

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

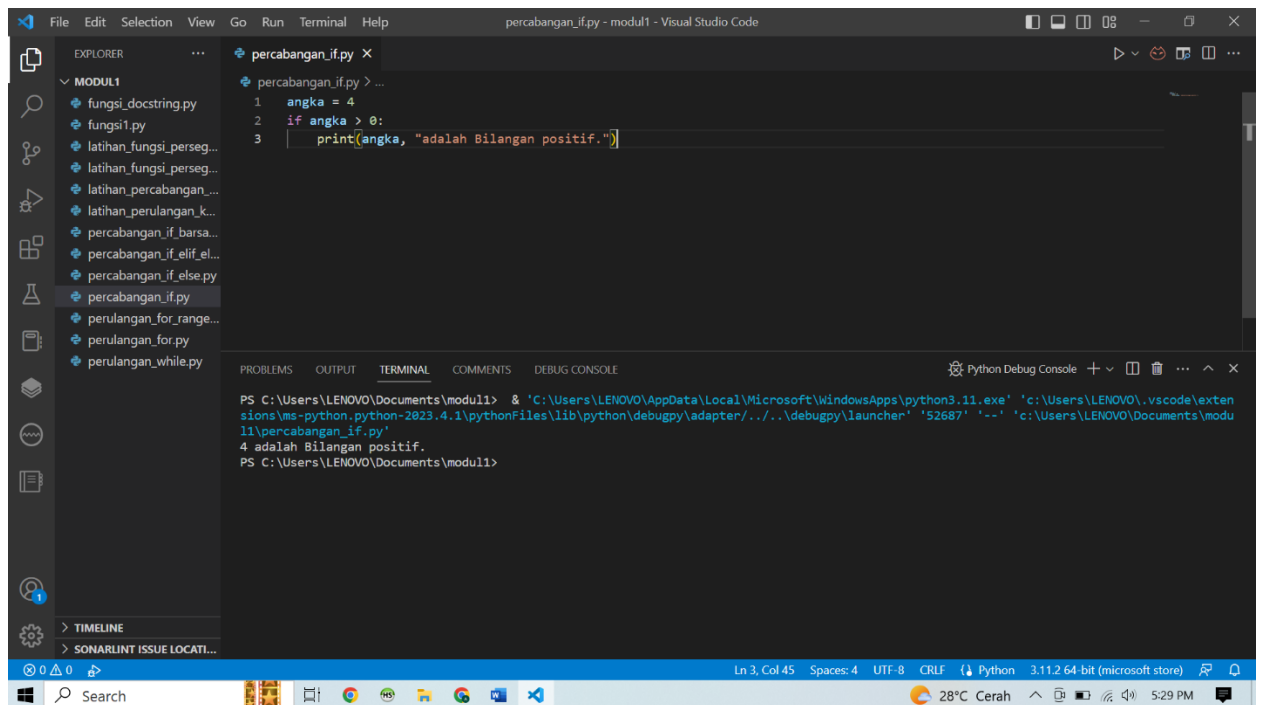
Task 2

Python Modul 4

Percabangan

1. Pernyataan if

Terdiri dari ekspresi Boolean diikuti satu baris atau lebih pernyataan



The screenshot displays the Visual Studio Code interface. The Explorer panel on the left shows a project named 'MODUL1' with several Python files. The file 'percabangan_if.py' is selected and open in the editor. The code in the editor is as follows:

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

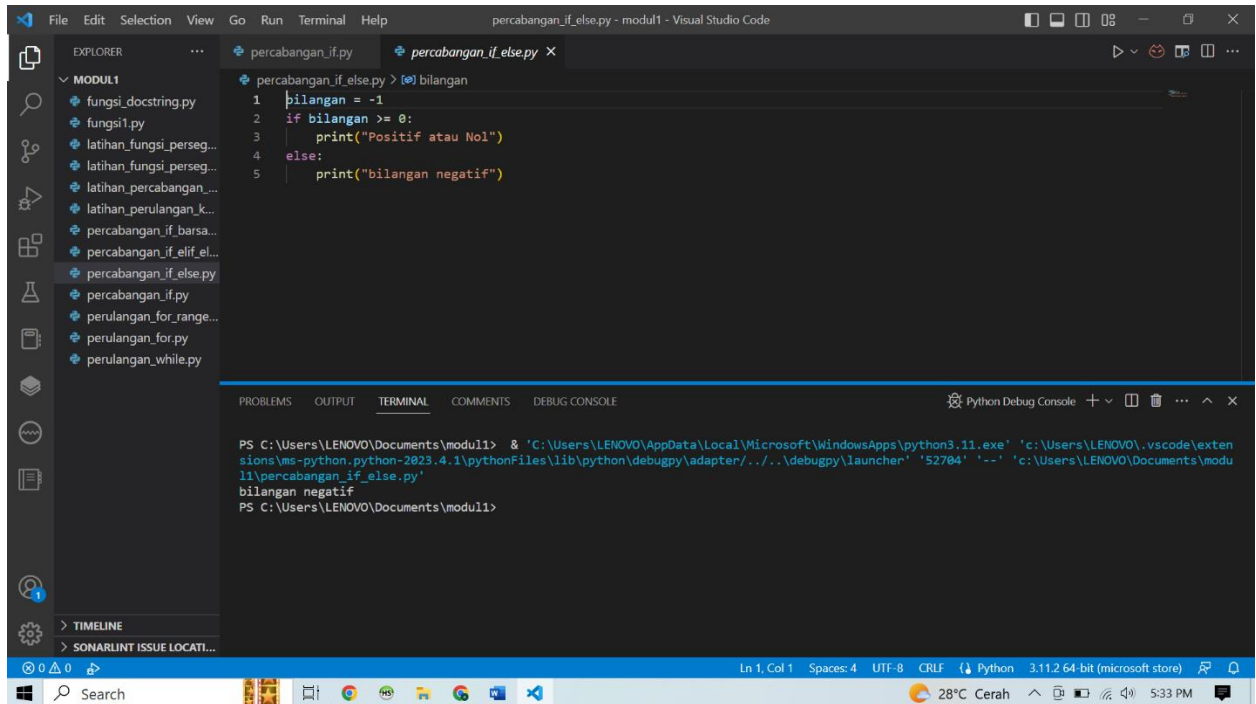
The TERMINAL panel at the bottom shows the command prompt output after running the script:

```
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' '52687' '--' 'c:\Users\LENOVO\Documents\modul1\percabangan_if.py'
4 adalah Bilangan positif.
PS C:\Users\LENOVO\Documents\modul1>
```

The status bar at the bottom indicates the current file is 'Ln 3, Col 45', the encoding is 'UTF-8', and the line ending is 'CRLF'. The system tray shows the temperature as 28°C and the time as 5:29 PM.

2. Pernyataan if_else

Ada 2 kondisi, komdisi pertaman kalau benar dan kondisi ke dua kalau salah.



The screenshot shows the Visual Studio Code interface with a file explorer on the left containing a folder named 'MODUL1'. The main editor displays a file named 'percabangan_if_else.py' with the following code:

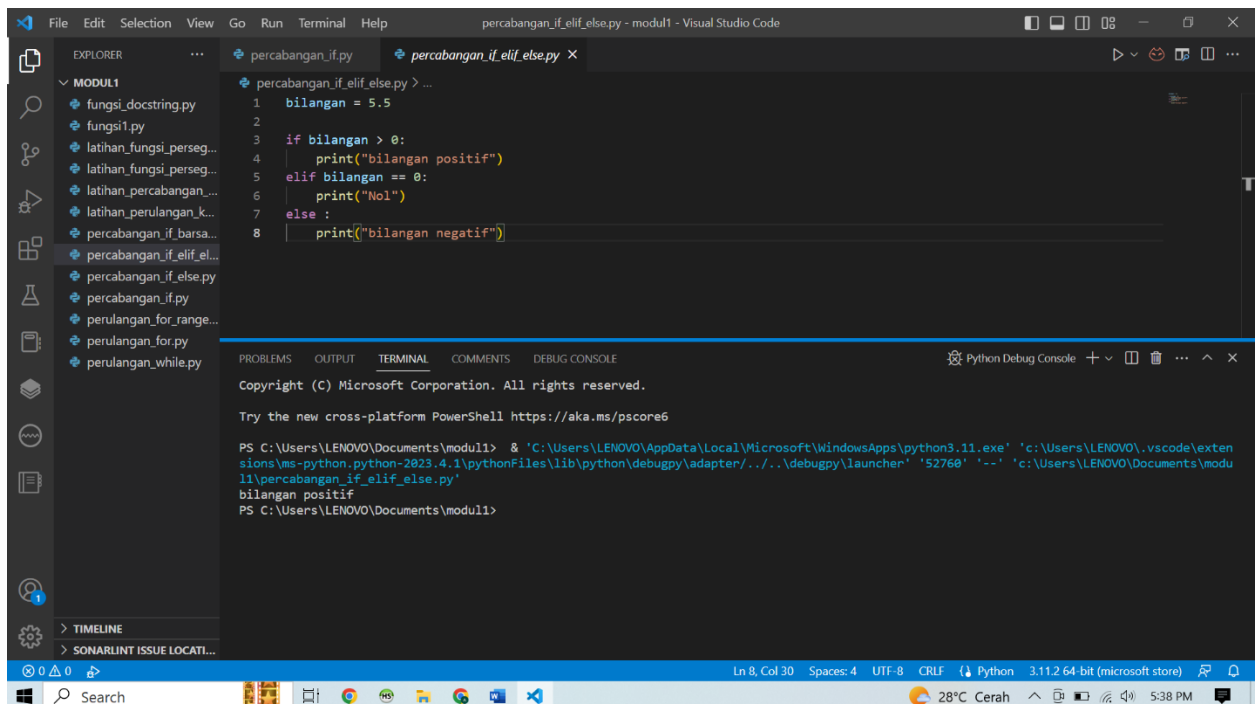
```
1 bilangan = -1
2 if bilangan >= 0:
3     print("Positif atau Nol")
4 else:
5     print("bilangan negatif")
```

