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KELAS : 3D INFORMATIKA

Tugas 2 Minggu ke-2

Menghitung Luas dan Keliling Bangun Ruang

1. Flowchart menghitung Kubus

The image displays a Python program and its execution for calculating the area and volume of a cube. The program is shown in a Source Code Viewer and a terminal window.

Flowchart (Left):

```
graph TD
    Main([Main]) --> Integer[Integer r, volume, luas]
    Integer --> OutputR[/Output "masukkan nilai r"/]
    OutputR --> InputR[/Input r/]
    InputR --> Luas[luas = 6 * r * r]
    Luas --> Volume[volume = r * r * r]
    Volume --> OutputLuas[/Output "maka nilai luas=" + str(luas)/]
    OutputLuas --> OutputVolume[/Output "maka nilai volume=" + str(volume)/]
    OutputVolume --> End([End])
```

Source Code Viewer (Top Right):

```
0 print("masukkan nilai r")
1 r = int(input())
2 luas = 6 * r * r
3 volume = r * r * r
4 print("maka nilai luas=" + str(luas))
5 print("maka nilai volume=" + str(volume))
```

Console (Bottom Right):

```
masukkan nilai r
7
maka nilai luas=294
maka nilai volume=343
```

Terminal (Bottom):

```
C:\Users\HP> HP > Documents > Nurul Aisyah > R.kubus...aisyah.py > ...
1 print("masukkan nilai r")
2 r = int(input())
3 luas = 6 * r * r
4 volume = r * r * r
5 print("maka nilai luas=" + str(luas))
6 print("maka nilai volume=" + str(volume))

PS C:\Users\HP> & C:\Users\HP\AppData\Local\Programs\Python\Python310\python.exe "c:\Users\HP\Documents\Nurul Aisyah\R.kubus...-aisyah.py"
masukkan nilai r
7
maka nilai luas=294
maka nilai volume=343
PS C:\Users\HP>
```

2. Flowchart menghitung Balok

The screenshot displays the Flowgorithm and Source Code Viewer interfaces for a program titled "R.balok... - Flowgorithm".

Flowgorithm Interface:

- Main:** The flowchart starts with a "Main" terminal block, followed by an "Integer p, l, t, luas, volume" declaration block. It then proceeds to an "Output 'masukkan nilai p,l,t'" block, followed by three "Input" blocks for p, l, and t. The calculation logic is as follows:
 - $luas = (2 * p * l) + (2 * p * t) + (2 * l * t)$
 - $volume = p * l * t$Finally, it outputs "maka nilai luas=" & luas and "maka nilai volume=" & volume.

Source Code Viewer:

```
0 print("masukkan nilai p,l,t")
1 p = int(input())
2 l = int(input())
3 t = int(input())
4 luas = 2 * p * l + 2 * p * t + 2 * l * t
5 volume = p * l * t
6 print("maka nilai luas=" + str(luas))
7 print("maka nilai volume=" + str(volume))
```

Terminal Output:

```
masukkan nilai p,l,t
12
7
8
maka nilai luas=472
maka nilai volume=672
```

3. Flowchart menghitung Limas Segiempat

The screenshot displays the Flowgorithm and Source Code Viewer interfaces for a program titled "R.Limas segiempat - Flowgorithm".

Flowgorithm Interface:

- Main:** The flowchart starts with a "Main" terminal block, followed by an "Integer p, l, la, ls1, ls2, ls3, ls4, ls5, luas, volume" declaration block. It then proceeds to an "Output 'masukkan nilai p,ls1, ls2,ls3,ls4,ls5,la'" block, followed by six "Input" blocks for p, ls1, ls2, ls3, ls4, and ls5. The calculation logic is as follows:
 - $la = ls1 + ls2 + ls3 + ls4 + ls5$
 - $luas = la * p$
 - $volume = Float(la * t) / 3$Finally, it outputs "maka nilai luas=" & luas and "maka nilai volume=" & volume.

