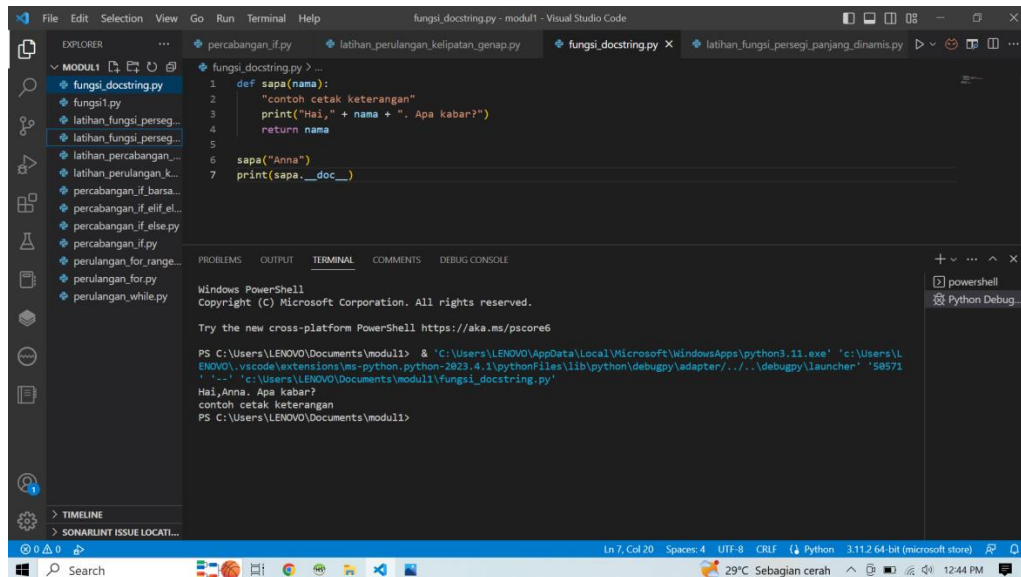


A. Python 5 modul 4

1. Fungsi docstring



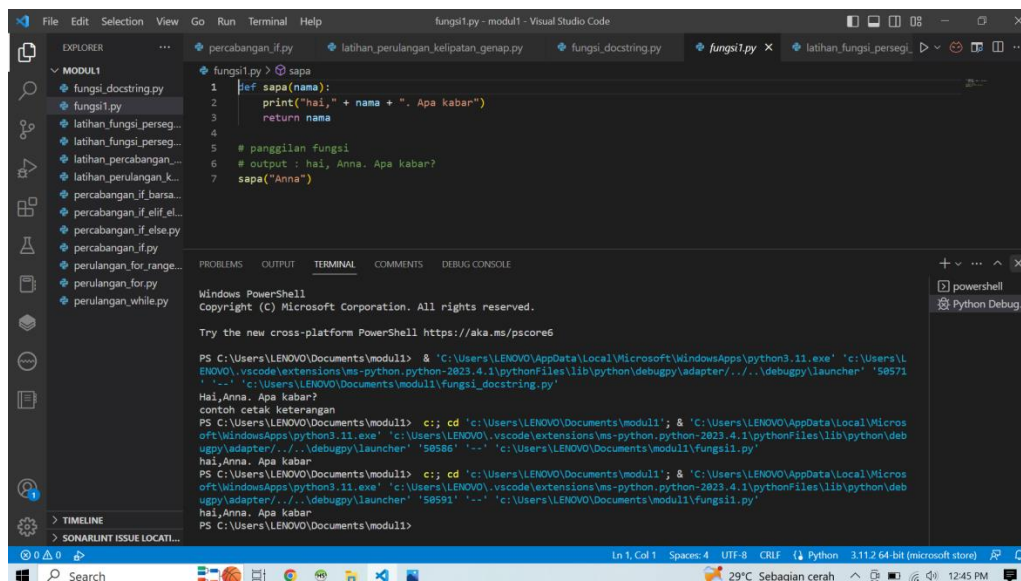
```
1 def sapa(nama):
2     """contoh cetak keterangan"""
3     print("Hai," + nama + ". Apa Kabar?")
4     return nama
5
6 sapa("Anna")
7 print(sapa.__doc__)
```

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

PS C:\Users\LENOVO\Documents\modul1> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\Documents\modul1\fungsi_docstring.py'
Hai,Anna. Apa Kabar?
contoh cetak keterangan
PS C:\Users\LENOVO\Documents\modul1>
```

2. Fungsi



```
1 def sapa(nama):
2     """contoh cetak keterangan"""
3     print("hai," + nama + ". Apa Kabar?")
4     return nama
5
6 # panggilan fungsi
7 # output : hai, Anna. Apa Kabar?
8 sapa("Anna")
```

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

PS C:\Users\LENOVO\Documents\modul1> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\Documents\modul1\fungsi1.py'
hai,Anna. Apa Kabar?
contoh cetak keterangan
PS C:\Users\LENOVO\Documents\modul1>
PS C:\Users\LENOVO\Documents\modul1> cd 'c:\Users\LENOVO\Documents\modul1'; & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\Documents\modul1\fungsi1.py'
hai,Anna. Apa Kabar?
contoh cetak keterangan
PS C:\Users\LENOVO\Documents\modul1>
PS C:\Users\LENOVO\Documents\modul1> cd 'c:\Users\LENOVO\Documents\modul1'; & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\Documents\modul1\fungsi1.py'
hai,Anna. Apa Kabar?
contoh cetak keterangan
PS C:\Users\LENOVO\Documents\modul1>
```

3. Program dinamis

The screenshot shows the Visual Studio Code interface with a Python file named `latihan_fungsi_persegi_panjang_dinamis.py` open. The code defines a function `persegipanjang` that takes `panjang` and `lebar` as arguments, calculates the area (`luas = panjang * lebar`), and prints it. The main program prompts the user for input and calls the function.

```
1 def persegipanjang(panjang, lebar):
2     luas = panjang * lebar
3     print("Luasnya :",luas)
4     return luas
5
6 print("Menghitung Luas Persegi panjang")
7 a = int(input("Masukan Panjang : "))
8 b = int(input("Masukan Lebar : "))
9 persegipanjang(a,b)
```

The terminal window shows the execution of the program, where the user has entered 4 for length and 6 for width, resulting in an area of 24.

```
PS C:\Users\LENOVO\Documents\modul1> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\Documents\modul1\latihan_fungsi_persegi_panjang_dinamis.py'
Menghitung Luas Persegi panjang
Masukan Panjang :
Masukan Lebar :
```

