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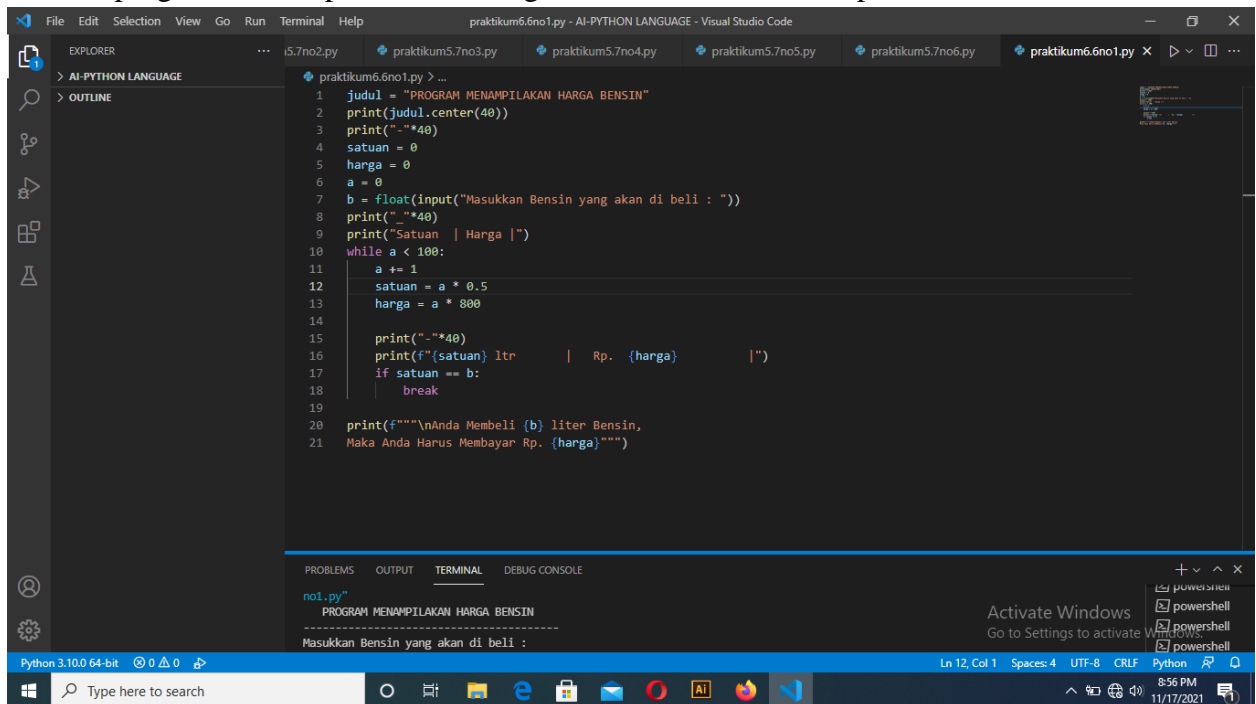
NIM : 20.01.013.020

Kelas : Teknik Informatika/3B

MK : Kecerdasan Buatan

PRAKTIKUM- 3

1. Buatlah program menampilkan table harga bensin berikut. N merupakan masukan.



```
1 judul = "PROGRAM MENAMPILAKAN HARGA BENJIN"
2 print(judul.center(40))
3 print("-"*40)
4 satuan = 0
5 harga = 0
6 a = 0
7 b = float(input("Masukkan Bensin yang akan di beli : "))
8 print("-"*40)
9 print("Satuan | Harga |")
10 while a < 100:
11     a += 1
12     satuan = a * 0.5
13     harga = a * 800
14
15     print("-"*40)
16     print(f"{satuan} ltr | Rp. {harga} |")
17     if satuan == b:
18         break
19
20 print(f"\nAnda Membeli {b} liter Bensin,
21 Maka Anda Harus Membayar Rp. {harga}")
```

no1.py
PROGRAM MENAMPILAKAN HARGA BENJIN

Masukkan Bensin yang akan di beli :

```

1 judul = "PROGRAM MENAMPILAKAN HARGA BENSLIN"
2 print(judul.center(40))
3 print("-"*40)
4 satuan = 0
5 harga = 0
6 a = 0
7 b = float(input("Masukkan Bensin yang akan di beli : "))
8 print("-"*40)
9 print("Satuan | Harga |")
10 while a < 100:
11     a += 1
12     satuan = a * 0.5
13     harga = a * 800
14
15     print("-"*40)
16     print(f"{satuan} ltr | Rp. {harga} |")
17     if satuan == b:

