

NAMA : GUSLINA TRI SANTIKA
NIM : 20.01.013.049
KELAS : ARTIFICIAL INTELLIGENCE – 3B

TUGAS QUIZ INDIVIDU - IV

1. Di Kampus UTS memiliki pipa yang bisa mengalirkan air sebanyak 125 liter air dalam waktu 50 menit. Berapa cm³/detik anutan pipa air tersebut?

Konsep 1 :

The image displays a Python program and its execution across two environments: Flowgorithm and Visual Studio Code.

Flowgorithm Environment:

- Source Code Viewer:** Shows the following Python code:

```
0 v = 125
1 t = 50
2 q = v * 1000 / (t * 60)
3 print("Debit (Q)=" + str(q))
```
- Flowchart:** A linear flowchart starting with 'Main', followed by 'Real v, t', 'Real Q', 'v = 125', 't = 50', 'Q = (v*1000)/(t*60)', 'Output "Debit (Q)" & Q', and finally 'End'.
- Console:** Displays the output: 'Debit (Q)=41.6666666666667'.

Visual Studio Code Environment:

- Explorer:** Shows the file 'guslinats.py'.
- Code Editor:** Contains the same Python code as the Flowgorithm Source Code Viewer:

```
1 v = 125
2 t = 50
3 q = v * 1000 / (t * 60)
4 print("Debit (Q)=" + str(q))
5
```
- Terminal:** Shows the command prompt output:

```
PS C:\Users\VACER> & C:/Users/ACER/AppData/Local/Programs/Python/Python310/python.exe c:/Users/ACER/guslinats.py
Debit (Q)=41.666666666666664
PS C:\Users\VACER>
```

Konsep 2 :

The image displays two screenshots related to a Python program. The top screenshot shows the Flowgorithm IDE, and the bottom screenshot shows the Visual Studio Code editor.

Flowgorithm Screenshot:

- Source Code Viewer:** Contains the following Python code:

```
0 v = float(input())
1 t = float(input())
2 q = v * 1000 / (t * 60)
3 print("Debit (Q)=" + str(q))
```
- Flowchart:** A vertical flowchart starting with 'Main', followed by 'Real v, t', 'Real Q', 'Input v', 'Input t', a process box with the formula $Q = (v * 1000) / (t * 60)$, an output box 'Output "Debit (Q)" = &Q', and finally 'End'.
- Console:** Shows the program's execution with inputs 125 and 50, resulting in the output 'Debit (Q)=41.6666666666667'.

Visual Studio Code Screenshot:

- Explorer:** Shows the file 'guslinats.py'.
- Editor:** Contains the same Python code as the Flowgorithm source code viewer:

```
1 v = float(input("Masukkan Volume = "))
2 t = float(input("Masukkan Waktu = "))
3 q = v * 1000 / (t * 60)
4 print("Debit (Q)=" + str(q))
5
```
- Terminal:** Shows the command prompt output:

```
PS C:\Users\VACER> & C:/Users/ACER/AppData/Local/Programs/Python/Python310/python.exe c:/Users/ACER/guslinats.py
Masukkan Volume = 125
Masukkan Waktu = 50
Debit (Q)=41.666666666666664
PS C:\Users\VACER>
```

2. Kubangan Kerbau mempunyai volume 40 m³ diisi dengan air, memakai pipa. Waktu yang diperlukan untuk mengisinya sampai penuh yaitu 4 jam. Berapa liter/detik debit air yang keluar dari pipa tersebut?

Konsep 1 :

The image displays two screenshots related to a programming exercise. The top screenshot shows the Flowgorithm IDE with a flowchart and a console window. The flowchart starts with 'Main', followed by 'Real v, t', 'Real Q', 'v = 40', 't = 4', 'Q = (v*1000)/(t*3600)', 'Output "Debit(Q)=" &Q ...', and 'End'. The console window shows the output: 'Debit(Q)=2.7777777777777778'. The bottom screenshot shows a Windows terminal window running the same Python code. The code is:

```
v = 40
t = 4
q = v * 1000 / (t * 3600)
print("Debit(Q)=" + str(q), end='', flush=True)
```

 The terminal output is:

```
PS C:\Users\VACER> & C:\Users\ACER\AppData\Local\Programs\Python\Python310\python.exe c:/Users/ACER/guslinats.py
Debit(Q)=2.7777777777777778
PS C:\Users\VACER>
```

Konsep 2 :

The image displays two software environments used for developing and running a Python program. The top environment is Flowgorithm, and the bottom is Visual Studio Code.