4. Program Statis

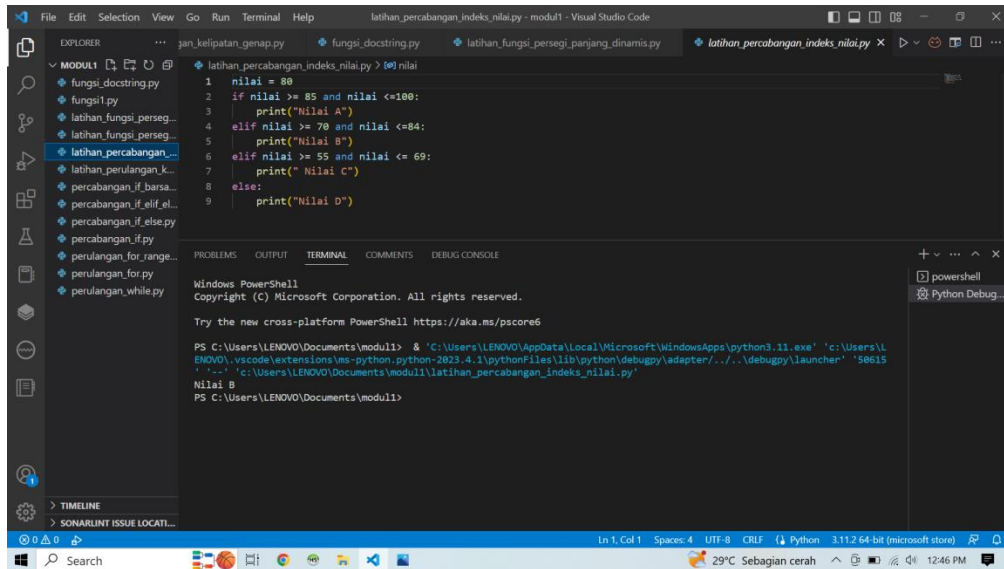
The screenshot shows the Visual Studio Code interface with a Python file named `latihan_fungsi_persegi_panjang.py` open. The code defines a function `persegipanjang` that takes `panjang` and `lebar` as arguments, calculates the area (`luas = panjang * lebar`), and prints it. The main program calls the function with fixed values of 4 and 6.

```
1 def persegipanjang(panjang, lebar):
2     luas = panjang * lebar
3     print("Luasnya :",luas)
4     return luas
5
6 print("Menghitung luas persegi panjang")
7 persegipanjang(4,6)
```

The terminal window shows the execution of the program, where the function is called with fixed values of 4 and 6, resulting in an area of 24.

```
PS C:\Users\LENOVO\Documents\modul1> & 'C:\Users\LENOVO\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\LENOVO\Documents\modul1\latihan_fungsi_persegi_panjang.py'
Menghitung luas persegi panjang
Luasnya : 24
```

5. Percabangan



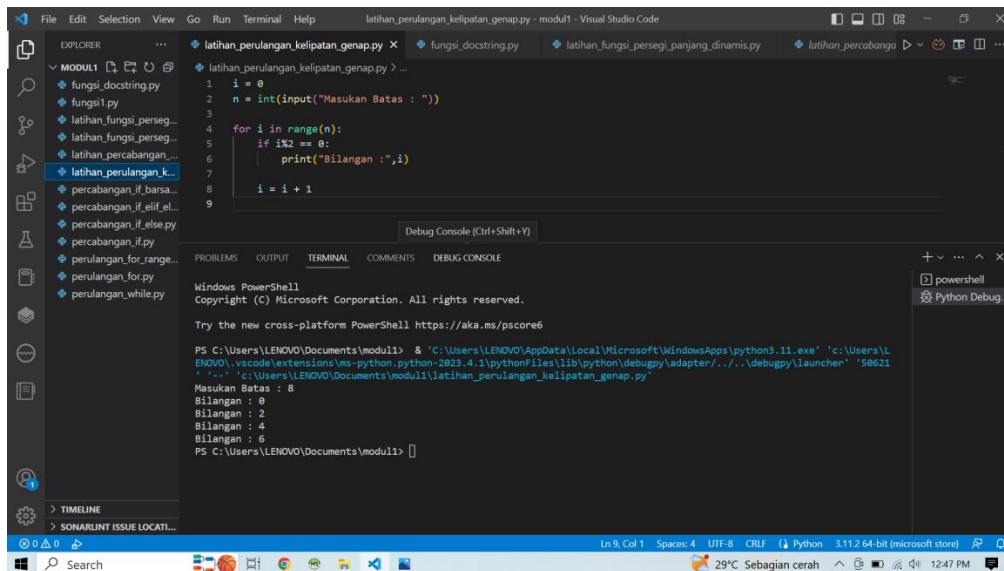
The screenshot shows the Visual Studio Code interface with a Python file named `latihan_percabangan_indeks_nilai.py` open. The code implements a conditional branching logic to print a grade based on a score (`nilai`).

```
1 nilai = 80
2 if nilai >= 85 and nilai <= 100:
3     print("Nilai A")
4 elif nilai >= 70 and nilai <= 84:
5     print("Nilai B")
6 elif nilai >= 55 and nilai <= 69:
7     print("Nilai C")
8 else:
9     print("Nilai D")
```

The terminal output shows the execution of the script, resulting in the output "Nilai B".

```
PS C:\Users\LENOVO\Documents\modul1> & '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' '50615'
Nilai B
PS C:\Users\LENOVO\Documents\modul1>
```

