, Help.
- Editor Bar:** perbandingan.py - modul1.py - Visual Studio Code.
- Explorer:** Shows a folder named MODUL1.PY containing several Python files: aritmatika.py, bitwise.py, identitas.py, keanggotaan.py, komentar.py, kutip.py, logika.py, modul1.py, namahari.py, penugasan.py, perbandingan.py, tes.py, and titikoma.py. The file perbandingan.py is currently selected.
- Code Editor:** Displays the following Python code:

```
a = 10
b = 3
c = a < b
print(c)
c = a > b
print(c)
c = a == b
print(c)
c = a != b
print(c)
```
- Terminal:** Shows the output of running the code:

```
PS C:\Users\LENOVO\Documents\modul1.py> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\.vscode\extensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../..\debugpy\launcher' '52851' '--' 'c:\Users\LENOVO\Documents\modul1.py\perbandingan.py'
False
True
False
True
PS C:\Users\LENOVO\Documents\modul1.py>
```
- Status Bar:** Ln 13, Col 8 Spaces: 4 UTF-8 Python 3.11.2 64-bit (microsoft store) 28°C Sebagian cerah 5:24 PM

## 8. Operator Penugasan



The screenshot shows the Visual Studio Code interface with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, Terminal, Help.
- Editor Bar:** penugasan.py - modul1.py - Visual Studio Code.
- Explorer:** Shows a folder named MODUL1.PY containing several Python files: aritmatika.py, bitwise.py, identitas.py, keanggotaan.py, komentar.py, kutip.py, logika.py, modul1.py, namahari.py, penugasan.py, perbandingan.py, tes.py, and titikoma.py. The file penugasan.py is currently selected.
- Code Editor:** Displays the following Python code:

```
a = 10
b = 3
a += b
print(a)
a = 10
b = 3
a -= b
print(a)
```
- Terminal:** Shows the output of running the code:

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

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

PS C:\Users\LENOVO\Documents\modul1.py> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\.vscode\extensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../..\debugpy\launcher' '52862' '--' 'c:\Users\LENOVO\Documents\modul1.py\penugasan.py'
13
7
PS C:\Users\LENOVO\Documents\modul1.py>
```
- Status Bar:** Ln 11, Col 8 Spaces: 4 UTF-8 Python 3.11.2 64-bit (microsoft store) 28°C Sebagian cerah 5:29 PM

## 9. Operator Logika

The screenshot shows the Visual Studio Code interface with the following details:

- File Bar:** File, Edit, Selection, View, Go, Run, Terminal, Help.
- Title Bar:** logika.py - modul1.py - Visual Studio Code.
- Explorer:** Shows a folder named "MODUL1.PY" containing files: aritmatika.py, bitwise.py, identitas.py, keanggotaan.py, komentar.py, kutip.py, logika.py, modul1.py, namahari.py, penugasan.py, perbandingan.py, tes.py, and titikoma.py. The file "logika.py" is selected and open in the editor.
- Editor:** Displays the following Python code:

```
a = True  
b = False  
c = True  
  
d = a and c  
print(d)  
  
d = a and b  
print(d)  
  
d = a or b  
print(d)  
  
d = a or c  
print(d)
```
- Terminal:** Shows the command PS C:\Users\LENOVO\Documents\modul1.py & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\.vscode\extensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter\..\..\debugpy\launcher' '52879' '--' 'c:\Users\LENOVO\Documents\modul1.py\logika.py'. The output shows the execution of the code with results: True, False, True, True.
- Status Bar:** Ln 11, Col 11, Spaces: 4, UTF-8, CRLF, Python 3.11.2 64-bit (microsoft store), 28°C Sebagian cerah, 5:31 PM.

## 10. Operator Bitwise

The screenshot shows the Visual Studio Code interface with the following details:

- File Bar:** File, Edit, Selection, View, Go, Run, Terminal, Help.
- Title Bar:** bitwise.py - modul1.py - Visual Studio Code.
- Explorer:** Shows a folder named "MODUL1.PY" containing files: aritmatika.py, bitwise.py, identitas.py, keanggotaan.py, komentar.py, kutip.py, logika.py, modul1.py, namahari.py, penugasan.py, perbandingan.py, tes.py, and titikoma.py. The file "bitwise.py" is selected and open in the editor.
- Editor:** Displays the following Python code:

```
a = 1  
b = 2  
  
c = a | b  
print(c)  
  
c = a & b  
print(c)
```
- Terminal:** Shows the command PS C:\Users\LENOVO\Documents\modul1.py & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\.vscode\extensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter\..\..\debugpy\launcher' '52883' '--' 'c:\Users\LENOVO\Documents\modul1.py\bitwise.py'. The output shows the execution of the code with results: 3, 0.
- Status Bar:** Ln 8, Col 8, Spaces: 4, UTF-8, CRLF, Python 3.11.2 64-bit (microsoft store), 28°C Sebagian cerah, 5:36 PM.

## 11. Operator Identitas

The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows files in the 'MODUL1.PY' folder, including 'identitas.py' (5 changes), 'keanggotaan.py', 'komentar.py', 'kutip.py', 'logika.py', 'modul1.py', 'namahari.py', 'penugasan.py', 'perbandingan.py', 'tes.py', and 'titikoma.py'.
- Code Editor:** Displays the 'identitas.py' code:

```
1 a = 1
2 b = 2
3
4 print(1 is a)
5 print(2 is b)
6 print(3 is a)
7 print(1 is not a)
8 print(2 is not b)
9
10 print(" ")
11
12 print(type(a) is int)
13 print(type(b) is float)
```
- Terminal:** Shows the execution output:

```
True
True
False
False
False

True
False
PS C:\Users\LENOVO\Documents\modul1.py>
```
- Bottom Status Bar:** Shows 'Ln 13, Col 23' and 'Python 3.11.2 64-bit (microsoft store)'.

## 12. Operator Keanggotaan

The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows files in the 'MODUL1.PY' folder, including 'ntar.py', 'perbandingan.py', 'penugasan.py', 'logika.py', 'bitwise.py', 'identitas.py' (5 changes), and 'keanggotaan.py' (1 change).
- Code Editor:** Displays the 'keanggotaan.py' code:

```
1 kata = "hari ini belajar python"
2
3 print("hari" in kata)
4 print("malam" in kata)
5 print("belajar" not in kata)
6 print("piton" is not kata)
7
8 print(" ")
9
10 kata = 5, 8, "sistem"
11
12 print(5 in kata)
13 print(8 in kata)
14 print(8 not in kata)
15 print("sistem" not in kata)
```
- Terminal:** Shows the execution output:

```
True
False
False
True

True
True
False
False
PS C:\Users\LENOVO\Documents\modul1.py>
```
- Bottom Status Bar:** Shows 'Ln 15, Col 28' and 'Python 3.11.2 64-bit (microsoft store)'.

## Python – Modul 2

### 1. Output

The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a folder named "PYTHON.MODUL 2" containing various Python files: Input\_abs.py, Input\_float.py, input\_pow.py, Input.py, list\_akses.py, list\_bilik\_urutan.py, list\_hapus\_anggota.py, list\_inser.py, list\_memotong.py, list\_negatif.py, list\_tambah\_ang... 2, list\_ubah\_anggota.py, list\_urut\_anggota.py, Output.py, string\_index\_lan.py, string\_index.py, String\_len.py, and string\_slice.py.
- Code Editor:** The active file is "Output.py". The code contains several print statements:

```
1 print(1, 3, 5, 7)
2 # Outputnya : 1 3 5 7
3
4 print(1,2,3,4, sep='+')
5 # Outputnya : 1+2+3+4
6
7 print(1,2,3,4, sep="#" , end=' ')
8 # Outputnya : 1#2#3#4
```
- Terminal:** The terminal shows the command to run the file and its output:

```
PS C:\Users\LENOVO\Documents\Python.Modul 2> c:; cd 'c:\Users\LENOVO\Documents\Python.Modul 2'; & "C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe" "c:\Users\LENOVO\.vscode\extensions\ms-python.python-2023.4.1\pythonFile\slib\python\debugpy\adapter/.../debugpy\launcher" '52912' '--' 'c:\Users\LENOVO\Documents\Python.Modul 2\Output.py'
1 3 5 7
1*2*3*4
1#2#3#4
```
- Status Bar:** Shows the current line (Ln 8, Col 23), spaces (Spaces: 4), encoding (UTF-8), and Python version (3.11.2 64-bit (microsoft store)).

### 2. Input

The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a folder named "PYTHON.MODUL 2" containing various Python files: Input\_abs.py, Input\_float.py, input\_pow.py, Input.py, list\_akses.py, list\_bilik\_urutan.py, list\_hapus\_anggota.py, list\_inser.py, list\_memotong.py, list\_negatif.py, list\_tambah\_ang... 2, list\_ubah\_anggota.py, list\_urut\_anggota.py, Output.py, string\_index\_lan.py, string\_index.py, String\_len.py, and string\_slice.py.
- Code Editor:** The active file is "Input.py". The code uses the input() function to get user input and print() to display results:

```
1 a = input("Masukkan Nilai A : ")
2 b = input("Masukkan Nilai B : ")
3
4 print(a,b) #Kode input
5
6 a = input("Masukkan Nilai A : ")
7 b = input("Masukkan Nilai B : ")
8 c = a+b
9
10 print(c) #kode input integer tanpa fungsi int()
11
12 a = int(input("Masukkan Nilai A : "))
13 b = int(input("Masukkan Nilai B : "))
14 c = a+b
15
16 print(c) #fungsi int() cara pertama
```
- Terminal:** The terminal shows the execution of the script and user input:

```
'52921' '--' 'c:\Users\LENOVO\Documents\Python.Modul 2\Input.py'
Masukkan Nilai A : 2
Masukkan Nilai B : 1
2 1
Masukkan Nilai A : 2
Masukkan Nilai B : 1
21
Masukkan Nilai A : 2
Masukkan Nilai B : 1
3
Masukkan Nilai A : 2
Masukkan Nilai B : 1
3
```
- Status Bar:** Shows the current line (Ln 19, Col 36), spaces (Spaces: 4), encoding (UTF-8), and Python version (3.11.2 64-bit (microsoft store)).

### 3. Input Float

The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a folder named "PYTHON.MODUL 2" containing several Python files: Output.py, Input.py (selected), Input\_float.py, Input\_abs.py, Input\_pow.py, list\_akses.py, list\_balik\_urutan.py, list\_hapus\_anggota.py, list\_inser.py, list\_memotong.py, list\_negatif.py, list\_tambah\_ang... (2), list\_ubah\_anggota.py, list\_urut\_anggota.py, Output.py, string\_index\_lan.py, string\_index.py, String\_Jen.py, and string\_slice.py.
- Terminal:** Displays the command-line output of running the script. It shows the user inputting values for variables A and B, and the resulting sum C.
- Status Bar:** Shows the Python version (3.11.2 64-bit) and system information (28°C, Sebagian cerah).

```
a = input("Masukkan Nilai A : ")
b = input("Masukkan Nilai B : ")
c=float(a) + float(b)
print(c) #Fungi float()
```

```
Masukkan Nilai A : 2
Masukkan Nilai B : 3
5.0
```

### 4. Input abs

The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a folder named "PYTHON.MODUL 2" containing several Python files: Output.py, Input.py (selected), Input\_float.py, Input\_abs.py, Input\_pow.py, list\_akses.py, list\_balik\_urutan.py, list\_hapus\_anggota.py, list\_inser.py, list\_memotong.py, list\_negatif.py, list\_tambah\_ang... (2), list\_ubah\_anggota.py, list\_urut\_anggota.py, Output.py, string\_index\_lan.py, string\_index.py, String\_Jen.py, and string\_slice.py.
- Terminal:** Displays the command-line output of running the script. It shows the user inputting values for variable A and calculating its absolute value.
- Status Bar:** Shows the Python version (3.11.2 64-bit) and system information (28°C, Sebagian cerah).

```
a = -5
c = abs(a)
print(c) #fungsi abs() dinamis untuk menghilangkan tipe data yang ada minusnya

a = int(input("Masukkan nilai A : "))

c = abs(a)
print(c) #fungsi abs() statis untuk menghilangkan tipe data yang ada minusnya

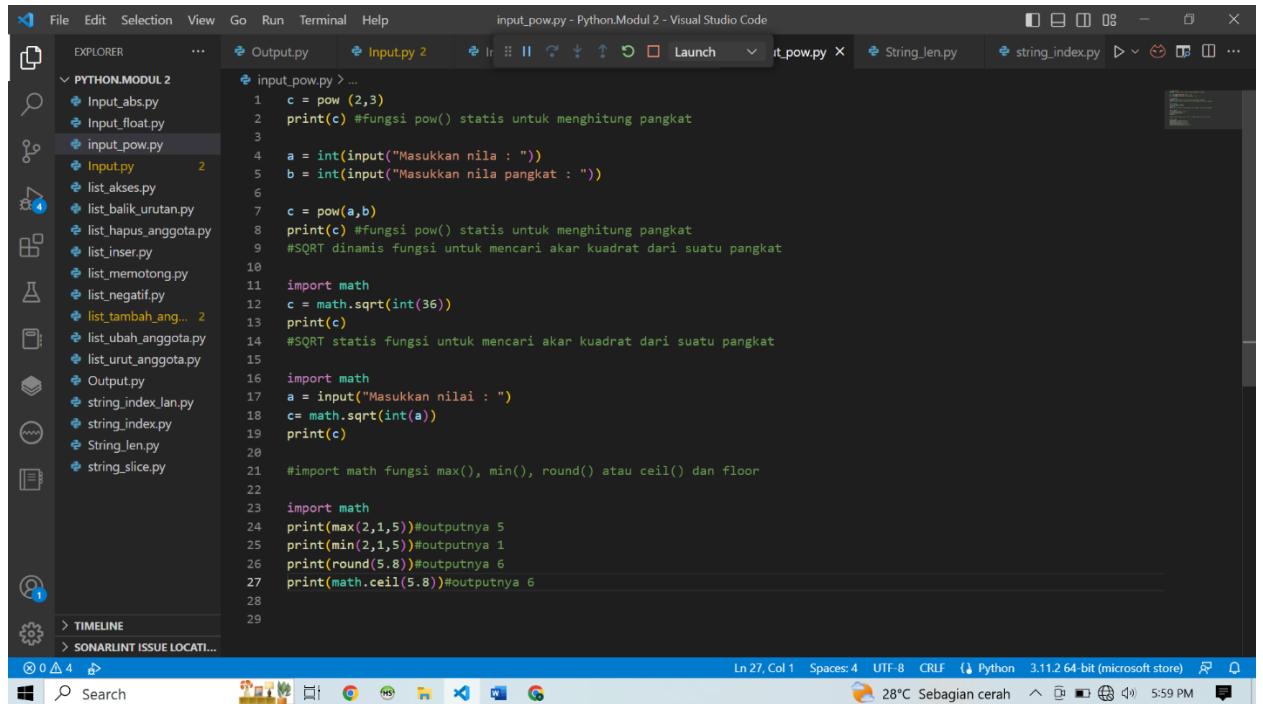
c = pow(2,3)
print(c) #fungsi pow() statis untuk menghitung pangkat

a = int(input("Masukkan nilai : "))
b = int(input("Masukkan nilai pangkat : "))