The terminal at the bottom shows the command to run the script and its output:

```
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' '52784' '--' 'c:\Users\LENOVO\Documents\modul1\percabangan_if_else.py'
bilangan negatif
PS C:\Users\LENOVO\Documents\modul1>
```

3. Pernyataan if_elif_else

Pernyataan if_elif_else digunakan untuk menguji lebih dari 2 kondisi



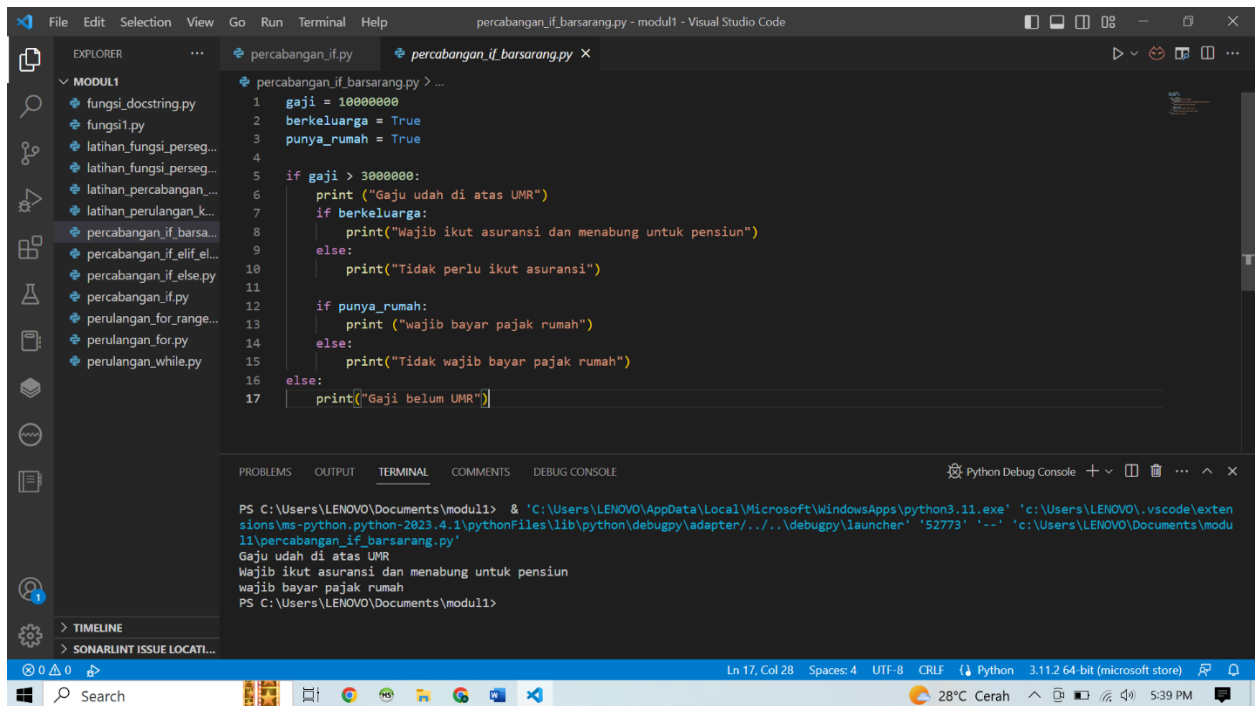
The screenshot shows the Visual Studio Code interface with a file explorer on the left containing a folder named 'MODUL1'. The main editor displays a file named 'percabangan_if_elif_else.py' with the following code:

```
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 at the bottom shows the command to run the script and its output:

```
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' '52768' '--' 'c:\Users\LENOVO\Documents\modul1\percabangan_if_elif_else.py'
bilangan positif
PS C:\Users\LENOVO\Documents\modul1>
```

4. Tambahkan : if Bersarang



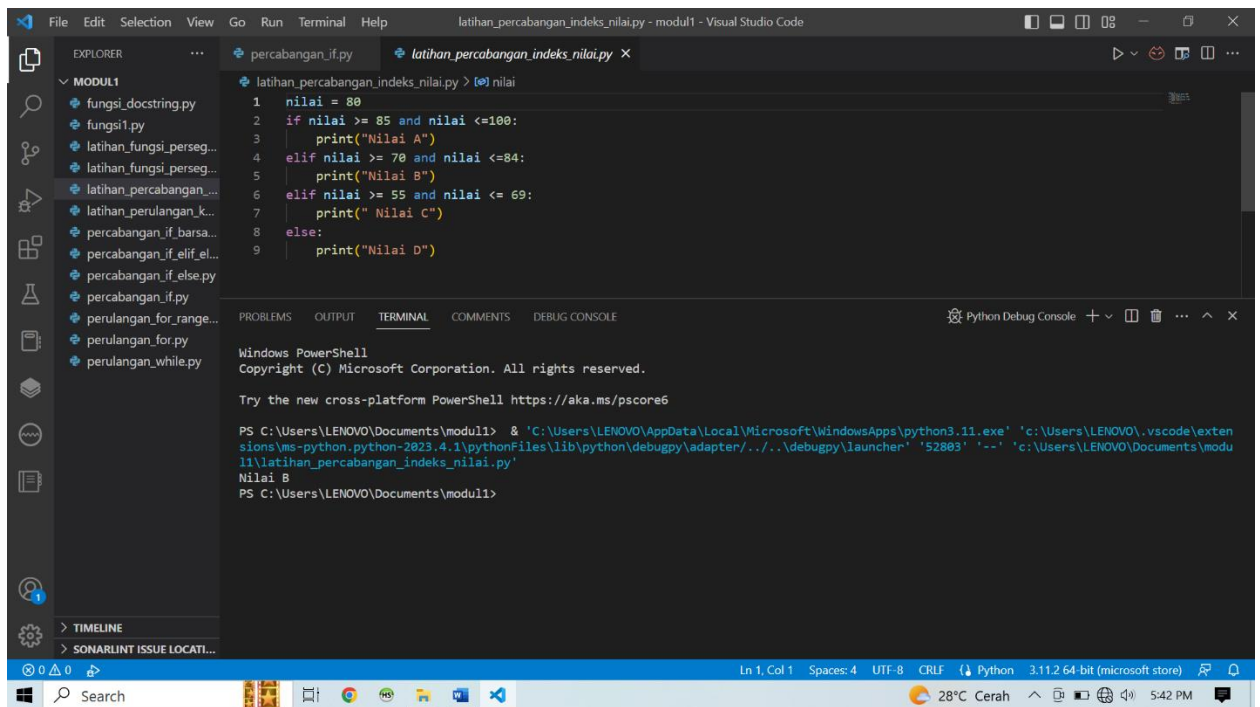
The screenshot shows the Visual Studio Code editor with a file named `percabangan_if_barsarang.py` open. The code defines variables `gaji`, `berkeluarga`, and `punya_rumah`, and uses nested if statements to print messages based on their values. The terminal output shows the execution results.

```
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
12    if punya_rumah:
13        print("wajib bayar pajak rumah")
14    else:
15        print("Tidak wajib bayar pajak rumah")
16 else:
17    print("Gaji belum UMR")
```

Terminal Output:

```
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' '52773' '--' 'c:\Users\LENOVO\Documents\modul1\percabangan_if_barsarang.py'
Gaji udah di atas UMR
Wajib ikut asuransi dan menabung untuk pensiun
wajib bayar pajak rumah
PS C:\Users\LENOVO\Documents\modul1>
```

5. Contoh Program Percabangan Indeks Nilai Statis



The screenshot shows the Visual Studio Code editor with a file named `latihan_percabangan_indeks_nilai.py` open. The code defines a variable `nilai` and uses a series of if-elif-else statements to print a letter grade based on its value. The terminal output shows the execution results.