6. Perulangan



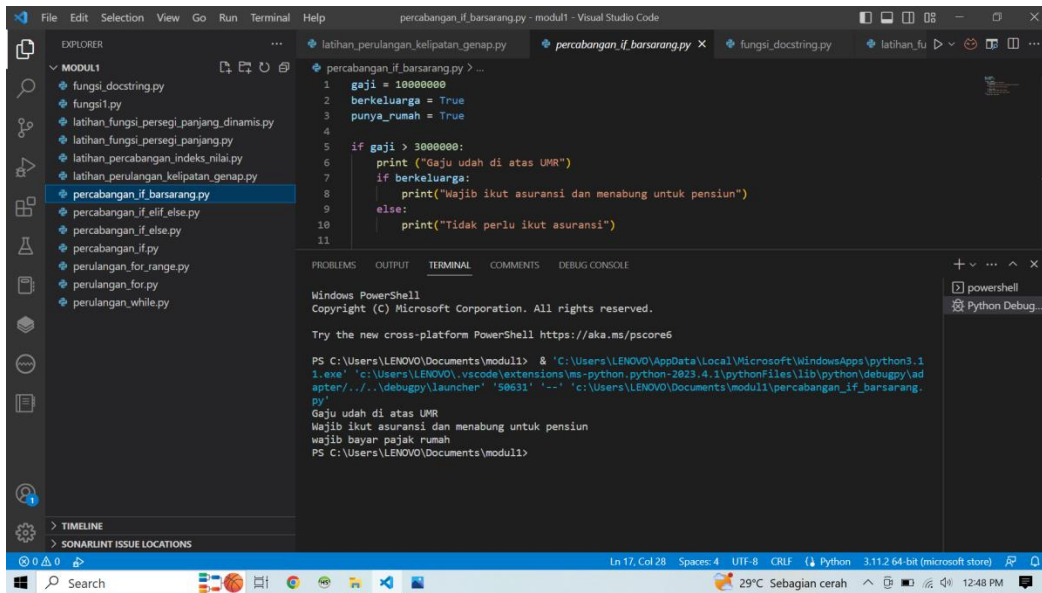
The screenshot shows the Visual Studio Code interface with a Python file named `latihan_perulangan_kelipatan_genap.py` open. The code implements a loop to calculate the sum of even numbers up to a given limit (`n`).

```
1 i = 0
2 n = int(input("Masukan Batas : "))
3
4 for i in range(n):
5     if i % 2 == 0:
6         print("Bilangan :", i)
7         i = i + 1
```

The terminal output shows the execution of the script, where the user enters "8" as the limit, and the program prints the even numbers 0, 2, 4, and 6.

```
PS C:\Users\LENOVO\Documents\modul1> & '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' '50621'
Masukan Batas : 8
Bilangan : 0
Bilangan : 2
Bilangan : 4
Bilangan : 6
PS C:\Users\LENOVO\Documents\modul1>
```

7. Percabangan if bersarang



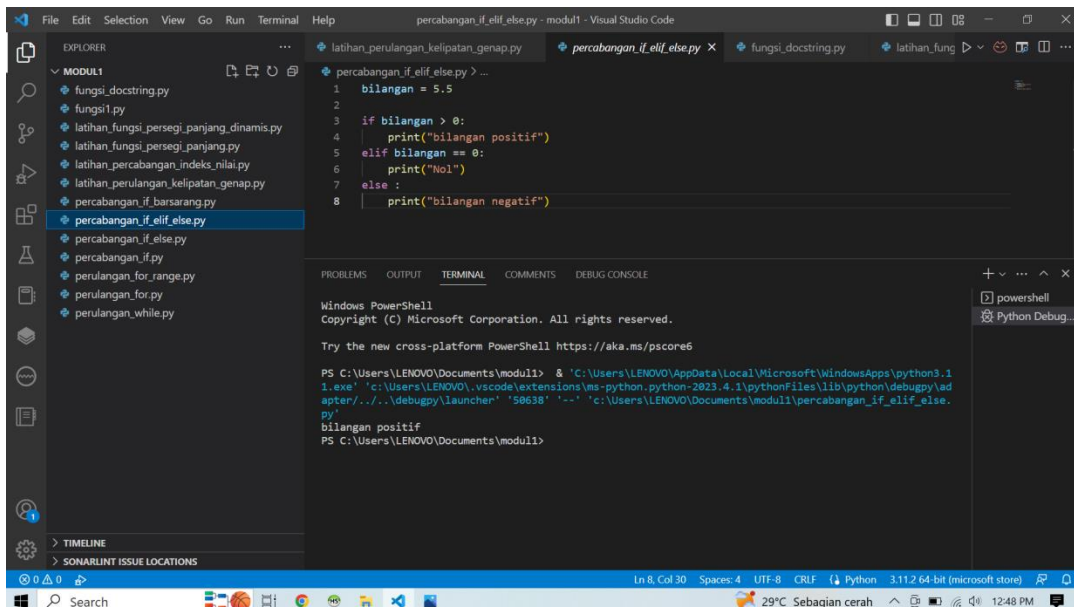
The screenshot shows the Visual Studio Code interface with a Python file named `percabangan_if_bersarang.py` open. The file contains a nested if statement that checks if a salary is greater than 3,000,000. If true, it prints a message about insurance and pension, and then checks if the person has a family. If they do, it prints a message about paying taxes.

```
1 gaji = 10000000
2 berkeluarga = True
3 punya_rumah = True
4
5 if gaji > 3000000:
6     print("Gaji udah di atas UMR")
7     if berkeluarga:
8         print("Wajib ikut asuransi dan menabung untuk pensiun")
9     else:
10        print("Tidak perlu ikut asuransi")
11
```

The terminal output shows the execution of the script, which prints the following messages:

```
Gaji udah di atas UMR
Wajib ikut asuransi dan menabung untuk pensiun
wajib bayar pajak rumah
PS C:\Users\LENOVO\Documents\modul1>
```