c = pow(a,b)
print(c) #fungsi pow() statis untuk menghitung pangkat
```

```
Masukkan nilai A : 10
10
8
Masukkan nilai : 10
Masukkan nilai pangkat : 2
100
```

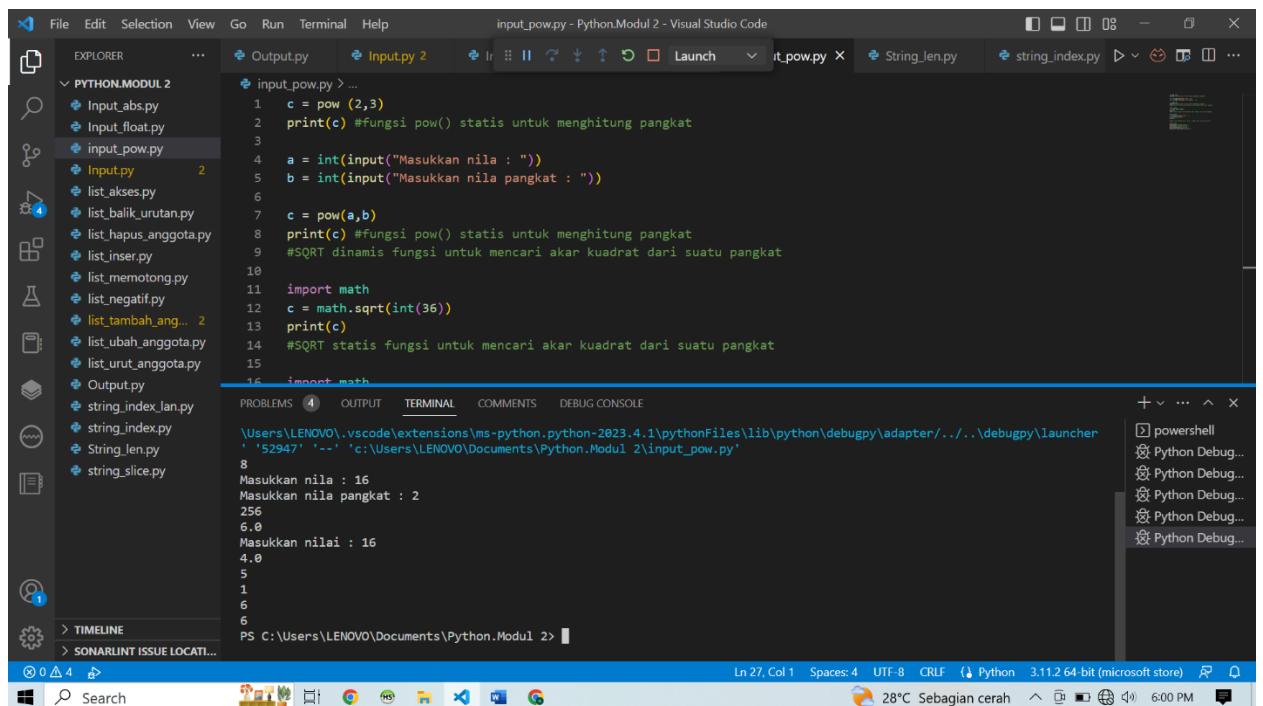
## 5. Input Fungsi Pow



The screenshot shows the Visual Studio Code interface with the file `input_pow.py` open in the editor. The code uses the `pow` function to calculate powers and the `sqrt` function from the `math` module to find square roots. It also demonstrates the use of `max`, `min`, `round`, `ceil`, and `floor` functions.

```
File Edit Selection View Go Run Terminal Help input_pow.py - Python.Modul 2 - Visual Studio Code
EXPLORER PYTHON.MODUL 2
input_pow.py
Input.py 2
Output.py
string_index.lan.py
string_index.py
String.Jen.py
string_slice.py
input_pow.py > ...
1 c = pow (2,3)
2 print(c) #fungsi pow() statis untuk menghitung pangkat
3
4 a = int(input("Masukkan nilai : "))
5 b = int(input("Masukkan nilai pangkat : "))
6
7 c = pow(a,b)
8 print(c) #fungsi pow() statis untuk menghitung pangkat
9 #SQRT dinamis fungsi untuk mencari akar kuadrat dari suatu pangkat
10
11 import math
12 c = math.sqrt(int(36))
13 print(c)
14 #SQRT statis fungsi untuk mencari akar kuadrat dari suatu pangkat
15
16 import math
17 a = input("Masukkan nilai : ")
18 c= math.sqrt(int(a))
19 print(c)
20
21 #import math fungsi max(), min(), round() atau ceil() dan floor
22
23 import math
24 print(max(2,1,5))#outputnya 5
25 print(min(2,1,5))#outputnya 1
26 print(round(5.8))#outputnya 6
27 print(math.ceil(5.8))#outputnya 6
28
29
Ln 27, Col 1 Spaces:4 UTF-8 CRLF Python 3.11.2 64-bit (microsoft store) 28°C Sebagian cerah 5:59 PM
```

Output :

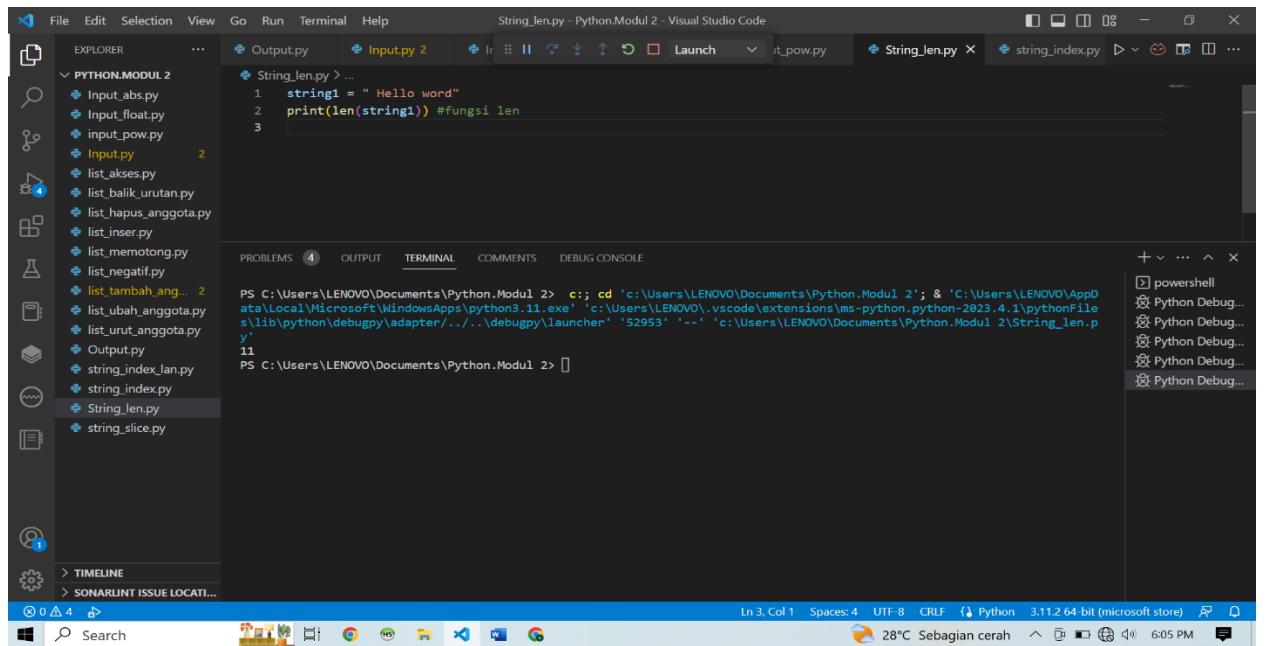


The screenshot shows the Visual Studio Code interface with the terminal tab active, displaying the execution of `input_pow.py`. The user inputs values for the base and exponent, and the program outputs the result using the `print` statement.

```
File Edit Selection View Go Run Terminal Help input_pow.py - Python.Modul 2 - Visual Studio Code
EXPLORER PYTHON.MODUL 2
input_pow.py
Input.py 2
Output.py
string_index.lan.py
string_index.py
String.Jen.py
string_slice.py
input_pow.py > ...
1 c = pow (2,3)
2 print(c) #fungsi pow() statis untuk menghitung pangkat
3
4 a = int(input("Masukkan nilai : "))
5 b = int(input("Masukkan nilai pangkat : "))
6
7 c = pow(a,b)
8 print(c) #fungsi pow() statis untuk menghitung pangkat
9 #SQRT dinamis fungsi untuk mencari akar kuadrat dari suatu pangkat
10
11 import math
12 c = math.sqrt(int(36))
13 print(c)
14 #SQRT statis fungsi untuk mencari akar kuadrat dari suatu pangkat
15
16 import math
17 a = input("Masukkan nilai : ")
18 c= math.sqrt(int(a))
19 print(c)
20
21 #import math fungsi max(), min(), round() atau ceil() dan floor
22
23 import math
24 print(max(2,1,5))#outputnya 5
25 print(min(2,1,5))#outputnya 1
26 print(round(5.8))#outputnya 6
27 print(math.ceil(5.8))#outputnya 6
28
29
PROBLEMS 4 OUTPUT TERMINAL COMMENTS DEBUG CONSOLE
Users\LENOVO\vscodeextensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../..\debugpy\launcher
'52947' '-> 'c:\Users\LENOVO\Documents\Python.Modul 2\input_pow.py'
8
Masukkan nilai : 16
Masukkan nilai pangkat : 2
256
6.0
Masukkan nilai : 16
4.0
5
1
6
6
PS C:\Users\LENOVO\Documents\Python.Modul 2>
```

## 6. Operator String

### a. String Fungsi Len

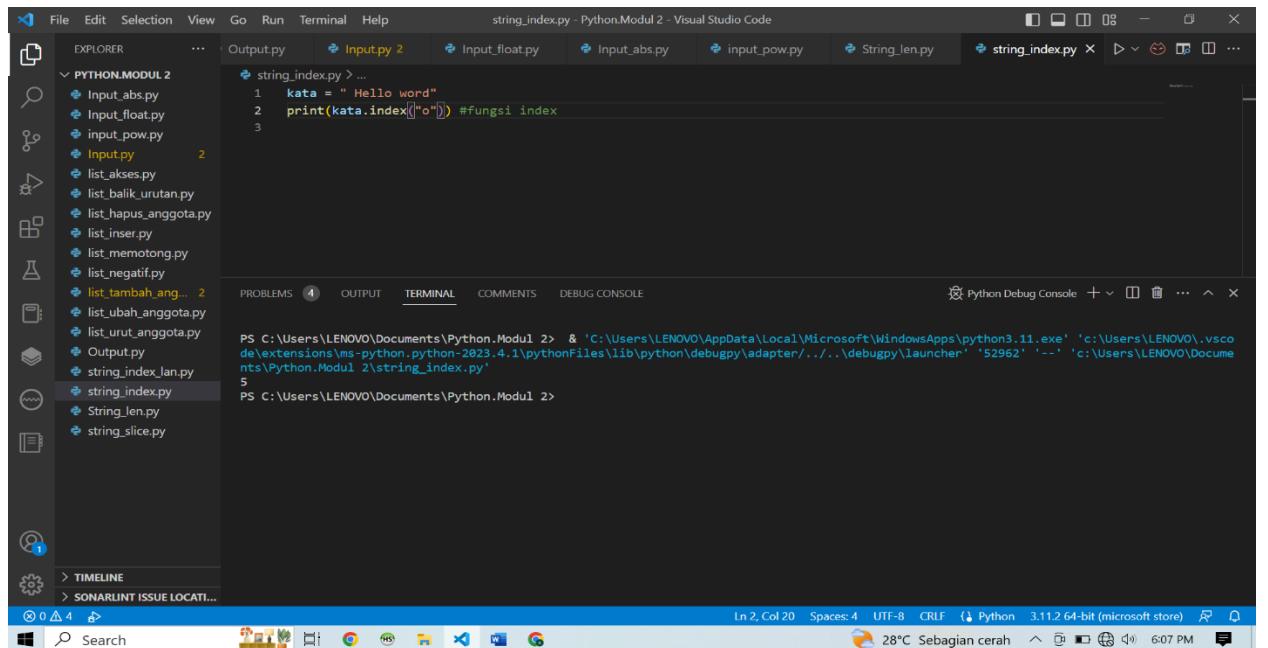


```
File Edit Selection View Go Run Terminal Help String_len.py - Python.Modul 2 - Visual Studio Code
EXPLORER ... Output.py Input.py 2 input_pow.py Launch it_pow.py String_len.py string_index.py
String_len.py > ...
1 string1 = "Hello word"
2 print(len(string1)) #fungsi len
3

PROBLEMS 4 OUTPUT TERMINAL COMMENTS DEBUG CONSOLE
PS C:\Users\LENOVO\Documents\Python.Modul 2> c;; cd 'c:\Users\LENOVO\Documents\Python.Modul 2'; & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\.vscode\extensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../debugpy\launcher' '52953' '--' 'c:\Users\LENOVO\Documents\Python.Modul 2\String_len.py'
11
PS C:\Users\LENOVO\Documents\Python.Modul 2> []

Ln 3, Col 1 Spaces:4 UTF-8 CRLF Python 3.11.2 64-bit (microsoft store) 28°C Sebagian cerah 6:05 PM
```

### b. String Fungsi Index

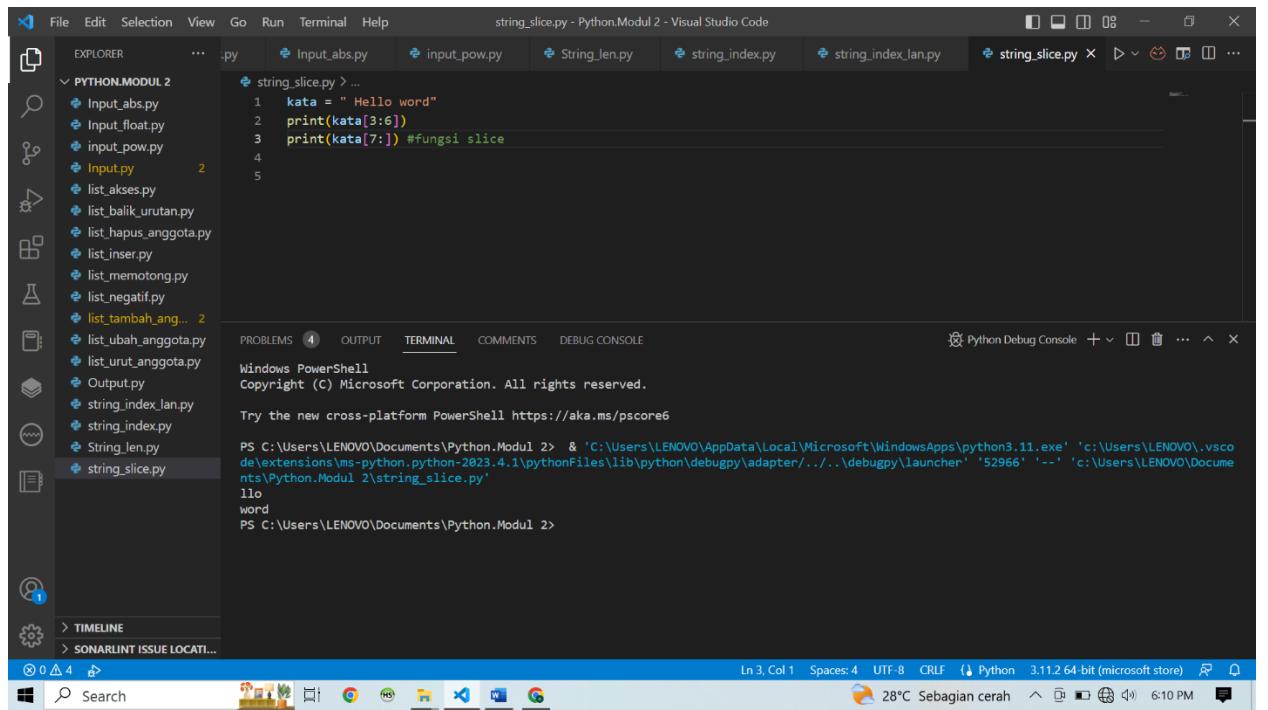


```
File Edit Selection View Go Run Terminal Help string_index.py - Python.Modul 2 - Visual Studio Code
EXPLORER ... Output.py Input.py 2 Input_float.py Input_abs.py input_pow.py String_len.py string_index.py
string_index.py > ...
1 kata = "Hello word"
2 print(kata.index('o')) #fungsi index
3

