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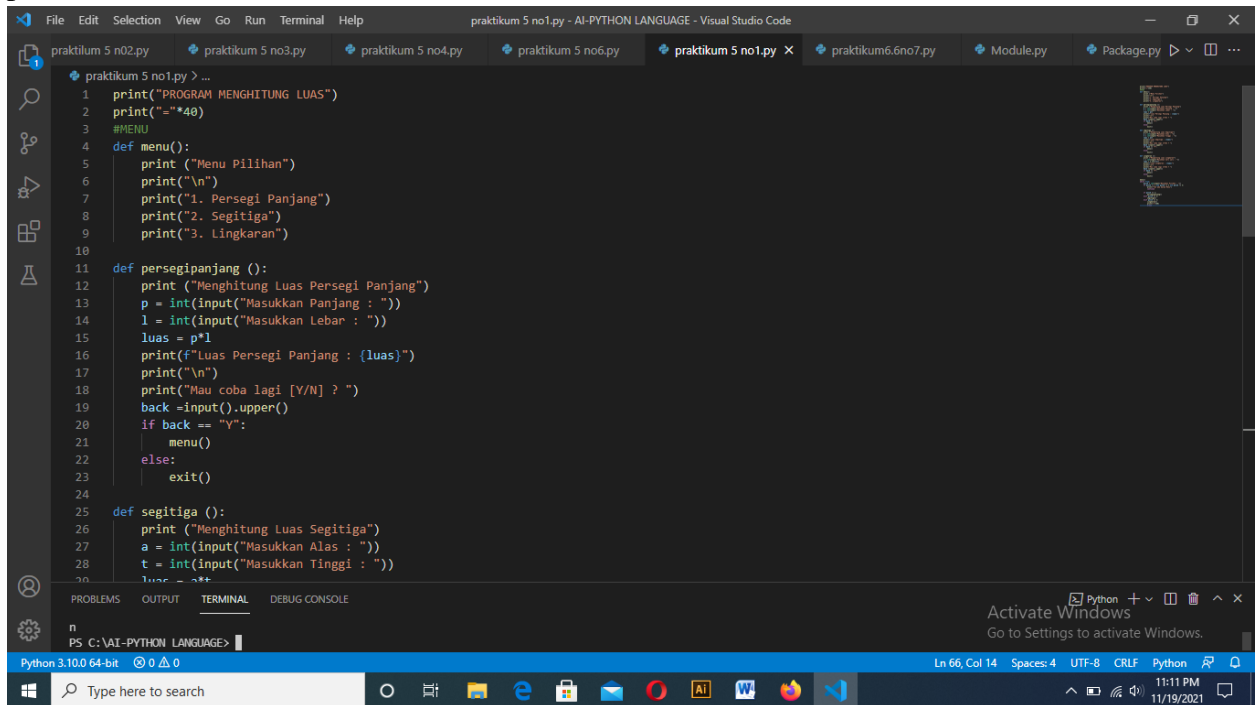
NIM : 20.01.013.020

