

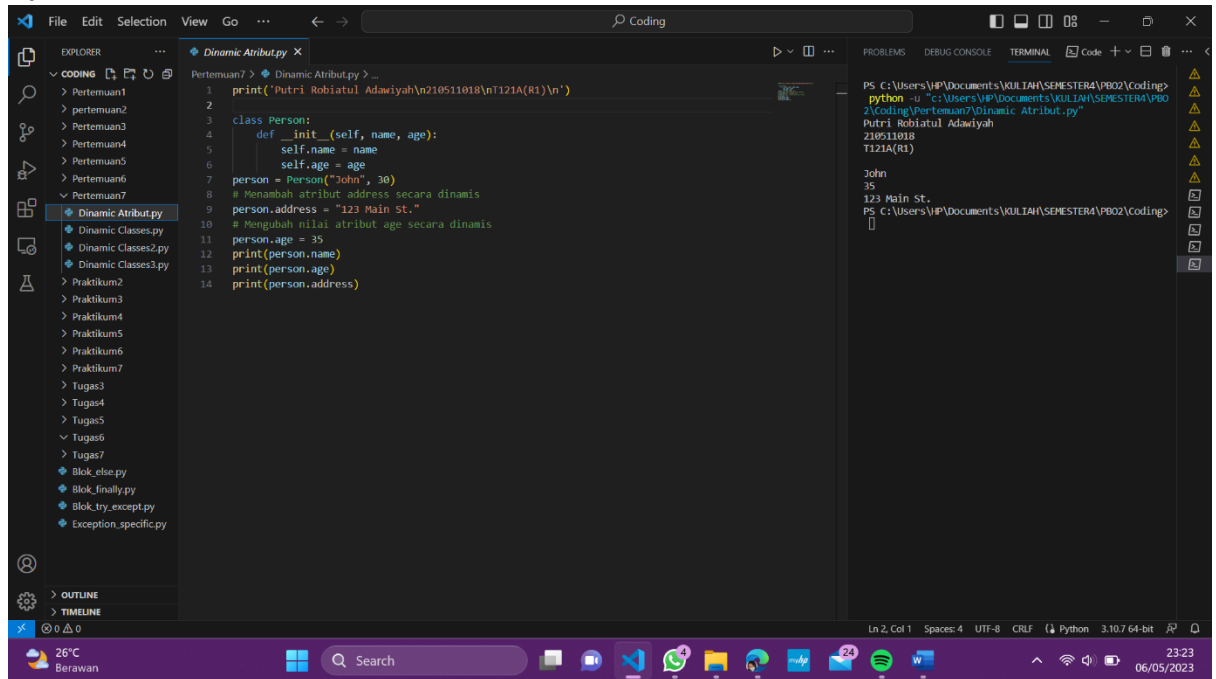
Nama : Putri Robi'atul Adawiyah

Nim : 210511018

Kelas : TI21A (R1)