```
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")
```

Terminal Output:

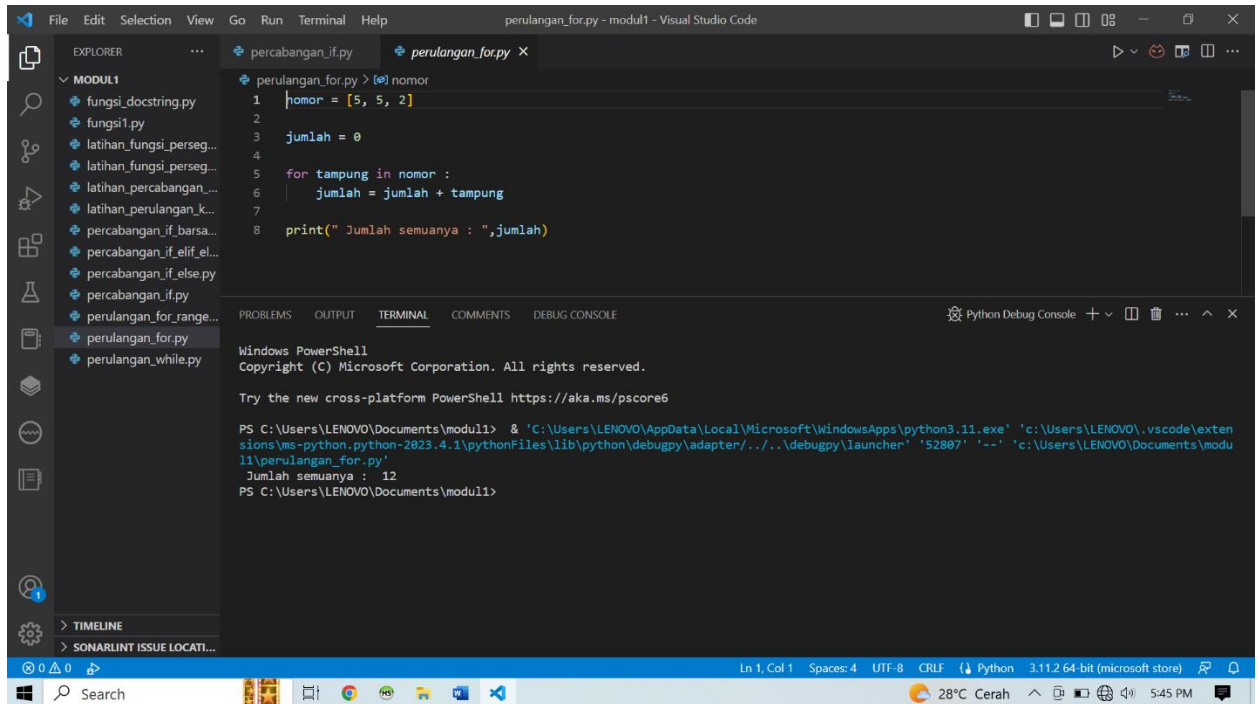
```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

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' '52883' '--' 'c:\Users\LENOVO\Documents\modul1\latihan_percabangan_indeks_nilai.py'
Nilai B
PS C:\Users\LENOVO\Documents\modul1>
```

Perulangan

1. Perulangan dengan menggunakan for



The screenshot shows the Visual Studio Code interface with a file explorer on the left containing a folder named 'MODUL1'. The main editor displays a file named 'perulangan_for.py' with the following Python code:

```
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)
```

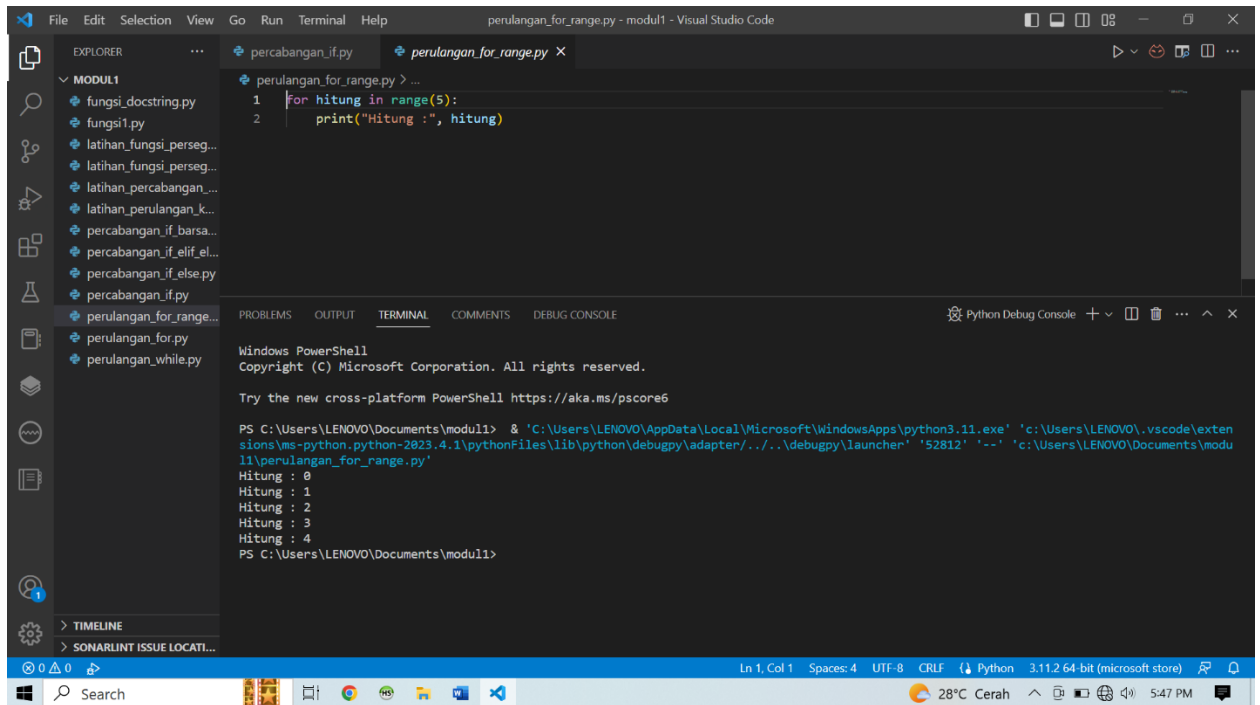
The bottom panel shows the 'TERMINAL' tab with the following output:

```
Windows PowerShell
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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' '52807' '--' 'c:\Users\LENOVO\Documents\modul1\perulangan_for.py'
Jumlah semuanya : 12
PS C:\Users\LENOVO\Documents\modul1>
```

Perulangan for dengan range



The screenshot shows the Visual Studio Code interface with a file explorer on the left containing a folder named 'MODUL1'. The main editor displays a file named 'perulangan_for_range.py' with the following Python code:

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

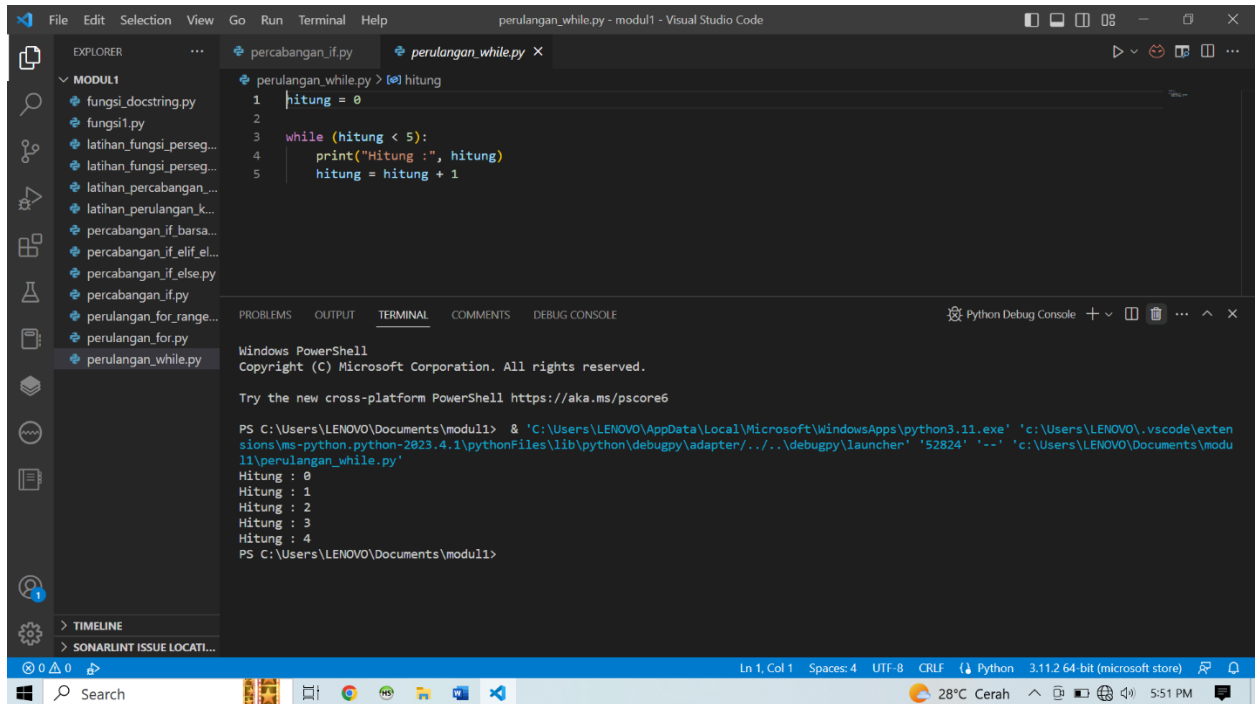
The bottom panel shows the 'TERMINAL' tab with the following output:

```
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' '52812' '--' '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>
```

2. Perulangan Menggunakan while



The screenshot shows the Visual Studio Code interface with a file named `perulangan_while.py` open. The code defines a variable `hitung` and uses a `while` loop to print its value from 0 to 4. The terminal window shows the execution output.