Kelas : Teknik Informatika/3B

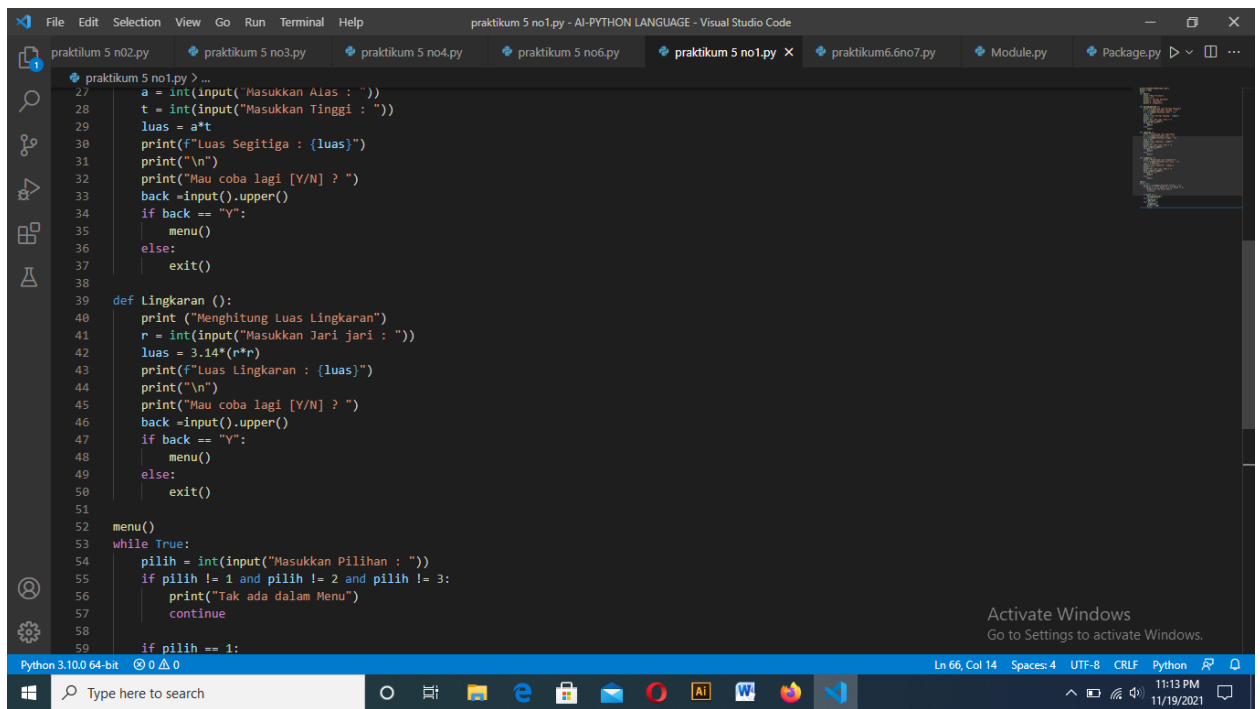
MK : Kecerdasan Buatan

PRAKTIKUM-5

1. Program menghitung luas persegi panjang, segi tiga, dan lingkaran dengan menggunakan prosedur dalam satu file.

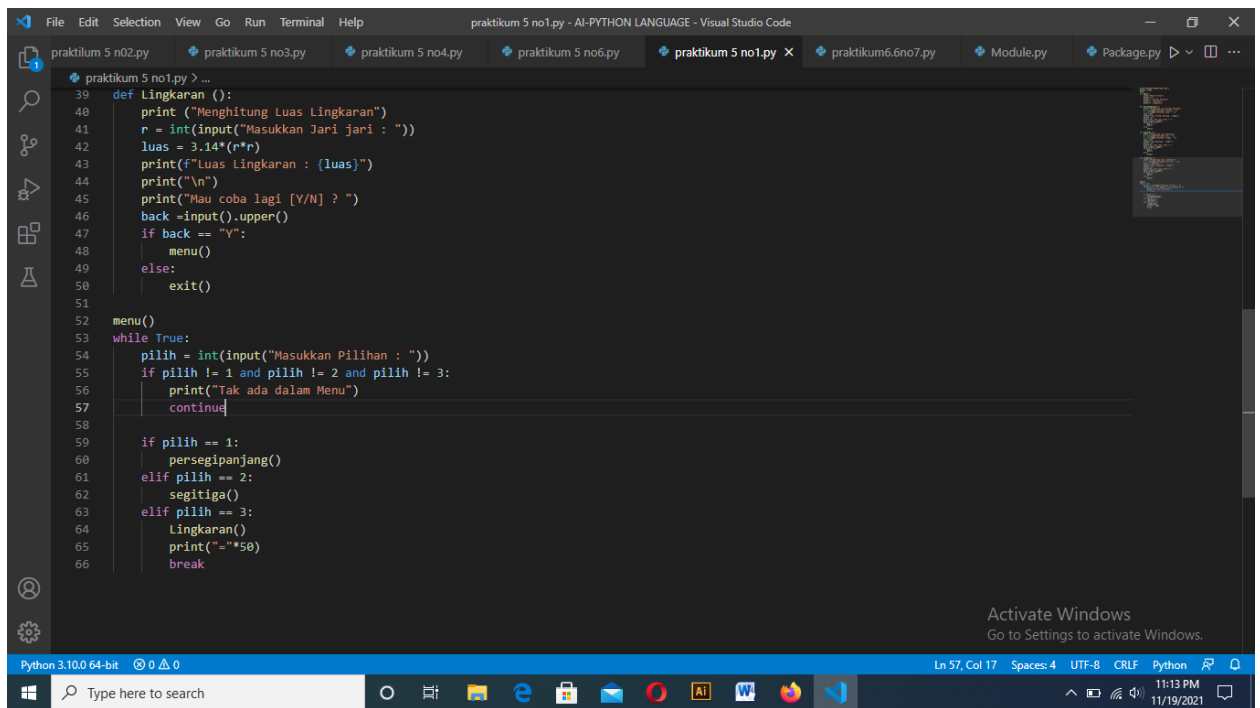


```
praktikum 5 no1.py > ...
1 print("PROGRAM MENGHITUNG LUAS")
2 print("="*40)
3 #MENU
4 def menu():
5     print ("Menu Pilihan")
6     print("\n")
7     print("1. Persegi Panjang")
8     print("2. Segitiga")
9     print("3. Lingkaran")
10
11 def persegi panjang ():
12     print ("Menghitung Luas Persegi Panjang")
13     p = int(input("Masukkan Panjang : "))
14     l = int(input("Masukkan Lebar : "))
15     luas = p*l
16     print(f"Luas Persegi Panjang : {luas}")
17     print("\n")
18     print("Mau coba lagi [Y/N] ? ")
19     back = input().upper()
20     if back == "Y":
21         menu()
22     else:
23         exit()
24
25 def segitiga():
26     print ("Menghitung Luas Segitiga")
27     a = int(input("Masukkan Alas : "))
28     t = int(input("Masukkan Tinggi : "))
29     luas = a*t
```