PROBLEMS 4 OUTPUT TERMINAL COMMENTS DEBUG CONSOLE
PS C:\Users\LENOVO\Documents\Python.Modul 2> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\.vscode\extensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../debugpy\launcher' '52962' '--' 'c:\Users\LENOVO\Documents\Python.Modul 2\string_index.py'
5
PS C:\Users\LENOVO\Documents\Python.Modul 2> []

Ln 2, Col 20 Spaces:4 UTF-8 CRLF Python 3.11.2 64-bit (microsoft store) 28°C Sebagian cerah 6:07 PM
```

### c. Range Slice



The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a folder named "PYTHON.MODUL 2" containing several Python files: Input\_abs.py, Input\_float.py, input\_pow.py, Input.py, list\_akeses.py, list\_balik\_urutan.py, list\_hapus\_anggota.py, list\_inser.py, list\_memotong.py, list\_negatif.py, list\_tambah\_ang... (partially visible), list\_ubah\_anggota.py, list\_urut\_anggota.py, Output.py, string\_index\_lan.py, string\_index.py, String\_len.py, and string\_slice.py.
- Code Editor:** The file "string\_slice.py" is open, displaying the following code:

```
kata = "Hello word"
print(kata[3:6])
print(kata[7:]) #fungsi slice
```
- Terminal:** The terminal window shows the output of running the script:

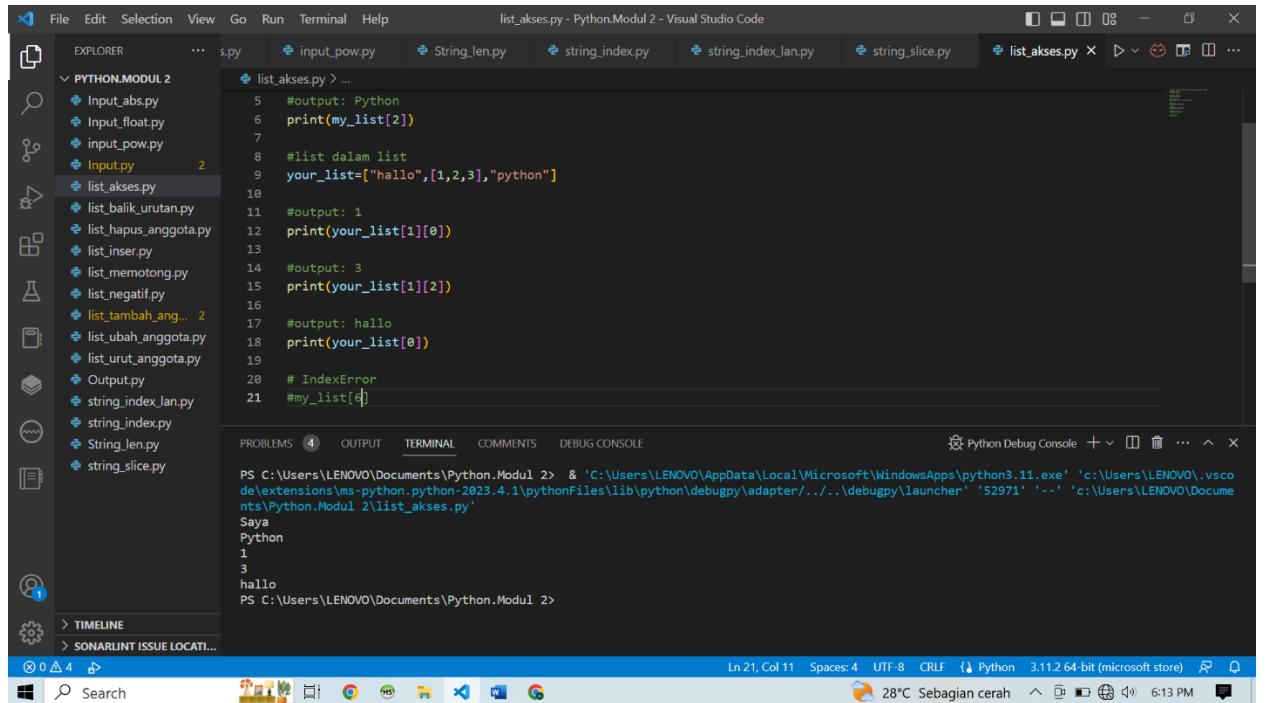
```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

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

PS C:\Users\LENOVO\Documents\Python.Modul 2> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\vscodeextensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../..\debugpy\launcher' '52966' '--' 'c:\Users\LENOVO\Documents\Python.Modul 2\string_slice.py'
Hello
word
PS C:\Users\LENOVO\Documents\Python.Modul 2>
```
- Status Bar:** Shows "Ln 3, Col 1" and "3.11.2 64-bit (microsoft store)".

## 7. List

### a. Mengakses Anggota List



The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a folder named "PYTHON.MODUL 2" containing several Python files: Input\_abs.py, Input\_float.py, input\_pow.py, Input.py, list\_akeses.py, list\_balik\_urutan.py, list\_hapus\_anggota.py, list\_inser.py, list\_memotong.py, list\_negatif.py, list\_tambah\_ang... (partially visible), list\_ubah\_anggota.py, list\_urut\_anggota.py, Output.py, string\_index\_lan.py, string\_index.py, String\_len.py, and string\_slice.py.
- Code Editor:** The file "list\_akses.py" is open, displaying the following code:

```
#output: Python
print(my_list[2])

#list dalam list
your_list=["hallo",[1,2,3],"python"]

#output: 1
print(your_list[1][0])

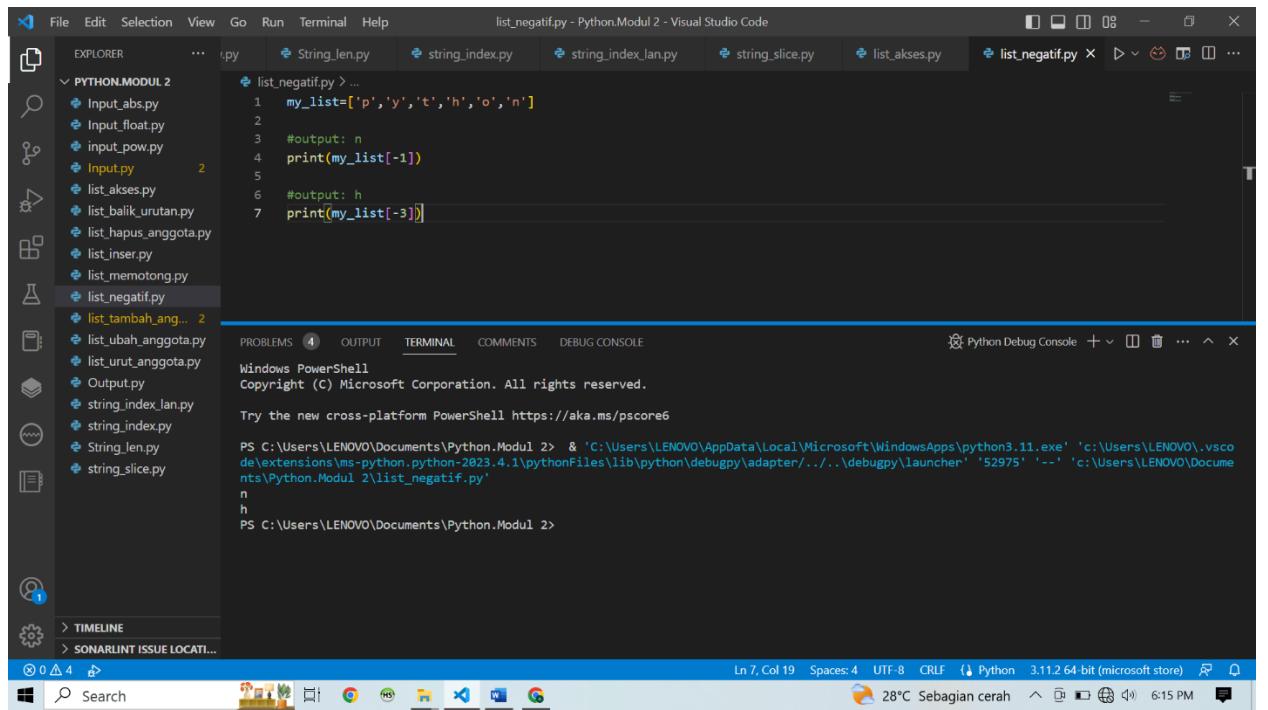
#output: 3
print(your_list[1][2])

#output: hallo
print(your_list[0])

# IndexError
#my_list[4]
```
- Terminal:** The terminal window shows the output of running the script:

```
PS C:\Users\LENOVO\Documents\Python.Modul 2> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\vscodeextensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../..\debugpy\launcher' '52971' '--' 'c:\Users\LENOVO\Documents\Python.Modul 2\list_akses.py'
Saya
Python
1
3
hallo
PS C:\Users\LENOVO\Documents\Python.Modul 2>
```
- Status Bar:** Shows "Ln 21, Col 11" and "3.11.2 64-bit (microsoft store)".

## b. List dengan Indeks Negatif



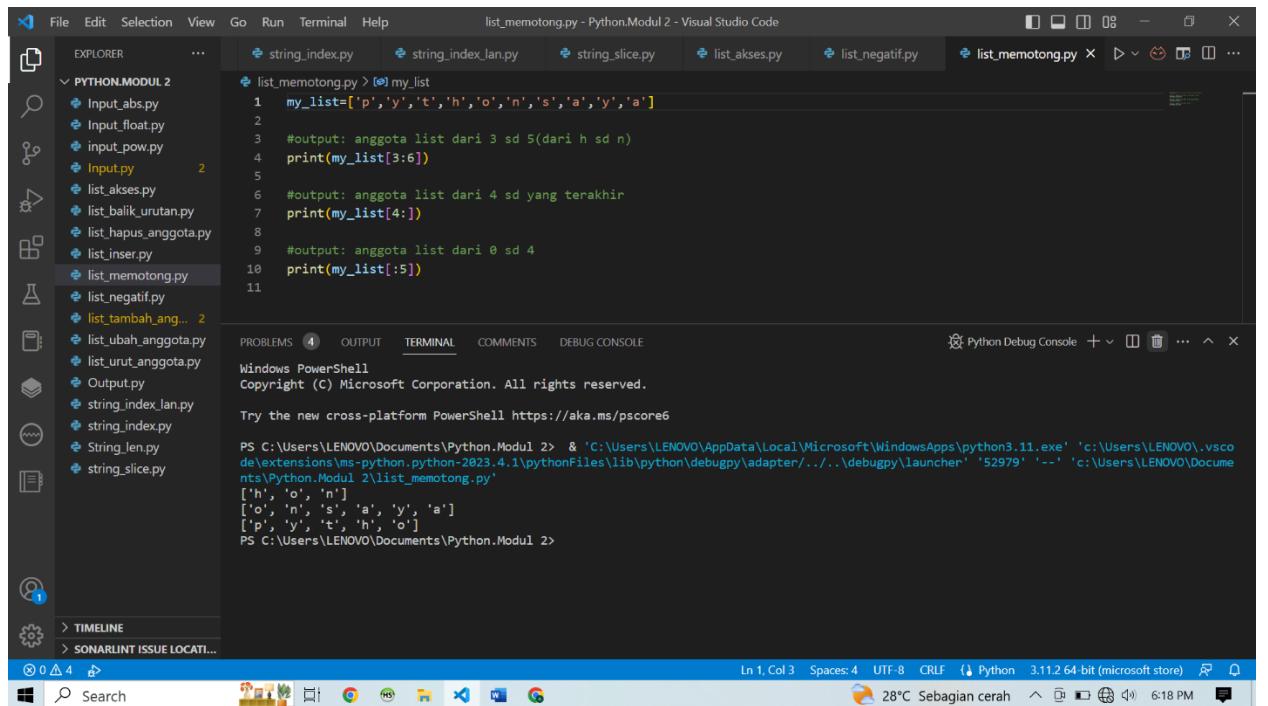
The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a folder named "PYTHON.MODUL 2" containing several Python files: Input\_abs.py, Input\_float.py, Input\_pow.py, Input.py, list\_akses.py, list\_balik\_urutan.py, list\_hapus\_anggota.py, list\_inser.py, list\_memotong.py, list\_negatif.py, list\_tambah\_ang... (partially visible), list\_ubah\_anggota.py, list\_urut\_anggota.py, Output.py, string\_index\_lan.py, string\_index.py, String\_len.py, and string\_slice.py.
- Code Editor:** The file "list\_negatif.py" is open, displaying the following code:

```
my_list=['p','y','t','h','o','n']
print(my_list[-1])
print(my_list[-3])
```
- Terminal:** The terminal window shows the command PS C:\Users\LENOVO\Documents\Python.Modul 2> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\vscodeextensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../..\debugpy\launcher' '52975' '--' 'c:\Users\LENOVO\Documents\Python.Modul 2\list\_negatif.py'. The output is:

```
n
h
```
- Status Bar:** Shows the current file is "list\_negatif.py", line 7, column 19, spaces: 4, encoding: UTF-8, CRLF, Python 3.11.2 64-bit (microsoft store). It also shows the system temperature is 28°C and the time is 6:15 PM.

## c. Memotong (Slicing) List



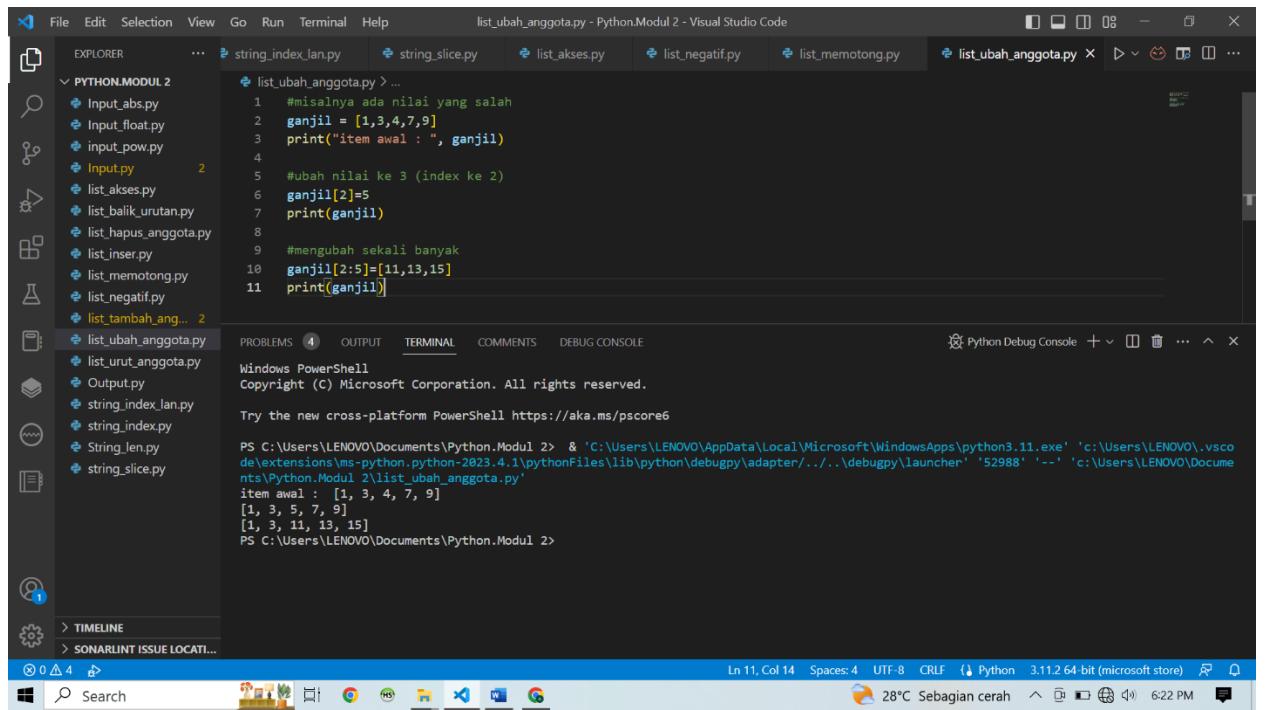
The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a folder named "PYTHON.MODUL 2" containing several Python files: string\_index.py, string\_index\_lan.py, string\_slice.py, list\_akses.py, list\_negatif.py, list\_memotong.py, list\_tambah\_ang... (partially visible), list\_ubah\_anggota.py, list\_urut\_anggota.py, Output.py, string\_index\_lan.py, string\_index.py, String\_len.py, and string\_slice.py.
- Code Editor:** The file "list\_memotong.py" is open, displaying the following code:

```
my_list=['p','y','t','h','o','n','s','a','y','a']
print(my_list[3:6])
print(my_list[4:])
print(my_list[:5])
```
- Terminal:** The terminal window shows the command PS C:\Users\LENOVO\Documents\Python.Modul 2> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\vscodeextensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../..\debugpy\launcher' '52979' '--' 'c:\Users\LENOVO\Documents\Python.Modul 2\list\_memotong.py'. The output is:

```
[h, o, n]
[o, n, s, a, y, a]
[p, y, t, h, o]
```
- Status Bar:** Shows the current file is "list\_memotong.py", line 1, column 3, spaces: 4, encoding: UTF-8, CRLF, Python 3.11.2 64-bit (microsoft store). It also shows the system temperature is 28°C and the time is 6:18 PM.

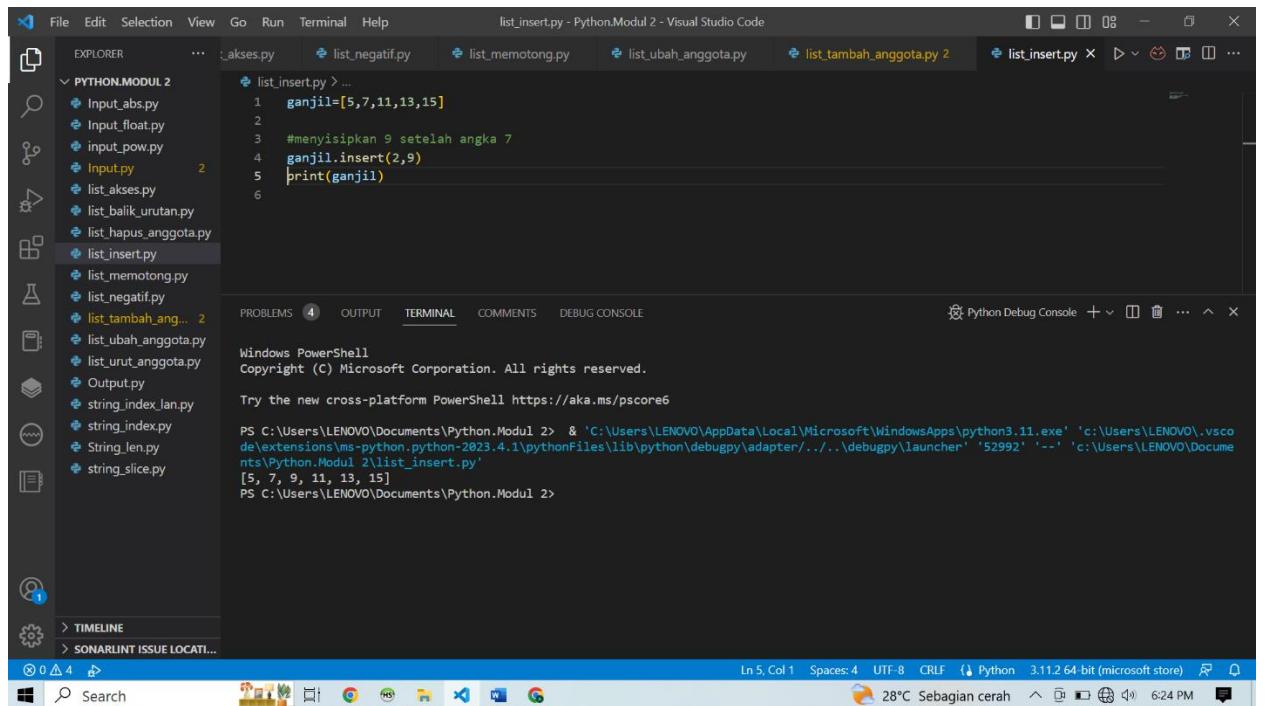
#### d. Mengubah Anggota List



The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a folder named "PYTHON.MODUL 2" containing various Python files: Input\_abs.py, Input\_float.py, input\_pow.py, Input.py, list\_akses.py, list\_balik\_urutan.py, list\_hapus\_anggota.py, list\_inser.py, list\_memotong.py, list\_negatif.py, list\_tambah\_anggota.py, and list\_ubah\_anggota.py.
- Code Editor:** Displays the content of `list_ubah_anggota.py`. The code defines a list `ganjil = [1,3,4,7,9]`, prints its first element, changes the second element to 5, prints the list again, and then changes the third element to 11, printing the list once more.
- Terminal:** Shows the command PS C:\Users\LENOVO\Documents\Python.Modul 2 & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\vscodeextensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../debugpy\launcher' '52988' '--' 'c:\Users\LENOVO\Documents\Python.Modul 2\list\_ubah\_anggota.py'. The output shows the list being modified at index 2.
- Status Bar:** Shows the current file is `list_ubah_anggota.py`, line 11, column 14, with 311.2 64-bit (microsoft store) Python version.

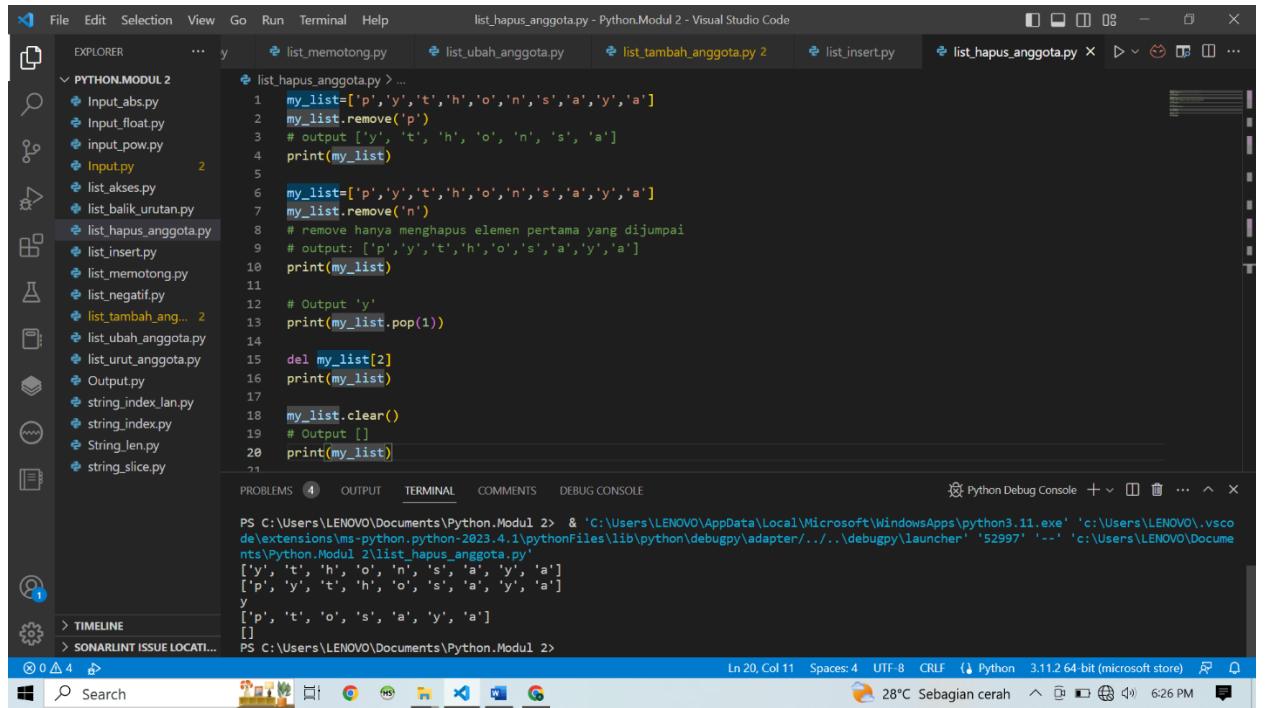
#### e. Menyisipkan Anggota List



The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a folder named "PYTHON.MODUL 2" containing various Python files: Input\_abs.py, Input\_float.py, input\_pow.py, Input.py, list\_akses.py, list\_balik\_urutan.py, list\_hapus\_anggota.py, list\_insert.py, list\_memotong.py, list\_negatif.py, list\_tambah\_anggota.py, and list\_ubah\_anggota.py.
- Code Editor:** Displays the content of `list_insert.py`. The code creates a list `ganjil=[5,7,11,13,15]`, inserts the value 9 at index 2, and prints the updated list.
- Terminal:** Shows the command PS C:\Users\LENOVO\Documents\Python.Modul 2 & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\vscodeextensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../debugpy\launcher' '52992' '--' 'c:\Users\LENOVO\Documents\Python.Modul 2\list\_insert.py'. The output shows the list with 9 inserted at index 2.
- Status Bar:** Shows the current file is `list_insert.py`, line 5, column 1, with 311.2 64-bit (microsoft store) Python version.

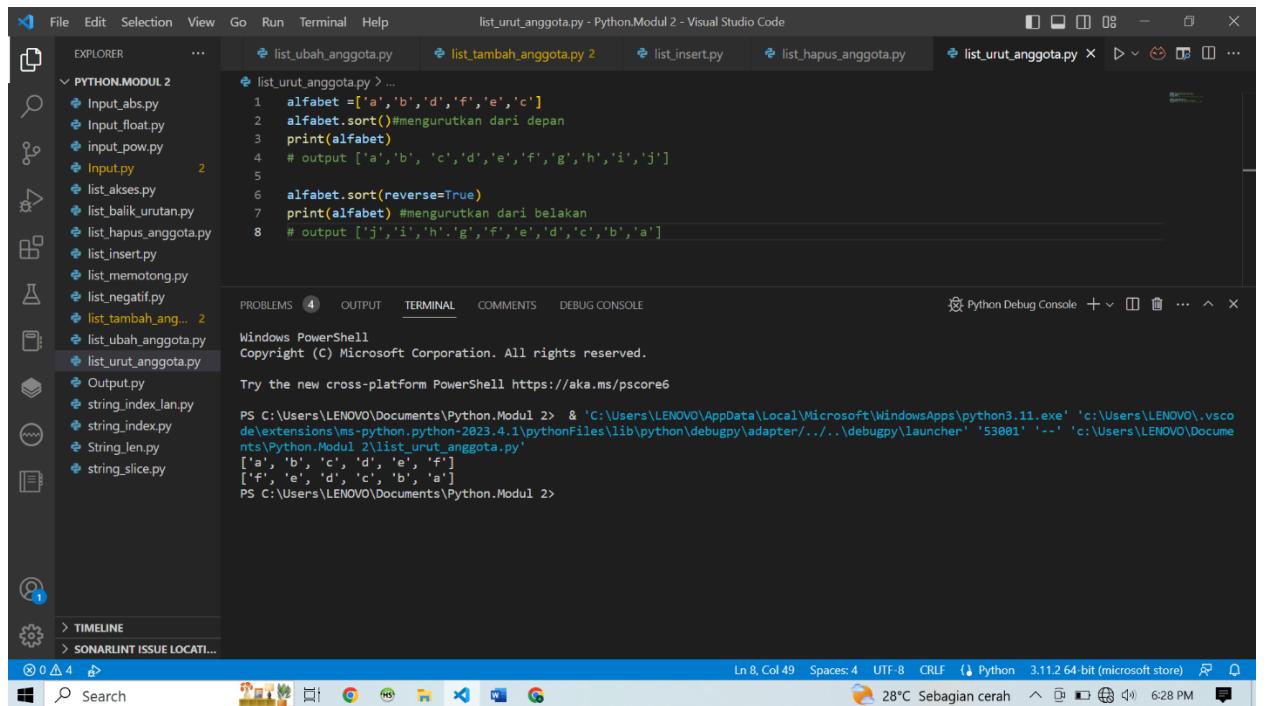
## f. Menghapus Anggota List



The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a folder named "PYTHON.MODUL 2" containing various Python files: Input\_abs.py, Input\_float.py, input\_pow.py, Input.py, list\_akeses.py, list\_balik\_urutan.py, list\_hapus\_anggota.py, list\_insert.py, list\_memotong.py, list\_negatif.py, list\_tambah\_ang... (partially visible), list\_ubah\_anggota.py, list\_urut\_anggota.py, Output.py, string\_index\_lan.py, string\_index.py, String\_len.py, and string\_slice.py.
- Code Editor:** Displays the content of "list\_hapus\_anggota.py". The code removes the first element from a list named "my\_list".
- Terminal:** Shows the command PS C:\Users\LENOVO\Documents\Python.Modul 2> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\.vscode\extensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../..\debugpy\launcher' '--' 'c:\Users\LENOVO\Documents\Python.Modul 2\list\_hapus\_anggota.py'. The output shows the original list and the modified list after removal.
- Status Bar:** Shows the file path PS C:\Users\LENOVO\Documents\Python.Modul 2>, line 20, column 11, spaces: 4, encoding: UTF-8, CRLF, Python 3.11.2 64-bit (microsoft store), and the current temperature 28°C.

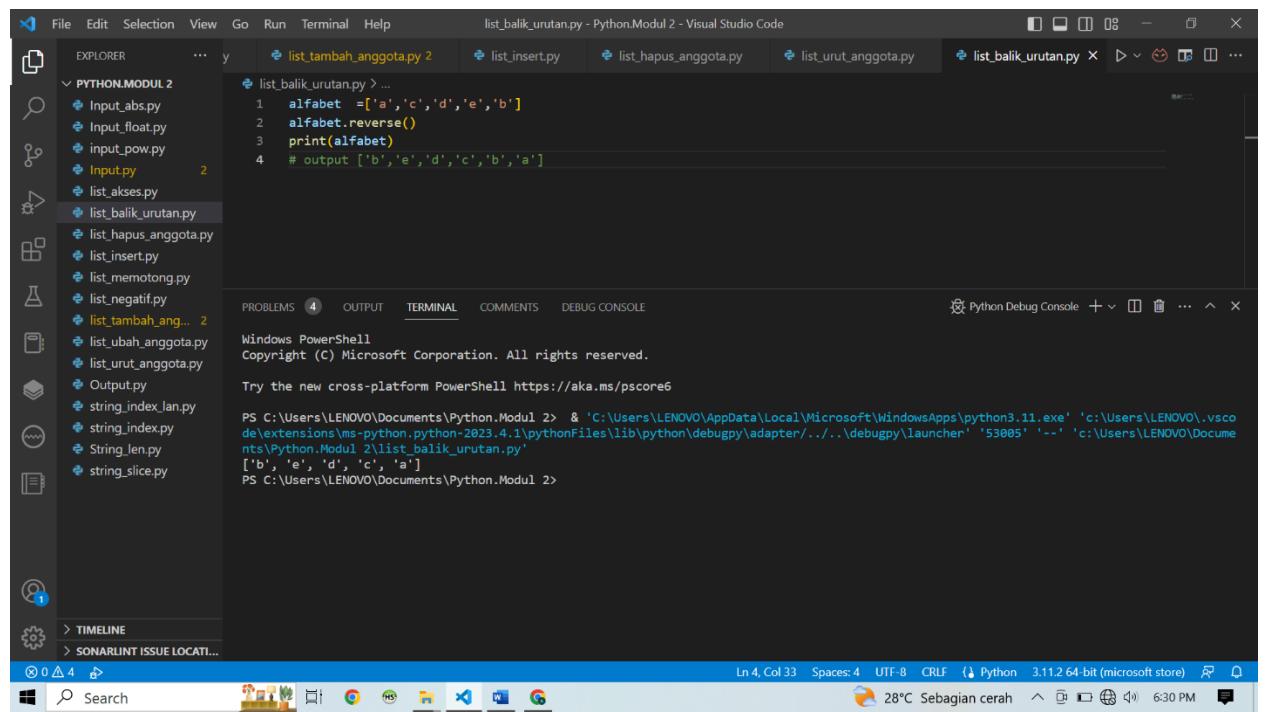
## g. Mengurutkan Anggota List



The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a folder named "PYTHON.MODUL 2" containing various Python files: Input\_abs.py, Input\_float.py, input\_pow.py, Input.py, list\_akeses.py, list\_balik\_urutan.py, list\_hapus\_anggota.py, list\_insert.py, list\_memotong.py, list\_negatif.py, list\_tambah\_ang... (partially visible), list\_ubah\_anggota.py, list\_urut\_anggota.py, Output.py, string\_index\_lan.py, string\_index.py, String\_len.py, and string\_slice.py.
- Code Editor:** Displays the content of "list\_urut\_anggota.py". The code sorts a list of characters "a", "b", "d", "f", "e", "c" both ascending and descending.
- Terminal:** Shows the command PS C:\Users\LENOVO\Documents\Python.Modul 2> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\.vscode\extensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../..\debugpy\launcher' '--' 'c:\Users\LENOVO\Documents\Python.Modul 2\list\_urut\_anggota.py'. The output shows the sorted lists.
- Status Bar:** Shows the file path PS C:\Users\LENOVO\Documents\Python.Modul 2>, line 8, column 49, spaces: 4, encoding: UTF-8, CRLF, Python 3.11.2 64-bit (microsoft store), and the current temperature 28°C.

## h. Membalik Anggota List



The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a folder named "PYTHON.MODUL 2" containing several Python files: Input\_abs.py, Input\_float.py, Input\_pow.py, Input\_akses.py, list\_tambah\_anggota.py, list\_hapus\_anggota.py, list\_insert.py, list\_memotong.py, list\_negatif.py, list\_tambah\_ang... (with a red circle icon), list\_ubah\_anggota.py, list\_urut\_anggota.py, Output.py, string\_index\_lan.py, string\_index.py, String\_len.py, and string\_slice.py.
- Code Editor:** Displays the content of the file "list\_balik\_urutan.py". The code is as follows:

```
1  alfabet =['a','c','d','e','b']
2  alfabet.reverse()
3  print(alfabet)
4  # output ['b','e','d','c','b','a']
```

- Terminal:** Shows a Windows PowerShell session with the following output:

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

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

PS C:\Users\LENOVO\Documents\Python.Modul 2> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' "c:\Users\LENOVO\vscodeextensions\ms-python.python-2023.4.1\pythonfiles\lib\python\debugpy\adapter/../..\debugpy\launcher" '53005' '--' 'c:\Users\LENOVO\Documents\Python.Modul 2\list_balik_urutan.py'
['b', 'e', 'd', 'c', 'a']
PS C:\Users\LENOVO\Documents\Python.Modul 2>
```
- Status Bar:** Shows the current file is "list\_balik\_urutan.py", line 4, column 33, spaces: 4, encoding: UTF-8, CRLF, Python 3.11.2 64-bit (microsoft store), and the system temperature is 28°C with a weather forecast of "Sebagian cerah".

# Python – Modul 3

## 1. Membuat Tuple

The screenshot shows the Visual Studio Code interface. The Explorer sidebar on the left lists several Python files under the 'PYTHON MODULE3' folder, including 'tuple\_bersarang.py'. The 'tuple\_bersarang.py' file contains the following code:

```
tuple_bersarang.py
1 # membuat tuple kosong
2 # Output: ()
3 tuple1 = ()
4 print(tuple1)
5
6 # tuple dengan 1 elemen
7 # Output: (1,)
8 tuple1= (1,)
9 print (tuple1)
10
11 # tuple berisi integer
12 # Output = (1, 2, 3)
13 tuple1= (1, 2, 3)
14 print (tuple1)
15
16 # tuple bersarang
17 # # Output: ("Hello", [1, 2, 3], (4, 5, 6))
18 tuple1= ("Hello", [1, 2, 3], (4, 5, 6))
19 print(tuple1)
20
21 # Tuple bisa tidak menggunakan tanda ()
22 # Output (1, 2, 3)
23 tuple1 = 1, 2, 3
24 print(tuple1)
25
26 # memasukkan anggota tuple ke variabel yang bersesuaian
27 # a akan berisi 1, b berisi 2, dan c berisi 3
28 # Output 1 2 3
29 a, b, c = tuple1
30 print(a, b, c)
```

The terminal at the bottom shows the output of running the script:

```
PS C:\Users\LENOVO\Documents\Python Modul.3> c:; cd 'c:\Users\LENOVO\Documents\Python Modul.3'; & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\vscode\extensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../debugpy\launcher' '53030' '--' 'c:\Users\LENOVO\Documents\Python Modul.3\tuple_bersarang.py'
()
(1, 2, 3)
('Hello', [1, 2, 3], (4, 5, 6))
(1, 2, 3)
1 2 3
PS C:\Users\LENOVO\Documents\Python Modul.3>
```

## 2. Mengakses Anggota Tuple

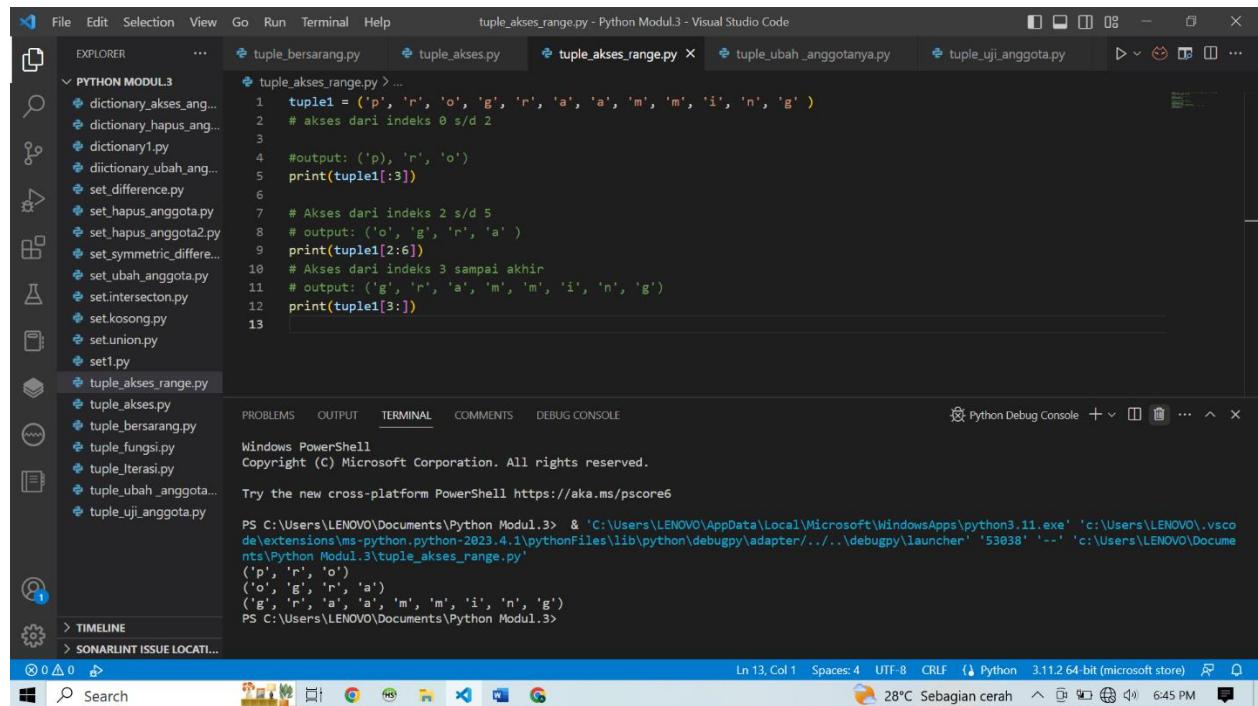
The screenshot shows the Visual Studio Code interface. The Explorer sidebar on the left lists several Python files under the 'PYTHON MODULE3' folder, including 'tuple\_akses.py'. The 'tuple\_akses.py' file contains the following code:

```
tuple_akses.py
1 tuple1 = ('p', 'y', 't', 'h', 'o', 'n')
2 # Output: 'p'
3 print(tuple1[0])
4
5 # Output: 'y'
6 print(tuple1[1])
7
8 # Output: 'n'
9 print(tuple1[-1])
10
11 # Output: 'o'
12 print(tuple1[-2])
13
14 # IndexError
15 #print(tuple1[6])
```

The terminal at the bottom shows the output of running the script:

```
PS C:\Users\LENOVO\Documents\Python Modul.3> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\vscode\extensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../debugpy\launcher' '53034' '--' 'c:\Users\LENOVO\Documents\Python Modul.3\tuple_akses.py'
p
y
n
o
PS C:\Users\LENOVO\Documents\Python Modul.3>
```

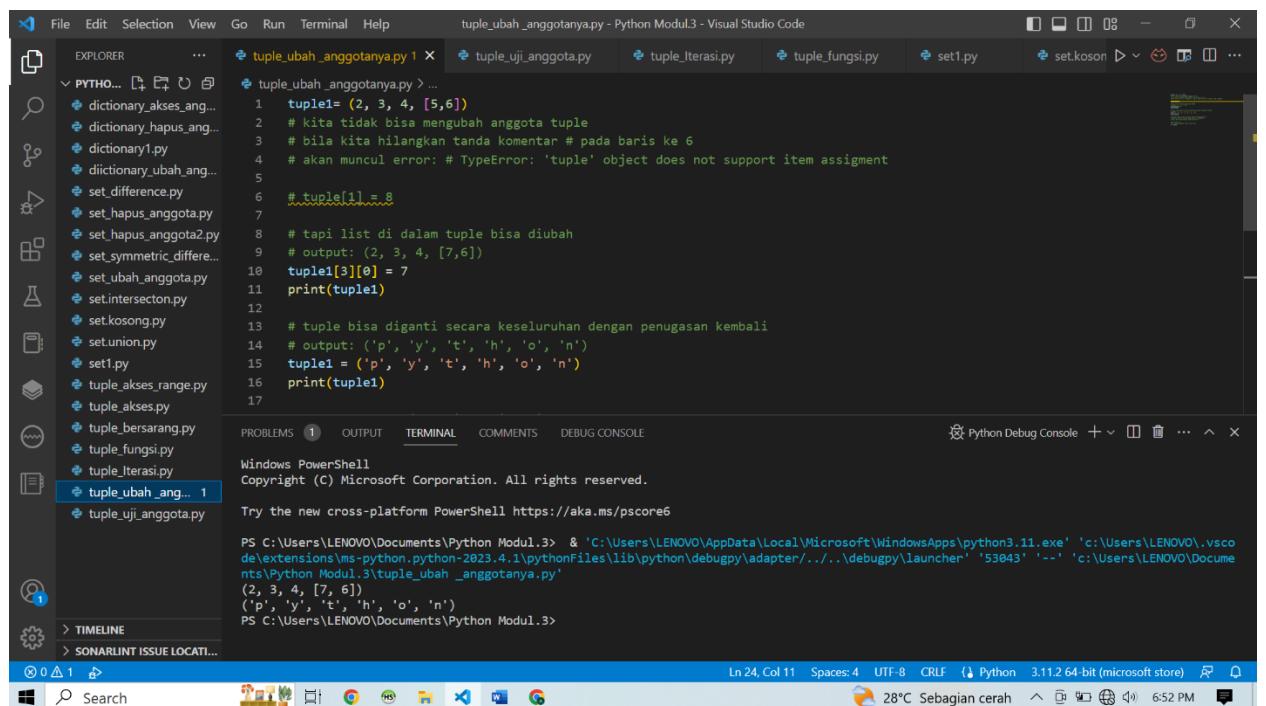
### a. Mengakses Tuple dengan range



The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a list of Python files in the "PYTHON MODULES" folder, including tuple\_akses\_ang..., tuple\_akses\_range.py, tuple\_ahes..., tuple\_bersarang.py, tuple\_fungi.py, tuple\_Iterasi.py, tuple\_ubah\_anggota.py, and tuple\_uji\_anggota.py.
- Code Editor:** Displays the content of tuple\_akses\_range.py. The code defines a tuple `tuple1 = ('p', 'r', 'o', 'g', 'r', 'a', 't', 'm', 'i', 'n', 'g')` and prints its elements from index 3 to 6 using `print(tuple1[3:])`.
- Terminal:** Shows the command PS C:\Users\LENOVO\Documents\Python Modul.3> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\vscodeextensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../debugpy\launcher' '53038' '--' 'c:\Users\LENOVO\Documents\Python Modul.3\tuple\_akses\_range.py'. The output shows the tuple elements from index 3 to 6: ('g', 'r', 'a', 'm', 'i', 'n', 'g').
- Status Bar:** Shows the current line (Ln 13, Col 1), spaces (Spaces: 4), encoding (UTF-8), and Python version (3.11.2 64-bit (microsoft store)).

## 3. Mengubah Anggota Tuple



The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a list of Python files in the "PYTHON" folder, including tuple\_ubah\_anggotanya.py, tuple\_uji\_anggota.py, tuple\_Iterasi.py, tuple\_fungi.py, set1.py, setkosong.py, setunion.py, tuple\_akses\_range.py, tuple\_akses.py, tuple\_bersarang.py, tuple\_fungi.py, tuple\_Iterasi.py, and tuple\_ubah\_ang... 1.
- Code Editor:** Displays the content of tuple\_ubah\_anggotanya.py. The code defines a tuple `tuple1 = (2, 3, 4, [5,6])` and attempts to change its elements. It prints the tuple and then tries to change the third element to 8 using `tuple1[3] = 8`, which results in a `TypeError`. It then prints the tuple again.
- Terminal:** Shows the command PS C:\Users\LENOVO\Documents\Python Modul.3> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\vscodeextensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../debugpy\launcher' '53043' '--' 'c:\Users\LENOVO\Documents\Python Modul.3\tuple\_ubah\_anggotanya.py'. The output shows the tuple elements: (2, 3, 4, [5, 6]).
- Status Bar:** Shows the current line (Ln 24, Col 11), spaces (Spaces: 4), encoding (UTF-8), and Python version (3.11.2 64-bit (microsoft store)).

#### 4. Menguji Keanggotaan Tuple

The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a folder named "PYTHON MODUL.3" containing various Python files such as "tuple\_ubah\_anggotanya.py", "tuple\_uji\_anggota.py", "tuple\_Iterasi.py", etc.
- Code Editor:** Displays the content of "tuple\_uji\_anggota.py". The code defines a tuple `tuple1 = (1, 2, 3, 'a', 'b', 'c')` and uses `in` and `not in` operators to check if elements are present in the tuple.
- Terminal:** Shows the output of running the script in a Windows PowerShell. It prints "True", "True", "False", and "True".
- Status Bar:** Shows the file path "C:\Users\LENOVO\Documents\Python Modul.3> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\vscodeextensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter'...\\debugpy\launcher' '53048' '---' 'c:\Users\LENOVO\Documents\Python Modul.3\tuple\_uji\_anggota.py'", line 15, column 25, and other system information like temperature and battery status.

#### 5. Iterasi pada Tuple

The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a folder named "PYTHON MODUL.3" containing various Python files.
- Code Editor:** Displays the content of "tuple\_Iterasi.py". The code defines a tuple `name = ('Sistem', 'informasi')` and iterates over it using a for loop to print each element.
- Terminal:** Shows the output of running the script in a Windows PowerShell. It prints "Hai Sistem" and "Hai informasi".
- Status Bar:** Shows the file path "C:\Users\LENOVO\Documents\Python Modul.3> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\vscodeextensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter'...\\debugpy\launcher' '53052' '---' 'c:\Users\LENOVO\Documents\Python Modul.3\tuple\_Iterasi.py'", line 6, column 17, and other system information like temperature and battery status.