8. Percabangan if,elif,else



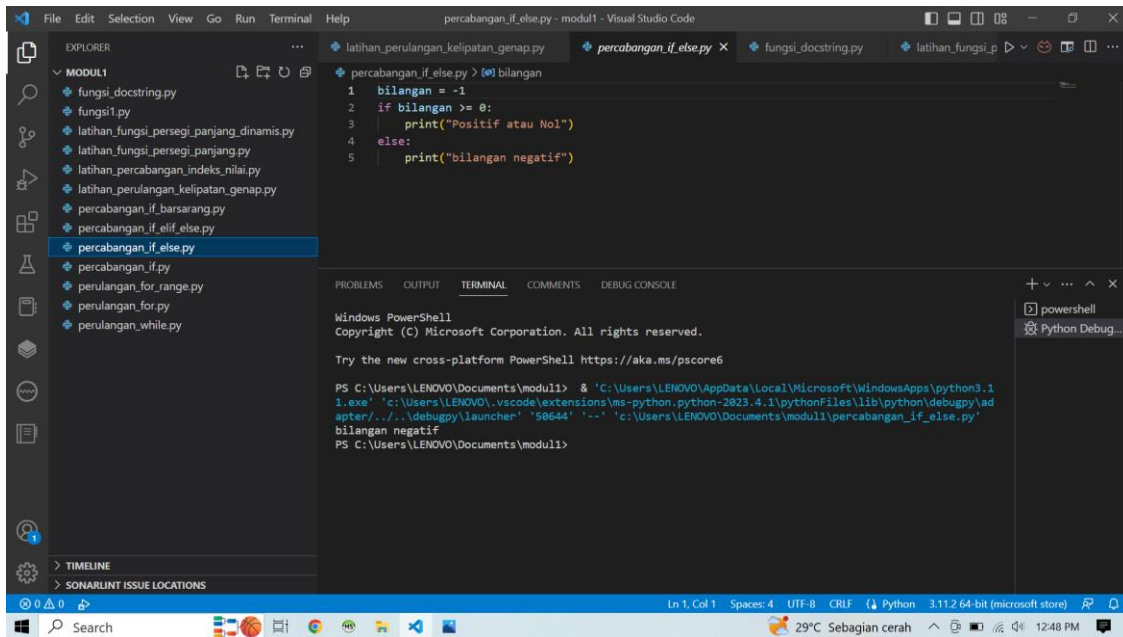
The screenshot shows the Visual Studio Code interface with a Python file named `percabangan_if_elif_else.py` open. The file contains an if-elif-else statement that checks if a number is positive, zero, or negative.

```
1 bilangan = 5.5
2
3 if bilangan > 0:
4     print("bilangan positif")
5 elif bilangan == 0:
6     print("Nol")
7 else:
8     print("bilangan negatif")
```

The terminal output shows the execution of the script, which prints the following message:

```
bilangan positif
PS C:\Users\LENOVO\Documents\modul1>
```

9. Percabangan if, else



```
File Edit Selection View Go Run Terminal Help
percabangan_if_else.py - modul1 - Visual Studio Code

EXPLORER
MODUL1
  fungsi_docstring.py
  fungsi1.py
  latihan_fungsi_persegi_panjang_dinamis.py
  latihan_fungsi_persegi_panjang.py
  latihan_percabangan_indeks_nilai.py
  latihan_perulangan_kelipatan_genap.py
  percabangan_if_barsarang.py
  percabangan_if_elif_else.py
  percabangan_if_else.py
  percabangan_if.py
  perulangan_for_range.py
  perulangan_for.py
  perulangan_while.py

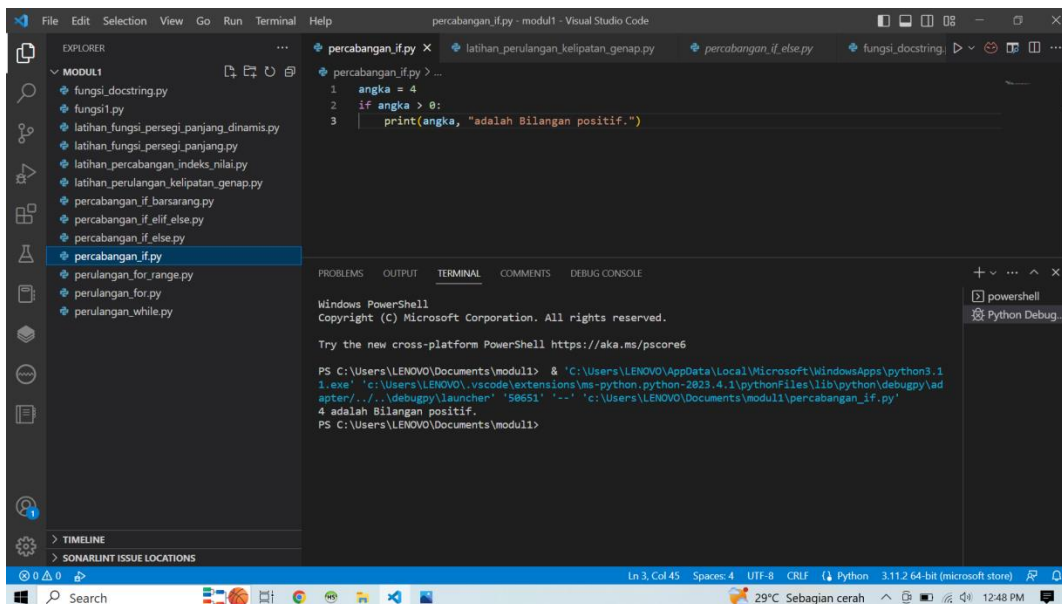
percabangan_if_else.py
1  bilangan = -1
2  if bilangan >= 0:
3      print("Positif atau Nol")
4  else:
5      print("bilangan negatif")

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

PS C:\Users\LENOVO\Documents\modul1> & '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' '50644' '-.' 'c:\Users\LENOVO\Documents\modul1\percabangan_if_else.py'
bilangan negatif
PS C:\Users\LENOVO\Documents\modul1>
```

10. Percabangan if



```
File Edit Selection View Go Run Terminal Help
percabangan_if.py - modul1 - Visual Studio Code

EXPLORER
MODUL1
  fungsi_docstring.py
  fungsi1.py
  latihan_fungsi_persegi_panjang_dinamis.py
  latihan_fungsi_persegi_panjang.py
  latihan_percabangan_indeks_nilai.py
  latihan_perulangan_kelipatan_genap.py
  percabangan_if_barsarang.py
  percabangan_if_elif_else.py
  percabangan_if_else.py
  percabangan_if.py
  perulangan_for_range.py
  perulangan_for.py
  perulangan_while.py

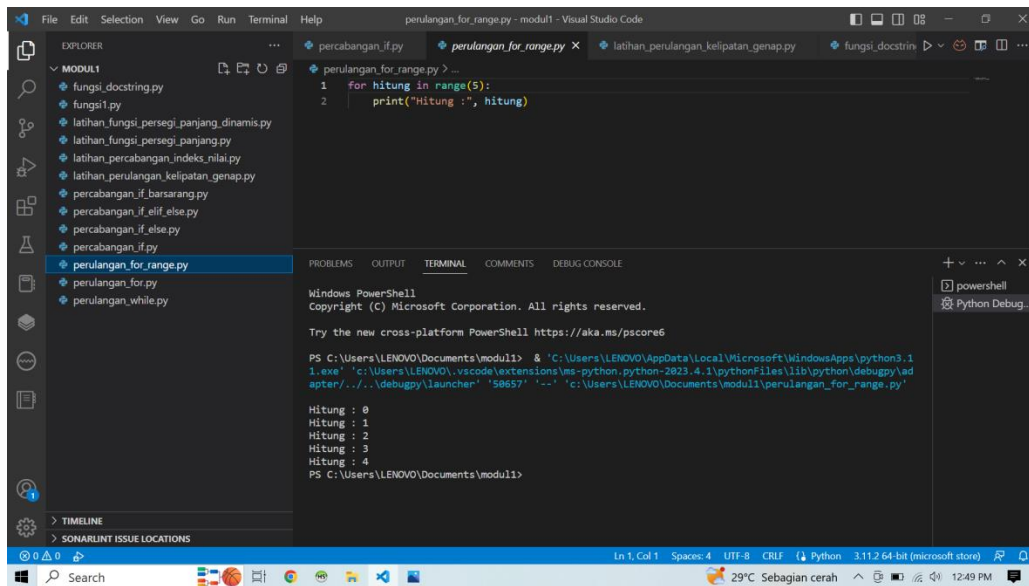
percabangan_if.py
1  angka = 4
2  if angka > 0:
3      print(angka, "adalah Bilangan positif.")

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

PS C:\Users\LENOVO\Documents\modul1> & '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' '50651' '-.' 'c:\Users\LENOVO\Documents\modul1\percabangan_if.py'
4 adalah bilangan positif.
PS C:\Users\LENOVO\Documents\modul1>
```