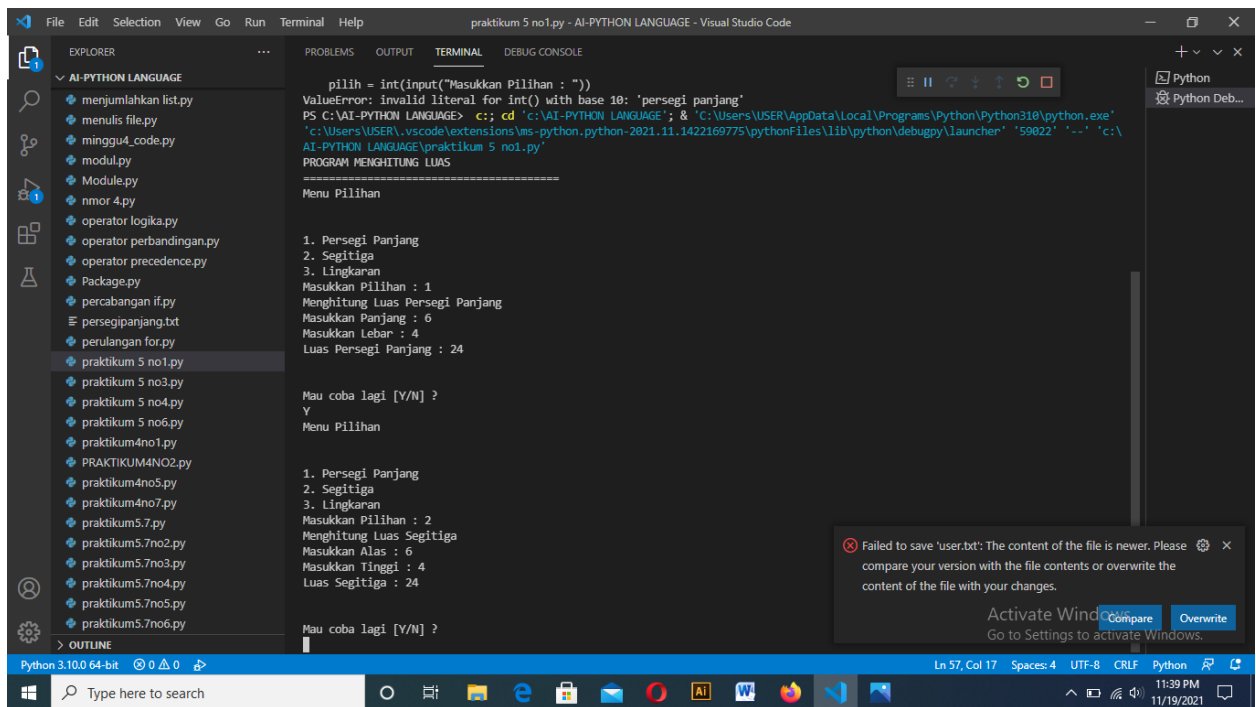
The screenshot shows the Visual Studio Code editor with a Python file named 'praktikum 5 no1.py'. The code defines two functions: 'Lingkaran()' for calculating the area of a circle and a 'menu()' function that uses a while loop to present a choice to the user. The 'Lingkaran()' function prompts for the radius, calculates the area using the formula $3.14 * r^2$, and asks if the user wants to try again. The 'menu()' function prompts for a choice (1, 2, or 3) and prints an error message if the choice is invalid. The status bar at the bottom indicates 'Python 3.10.0 64-bit' and 'Ln 66, Col 14'.

```
27 a = int(input("Masukkan Alias : "))
28 t = int(input("Masukkan Tinggi : "))
29 luas = a*t
30 print(f"Luas Segitiga : {luas}")
31 print("\n")
32 print("Mau coba lagi [Y/N] ? ")
33 back = input().upper()
34 if back == "Y":
35     menu()
36 else:
37     exit()
38
39 def Lingkaran():
40     print("Menghitung Luas Lingkaran")
41     r = int(input("Masukkan Jari jari : "))
42     luas = 3.14*(r*r)
43     print(f"Luas Lingkaran : {luas}")
44     print("\n")
45     print("Mau coba lagi [Y/N] ? ")
46     back = input().upper()
47     if back == "Y":
48         menu()
49     else:
50         exit()
51
52 menu()
53 while True:
54     pilih = int(input("Masukkan Pilihan : "))
55     if pilih != 1 and pilih != 2 and pilih != 3:
56         print("Tak ada dalam Menu")
57         continue
58
59     if pilih == 1:
```