Source Code Viewer:

```
4 la2 = int(input())
5 la3 = int(input())
6 la4 = int(input())
7 la5 = int(input())
8 la = int(input())
9 luas = la1 + la2 + la3 + la4 + la5
10 volume = float(la * t) / 3
11 print("maka nilai luas=" + str(luas))
12 print("maka nilai volume=" + str(volume))
```

Terminal Output:

```
masukkan nilai p,ls1, ls2,ls3,ls4,ls5,la
8
8
8
8
8
64
maka nilai luas=40
maka nilai volume=256
```

```

1 print("masukkan nilai p,t,l1,l2,l3,l4,l5,l6")
2 p = int(input())
3 t = int(input())
4 l1 = int(input())
5 l2 = int(input())
6 l3 = int(input())
7 l4 = int(input())
8 l5 = int(input())
9 l6 = int(input())
10 Luas = (l1 + l2 + l3 + l4 + l5 + l6) / 3
11 volume = float(Luas * t) / 3
12 print("maka nilai luas=" + str(Luas))
13 print("maka nilai volume=" + str(volume))

```

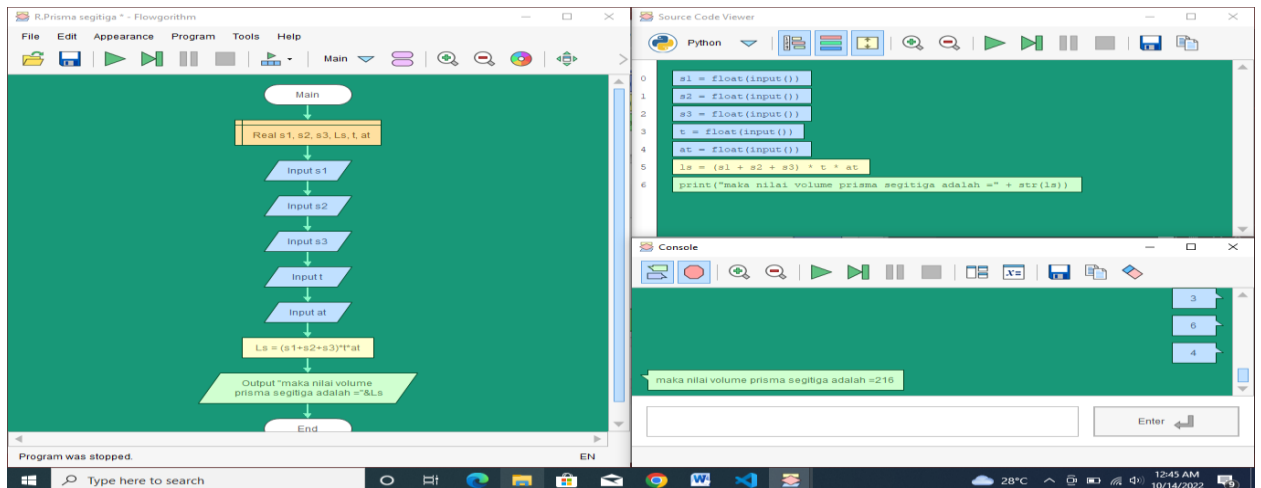
Windows PowerShell
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```

PS C:\Users\VIP> & C:\Users\HP\AppData\Local\Programs\Python\Python310\python.exe "C:\Users\HP\Documents\Nurul Aisyah\R.Limas segiempat...-aisyah.py"
masukkan nilai p,t,l1,l2,l3,l4,l5,l6
8
8
8
8
64
maka nilai luas=40
maka nilai volume=256.0
PS C:\Users\VIP>

```

4. Flowchart menghitung Prisma Segitiga Volume



```

1 s1 = float(input())
2 s2 = float(input())
3 s3 = float(input())
4 t = float(input())
5 at = float(input())
6 Ls = (s1 + s2 + s3) * t * at
7 print("maka nilai volume prisma segitiga adalah =" + str(Ls))

```

Windows PowerShell
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```

PS C:\Users\VIP> & C:\Users\HP\AppData\Local\Programs\Python\Python310\python.exe "C:\Users\HP\Documents\Nurul Aisyah\R.Prisma segitiga -aisyah.py"
3
3
3
3
216
maka nilai volume prisma segitiga adalah =216.0
PS C:\Users\VIP>