## 6. Metode dan Fungsi Bawaan Tuple

The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a folder named "PYTHON MODUL.3" containing various Python files: tuple\_fungsi.py, tuple\_ubah\_anggotanya.py, tuple\_uji\_anggota.py, tuple\_Iterasi.py, tuple\_fungsi.py, set1.py, setkoson.py, and several files starting with "dictionary\_".
- Code Editor:** The active file is tuple\_fungsi.py, which contains the following code:

```
tuple1 = ('p', 'y', 't', 'o', 'n', 's', 'a', 'y', 'a')
# count
# output: 2
print(tuple1.count('a'))

# index
# Output 4
print(tuple1.index('n'))
```
- Terminal:** Shows the command PS C:\Users\LENOVO\Documents\Python Modul.3> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\vscode\extensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../debugpy\launcher' '53061' '--' 'c:\Users\LENOVO\Documents\Python Modul.3\tuple\_fungsi.py'
2
4
- Status Bar:** Displays "Ln 8, Col 25 Spaces:4 UTF-8 CRLF Python 3.11.2 64-bit (microsoft store)" and the system status "28°C Sebagian cerah".

## 7. Membuat Set

The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a folder named "PYTHON MODUL.3" containing various Python files: tuple\_fungsi.py, tuple\_ubah\_anggotanya.py, tuple\_uji\_anggota.py, tuple\_Iterasi.py, set1.py, setkoson.py, and several files starting with "dictionary\_".
- Code Editor:** The active file is set1.py, which contains the following code:

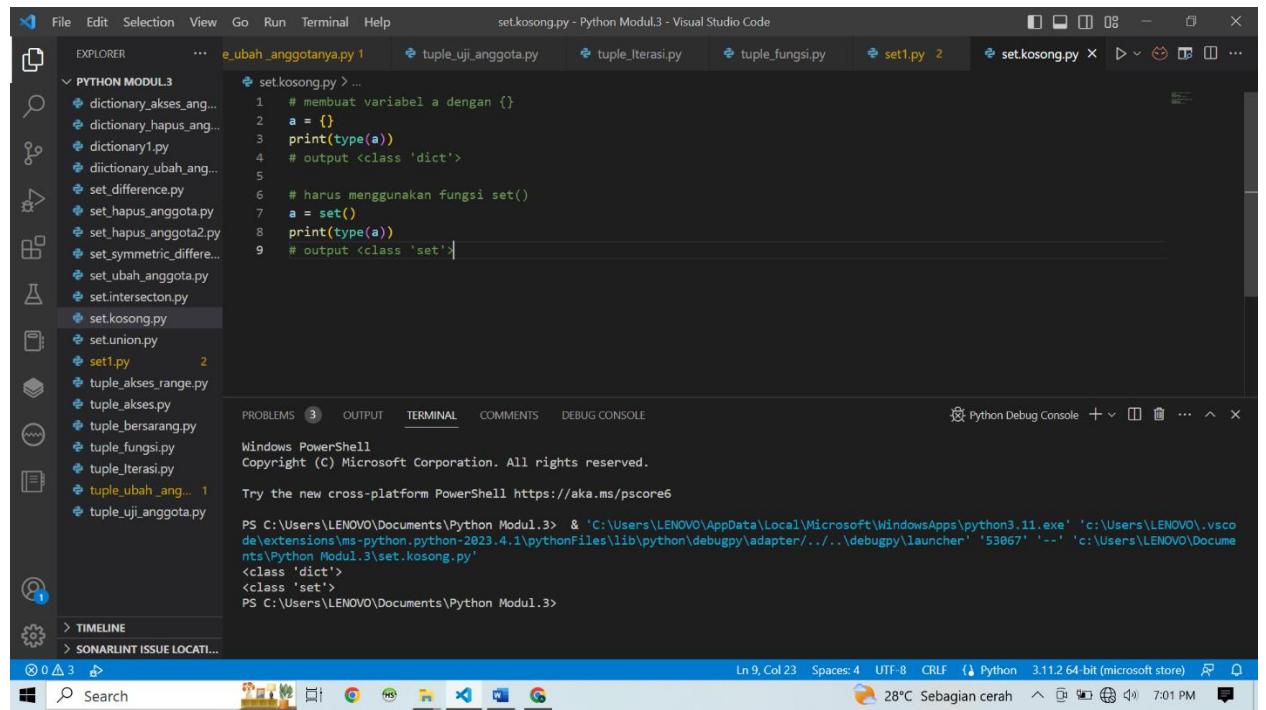
```
# set dengan menggunakan fungsi set()
set_saya = set([1,2,3])
print(set_saya)

# set data campuran
set_saya = {1, 2.0, "Python", (3,4,4)}
print(set_saya)

# bila kita mengisi duplikasi, set akan menghilangkan salah satu
# output: {1,2,3}
set_saya = {1,2,2,3,3,3}
print(set_saya)

# set tidak bisa berisi anggota list
# contoh berikut akan muncul error TypeError
set_saya = {1,2,[3,4,5]}
```
- Terminal:** Shows the command PS C:\Users\LENOVO\Documents\Python Modul.3> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\vscode\extensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../debugpy\launcher' '53061' '--' 'c:\Users\LENOVO\Documents\Python Modul.3\set1.py'
{1, 2, 3}
{1, 2, 3}
{1, 2.0, 'Python', (3, 4, 4)}
{1, 2, 3}
Traceback (most recent call last):
 File "c:\Users\LENOVO\Documents\Python Modul.3\set1.py", line 20, in <module>
 set\_saya = {1,2,[3,4,5]}
 ^
TypeError: unhashable type: 'list'
PS C:\Users\LENOVO\Documents\Python Modul.3>
- Status Bar:** Displays "Ln 9, Col 20 Spaces:4 UTF-8 CRLF Python 3.11.2 64-bit (microsoft store)" and the system status "28°C Sebagian cerah".

### a. Set Kosong

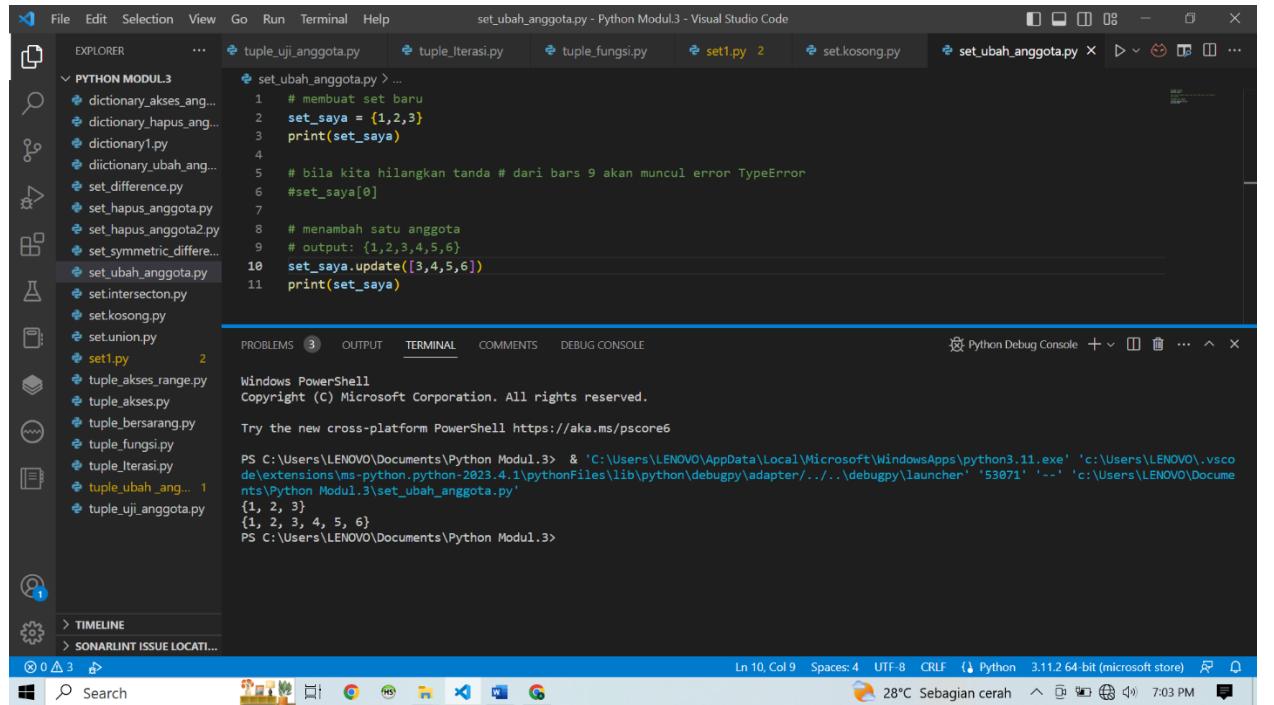


The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a folder named "PYTHON MODUL.3" containing various Python files: e\_ubah\_anggotanya.py, tuple\_uji\_anggota.py, tuple\_Iterasi.py, tuple\_fungsi.py, set1.py, and set.kosong.py.
- Code Editor:** Displays the content of `set.kosong.py`. The code creates an empty set and prints its type.

```
1 # membuat variabel a dengan {}
2 a = {}
3 print(type(a))
4 # output <class 'dict'>
5
6 # harus menggunakan fungsi set()
7 a = set()
8 print(type(a))
9 # output <class 'set'>
```
- Terminal:** Shows the command PS C:\Users\LENOVO\Documents\Python Modul.3> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\vscode\extensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../debugpy\launcher' '53067' '--' 'c:\Users\LENOVO\Documents\Python Modul.3\set.kosong.py'. The output shows the types of the variables `a` and `a` again.
- Status Bar:** Shows the current line (Ln 9, Col 23), spaces (Spaces: 4), encoding (UTF-8), and Python version (3.11.2 64-bit (microsoft store)).

## 8. Mengubah Anggota Set

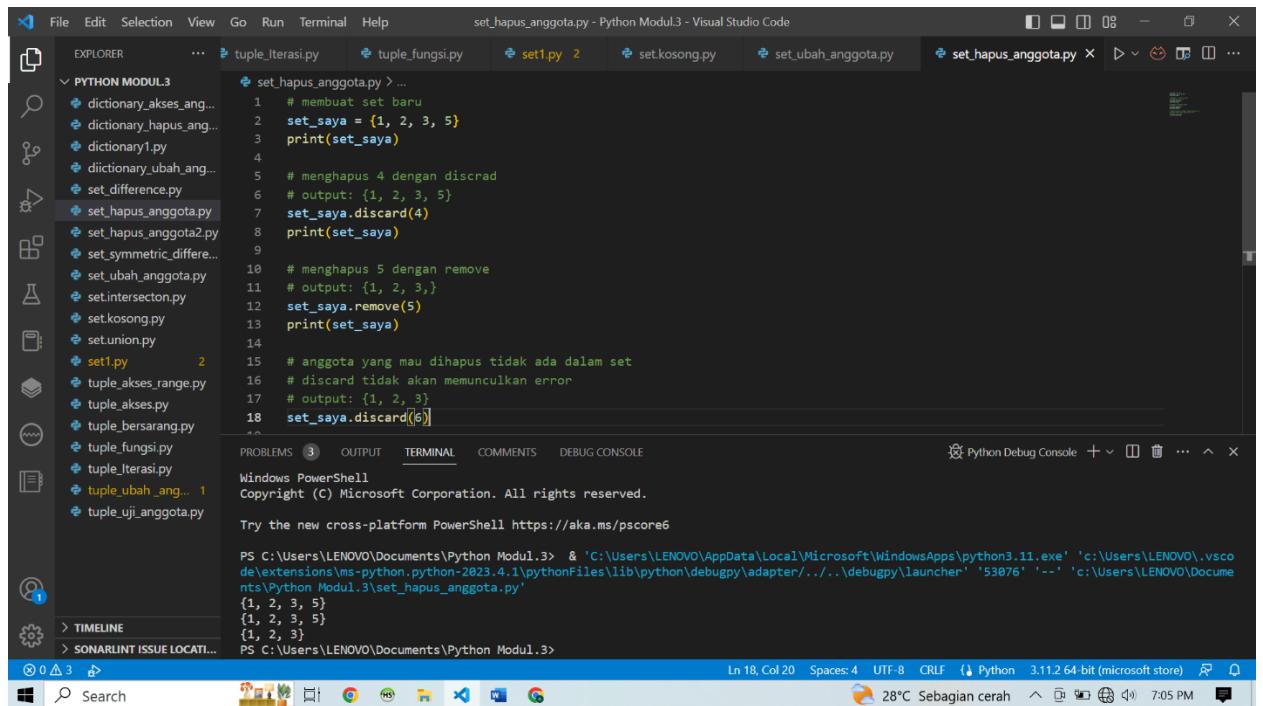


The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a folder named "PYTHON MODUL.3" containing various Python files: tuple\_uji\_anggota.py, tuple\_Iterasi.py, tuple\_fungsi.py, set1.py, and set\_ubah\_anggota.py.
- Code Editor:** Displays the content of `set_ubah_anggota.py`. The code creates a set with three elements, adds two more elements, and prints the updated set.

```
1 # membuat set baru
2 set_saya = {1,2,3}
3 print(set_saya)
4
5 # bila kita hilangkan tanda # dari bars 9 akan muncul error TypeError
6 #set_saya[0]
7
8 # menambah satu anggota
9 # output: {1,2,3,4,5,6}
10 set_saya.update({3,4,5,6})
11 print(set_saya)
```
- Terminal:** Shows the command PS C:\Users\LENOVO\Documents\Python Modul.3> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\vscode\extensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../debugpy\launcher' '53071' '--' 'c:\Users\LENOVO\Documents\Python Modul.3\set\_ubah\_anggota.py'. The output shows the initial set and the updated set.
- Status Bar:** Shows the current line (Ln 10, Col 9), spaces (Spaces: 4), encoding (UTF-8), and Python version (3.11.2 64-bit (microsoft store)).