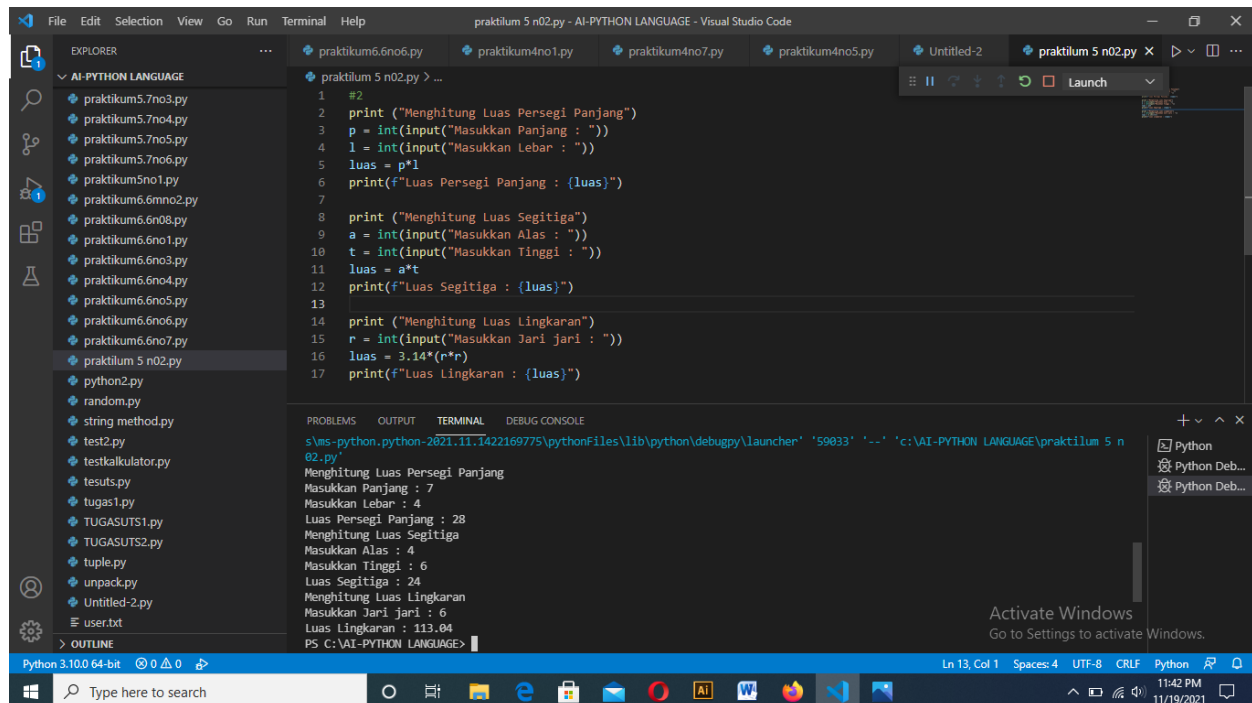


This screenshot shows the continuation of the Python script in the same Visual Studio Code editor. The code continues from the 'menu()' function, where it calls 'persegi panjang()', 'segitiga()', and 'Lingkaran()' based on the user's choice. It also includes a print statement and a 'break' statement to exit the loop. The status bar at the bottom indicates 'Python 3.10.0 64-bit' and 'Ln 57, Col 17'.

```
60     persegi panjang()
61     elif pilih == 2:
62         segitiga()
63     elif pilih == 3:
64         Lingkaran()
65     print("\n"*50)
66     break
```



2. Modifikasi soal nomor 1 dimana setiap prosedur disimpan dalam file yang berbeda



3. Program menghitung luas segitiga

The screenshot shows the Visual Studio Code interface with a Python file named `praktikum 5 no3.py` open. The code defines a function `luassgt` to calculate the area of a triangle and takes user input for the base and height.

```
1 #3
2 def luassgt(alas, tinggl):
3     luas = 0.5*alas*tinggl
4     print(f"Luas Segitiga adalah {luas}")
5
6 alas = int(input("Masukkan Nilai Alas = "))
7 tinggl = int(input("Masukkan Nilai Tinggl = "))
8
9 luassgt(alas,tinggl)
```

The terminal output shows the execution of the program:

```
Masukkan Jari jari : 6
Luas Lingkaran : 113.04
PS C:\VAI-PYTHON LANGUAGE> cd 'c:\VAI-PYTHON LANGUAGE'; & 'C:\Users\USER\AppData\Local\Programs\Python\Python310\python.exe'
'c:\Users\USER\.vscode\extensions\ms-python.python-2021.11.1422169775\pythonFiles\lib\python\debugpy\launcher' '59059' '--' 'c:\
AI-PYTHON LANGUAGE\praktikum 5 no3.py'
Masukkan Nilai Alas = 4
Masukkan Nilai Tinggl = 6
Luas Segitiga adalah 12.0
PS C:\VAI-PYTHON LANGUAGE>
```