```
perulangan_while.py > | hitung
1 hitung = 0
2
3 while (hitung < 5):
4     print("Hitung :", hitung)
5     hitung = hitung + 1
```

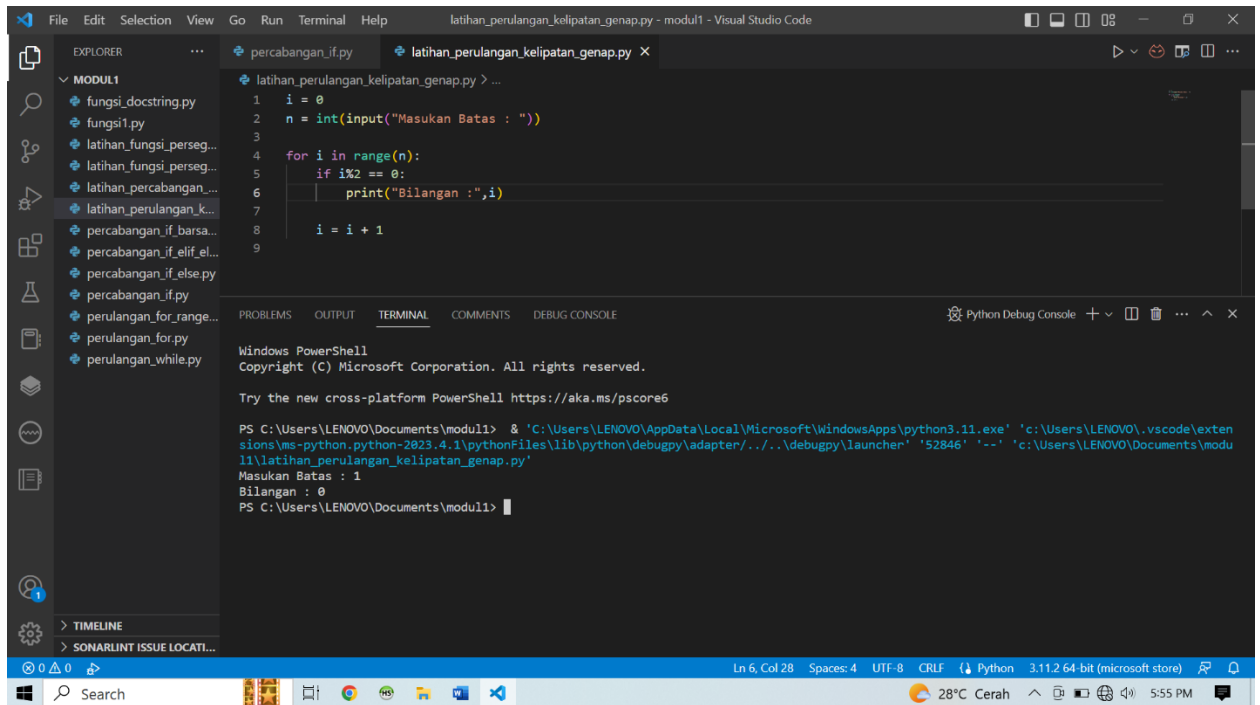
Terminal Output:

```
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' '52824' '--' 'c:\Users\LENOVO\Documents\modul1\perulangan_while.py'
Hitung : 0
Hitung : 1
Hitung : 2
Hitung : 3
Hitung : 4
PS C:\Users\LENOVO\Documents\modul1>
```

3. Contoh Program Kelipatan Bilangan Genap



The screenshot shows the Visual Studio Code interface with a file named `latihan_perulangan_kelipatan_genap.py` open. The code prompts the user for a limit `n` and then prints all even numbers from 0 to `n-1` using a `for` loop and an `if` condition. The terminal window shows the execution output.

```
latihan_perulangan_kelipatan_genap.py > | ...
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
8     i = i + 1
9
```

Terminal Output:

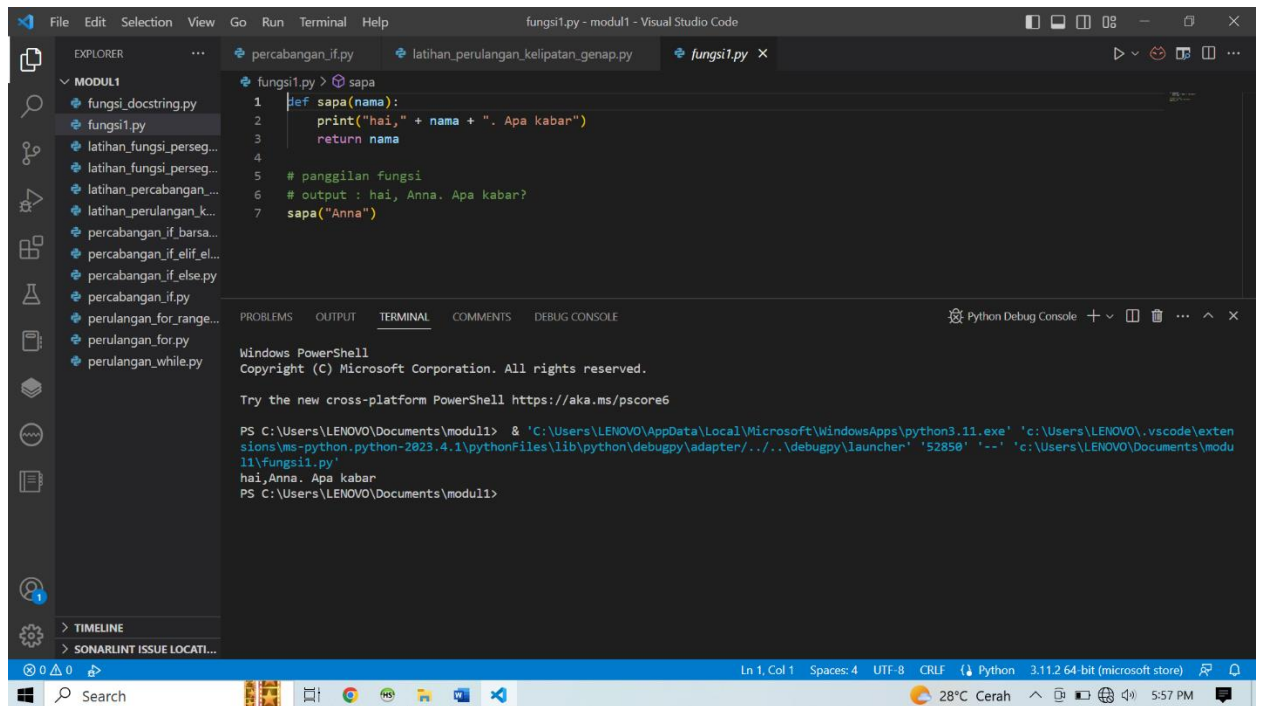
```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

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' '52846' '--' 'c:\Users\LENOVO\Documents\modul1\latihan_perulangan_kelipatan_genap.py'
Masukan Batas : 1
Bilangan : 0
PS C:\Users\LENOVO\Documents\modul1>
```

Latihan

1. Mendefinisikan Fungsi



The screenshot shows the Visual Studio Code interface with a file explorer on the left containing a folder named 'MODUL1'. The main editor displays a file named 'fungsi1.py' with the following Python code:

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

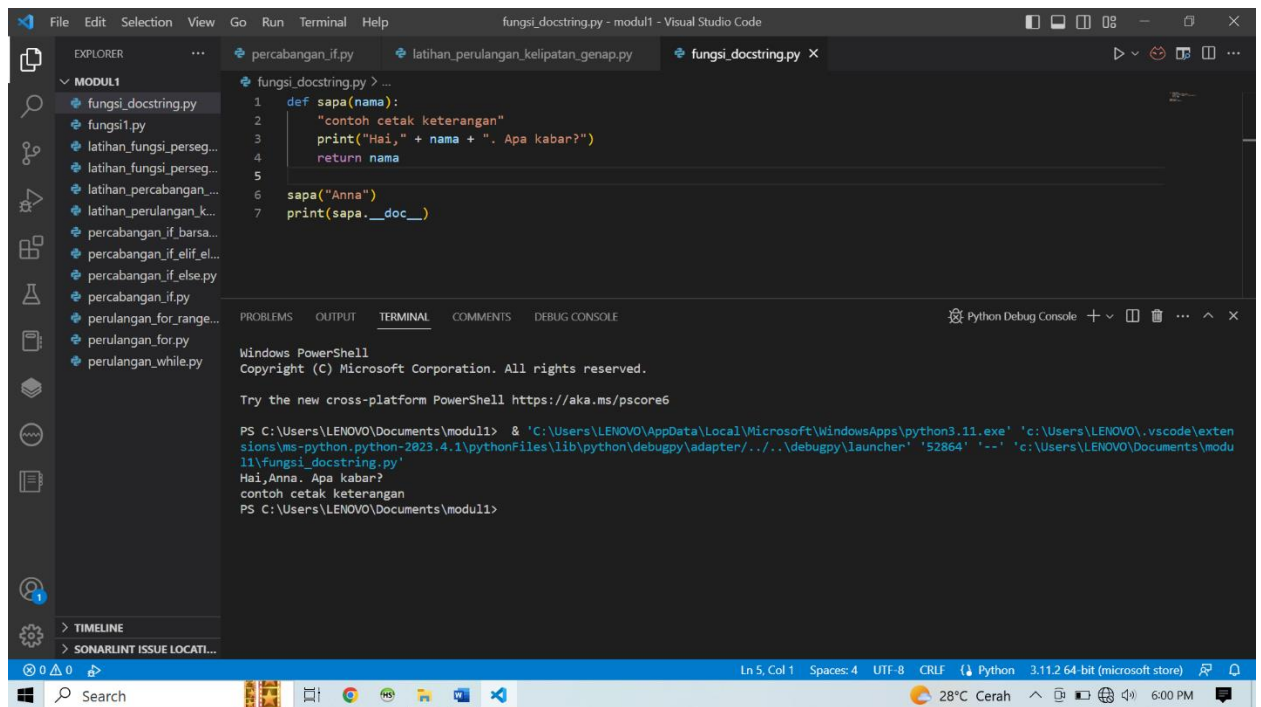
The bottom panel shows the 'TERMINAL' tab with the following output:

```
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' '52850' '--' 'c:\Users\LENOVO\Documents\modul1\fungsi1.py'
hai,Anna. Apa kabar
PS C:\Users\LENOVO\Documents\modul1>
```

2. Docstring



The screenshot shows the Visual Studio Code interface with a file explorer on the left containing a folder named 'MODUL1'. The main editor displays a file named 'fungsi_docstring.py' with the following Python code:

```
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__)
```

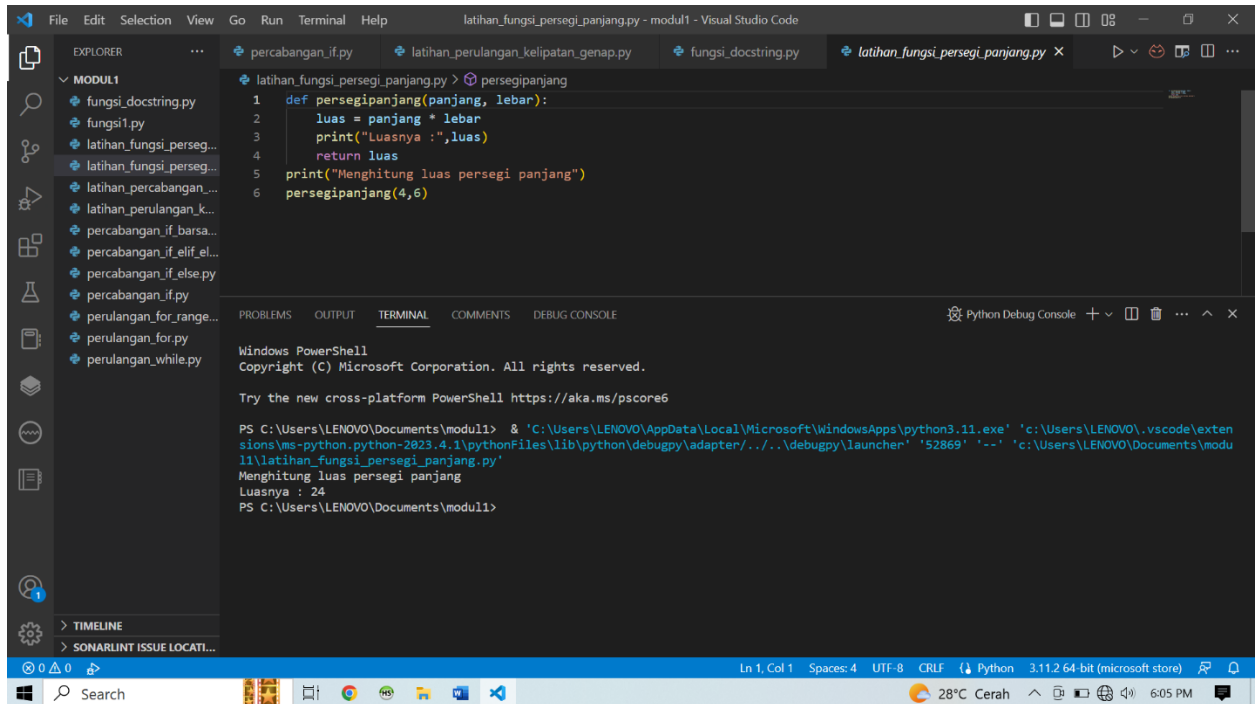
The bottom panel shows the 'TERMINAL' tab with the following output:

```
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' '52864' '--' 'c:\Users\LENOVO\Documents\modul1\fungsi_docstring.py'
Hai,Anna. Apa kabar?
contoh cetak keterangan
PS C:\Users\LENOVO\Documents\modul1>
```


3. Contoh Program Luas Persegi Panjang dengan Fungsi



The screenshot shows the Visual Studio Code interface with a file explorer on the left containing a folder named 'MODUL1'. The main editor displays the file 'latihan_fungsi_persegi_panjang.py' with the following Python code:

```
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)
```

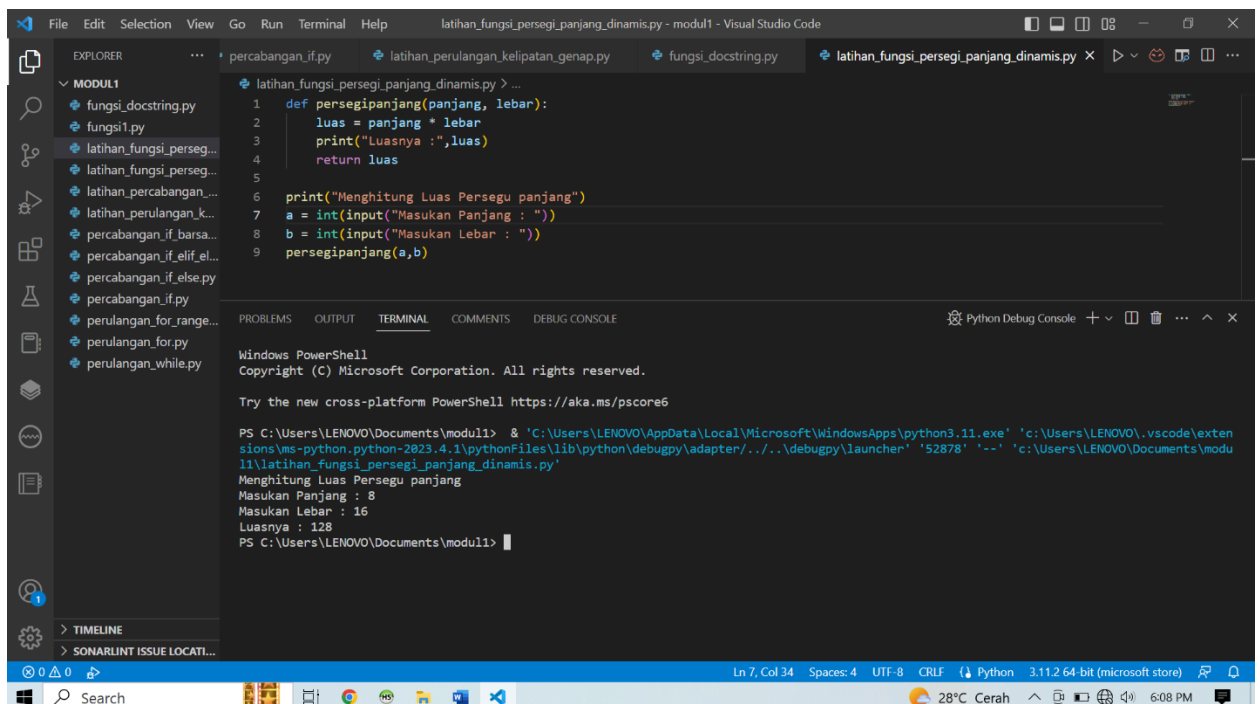
The bottom panel shows the 'TERMINAL' tab with the following output:

```
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' '52869' '--' 'c:\Users\LENOVO\Documents\modul1\latihan_fungsi_persegi_panjang.py'
Menghitung luas persegi panjang
Luasnya : 24
PS C:\Users\LENOVO\Documents\modul1>
```

The status bar at the bottom indicates the file is at line 1, column 1, using UTF-8 encoding with CRLF line endings, and is a 3.11.2 64-bit Python file.



The screenshot shows the Visual Studio Code interface with a file explorer on the left containing a folder named 'MODUL1'. The main editor displays the file 'latihan_fungsi_persegi_panjang_dinamis.py' with the following Python code:

```
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 bottom panel shows the 'TERMINAL' tab with the following output:

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

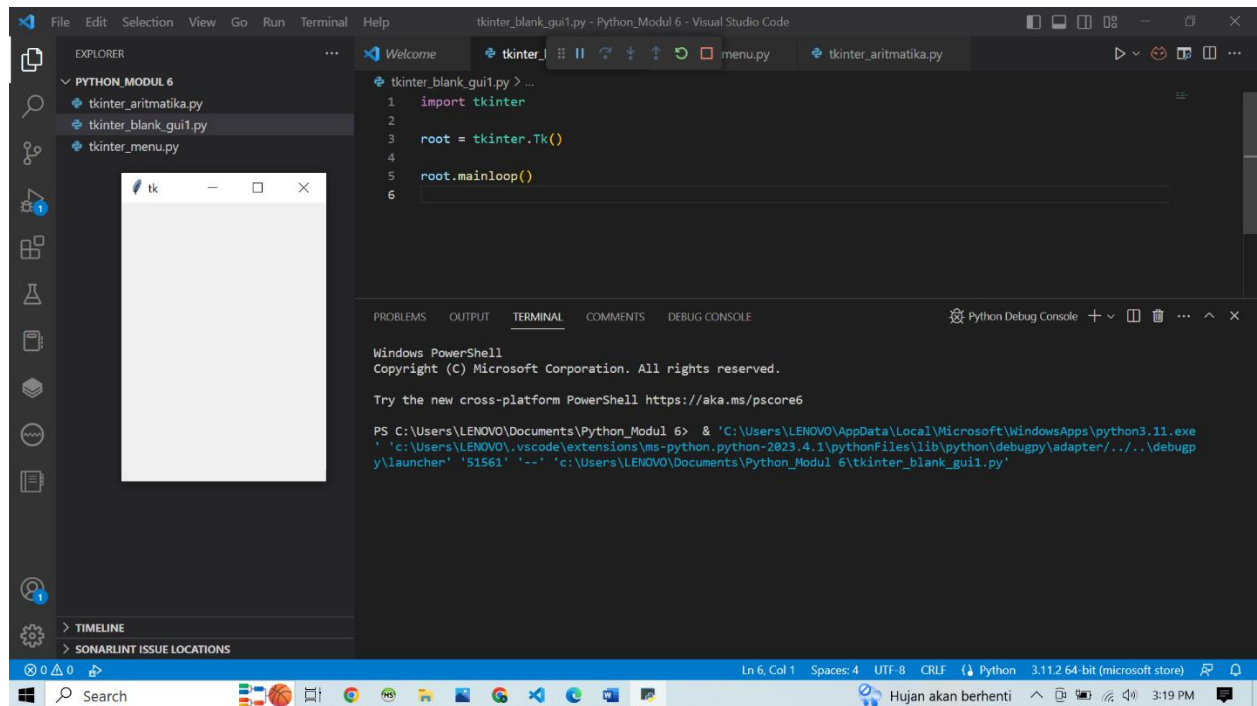
Try the new cross-platform PowerShell https://aka.ms/pscore6