```

PROGRAM MENAMPILAKAN HARGA BENSLIN

Masukkan Bensin yang akan di beli : 1.5

Satuan	Harga
0.5 ltr	Rp. 800
1.0 ltr	Rp. 1600
1.5 ltr	Rp. 2400

Anda Membeli 1.5 liter Bensin,
Maka Anda Harus Membayar Rp. 2400

PS C:\VAI-PYTHON LANGUAGE>

- Program yang menampilkan deret geometri dengan masukan nilai awal, banyaknya suku dan rasio antara satu suku dengan suku sebelumnya.

```

1 a = int(input("Masukkan Batas : "))
2 b = 1
3 while b <= a :
4     print(b)
5
6     b = b + 1

```

PS C:\VAI-PYTHON LANGUAGE> & 'C:\Users\USER\AppData\Local\Programs\Python\Python310\python.exe' 'c:\Users\USER\.vscode\extension s\ms-python.python-2021.11.1422169775\pythonFiles\lib\python\debugpy\launcher' '52168' '--' 'c:\VAI-PYTHON LANGUAGE\praktikum6.6m no2.py'

Masukkan Batas : 5

1

2

3

4

5

6

PS C:\VAI-PYTHON LANGUAGE>

- Program yang menginput sejumlah N (Input) bilangan, kemudian keluarannya berupa nilai total dan rata-rata dari bilangan yang telah diinput tersebut.

```
praktikum6.6no3.py > ...
1 print("="*45)
2 judul = "PROGRAM MENGHITUNG NILAI TOTAL & RATA-RATA "
3 print(judul.center(45))
4 print("="*45)
5 i = int(input("Banyaknya Data: "))
6
7 data = []
8 jum = 0
9 for n in range(0, i):
10     temp = int(input("Masukkan data ke-%d: " % (n+1)))
11     data.append(temp)
12     jum += data[n]
13     rata2 = jum / i
14
15
16 print("\nRata-rata = ", rata2)
17 print("Total    = ", jum)
```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

```
'c:\Users\USER\.vscode\extensions\ms-python.python-2021.11.1422169775\pythonFiles\lib\python\debugpy\launcher' '58794' '--' 'c:\
AI-PYTHON LANGUAGE\praktikum6.6no3.py'

PROGRAM MENGHITUNG NILAI TOTAL & RATA-RATA
=====
Banyaknya Data: 5
Masukkan data ke-1: 3
Masukkan data ke-2: 4
Masukkan data ke-3: 5
Masukkan data ke-4: 6
Masukkan data ke-5: 7

Rata-rata = 5.0
Total    = 25
PS C:\AI-PYTHON LANGUAGE>
```

4. Program menghitung x dengan x bilangan real dan y bilangan bulat positif. Keduanya diperoleh dari masukan.

```
praktikum6.6no4.py > ...
1 print("Program Menghitung Perpangkatan")
2
3 a = int(input("Masukkan Bilangan Real (x)      = "))
4 b = int(input("Masukkan Bilangan Pangkat (y)    = "))
5
6 c = a**b
7 print(f"Hasilnya = {c}")
```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

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

PS C:\AI-PYTHON LANGUAGE> & 'C:\Users\USER\AppData\Local\Programs\Python\Python310
s\ms-python.python-2021.11.1422169775\pythonFiles\lib\python\debugpy\launcher' '588
o4.py'
Program Menghitung Perpangkatan
Masukkan Bilangan Real (x)      = 4
Masukkan Bilangan Pangkat (y)    = 2
Hasilnya = 16
PS C:\AI-PYTHON LANGUAGE>
```

5. Program menghitung $N!$ dengan N sebagai masukan.

The screenshot shows the Visual Studio Code interface with a Python file named `praktikum6.6no5.py` open. The code is a simple factorial calculator. The terminal shows the execution of the program, which prompts the user to enter a number and then prints the factorial result.

```
praktikum6.6no5.py > ...
1 result = 1
2 n = int(input("Masukkan bilangan bulat : "))
3
4 for i in range(1, n + 1):
5     result *= i
6
7 print(f"Faktorial dari {n} adalah {result}")
```

Terminal Output:

```
s\ms-python.python-2021.11.1422169775\pythonFiles\lib\python\debugpy\launcher '58821' '-' 'c:\AI-PYTHON LANGUAGE\praktikum6.6no5.py'
Program Menghitung Perpangkatan
Masukkan Bilangan Real (x) = 4
Masukkan Bilangan Pangkat (y) = 2
Hasilnya = 16
PS C:\AI-PYTHON LANGUAGE> c;; cd 'c:\AI-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' '58826' '-' 'c:\AI-PYTHON LANGUAGE\praktikum6.6no5.py'
Masukkan bilangan bulat : 4
Faktorial dari 4 adalah 24
PS C:\AI-PYTHON LANGUAGE>
```

6. Program tebak angka dimana pengguna menginput suatu bilangan integer antara 0-10 yang telah diacak computer. Jika angka yang ditebak lebih besar dari angka sesungguhnya, maka ditampilkan keterangan bahwa angka tebakan lebih besar. demikian sebaliknya. Pengguna menginput terus bilangan tersebut sampai angka tebakan sama dengan angka yang dimaksud.

The screenshot shows the Visual Studio Code interface with a Python file named `praktikum6.6no6.py` open. The code is a number guessing game. The terminal shows the execution of the program, which prompts the user to enter a number and then prints the result.

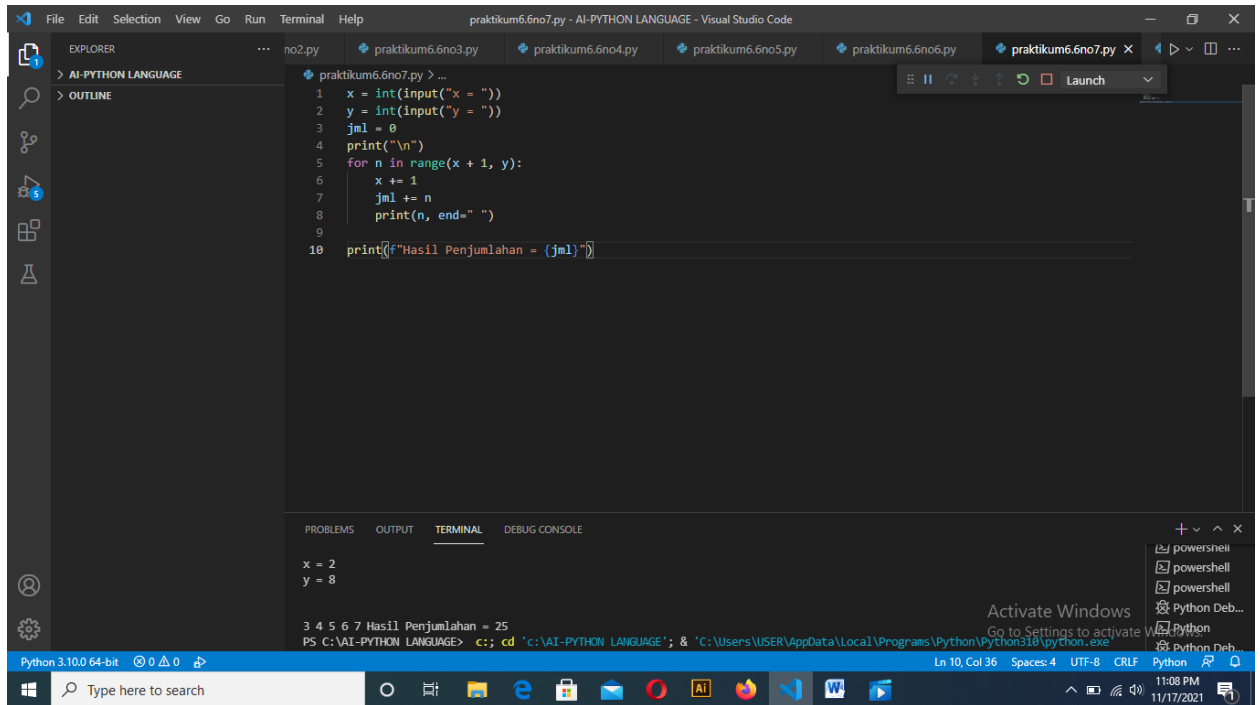
```
praktikum6.6no6.py > ...
1 trying = 0
2 secret_number = 5
3 limit = 3
4
5 while trying < limit:
6     guess_number = input("Masukan angka (1-9) : ")
7     guess_number = int(guess_number)
8
9     if guess_number == secret_number:
10        print("Selamat, Anda Menang!")
11        break
12
13    trying += 1
```

Terminal Output:

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

PS C:\AI-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' '58806' '-' 'c:\AI-PYTHON LANGUAGE\praktikum6.6no6.py'
Masukan angka (1-9) : 3
Masukan angka (1-9) : 2
Masukan angka (1-9) : 5
Selamat, Anda Menang!
PS C:\AI-PYTHON LANGUAGE>
```

7. Program menampilkan dan menjumlahkan semua bilangan yang terletak antara x dan y ($x < y$).



The screenshot shows a Visual Studio Code editor with a Python file named `praktikum6.6no7.py`. The code is as follows:

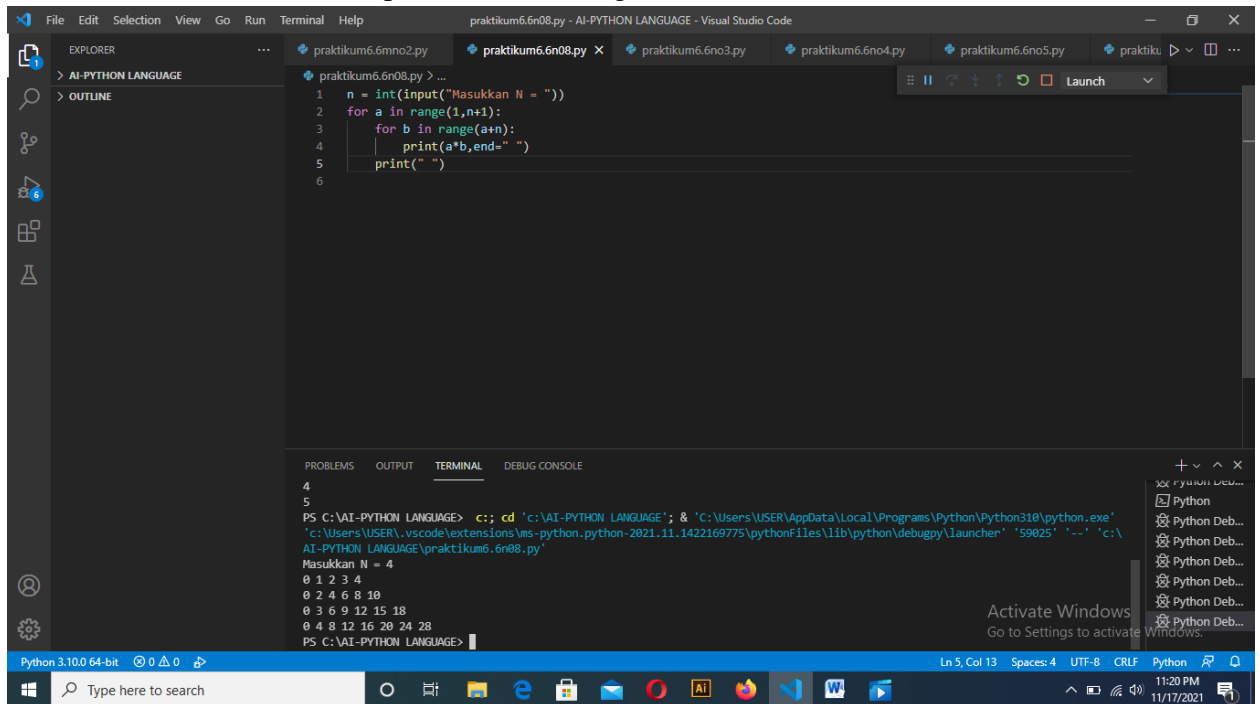
```
1 x = int(input("x = "))
2 y = int(input("y = "))
3 jml = 0
4 print("\n")
5 for n in range(x + 1, y):
6     x += 1
7     jml += n
8     print(n, end=" ")
9
10 print(f"Hasil Penjumlahan = {jml}")
```

The terminal output shows the execution of the program with `x = 2` and `y = 8`, resulting in the sum of numbers from 3 to 7, which is 25.

```
x = 2
y = 8

3 4 5 6 7 Hasil Penjumlahan = 25
PS C:\VAI-PYTHON LANGUAGE> c:; cd 'c:\VAI-PYTHON LANGUAGE'; & 'C:\Users\USER\AppData\Local\Programs\Python\Python310\python.exe'
```

8. a. Untuk masukan N = 5, tampilkan susunan angka berikut



The screenshot shows a Visual Studio Code editor with a Python file named `praktikum6.6no8.py`. The code is as follows:

```
1 n = int(input("Masukkan N = "))
2 for a in range(1, n+1):
3     for b in range(a, n+1):
4         print(a*b, end=" ")
5     print("\n")
6
```

The terminal output shows the execution of the program with `N = 5`, resulting in a pattern of numbers from 1 to 25 arranged in a triangular shape.

```
4
5
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' '59025' '-' 'c:\
VAI-PYTHON LANGUAGE\praktikum6.6no8.py'
Masukkan N = 5
0 1 2 3 4
0 2 4 6 8 10
0 3 6 9 12 15 18
0 4 8 12 16 20 24 28
PS C:\VAI-PYTHON LANGUAGE>
```