11. Percabangan for, range



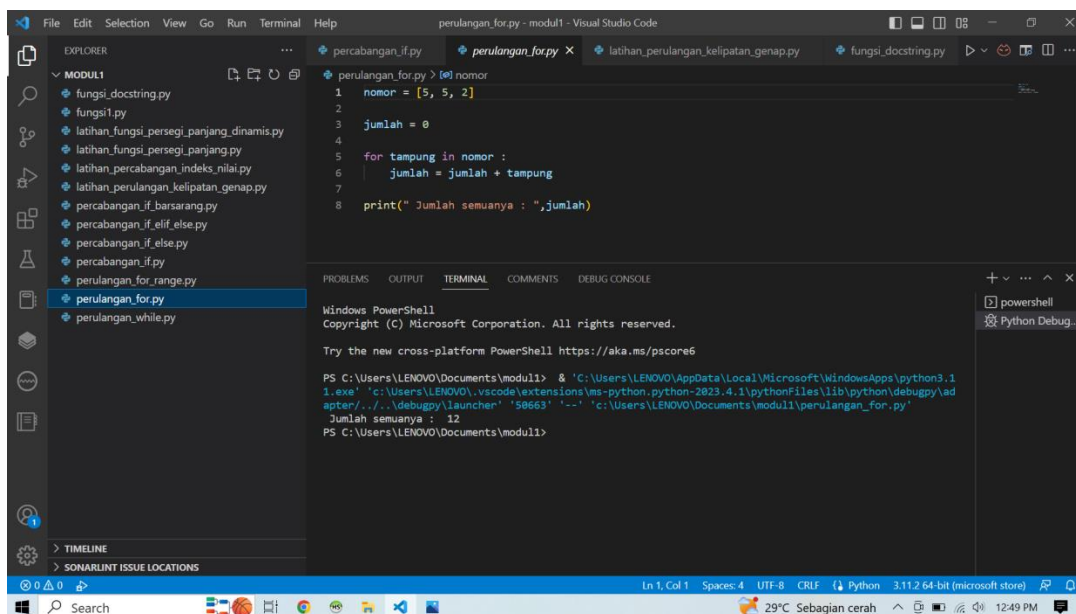
The screenshot shows the Visual Studio Code interface with a file explorer on the left containing a folder named 'MODUL1' with several Python files. The active file is 'perulangan_for_range.py'. The code in the editor is as follows:

```
1 for hitung in range(5):  
2     print("Hitung :", hitung)
```

The bottom panel shows the 'TERMINAL' tab 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\modul1> & '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' '58657' '-.' 'c:\Users\LENOVO\Documents\modul1\perulangan_for_range.py'  
  
Hitung : 0  
Hitung : 1  
Hitung : 2  
Hitung : 3  
Hitung : 4  
PS C:\Users\LENOVO\Documents\modul1>
```

12. Perulangan for



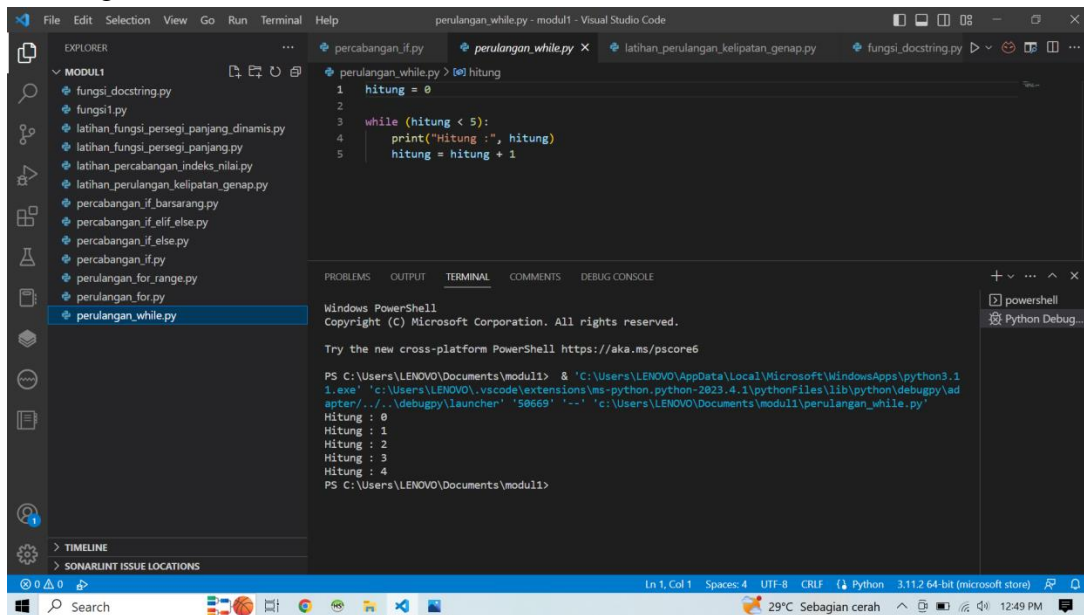
The screenshot shows the Visual Studio Code interface with a file explorer on the left containing a folder named 'MODUL1' with several Python files. The active file is 'perulangan_for.py'. The code in the editor is as follows:

```
1 nomor = [5, 5, 2]  
2  
3 jumlah = 0  
4  
5 for tampung in nomor :  
6     jumlah = jumlah + tampung  
7  
8 print(" Jumlah semuanya : ", jumlah)
```

The bottom panel shows the 'TERMINAL' tab 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\modul1> & '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' '58663' '-.' 'c:\Users\LENOVO\Documents\modul1\perulangan_for.py'  
  
Jumlah semuanya : 12  
PS C:\Users\LENOVO\Documents\modul1>
```

13. Perulangan while



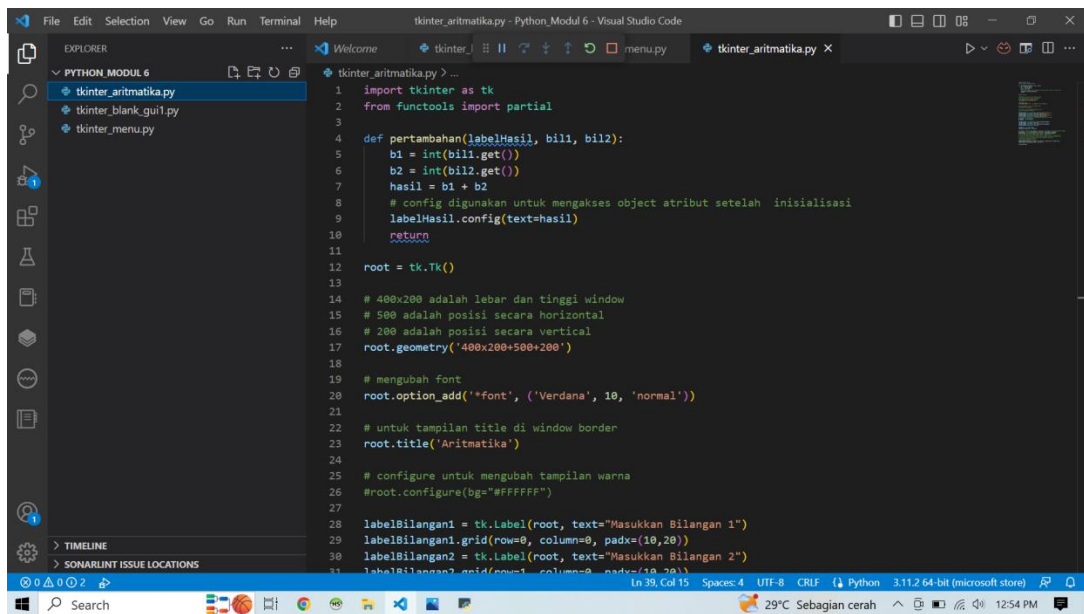
The screenshot shows the Visual Studio Code interface with a Python file named `perulangan_while.py` open. The code defines a variable `hitung` and a `while` loop that prints the value of `hitung` and increments it by 1 until it reaches 5. The terminal window shows the output of the program, displaying the values 0 through 4.

```
1 hitung = 0
2
3 while (hitung < 5):
4     print("Hitung :", hitung)
5     hitung = hitung + 1
```

```
PS C:\Users\LENOVO\Documents\modul1>
Hitung : 0
Hitung : 1
Hitung : 2
Hitung : 3
Hitung : 4
PS C:\Users\LENOVO\Documents\modul1>
```