Tugas : SS Latihan 7 PBO2

1. Dynamic Atribut

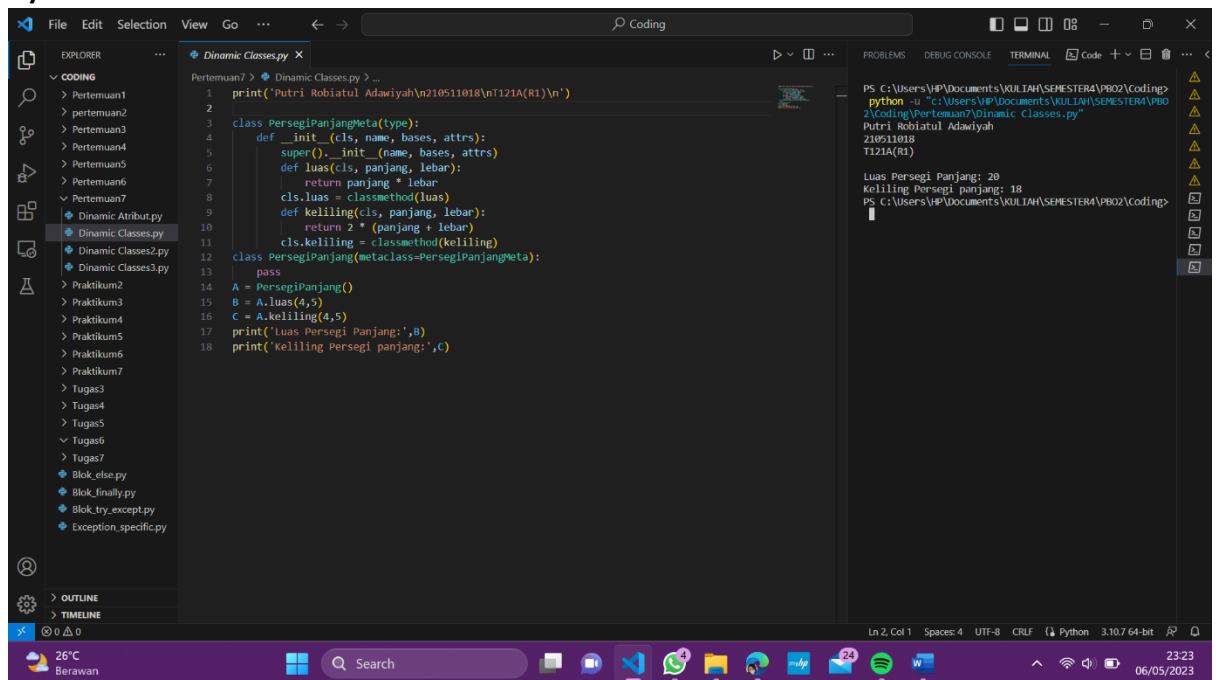


```
1 print('Putri Robi'atul Adawiyah\n210511018\nTI21A(R1)\n')
2
3 class Person:
4     def __init__(self, name, age):
5         self.name = name
6         self.age = age
7     person = Person("John", 30)
8     # Menambah atribut address secara dinamis
9     person.address = "123 Main St."
10    # Mengubah nilai atribut age secara dinamis
11    person.age = 35
12    print(person.name)
13    print(person.age)
14    print(person.address)
```

```
PS C:\Users\VP\Documents\KULIAH\SEMESTER4\PRO2\Coding> python -u "C:\Users\VP\Documents\KULIAH\SEMESTER4\PRO2\Coding\Pertemuan7\Dynamic Atribut.py"
Putri Robi'atul Adawiyah
210511018
TI21A(R1)

John
35
123 Main St.
PS C:\Users\VP\Documents\KULIAH\SEMESTER4\PRO2\Coding>
```

2. Dynamic Classes



```
1 print('Putri Robi'atul Adawiyah\n210511018\nTI21A(R1)\n')
2
3 class PersegiPanjangMeta(type):
4     def __init__(cls, name, bases, attrs):
5         super().__init__(name, bases, attrs)
6         def luas(cls, panjang, lebar):
7             return panjang * lebar
8         cls.luas = classmethod(luas)
9         def keliling(cls, panjang, lebar):
10            return 2 * (panjang + lebar)
11        cls.keliling = classmethod(keliling)
12    class PersegiPanjang(metaclass=PersegiPanjangMeta):
13        pass
14    A = PersegiPanjang()
15    B = A.luas(4,5)
16    C = A.keliling(4,5)
17    print('Luas Persegi Panjang:',B)
18    print('Keliling Persegi panjang:',C)
```

```
PS C:\Users\VP\Documents\KULIAH\SEMESTER4\PRO2\Coding> python -u "C:\Users\VP\Documents\KULIAH\SEMESTER4\PRO2\Coding\Pertemuan7\Dynamic Classes.py"
Putri Robi'atul Adawiyah
210511018
TI21A(R1)

Luas Persegi Panjang: 20
Keliling Persegi panjang: 18
PS C:\Users\VP\Documents\KULIAH\SEMESTER4\PRO2\Coding>
```