Flowgorithm Environment:

- Console:** Shows the program's output. It displays the input values 40 and 4, followed by the calculated result: `Debit(Q)=2.7777777777777778`.
- Flowchart:** A visual representation of the program's logic. It starts with a 'Main' block, followed by 'Real v, t' and 'Real Q' declarations. It then takes 'Input v' and 'Input t', calculates $Q = (v * 1000) / (t * 3600)$, and outputs 'Debit(Q)= ' followed by the value of Q. The process ends at 'End'.
- Source Code Viewer:** Displays the Python code that corresponds to the flowchart:

```
0 v = float(input())
1 t = float(input())
2 q = v * 1000 / (t * 3600)
3 print("Debit(Q)=" + str(q), end='', flush=True)
```

Visual Studio Code Environment:

- EXPLORER:** Shows the file structure with `guslinats.py` and `Fathiya.py` open.
- EDITOR:** Contains the same Python code as the Source Code Viewer in Flowgorithm:

```
1 v = float(input("Masukkan Volume = "))
2 t = float(input("Masukkan Waktu = "))
3 q = v * 1000 / (t * 3600)
4 print("Debit(Q)=" + str(q), end='', flush=True)
5
```
- TERMINAL:** Shows the command prompt output. It indicates the file path `C:\Users\ACER> C:\Users\ACER\AppData\Local\Programs\Python\Python310\python.exe c:/Users/ACER/guslinats.py` and the resulting output: `Debit(Q)=2.7777777777777778`.

3. Terdapat sebuah air terjun yang mempunyai debit air sebesar 80 m³/detik. Berapa banyak air yang bisa dipindahkan air terjun tersebut dalam waktu 10 menit?

Konsep 1 :

The image displays two screenshots illustrating a programming concept. The top screenshot shows the Flowgorithm IDE with a flowchart and a source code window. The flowchart starts with 'Main', followed by 'Real Q, t', 'Real v', 'Q = 80', 't = 10', 'v = (Q)*(t*60)', 'Output "Volume(v)=&v ..."', and 'End'. The source code window shows the following Python code:

```
0 q = 80
1 t = 10
2 v = q * (t * 60)
3 print("Volume(v)=" + str(v), end='', flush=True)
```

The bottom screenshot shows the Visual Studio Code editor with the same Python code in a file named 'guslinats.py'. The terminal output shows the execution of the program, resulting in 'Volume(v)=48000'.

```
PS C:\Users\VACER> & 'C:\Users\VACER\AppData\Local\Programs\Python\Python310\python.exe' 'c:\Users\VACER\.vscode\extensions\ms-python.python-2021.10.1365161279\pythonFiles\lib\python\debugpy\launcher' '51948' '-.' 'c:\Users\VACER\guslinats.py'
Volume(v)=48000
PS C:\Users\VACER>
```

Konsep 2 :

The screenshot displays the Flowgorithm IDE interface. On the left, the Console window shows the output: "Volume(v)=48000". In the center, a flowchart illustrates the program's logic: it starts with a 'Main' terminal, followed by 'Real Q, t' and 'Real v' declarations, then 'Input Q' and 'Input t' processes, a calculation 'v = (Q)*(t*60)', an output statement 'Output "Volume(v)="+ &v ...', and finally an 'End' terminal. On the right, the Source Code Viewer shows the corresponding Python code:

```
0 q = float(input())
1 t = float(input())
2 v = q * (t * 60)
3 print("Volume(v)="+ str(v), end='', flush=True)
```

Below the Flowgorithm IDE, a Visual Studio Code window shows the same Python code in a file named 'guslinats.py'. The terminal window at the bottom displays the execution output:

```
C:\Users\VACER> guslinats.py
Masukkan Debit = 80
Masukkan Waktu = 10
Volume(v)=48000.0
PS C:\Users\VACER>
```