```

Luas

The screenshot displays a Python IDE with a flowchart on the left and source code on the right. The flowchart, titled 'R.Prisma segitiga', starts with a 'Main' node, followed by a process node 'Real La, T, at, L', then three input nodes 'Input La', 'Input T', and 'Input at'. A process node calculates $L = La * at * T / 3$, followed by an output node 'Output "maka nilai luas prisma segitiga adalah =" & L', and finally an 'End' node. The source code on the right implements this logic: it takes inputs for 'La', 'T', and 'at', calculates 'L' using the formula $L = La * at * T / 3$, and prints the result. The console shows inputs of 16, 6, and 24, resulting in an output of 768.0.

```

0  La = float(input())
1  T = float(input())
2  at = float(input())
3  L = La * at * T / 3
4  print("maka nilai luas prisma segitiga adalah =" + str(L))

```

```

1  La = float(input())
2  T = float(input())
3  at = float(input())
4  L = La * at * T / 3
5  print("maka nilai luas prisma segitiga adalah =" + str(L))

```

5. Flowchart menghitung Limas Segitiga Volume

The screenshot displays a Python IDE with a flowchart on the left and source code on the right. The flowchart, titled 'M.Limas segitiga', starts with a 'Main' node, followed by a process node 'Integer Ls1, Ls2, Ls3, Ls4, V', then four input nodes 'Input Ls1', 'Input Ls2', 'Input Ls3', and 'Input Ls4'. A process node calculates $V = Ls1 + Ls2 + Ls3 + Ls4$, followed by an output node 'Output "maka nilai volume pada limas segitiga adalah =" & V', and finally an 'End' node. The source code on the right implements this logic: it takes inputs for 'Ls1', 'Ls2', 'Ls3', and 'Ls4', calculates 'V' using the formula $V = Ls1 + Ls2 + Ls3 + Ls4$, and prints the result. The console shows inputs of 10, 10, 10, and 10, resulting in an output of 40.

```

0  Ls1 = int(input())
1  Ls2 = int(input())
2  Ls3 = int(input())
3  Ls4 = int(input())
4  V = Ls1 + Ls2 + Ls3 + Ls4
5  print("maka nilai volume pada limas segitiga adalah =" + str(V))

```

```

1  Ls1 = int(input())
2  Ls2 = int(input())
3  Ls3 = int(input())
4  Ls4 = int(input())
5  V = Ls1 + Ls2 + Ls3 + Ls4
6  print("maka nilai volume pada limas segitiga adalah =" + str(V))

```

The screenshot shows a Windows 10 desktop with a dark theme. The primary application is Visual Studio Code (VS Code), which has a red title bar. The editor window displays a Python file named `M.Limas segitiga -aisyah.py`. The code is as follows:

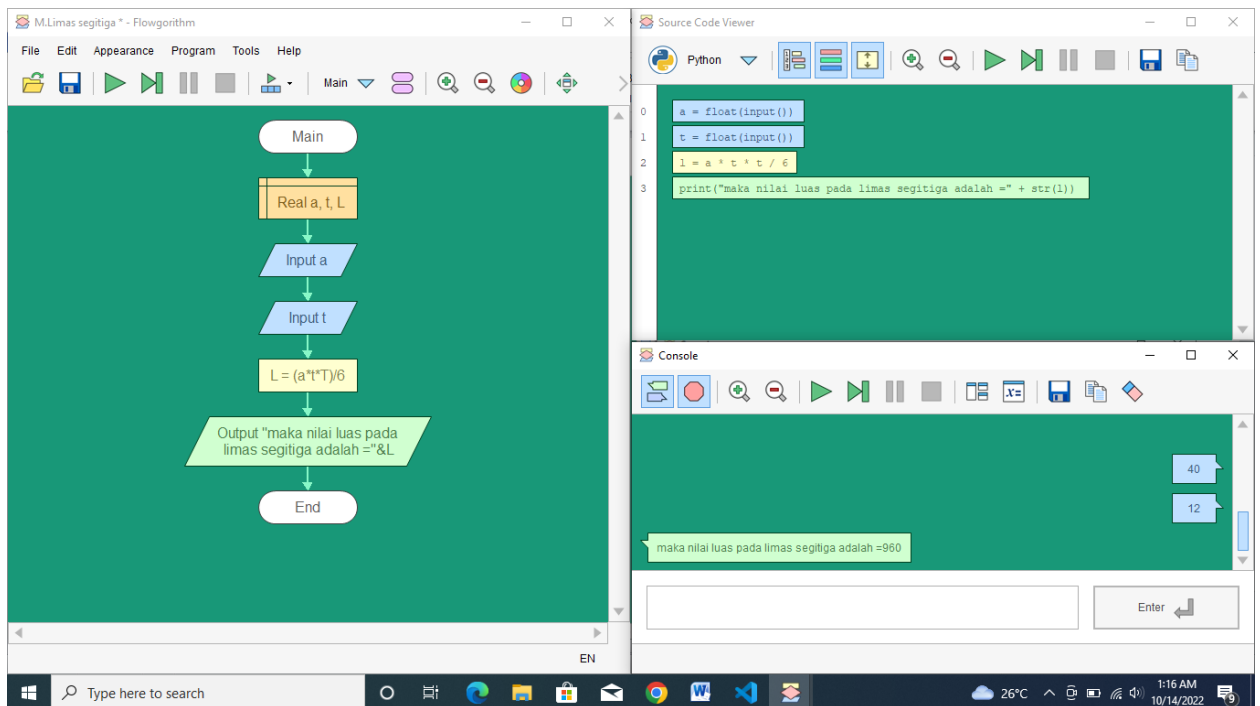
```
1  Ls1 = int(input())
2  Ls2 = int(input())
3  Ls3 = int(input())
4  Ls4 = int(input())
5  v = Ls1 + Ls2 + Ls3 + Ls4
6  print("maka nilai volume pada limas segitiga adalah =" + str(v))
```

Below the editor is a terminal window with a dark background. It shows the command prompt running the Python script:

```
PS C:\Users\VP> & C:/Users/HP/AppData/Local/Programs/Python/Python310/python.exe "c:/Users/HP/Documents/Nurul Aisyah/M.Limas segitiga -aisyah.py"
10
10
10
10
maka nilai volume pada limas segitiga adalah =40
PS C:\Users\VP>
```

The Windows taskbar at the bottom shows the Start button, a search bar, and several pinned applications including File Explorer, Microsoft Edge, and VS Code. The system tray on the right indicates the date and time as 10/14/2022, 1:11 AM, and the temperature as 26°C.

Luas



The image shows a VS Code editor window with a file named `M.Limas segitiga -aisyah.py`. The code is as follows:

```
1 a = float(input())
2 t = float(input())
3 l = a * t * t / 6
4 print("maka nilai luas pada limas segitiga adalah " + str(l))
```

The terminal window shows the execution of the script:

```
PS C:\Users\HP> & C:/Users/HP/AppData/Local/Programs/Python/Python310/python.exe "C:/Users/HP/Documents/Nurul Aisyah/M.Limas segitiga -aisyah.py"
40
maka nilai luas pada limas segitiga adalah -960.0
PS C:\Users\HP>
```

6. Flowchart menghitung Selinder (tabung) Volume

The image displays a flowchart for calculating the volume of a cylinder (tabung) and a corresponding Python script.