3. Dinamic Classes2

```
1 print('Putri Robiatul Adawiyah\n210511018\n1211A(R1)\n')
2
3 class SegitigaMeta(type):
4     def __init__(cls, name, bases, attrs):
5         super().__init__(name, bases, attrs)
6         # Tambahkan method untuk menghitung luas dan keliling segitiga
7         def luas(cls, alas, tinggi):
8             return (alas * tinggi) / 2
9         cls.luas = classmethod(luas)
10        def keliling(cls, sisi1, sisi2, sisi3):
11            return sisi1 + sisi2 + sisi3
12        cls.keliling = classmethod(keliling)
13
14 class Segitiga(metaclass=SegitigaMeta):
15     pass
16
17 s = Segitiga()
18 # Menghitung luas segitiga dengan alas=4 dan tinggi=5
19 luas_segitiga = Segitiga.luas(4, 5)
20 print('Luas segitiga:', luas_segitiga)
21 # Menghitung keliling segitiga dengan sisi1=3, sisi2=4, dan sisi3=5
22 keliling_segitiga = Segitiga.keliling(3, 4, 5)
23 print('Keliling segitiga:', keliling_segitiga)
```

Terminal Output:

```
PS C:\Users\HP\Documents\KULIAH\SEMESTER4\PROG2\Coding>
python -u "C:\Users\HP\Documents\KULIAH\SEMESTER4\PROG2\Coding\Pertemuan7\Dinamic Classes2.py"
Putri Robiatul Adawiyah
210511018
1211A(R1)
Luas segitiga: 10.0
Keliling segitiga: 12
PS C:\Users\HP\Documents\KULIAH\SEMESTER4\PROG2\Coding>
```

4. Dynamic Classes3

```
1 print('Putri Robiatul Adawiyah\n210511018\n1211A(R1)\n')
2
3 class CelciusMeta(type):
4     def __init__(cls, name, bases, attrs):
5         super().__init__(name, bases, attrs)
6         cls.suhu_standar = ""
7         def to_fahrenheit(cls, suhu):
8             return (suhu * 9/5) + 32
9         def to_reamur(cls, suhu):
10            return suhu * 4/5
11        def to_kelvin(cls, suhu):
12            return suhu + 273.15
13        cls.to_fahrenheit = classmethod(to_fahrenheit)
14        cls.to_reamur = classmethod(to_reamur)
15        cls.to_kelvin = classmethod(to_kelvin)
16
17 class Celcius(metaclass=CelciusMeta):
18     def __init__(self, suhu):
19         self.suhu = suhu
20
21     def ke_unit(self, unit):
22         if unit == "Fahrenheit":
23             self.suhu = self.__class__.to_fahrenheit(self.suhu)
24             self.__class__.suhu_standar = "Fahrenheit"
25         elif unit == "Reamur":
26             self.suhu = self.__class__.to_reamur(self.suhu)
27             self.__class__.suhu_standar = "Reamur"
28         elif unit == "Kelvin":
29             self.suhu = self.__class__.to_kelvin(self.suhu)
30             self.__class__.suhu_standar = "Kelvin"
31         elif unit == "Celcius":
32             pass # do nothing
33         else:
34             raise ValueError(f"Unit {unit} tidak dikenal.")
35
36     def __repr__(self):
37         return f"{self.suhu:.2f} {self.__class__.suhu_standar}"
38
39 # Membuat objek suhu dengan nilai 100 celcius
40 c = Celcius(100)
41 # Mengubah objek suhu menjadi Fahrenheit
42 c.ke_unit("Fahrenheit")
```

Terminal Output:

```
PS C:\Users\HP\Documents\KULIAH\SEMESTER4\PROG2\Coding>
python -u "C:\Users\HP\Documents\KULIAH\SEMESTER4\PROG2\Coding\Pertemuan7\Dinamic Classes3.py"
Putri Robiatul Adawiyah
210511018
1211A(R1)
212.00 Fahrenheit
PS C:\Users\HP\Documents\KULIAH\SEMESTER4\PROG2\Coding>
```