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' '52878' '--' 'c:\Users\LENOVO\Documents\modul1\latihan_fungsi_persegi_panjang_dinamis.py'
Menghitung Luas Persegi panjang
Masukan Panjang : 8
Masukan Lebar : 16
Luasnya : 128
PS C:\Users\LENOVO\Documents\modul1>
```

The status bar at the bottom indicates the file is at line 7, column 34, using UTF-8 encoding with CRLF line endings, and is a 3.11.2 64-bit Python file.

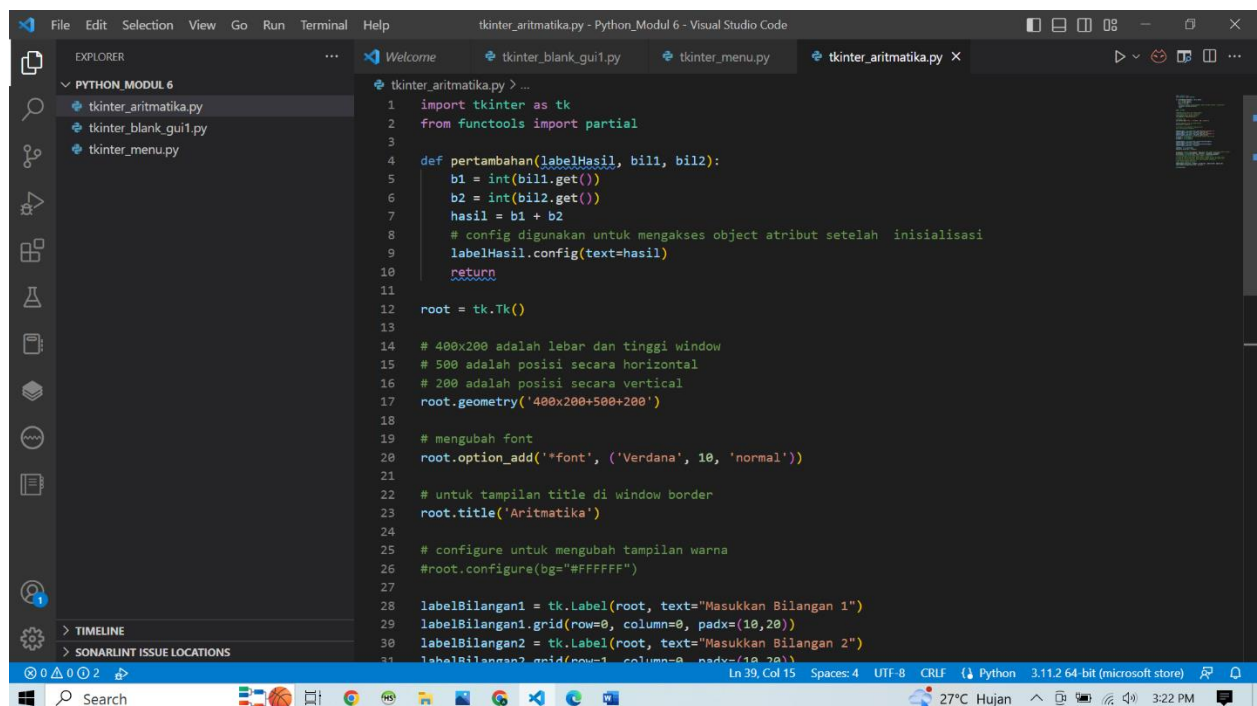
Python Modul 6

1. Tampilan GUI Sederhana

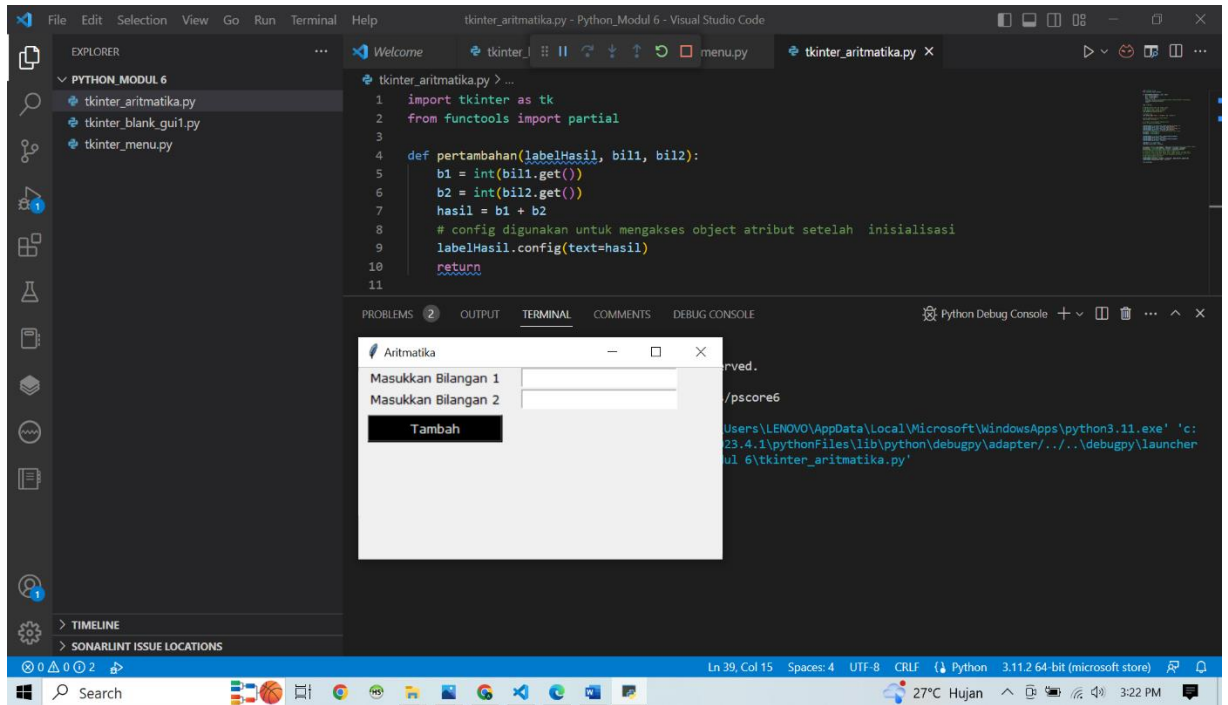


Kode Tampilan GUI sederhana dan gambat Tampilan GUI sederhana

2. Contoh Aplikasi Aritmatika Pertambahan

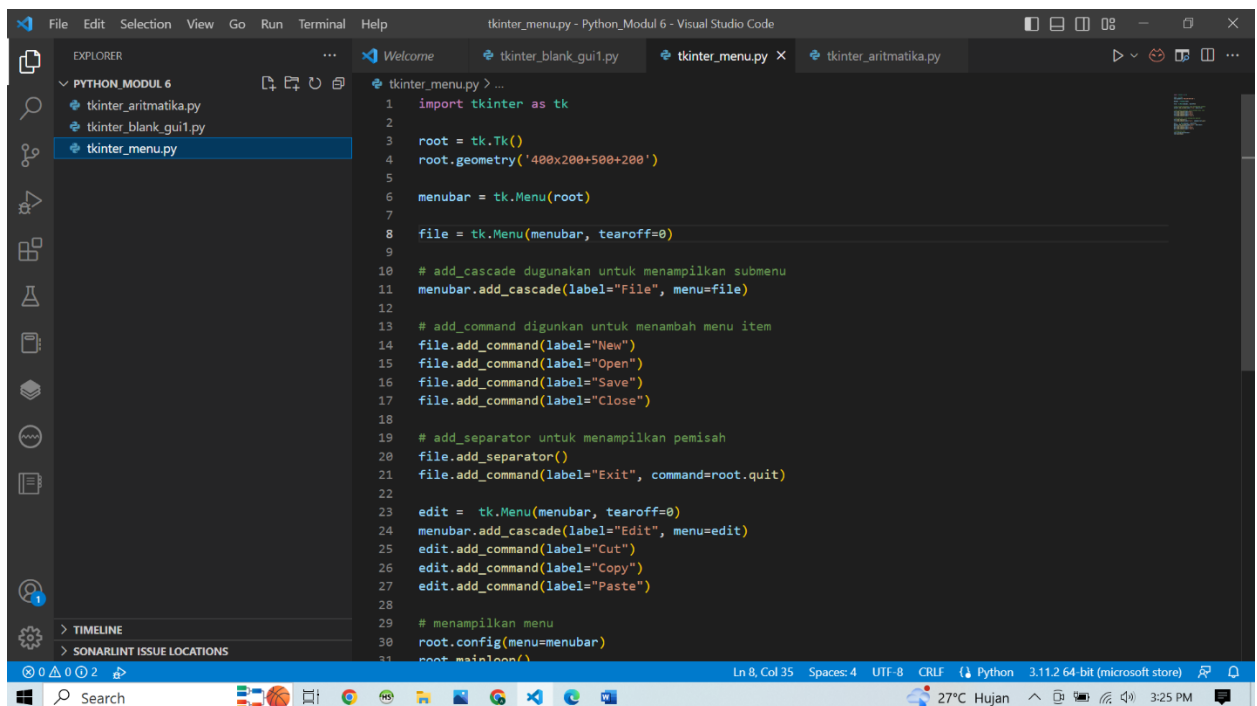


Kode Aplikasi Artimatika pertambahan

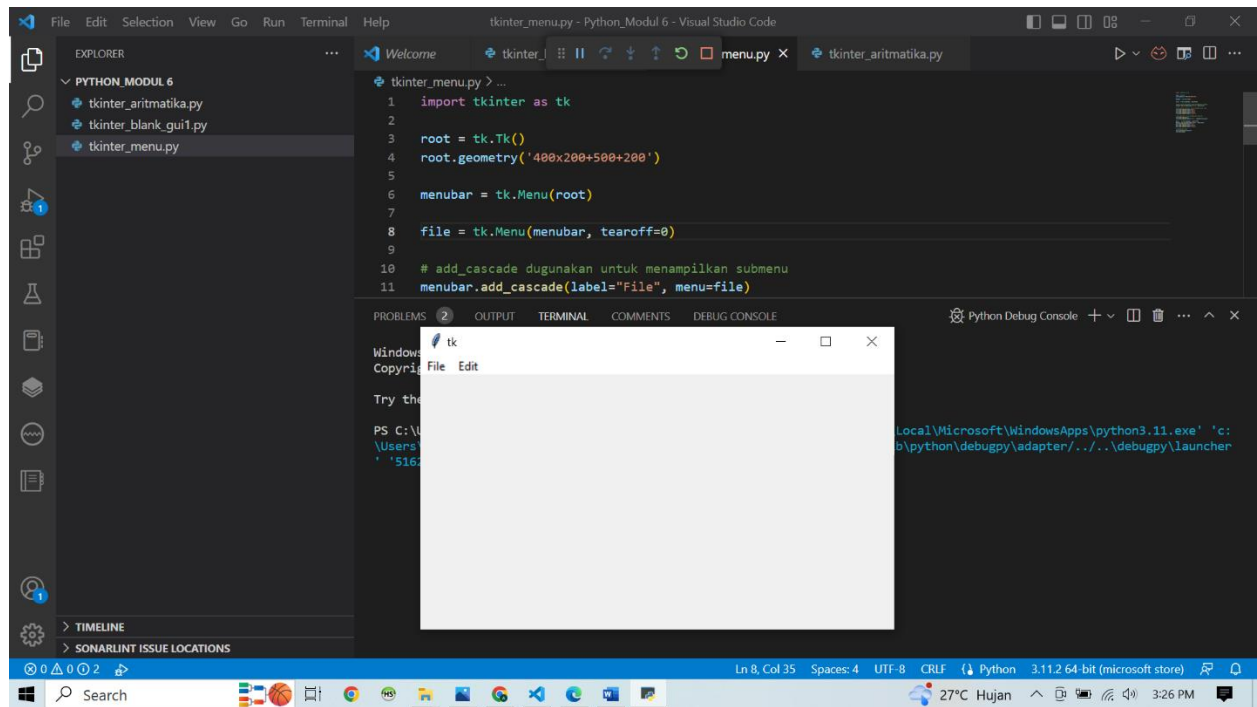


Gambar Aplikasi Aritmatika

3. Membuat Menu



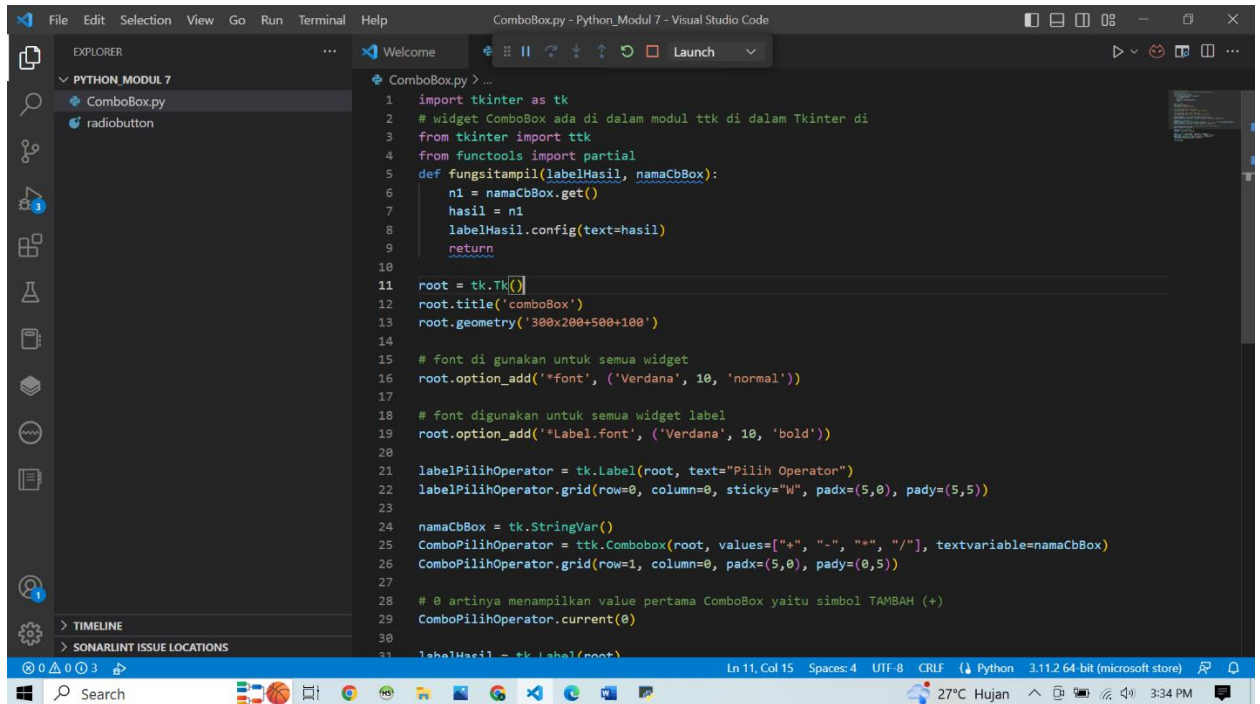
Kode Tampilan Menu



Gambar Tambilan Menu

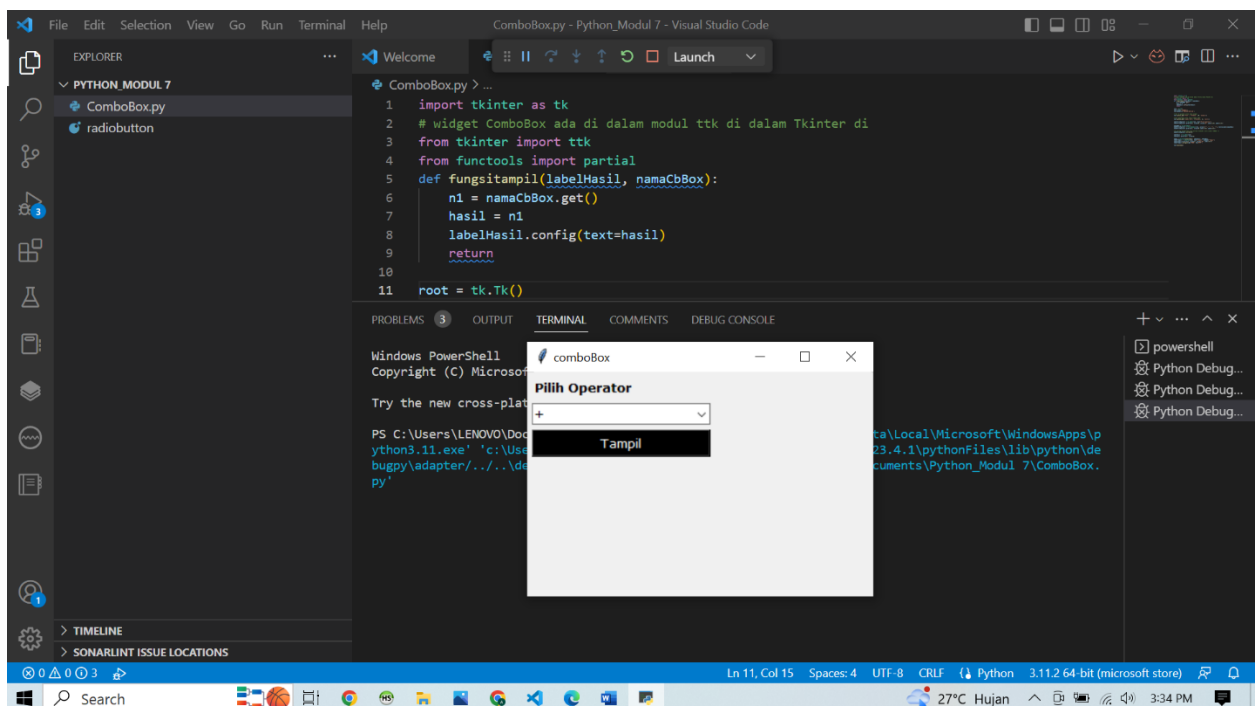
Python Modul 7

1. ComboBox



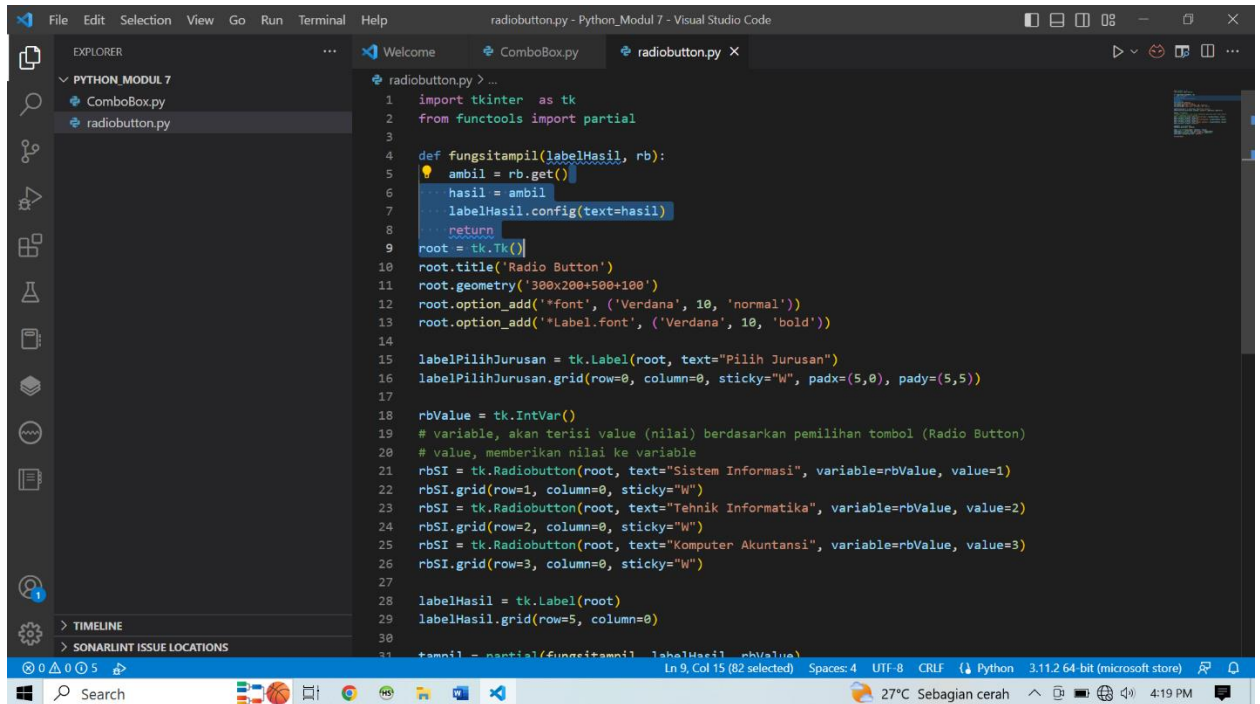
```
1 import tkinter as tk
2 # widget ComboBox ada di dalam modul ttk di dalam Tkinter di