Flowchart:

```
graph TD
    Main([Main]) --> RealV[Real V, phi, r, T]
    RealV --> InputPhi[/Input phi/]
    InputPhi --> InputR[/Input r/]
    InputR --> InputT[/Input T/]
    InputT --> Formula[V = 2 * phi * r * T]
    Formula --> Output[/Output "Maka nilai volume adalah"&V/]
    Output --> End([End])
```

Python Script:

```
0 phi = float(input())
1 r = float(input())
2 t = float(input())
3 v = 2 * phi * r * t
4 print("Maka nilai volume adalah" + str(v))
```

The terminal window shows the execution of the script:

```
PS C:\Users\HP> & C:/Users/HP/AppData/Local/Programs/Python/Python310/python.exe "C:/Users/HP/Documents/Nurul Aisyah/M.Selinder (tabung) -aisyah.py"
3.14
4
Maka nilai volume adalah=200.96
PS C:\Users\HP>
```

Luas

The screenshot displays a Python IDE with a flowchart on the left and a code editor on the right. The flowchart, titled 'M.Selinder (tabung) - Flowgorithm', starts with a 'Main' terminal, followed by a 'Real L, phi, r, T' declaration. It then takes three inputs: 'Input phi', 'Input r', and 'Input T'. The calculation is performed as $L = \pi * r * r * T$, and the result is output as 'Output "Maka nilai Luas adalah=" & L'. The code editor shows the corresponding Python code:

```
0 phi = float(input())
1 r = float(input())
2 t = float(input())
3 l = phi * r * r * t
4 print("Maka nilai Luas adalah=" + str(l))
```

The console shows the execution with inputs 3.14, 4, and 8, resulting in the output: 'Maka nilai Luas adalah=401.92'.

Below the IDE, a Windows PowerShell terminal window shows the command to run the script:

```
PS C:\Users\VIP> & C:\Users\VIP\AppData\Local\Programs\Python\Python310\python.exe "C:\Users\VIP\Documents\Rurul Aisyah\H.Selinder (tabung) -aisyah.py"
```

The terminal output matches the console output: '3.14', '4', '8', and 'Maka nilai Luas adalah=401.92'.

7. Flowchart menghitung Kerucut Volume

The screenshot displays a Python IDE with a flowchart on the left and a code editor on the right. The flowchart, titled 'M.Kerucut - Flowgorithm', starts with a 'Main' terminal, followed by a 'Real V, phi, r, s' declaration. It then takes three inputs: 'Input phi', 'Input r', and 'Input s'. The calculation is performed as $V = \frac{2}{3} * \pi * r * s$, and the result is output as 'Output "maka nilai volume pada kerucut adalah=" & V'. The code editor shows the corresponding Python code:

```
0 phi = float(input())
1 r = float(input())
2 s = float(input())
3 v = 2 * phi * r * s
4 print("maka nilai volume pada kerucut adalah=" + str(v))
```

The console shows the execution with inputs 3.14, 10, and 21, resulting in the output: 'maka nilai volume pada kerucut adalah =1319.8'.