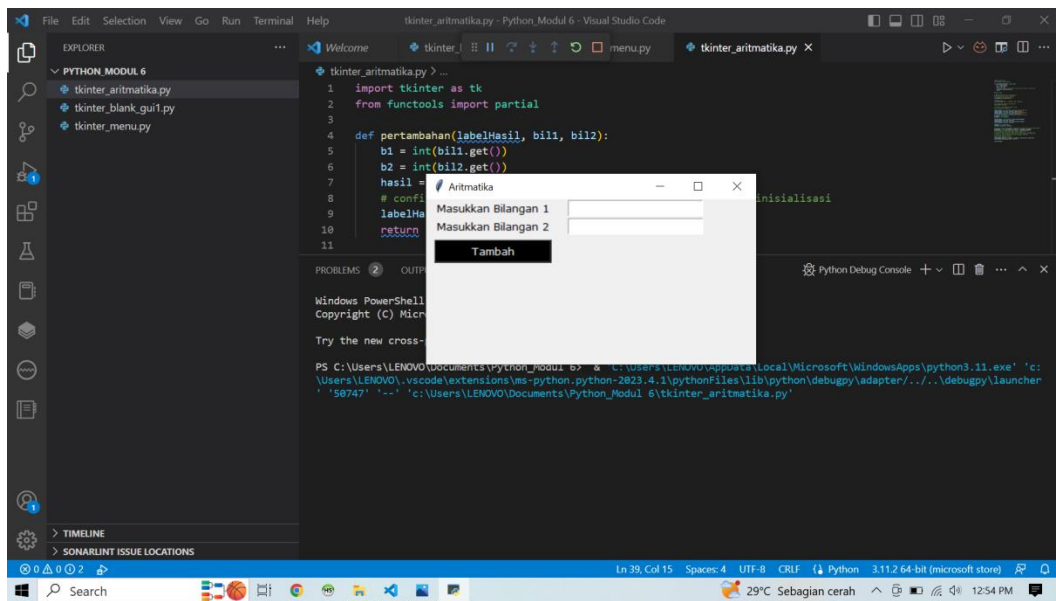
B. Python 7 modul 4

1. Tiknter aritmatika

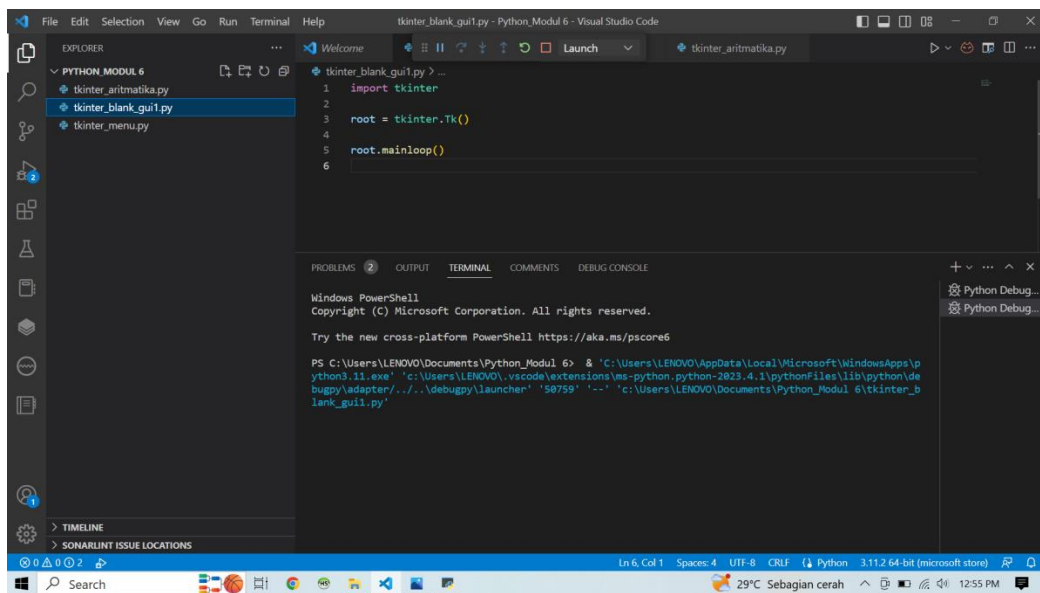


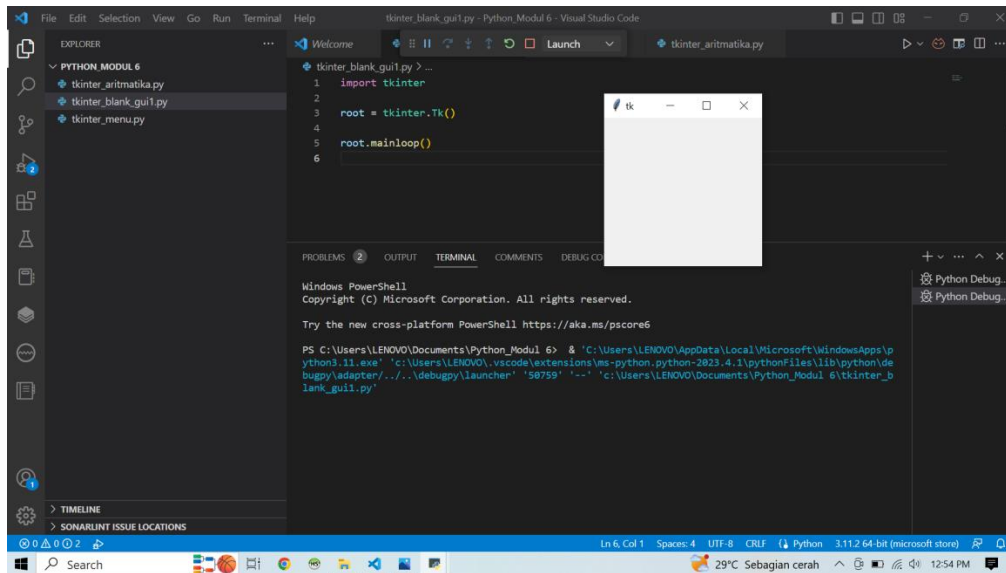
The screenshot shows the Visual Studio Code interface with a Python file named `tkinter_aritmatika.py` open. The code uses the `Tkinter` library to create a simple arithmetic application. It defines a function `pertambahan` that takes two numbers and returns their sum. The main part of the code creates a `Tk` window, sets its geometry, font, and title, and adds two labels for input and one label for the result.

```
1 import tkinter as tk
2 from functools import partial
3
4 def pertambahan(labelHasil, bil1, bil2):
5     b1 = int(bil1.get())
6     b2 = int(bil2.get())
7     hasil = b1 + b2
8     # config digunakan untuk mengakses object atribut setelah inisialisasi
9     labelHasil.config(text=hasil)
10    return
11
12 root = tk.Tk()
13
14 # 400x200 adalah lebar dan tinggi window
15 # 500 adalah posisi secara horizontal
16 # 200 adalah posisi secara vertical
17 root.geometry('400x200+500+200')
18
19 # mengubah font
20 root.option_add('*font', ('Verdana', 10, 'normal'))
21
22 # untuk tampilan title di window border
23 root.title('Aritmatika')
24
25 # configure untuk mengubah tampilan warna
26 root.configure(bg="#FFFFFF")
27
28 labelBilangan1 = tk.Label(root, text="Masukkan Bilangan 1")
29 labelBilangan1.grid(row=0, column=0, padx=(10,20))
30 labelBilangan2 = tk.Label(root, text="Masukkan Bilangan 2")
31 labelBilangan2.grid(row=1, column=0, padx=(10,20))
```