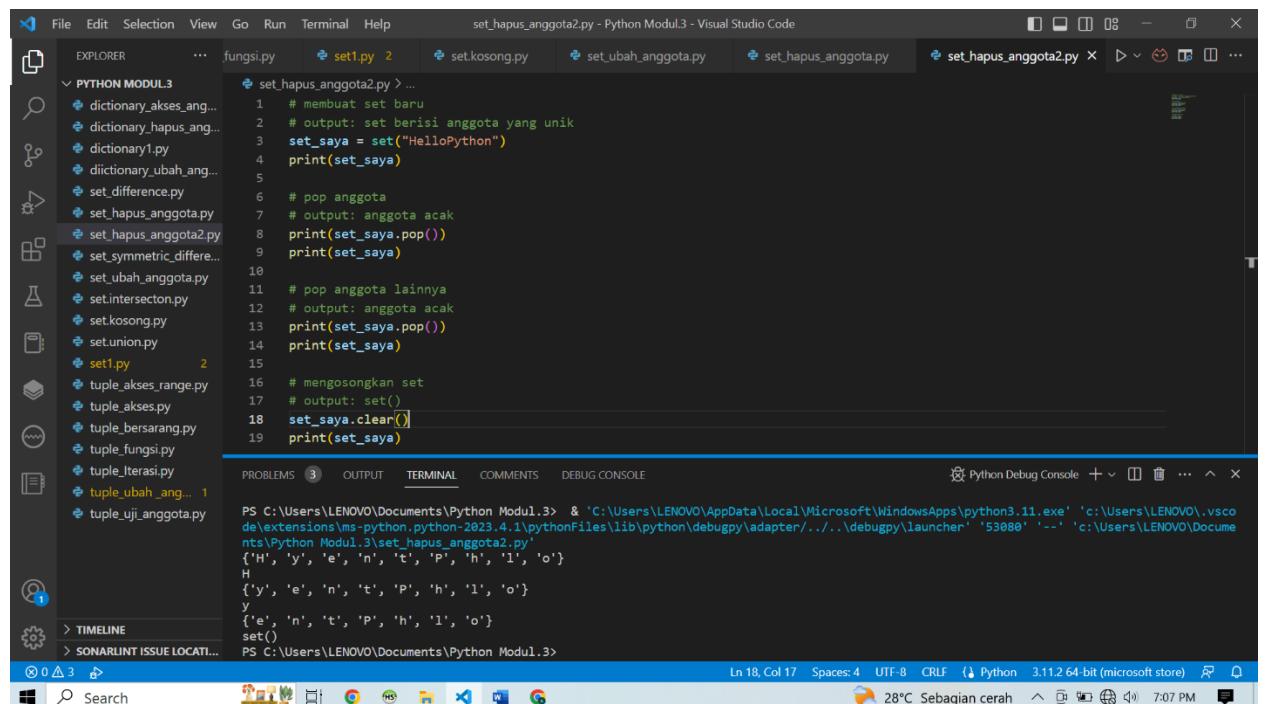
## 9. Menghapus Anggota Set



The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a list of Python files in the "PYTHON MODUL3" folder, including `set_hapus_anggota.py`, `tuple_Iterasi.py`, `tuple_fungsi.py`, `set1.py`, `set.kosong.py`, `set_ubah_anggota.py`, `set_hapus_anggota2.py`, `set_symmetric_differ...`, `set_ubah_anggota.py`, `set.intersector.py`, `set.kosong.py`, `set.union.py`, `set1.py`, `tuple_akses_range.py`, `tuple_akses.py`, `tuple_bersarang.py`, `tuple_fungsi.py`, `tuple_Iterasi.py`, `tuple_ubah_ang... 1`, and `tuple_uji_anggota.py`.
- Code Editor:** Displays the content of `set_hapus_anggota.py`. The code creates a set `set_saya` with elements {1, 2, 3, 5}, prints it, then removes element 4 using `discard(4)` and prints the result. It then removes element 5 using `remove(5)` and prints the result. Finally, it attempts to remove element 6 using `set_saya.discard(6)` and prints the result.
- Terminal:** Shows the command `PS C:\Users\LENOVO\Documents\Python Modul3> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\vscode\extensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../debugpy\launcher' '53076' '--' 'c:\Users\LENOVO\Documents\Python Modul3\set_hapus_anggota.py'` being run, followed by the output: `[1, 2, 3, 5]`, `[1, 2, 3]`, and `[1, 2, 3]`.
- Status Bar:** Shows "Ln 18, Col 20" and "Python 3.11.2 64-bit (microsoft store)".

### a. Menghapus Anggota Set Secara Random dengan pop()

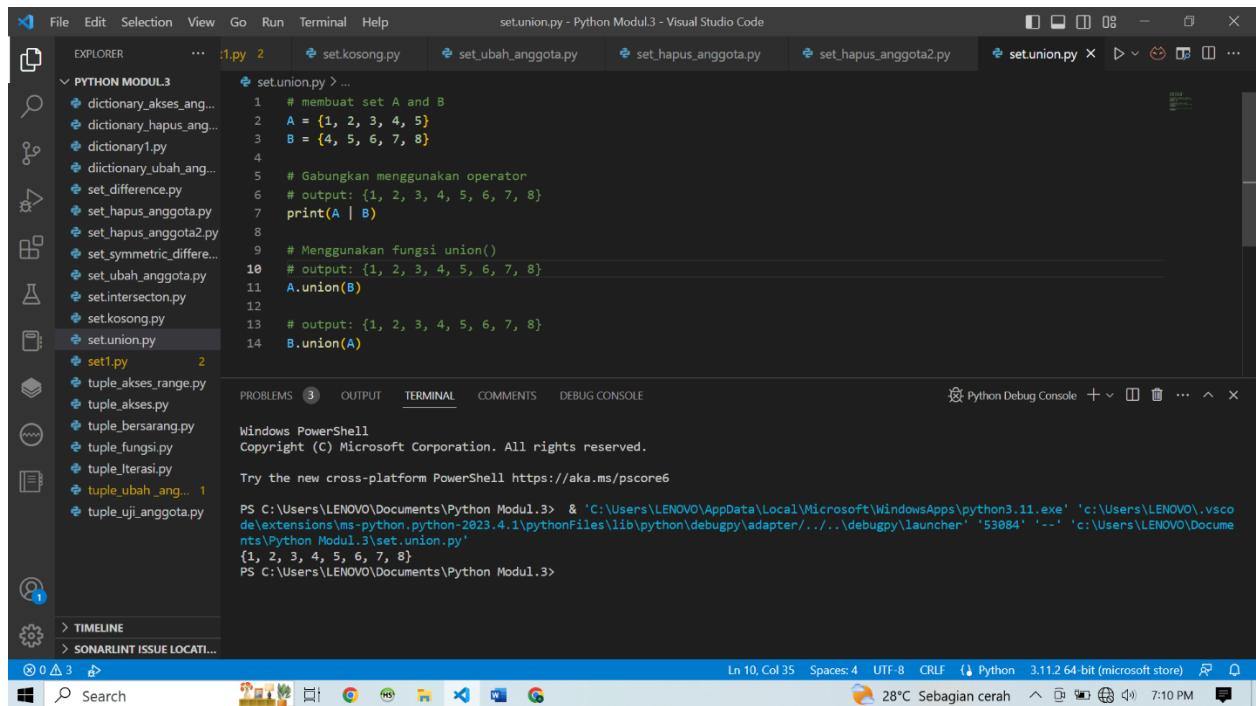


The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a list of Python files in the "PYTHON MODUL3" folder, including `fungsi.py`, `set1.py`, `set.kosong.py`, `set_ubah_anggota.py`, and `set_hapus_anggota2.py`.
- Code Editor:** Displays the content of `set_hapus_anggota2.py`. The code creates a set `set_saya` with the string "HelloPython", prints it, then removes one element at random using `set.pop()` and prints the result. This process is repeated until the set is empty, using `set.clear()` and printing the final empty set.
- Terminal:** Shows the command `PS C:\Users\LENOVO\Documents\Python Modul3> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\vscode\extensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../debugpy\launcher' '53080' '--' 'c:\Users\LENOVO\Documents\Python Modul3\set_hapus_anggota2.py'` being run, followed by the output of the random removal process.
- Status Bar:** Shows "Ln 18, Col 17" and "Python 3.11.2 64-bit (microsoft store)".

## 10. Operasi Set di Python

### a. Operasi Gabungan (Union)



```
File Edit Selection View Go Run Terminal Help set.union.py - Python Modul3 - Visual Studio Code
EXPLORER ... 1.py 2 set.kosong.py set_ubah_anggota.py set_hapus_anggota.py set_hapus_anggota2.py set.union.py set.ubah_anggota.py set.intersecon.py set.kosong.py set.union.py set1.py 2 tuple_akses_range.py tuple_akses.py tuple_bersarang.py tuple_fungsi.py tuple_iterasi.py tuple_ubah_ang... 1 tuple_uji_anggota.py
PYTHON MODUL3
set.union.py > ...
1 # membuat set A dan B
2 A = {1, 2, 3, 4, 5}
3 B = {4, 5, 6, 7, 8}
4
5 # Gabungkan menggunakan operator
6 # output: {1, 2, 3, 4, 5, 6, 7, 8}
7 print(A | B)
8
9 # Menggunakan fungsi union()
10 # output: {1, 2, 3, 4, 5, 6, 7, 8}
11 A.union(B)
12
13 # output: {1, 2, 3, 4, 5, 6, 7, 8}
14 B.union(A)

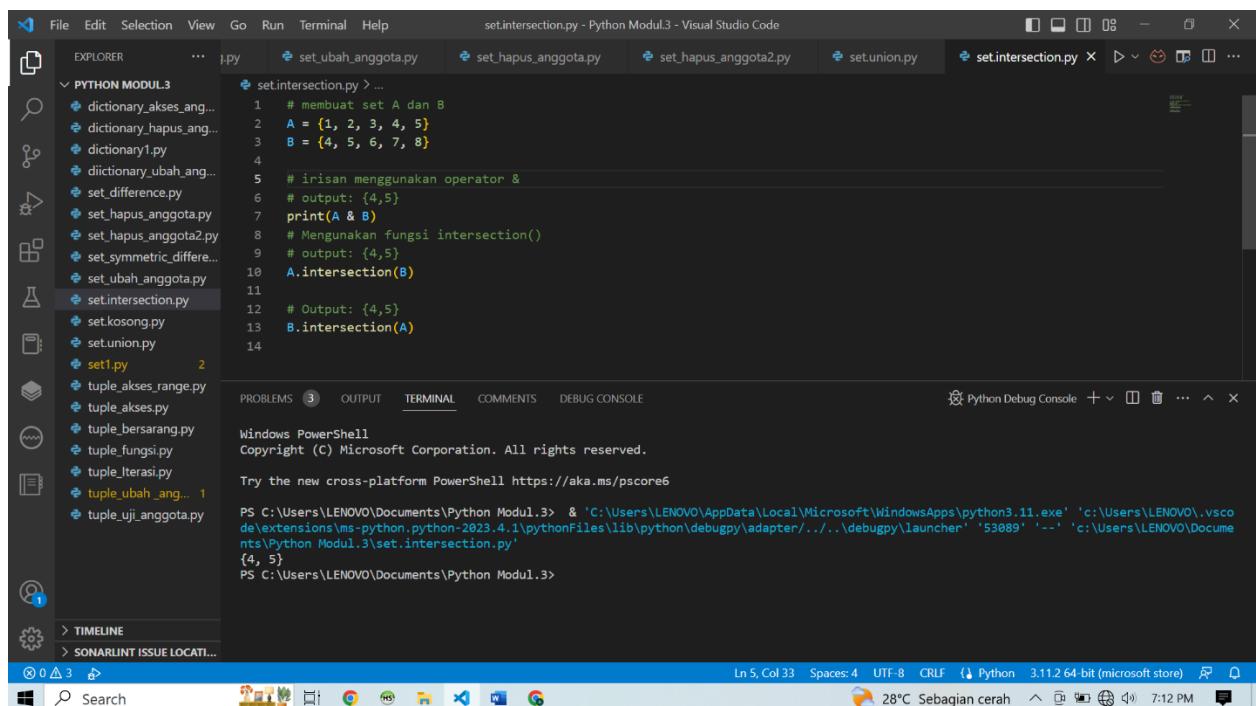
PROBLEMS 3 OUTPUT TERMINAL COMMENTS DEBUG CONSOLE
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

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

PS C:\Users\LENOVO\Documents\Python Modul.3> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\vscode\extensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../..\debugpy\launcher' '53084' '--' 'c:\Users\LENOVO\Documents\Python Modul.3\set.union.py'
{1, 2, 3, 4, 5, 6, 7, 8}
PS C:\Users\LENOVO\Documents\Python Modul.3>

Ln 10, Col 35 Spaces:4 UTF-8 CRLF { Python 3.11.2 64-bit (microsoft store) 28°C Sebagian cerah 7:10 PM
```

### b. Operator Irisan (Intersection)



```
File Edit Selection View Go Run Terminal Help set.intersection.py - Python Modul3 - Visual Studio Code
EXPLORER ... 1.py set_ubah_anggota.py set_hapus_anggota2.py set.union.py set.intersection.py set.ubah_anggota.py set.intersecon.py set.kosong.py set.union.py set1.py 2 tuple_akses_range.py tuple_akses.py tuple_bersarang.py tuple_fungsi.py tuple_iterasi.py tuple_ubah_ang... 1 tuple_uji_anggota.py
PYTHON MODUL3
set.intersection.py > ...
1 # membuat set A dan B
2 A = {1, 2, 3, 4, 5}
3 B = {4, 5, 6, 7, 8}
4
5 # irisan menggunakan operator &
6 # output: {4,5}
7 print(A & B)
8 # Menggunakan fungsi intersection()
9 # output: {4,5}
10 A.intersection(B)
11
12 # Output: {4,5}
13 B.intersection(A)
14

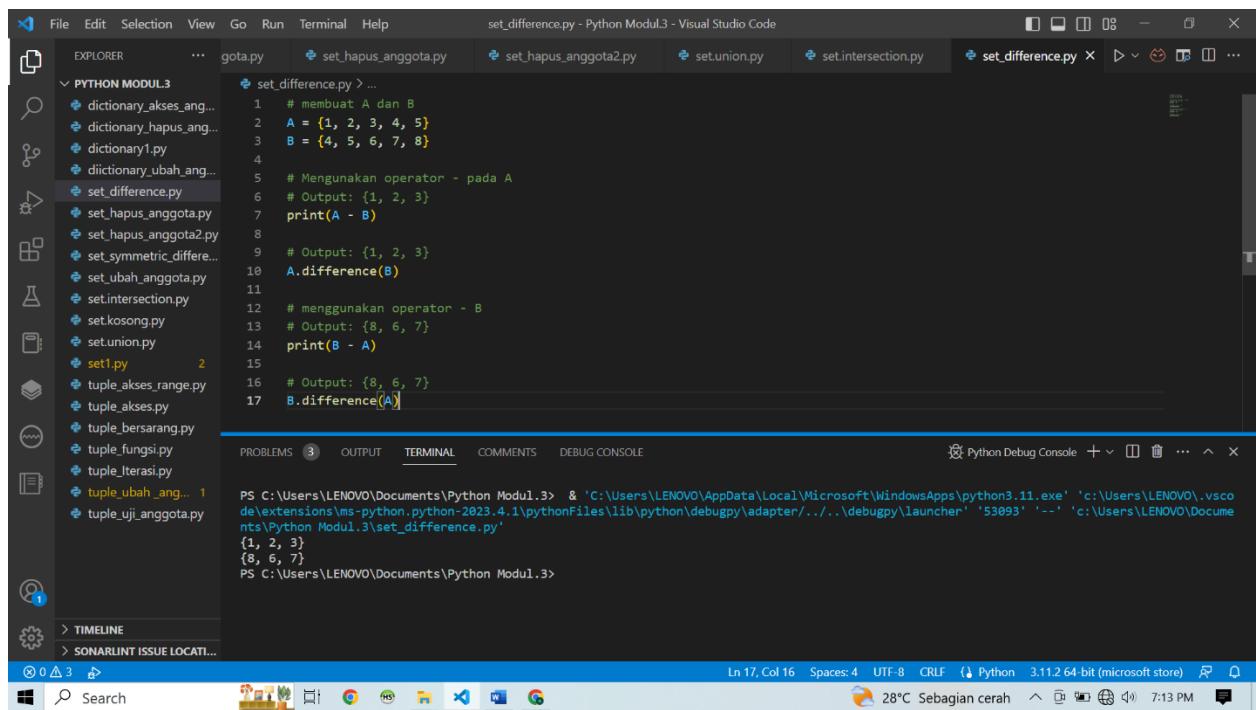
PROBLEMS 3 OUTPUT TERMINAL COMMENTS DEBUG CONSOLE
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

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

PS C:\Users\LENOVO\Documents\Python Modul.3> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\vscode\extensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/../..\debugpy\launcher' '53089' '--' 'c:\Users\LENOVO\Documents\Python Modul.3\set.intersection.py'
{4, 5}
PS C:\Users\LENOVO\Documents\Python Modul.3>

Ln 5, Col 33 Spaces:4 UTF-8 CRLF { Python 3.11.2 64-bit (microsoft store) 28°C Sebagian cerah 7:12 PM
```