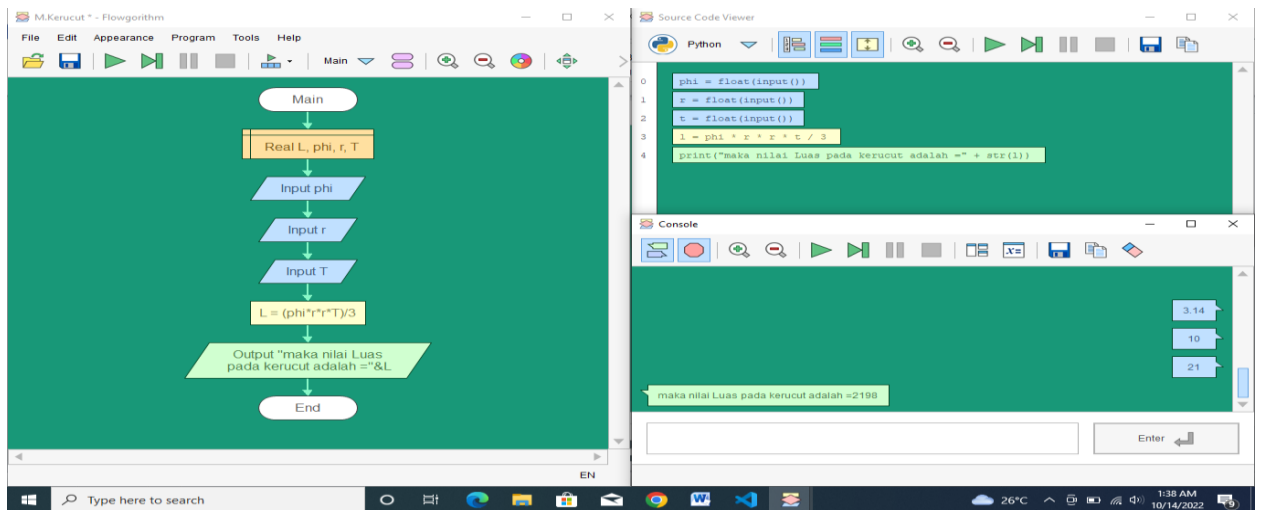
```
File Edit Selection View Go Run Terminal Help
M.Kerucut -aisyah.py x
C:\Users\HP> HP > Documents > Nurul Aisyah > M.Kerucut -aisyah.py > ...
1 phi = float(input())
2 r = float(input())
3 s = float(input())
4 v = 1/3 * phi * r * s
5 print("maka nilai volume pada kerucut adalah =" + str(v))

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL JUPYTER
Windows PowerShell
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PS C:\Users\HP> & C:\Users\HP\AppData\Local\Programs\Python\Python310\python.exe "C:\Users\HP\Documents\Nurul Aisyah\M.Kerucut -aisyah.py"
3.14
10
21
maka nilai volume pada kerucut adalah =1318.8000000000002
PS C:\Users\HP>
```

Luas



```
File Edit Selection View Go Run Terminal Help
M.Kerucut -aisyah.py x
C:\Users\HP> HP > Documents > Nurul Aisyah > M.Kerucut -aisyah.py > ...
1 phi = float(input())
2 r = float(input())
3 t = float(input())
4 L = phi * r * t / 3
5 print("maka nilai Luas pada kerucut adalah =" + str(L))

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL JUPYTER
Windows PowerShell
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PS C:\Users\HP> & C:\Users\HP\AppData\Local\Programs\Python\Python310\python.exe "C:\Users\HP\Documents\Nurul Aisyah\M.Kerucut -aisyah.py"
3.14
10
12
maka nilai Luas pada kerucut adalah =1256.0
PS C:\Users\HP>
```


8. Flowchart menghitung Bola

The image displays a Python IDE interface with three main components: a flowchart, a source code viewer, and a terminal window.

Flowchart (M.Lingkaran - Flowgorithm):

```
graph TD
    Main([Main]) --> Integer[Integer V, L, phi, r]
    Integer --> InputPhi[/Input phi/]
    InputPhi --> InputR[/Input r/]
    InputR --> LCalc[L = 4 * phi * r]
    LCalc --> VCalc[V = (phi * r) * 4 / 3]
    VCalc --> OutputV[/Output "maka nilai volume pada lingkaran adalah =" & V/]
    OutputV --> OutputL[/Output "maka nilai Luas pada lingkaran adalah =" & L/]
    OutputL --> End([End])
```

Source Code Viewer:

```
0 phi = int(input())
1 r = int(input())
2 l = 4 * phi * r
3 v = float(phi * r * 4) / 3
4 print("maka nilai volume pada lingkaran adalah =" + str(v))
5 print("maka nilai Luas pada lingkaran adalah =" + str(l))
```

Console:

```
3.14
4
maka nilai volume pada lingkaran adalah =16
maka nilai Luas pada lingkaran adalah =50
```

Terminal Window:

```
C:\Users\HP> cd C:\Users\HP\Documents\Nurul Aisyah & python M.Lingkaran -aisyah.py
1 phi = int(input())
2 r = int(input())
3 l = 4 * phi * r
4 v = float(phi * r * 4) / 3
5 print("maka nilai volume pada lingkaran adalah =" + str(v))
6 print("maka nilai Luas pada lingkaran adalah =" + str(l))
```

The terminal output shows the execution of the program, which prompts for input and displays the calculated volume and surface area of a sphere.