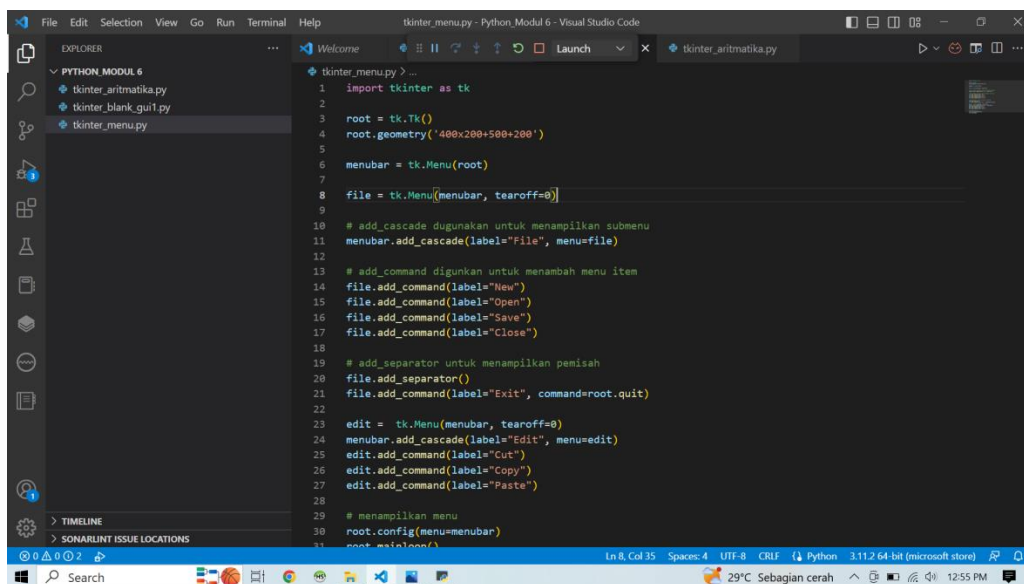


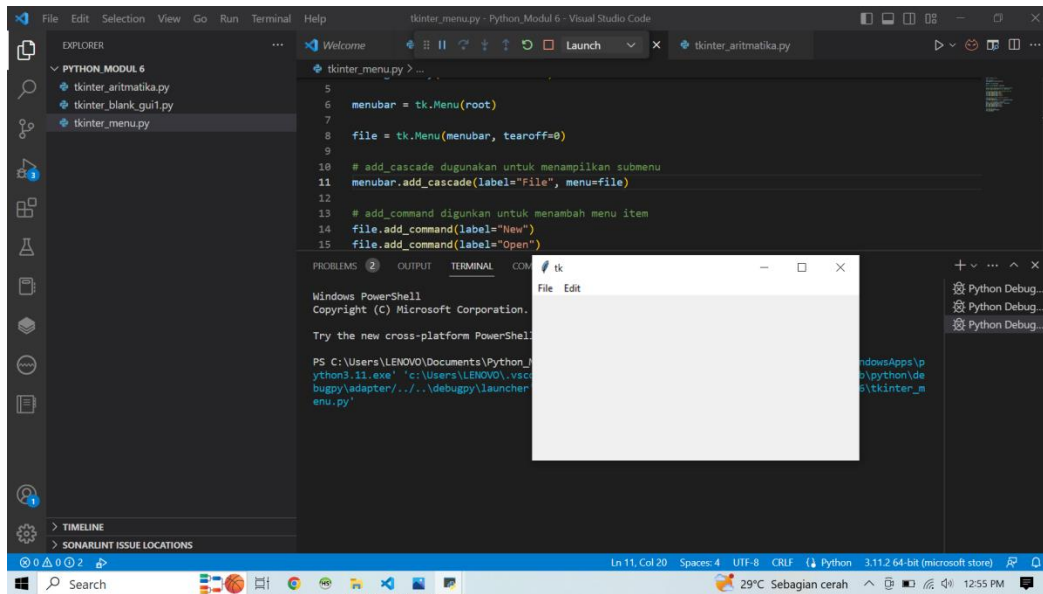
2. Tkinter blank GUI





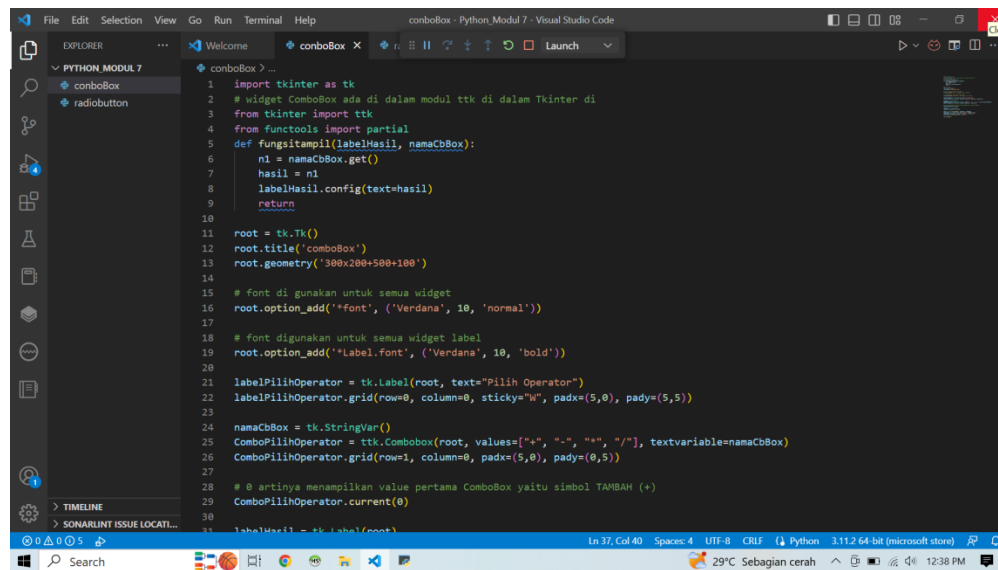
3. Tkinter menu

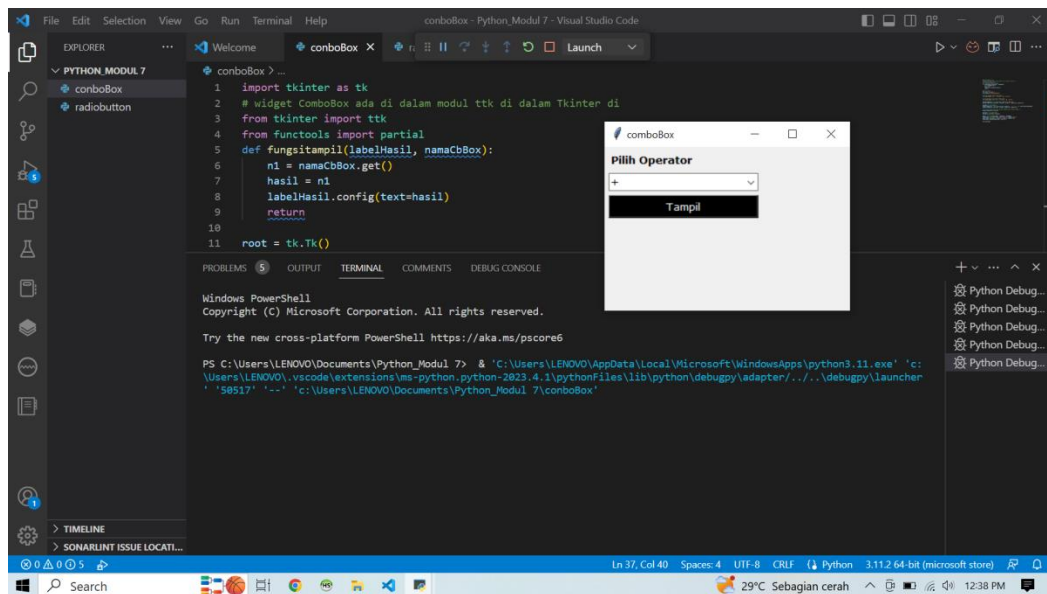




C. Python 8 modul 4

1. conboBox





2. radio button