4. Program mencari nilai tertinggi dari sekelompok data menggunakan list

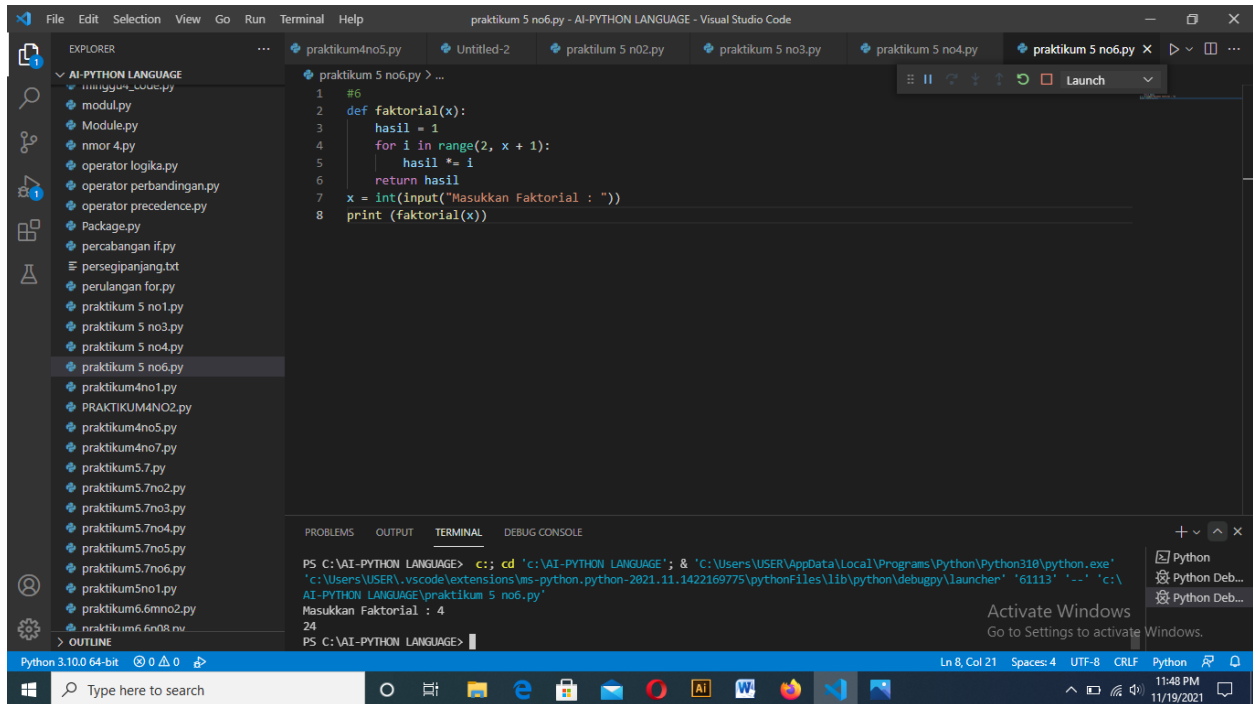
The screenshot shows the Visual Studio Code interface with a Python file named `praktikum 5 no4.py` open. The code prompts the user for the number of data points, creates a list, and finds the maximum value.

```
1 #4
2 N = int(input("Banyak Data = "))
3
4 data = []
5 for i in range(0, N):
6     nilai = int(input("Masukkan data ke-{:d}: ".format(i+1)))
7     data.append(nilai)
8
9 max_number = max(data)
10
11 print(f"Jadi angka Terbesar dari semua bilangan adalah {max_number}")
```

The terminal output shows the execution of the program:

```
PS C:\VAI-PYTHON LANGUAGE> cd 'c:\VAI-PYTHON LANGUAGE'; & 'C:\Users\USER\AppData\Local\Programs\Python\Python310\python.exe'
'c:\Users\USER\.vscode\extensions\ms-python.python-2021.11.1422169775\pythonFiles\lib\python\debugpy\launcher' '61104' '--' 'c:\
AI-PYTHON LANGUAGE\praktikum 5 no4.py'
Banyak Data = 3
Masukkan data ke-1: 6
Masukkan data ke-2: 4
Masukkan data ke-3: 2
Jadi angka Terbesar dari semua bilangan adalah 6
PS C:\VAI-PYTHON LANGUAGE>
```

6. Program menghitung faktorial sebuah bilangan menggunakan fungsi



The screenshot shows the Visual Studio Code interface with a Python file named `praktikum 5 no6.py` open. The code defines a function `faktorial(x)` that calculates the factorial of a number `x` using a `for` loop. The function returns the result, which is then printed after taking user input.

```
1 #6
2 def faktorial(x):
3     hasil = 1
4     for i in range(2, x + 1):
5         hasil *= i
6     return hasil
7 x = int(input("Masukkan Faktorial : "))
8 print (faktorial(x))
```

The terminal output shows the execution of the program:

```
PS C:\VAI-PYTHON LANGUAGE> c::; cd 'c:\VAI-PYTHON LANGUAGE'; & 'c:\Users\USER\AppData\Local\Programs\Python\Python310\python.exe'
'c:\Users\USER\.vscode\extensions\ms-python.python-2021.11.1422169775\pythonFiles\lib\python\debugpy\launcher' '61113' '--' 'c:\
VAI-PYTHON LANGUAGE\praktikum 5 no6.py'
Masukkan Faktorial : 4
24
PS C:\VAI-PYTHON LANGUAGE>
```

The status bar at the bottom indicates the file is encoded in UTF-8 with CRLF line endings, and the Python extension is active.