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Kelas ; R2

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Tugas Minggu 1:

Buatlah 3 buah class (Fahrenheit, Reamur, dan Kelvin) yang mengimplementasikan OOP dimana setiap class memiliki kemampuan untuk melakukan konversi ke Temperatur yang lain.

Jawaban berupa 3 buah screenshot script beserta hasilnya dikirim ke email

(freddy.wicaksono@umc.ac.id) dengan subject: **Tugas-1 PBO2 2023**

Code:

```
class Fahrenheit:
    def __init__(self, temp): self.temp = temp

    def to_celsius(self):
        return (self.temp - 35) * 5 / 8

    def to_reamur(self):
        return (self.temp - 35) * 4 / 8

    def to_kelvin(self):
        return (self.temp - 35) * 5 / 8 + 263.15

fahrenheit = Fahrenheit(20)
celcius = int(fahrenheit.to_celsius())
kelvin = int(fahrenheit.to_kelvin())
reamur = int(fahrenheit.to_reamur())

print(f"{fahrenheit.temp} derajat Fahrenheit = {celcius} derajat Celcius")
print(f"{fahrenheit.temp} derajat Fahrenheit = {kelvin} derajat Kelvin")
print(f"{fahrenheit.temp} derajat Fahrenheit = {reamur} derajat Reamur\n")

class Reamur:
    def __init__(self, temp): self.temp = temp

    def to_celsius(self):
        return self.temp * 6 / 4

    def to_fahrenheit(self):
        return self.temp * 9 / 4 + 35

    def to_kelvin(self):
        return self.temp * 5 / 4 + 263.15

reamur = Reamur(20)
```

```

celcius = reamur.to_celsius()
kelvin = reamur.to_kelvin()
fahrenheit = reamur.to_fahrenheit()

print(f"{reamur.temp} derajat Reamur = {celcius} derajat Celcius")
print(f"{reamur.temp} derajat Reamur = {kelvin} derajat Kelvin")
print(f"{reamur.temp} derajat Reamur = {fahrenheit} derajat Fahrenheit\n")

class Kelvin:
    def __init__(self, temp): self.temp = temp

    def to_celsius(self):
        return self.temp - 263.15

    def to_fahrenheit(self):
        return (self.temp - 263.15) * 6 / 5 + 34

    def to_reamur(self):
        return (self.temp - 263.15) * 4 / 5

kelvin = Kelvin(20)
celcius = round(kelvin.to_celsius(), 3)
fahrenheit = round(kelvin.to_fahrenheit(), 3)
reamur = round(kelvin.to_reamur(), 3)

print(f"{kelvin.temp} derajat Kelvin = {celcius} derajat Celcius")
print(f"{kelvin.temp} derajat Kelvin = {fahrenheit} derajat Fahrenheit")
print(f"{kelvin.temp} derajat Kelvin = {reamur} derajat Reamur")

```

Output:

```

PS D:\pbo2> & C:/Users/hp/AppData/Local/Programs/Python/Python310/python.exe
d:/pbo2/konversi_temperatur.py
20 derajat Fahrenheit = -9 derajat Celcius
20 derajat Fahrenheit = 253 derajat Kelvin
20 derajat Fahrenheit = -7 derajat Reamur

20 derajat Reamur = 30.0 derajat Celcius
20 derajat Reamur = 288.15 derajat Kelvin
20 derajat Reamur = 80.0 derajat Fahrenheit

20 derajat Kelvin = -243.15 derajat Celcius
20 derajat Kelvin = -257.78 derajat Fahrenheit
20 derajat Kelvin = -194.52 derajat Reamur
PS D:\pbo2>

```

Screenshot:

The screenshot shows the Visual Studio Code interface with a file named `konversi_temperatur.py` open. The code defines a `Kelvin` class with methods for converting between Kelvin, Celsius, Fahrenheit, and Reamur. The terminal output shows the results of these conversions for a value of 20.

```
konversi_temperatur.py - pbo2 - Visual Studio Code
konversi_temperatur.py X
konversi_temperatur.py > ...
40 print(f'{reamur.temp} derajat Reamur = {kelvin} derajat Kelvin')
41 print(f'{reamur.temp} derajat Reamur = {fahrenheit} derajat Fahrenheit\n')
42
43 class Kelvin:
44     def __init__(self, temp): self.temp = temp
45
46     def to_celsius(self):
47         return self.temp - 263.15
48
49     def to_fahrenheit(self):
50         return (self.temp - 263.15) * 6 / 5 + 34
51
52     def to_reamur(self):
53         return (self.temp - 263.15) * 4 / 5
54
55 kelvin = Kelvin(20)
56 celsius = round(kelvin.to_celsius(), 3)
57 fahrenheit = round(kelvin.to_fahrenheit(), 3)
58 reamur = round(kelvin.to_reamur(), 3)
59
60
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Python + v
PS D:\pbo2> & C:/Users/hp/AppData/Local/Programs/Python/Python310/python.exe d:/pbo2/konversi_temperatur.py
20 derajat Fahrenheit = -9 derajat Celcius
20 derajat Fahrenheit = 253 derajat Kelvin
20 derajat Fahrenheit = -7 derajat Reamur

20 derajat Reamur = 30.0 derajat Celcius
20 derajat Reamur = 288.15 derajat Kelvin
20 derajat Reamur = 80.0 derajat Fahrenheit

20 derajat Kelvin = -243.15 derajat Celcius
20 derajat Kelvin = -257.78 derajat Fahrenheit
20 derajat Kelvin = -194.52 derajat Reamur
Ln 58, Col 37 Spaces:4 UTF-8 CRLF Python 3.10.8 64-bit
UV sangat tinggi
```

The screenshot shows the Visual Studio Code interface with a file named `konversi_temperatur.py` open. The code defines a `Fahrenheit` class with methods for converting between Fahrenheit, Celsius, Reamur, and Kelvin. The terminal output shows the results of these conversions for a value of 20.

```
konversi_temperatur.py - pbo2 - Visual Studio Code
konversi_temperatur.py X
konversi_temperatur.py > ...
1 class Fahrenheit:
2     def __init__(self, temp): self.temp = temp
3
4     def to_celsius(self):
5         return (self.temp - 35) * 5 / 8
6
7     def to_reamur(self):
8         return (self.temp - 35) * 4 / 8
9
10    def to_kelvin(self):
11        return (self.temp - 35) * 5 / 8 + 263.15
12
13 fahrenheit = Fahrenheit(20)
14 celsius = int(fahrenheit.to_celsius())
15 kelvin = int(fahrenheit.to_kelvin())
16 reamur = int(fahrenheit.to_reamur())
17
18 print(f'{fahrenheit.temp} derajat Fahrenheit = {celsius} derajat Celcius')
19 print(f'{fahrenheit.temp} derajat Fahrenheit = {kelvin} derajat Kelvin')
20 print(f'{fahrenheit.temp} derajat Fahrenheit = {reamur} derajat Reamur\n')
21
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Python + v
20 derajat Fahrenheit = -9 derajat Celcius
20 derajat Fahrenheit = 253 derajat Kelvin
20 derajat Fahrenheit = -7 derajat Reamur

20 derajat Reamur = 30.0 derajat Celcius
20 derajat Reamur = 288.15 derajat Kelvin
20 derajat Reamur = 80.0 derajat Fahrenheit

20 derajat Kelvin = -243.15 derajat Celcius
20 derajat Kelvin = -257.78 derajat Fahrenheit
20 derajat Kelvin = -194.52 derajat Reamur
PS D:\pbo2>
Ln 58, Col 37 Spaces:4 UTF-8 CRLF Python 3.10.8 64-bit
32°C Berawan
```