3 from tkinter import ttk
4 from functools import partial
5 def fungsitampil(labelHasil, namaCbBox):
6     n1 = namaCbBox.get()
7     hasil = n1
8     labelHasil.config(text=hasil)
9     return
10
11 root = tk.Tk()
12 root.title('comboBox')
13 root.geometry('300x200+500+100')
14
15 # font di gunakan untuk semua widget
16 root.option_add('*font', ('Verdana', 10, 'normal'))
17
18 # font digunakan untuk semua widget label
19 root.option_add('*Label.font', ('Verdana', 10, 'bold'))
20
21 labelPilihOperator = tk.Label(root, text="Pilih Operator")
22 labelPilihOperator.grid(row=0, column=0, sticky="W", padx=(5,0), pady=(5,5))
23
24 namaCbBox = tk.StringVar()
25 ComboPilihOperator = ttk.Combobox(root, values=["+", "-", "*", "/"], textvariable=namaCbBox)
26 ComboPilihOperator.grid(row=1, column=0, padx=(5,0), pady=(0,5))
27
28 # 0 artinya menampilkan value pertama ComboBox yaitu simbol TAMBAH (+)
29 ComboPilihOperator.current(0)
30
31 labelHasil = tk.Label(root)
```

Kode Tampilan ComboBox



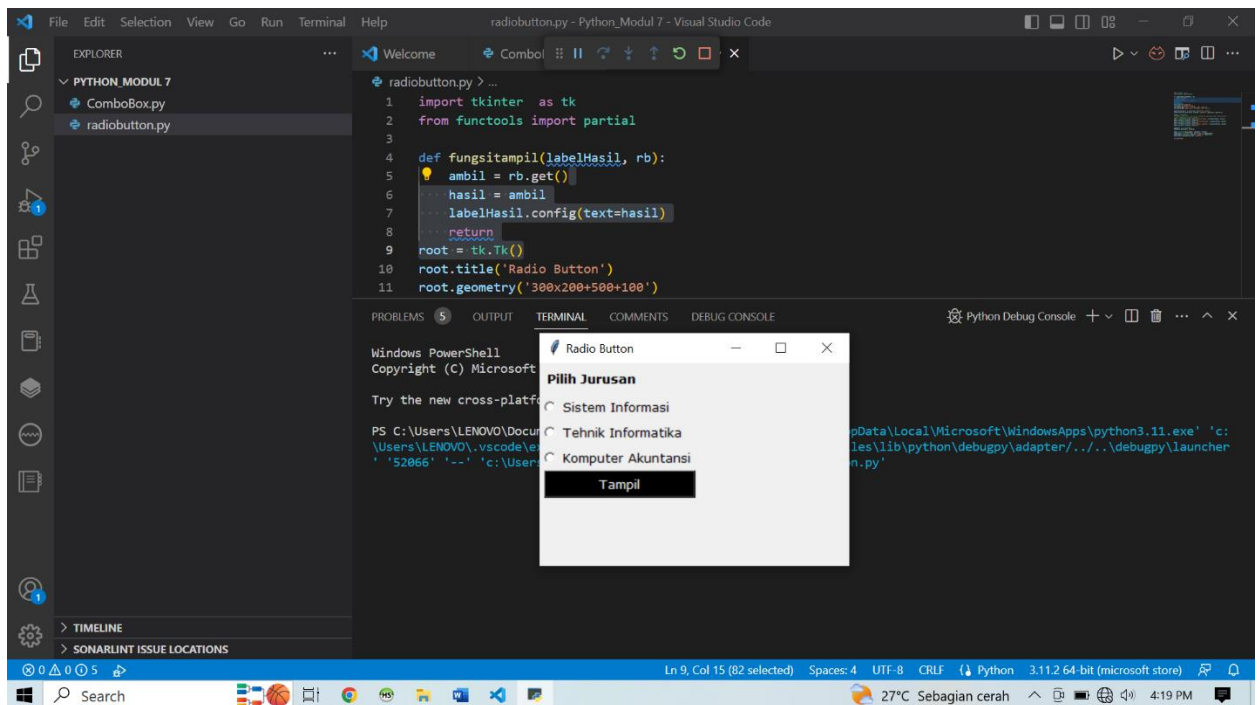
Tampilan ComboBox

2. RadioButton