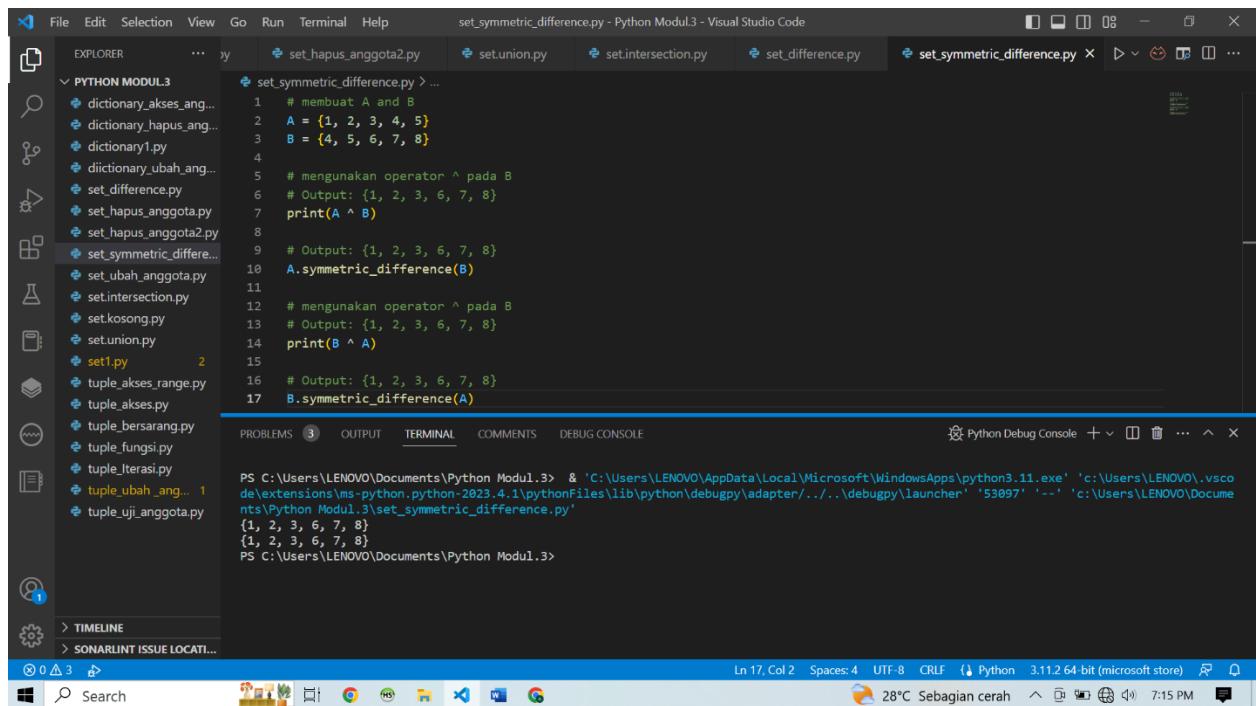
### c. Operasi Selisi (Difference)



The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a folder named "PYTHON MODUL.3" containing various Python files such as "set\_difference.py", "set\_hapus\_anggota.py", "set.union.py", etc.
- Code Editor:** Displays the content of "set\_difference.py". The code creates two sets, A and B, and then prints their difference using both the '-' operator and the `A.difference(B)` method.
- Terminal:** Shows the command PS C:\Users\LENOVO\Documents\Python Modul.3> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\vscodeextensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter\..\..\debugpy\launcher' '53093' '--' 'c:\Users\LENOVO\Documents\Python Modul.3\set\_difference.py'. The output shows the results of the set operations.
- Status Bar:** Shows the current line (Ln 17), column (Col 16), spaces (Spaces: 4), encoding (UTF-8), and file type (CRLF).

### d. Operasi Komplemen (Symmetric Difference)

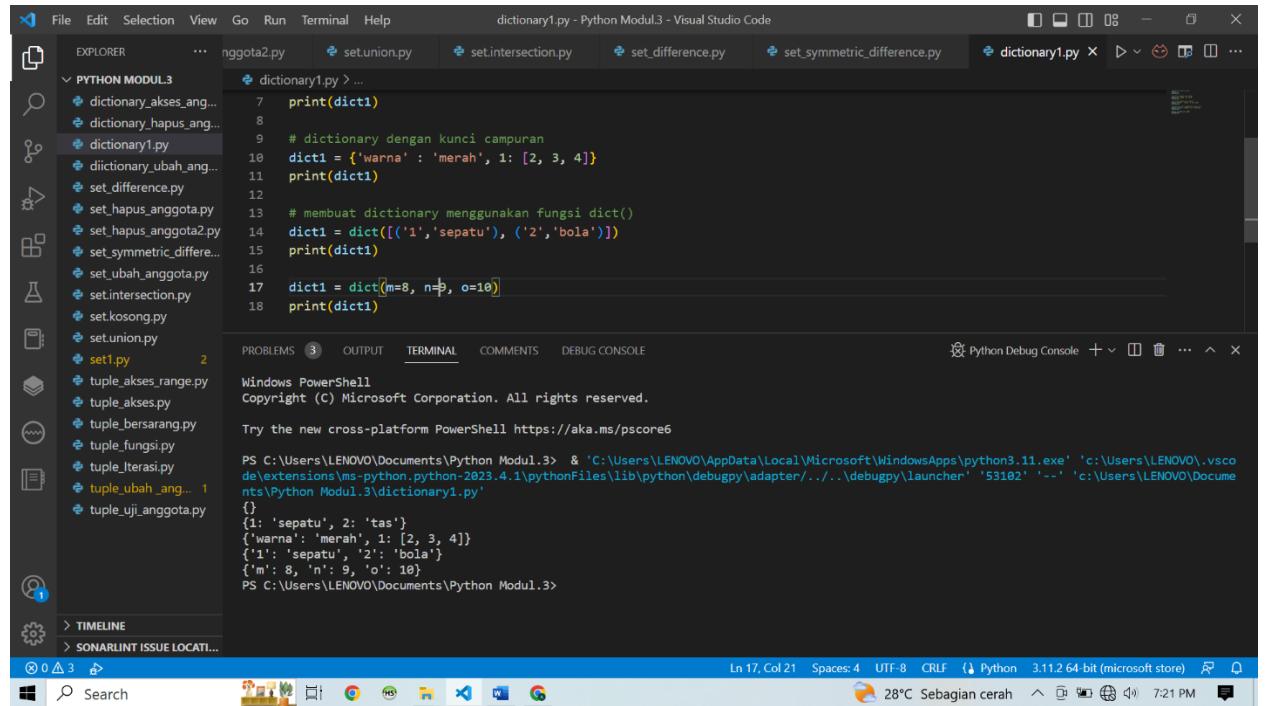


The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a folder named "PYTHON MODUL.3" containing various Python files.
- Code Editor:** Displays the content of "set\_symmetric\_difference.py". The code creates two sets, A and B, and then prints their symmetric difference using both the '^' operator and the `A.symmetric_difference(B)` method.
- Terminal:** Shows the command PS C:\Users\LENOVO\Documents\Python Modul.3> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\vscodeextensions\ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter\..\..\debugpy\launcher' '53097' '--' 'c:\Users\LENOVO\Documents\Python Modul.3\set\_symmetric\_difference.py'. The output shows the results of the set operations.
- Status Bar:** Shows the current line (Ln 17), column (Col 2), spaces (Spaces: 4), encoding (UTF-8), and file type (CRLF).

## 11. Dictionary

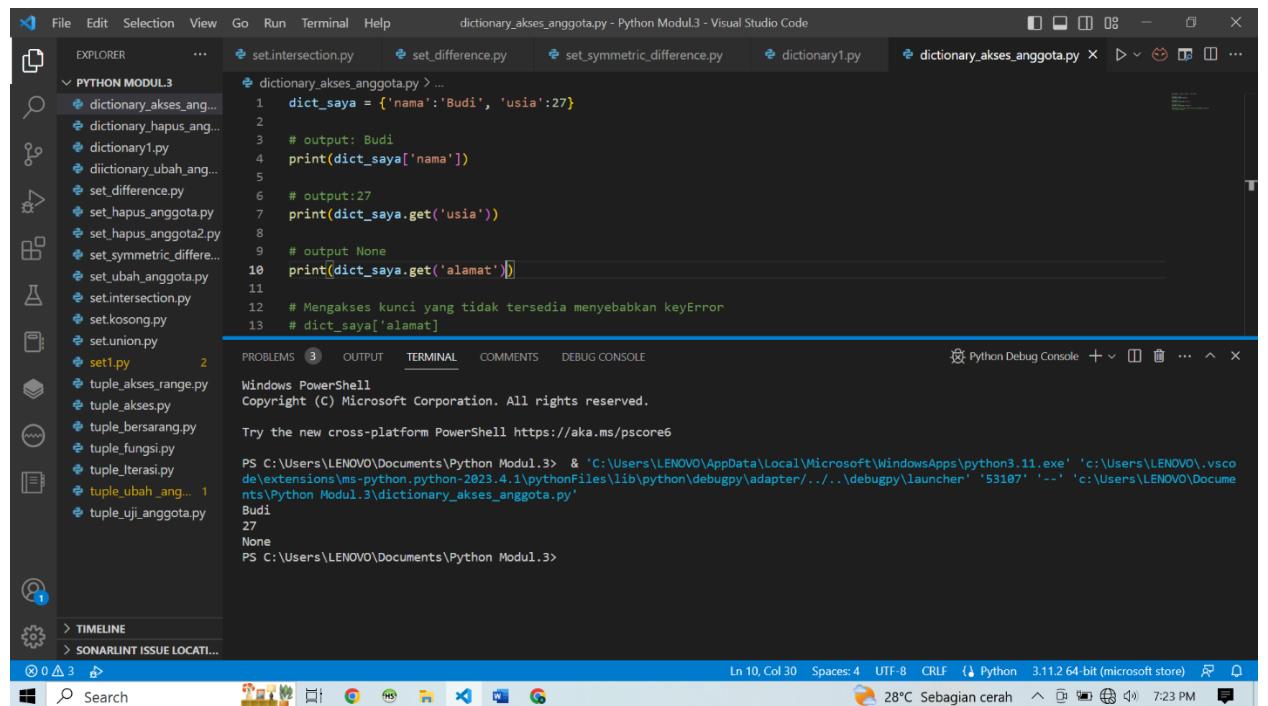
### a. Membuat Dictionary



The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a folder named "PYTHON MODUL.3" containing several Python files: dictionary\_akses\_ang..., dictionary\_hapus\_ang..., dictionary1.py, diictionary\_ubah\_ang..., set\_difference.py, set\_hapus\_anggota.py, set\_hapus\_anggota2.py, set\_symmetric\_differ..., set\_ubah\_anggota.py, set.intersection.py, set.kosong.py, set.union.py, and set1.py.
- Code Editor:** Displays the content of `dictionary1.py`. The code defines a dictionary `dict1` with mixed key types (string and list) and values (string and list). It then prints the dictionary.
- Terminal:** Shows the command PS C:\Users\LENOVO\Documents\Python Modul.3> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\Documents\Python Modul.3\dictionary1.py'. The output shows the dictionary structure: {1: 'sepatu', 2: 'tas'}, {'warna': 'merah', 1: [2, 3, 4]}, {'1': 'sepatu', '2': 'bola'}, {'m': 8, 'n': 9, 'o': 10}.
- Status Bar:** Shows the current line (Ln 17, Col 21), spaces (Spaces: 4), encoding (UTF-8), and Python version (3.11.2 64-bit (microsoft store)).

### b. Mengakses Anggota Dictionary



The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a folder named "PYTHON MODUL.3" containing several Python files: set.intersection.py, set\_difference.py, set\_symmetric\_difference.py, dictionary1.py, and dictionary\_akses\_anggota.py.
- Code Editor:** Displays the content of `dictionary_akses_anggota.py`. The code creates a dictionary `dict_saya` with keys 'nama' (string) and 'usia' (integer). It then prints the value for 'nama' and 'usia', and attempts to print the value for 'alamat' which does not exist, resulting in `None`.
- Terminal:** Shows the command PS C:\Users\LENOVO\Documents\Python Modul.3> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\Documents\Python Modul.3\dictionary\_akses\_anggota.py'. The output shows the dictionary structure: Budi, 27, None.
- Status Bar:** Shows the current line (Ln 10, Col 30), spaces (Spaces: 4), encoding (UTF-8), and Python version (3.11.2 64-bit (microsoft store)).

### c. Mengubah Anggota Dictionary

The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a folder named "PYTHON MODUL.3" containing several Python files: set.intersection.py, set.difference.py, set.symmetric\_difference.py, dictionary\_akses\_anggota.py, dictionary\_hapus\_anggota.py, dictionary1.py, diictionary\_ubah\_ang..., set.difference.py, set.hapus\_anggota.py, set.hapus\_anggota2.py, set.symmetric\_differ..., set\_ubah\_anggota.py, set.intersection.py, set.kosong.py, set.union.py, set1.py, tuple\_alkses\_range.py, tuple\_alkses.py, tuple\_bersarang.py, tuple\_fungsi.py, tuple\_iterasi.py, tuple\_ubah\_ang... 1, tuple\_uji\_anggota.py.
- Code Editor:** Displays the content of `dictionary_akses_anggota.py`. The code defines a dictionary `dict_saya` with key-value pairs ('nama': 'Budi', 'usia': 27). It then prints the value for 'nama' and 'usia'. It attempts to print values for non-existent keys ('alamat') and ('id'), which results in `None` and a `keyError` respectively.
- Terminal:** Shows the command line output from running the script in PowerShell. It shows the environment variables and the execution path: PS C:\Users\LENOVO\Documents\Python Modul.3> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\vscode/extensions/ms-python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter'...'53111' '--' 'c:\Users\LENOVO\Documents\Python Modul.3\dictionary\_akses\_anggota.py'. The output shows the printed values for 'nama' and 'usia'.
- Status Bar:** Shows the current file is `dictionary_akses_anggota.py`, line 10, column 30, spaces: 4, encoding: UTF-8, CRLF, Python 3.11.2 64-bit (microsoft store), and the system status: 28°C Sebagian cerah.

### d. Menghapus Anggota Dictionary

The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows a folder named "PYTHON MODUL.3" containing several Python files: difference.py, dictionary1.py, dictionary\_akses\_ang..., dictionary\_hapus\_ang..., set\_difference.py, set\_hapus\_anggota.py, set\_hapus\_anggota2.py, set.symmetric\_differ..., set\_ubah\_anggota.py, set.intersection.py, set.kosong.py, set.union.py, set1.py, tuple\_alkses\_range.py, tuple\_alkses.py, tuple\_bersarang.py, tuple\_fungsi.py, tuple\_iterasi.py, tuple\_ubah\_ang... 1, tuple\_uji\_anggota.py.
- Code Editor:** Displays the content of `dictionary_hapus_anggota.py`. The code creates a dictionary `dict_saya` with various keys and values. It then uses the `pop` method to remove the value for key 3, resulting in an output of (5, 25). It also demonstrates random deletion using `popitem`, clearing the dictionary using `clear`, and deleting the entire dictionary object using `del`.
- Terminal:** Shows the command line output from running the script in PowerShell. The output shows the removal of specific items from the dictionary and the final state where the dictionary is empty.
- Status Bar:** Shows the current file is `dictionary_hapus_anggota.py`, line 14, column 1, spaces: 4, encoding: UTF-8, CRLF, Python 3.11.2 64-bit (microsoft store), and the system status: 28°C Sebagian cerah.

The screenshot shows the Microsoft Visual Studio Code interface with the following details:

- File Bar:** File, Edit, Selection, View, Go, Run, Terminal, Help.
- Title Bar:** dictionary\_hapus\_anggota.py - Python Modul.3 - Visual Studio Code
- Explorer:** Shows a tree view of Python modules under "PYTHON MODUL".
- Editor:** Displays the content of `dictionary_hapus_anggota.py`. The code creates a dictionary `dict_saya` with items (1:1, 2:4, 3:9, 4:16, 5:25), removes the item at index 3, and prints the result.
- Terminal:** Shows the command run in PowerShell: `PS C:\Users\LENOVO\Documents\Python Modul.3> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\Documents\Python Modul.3\dictionary_hapus_anggota.py'`. The output shows the removed item (3, 25) and the remaining dictionary.
- Status Bar:** Ln 14, Col 1, Spaces: 4, UTF-8, CRLF, Python 3.11.2 64-bit (microsoft store).
- System Tray:** Shows icons for Task View, Search, and other system status.