```
1 import tkinter as tk
2 from functools import partial
3
4 def fungsitampil(labelHasil, rb):
5     ambil = rb.get()
6     hasil = ambil
7     labelHasil.config(text=hasil)
8     return
9
10 root = tk.Tk()
11 root.title('Radio Button')
12 root.geometry('300x200+500+100')
13 root.option_add('*font', ('Verdana', 10, 'normal'))
14 root.option_add('*Label.font', ('Verdana', 10, 'bold'))
15
16 labelPilihJurusan = tk.Label(root, text="Pilih Jurusan")
17 labelPilihJurusan.grid(row=0, column=0, sticky="W", padx=(5,0), pady=(5,5))
18
19 rbValue = tk.IntVar()
20 # variable, akan terisi value (nilai) berdasarkan pemilihan tombol (Radio Button)
21 # value, memberikan nilai ke variable
22 rbSI = tk.Radiobutton(root, text="Sistem Informasi", variable=rbValue, value=1)
23 rbSI.grid(row=1, column=0, sticky="W")
24 rbSI = tk.Radiobutton(root, text="Teknik Informatika", variable=rbValue, value=2)
25 rbSI.grid(row=2, column=0, sticky="W")
26 rbSI = tk.Radiobutton(root, text="Komputer Akuntansi", variable=rbValue, value=3)
27 rbSI.grid(row=3, column=0, sticky="W")
28
29 labelHasil = tk.Label(root)
30 labelHasil.grid(row=5, column=0)
31
32 tampil = partial(fungsitampil, labelHasil, rbValue)
```

Kode Tampilan RadioButton



Tampilan RadioButton