

LAPORAN PRAKTIKUM

PEMROGRAMAN BERORIENTASI OBJEK LANJUT

2023



Prepared By:

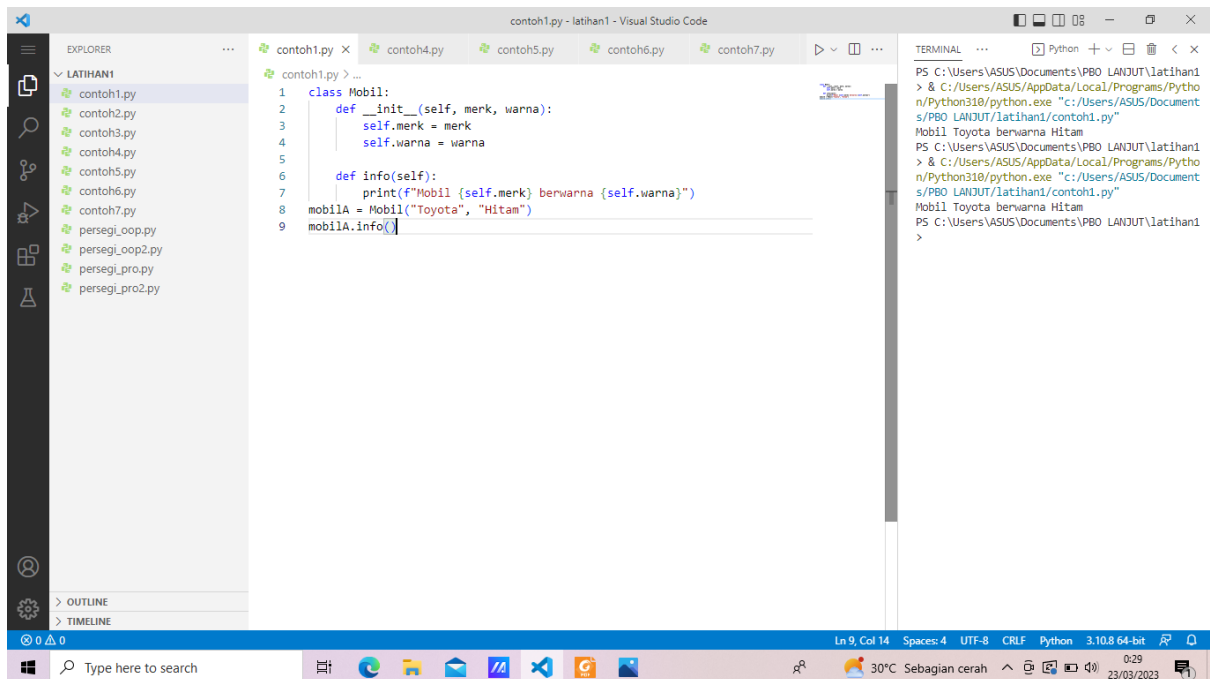
LATIHAN 1

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Nim : 210511173

Kelas : K-1

Contoh 1



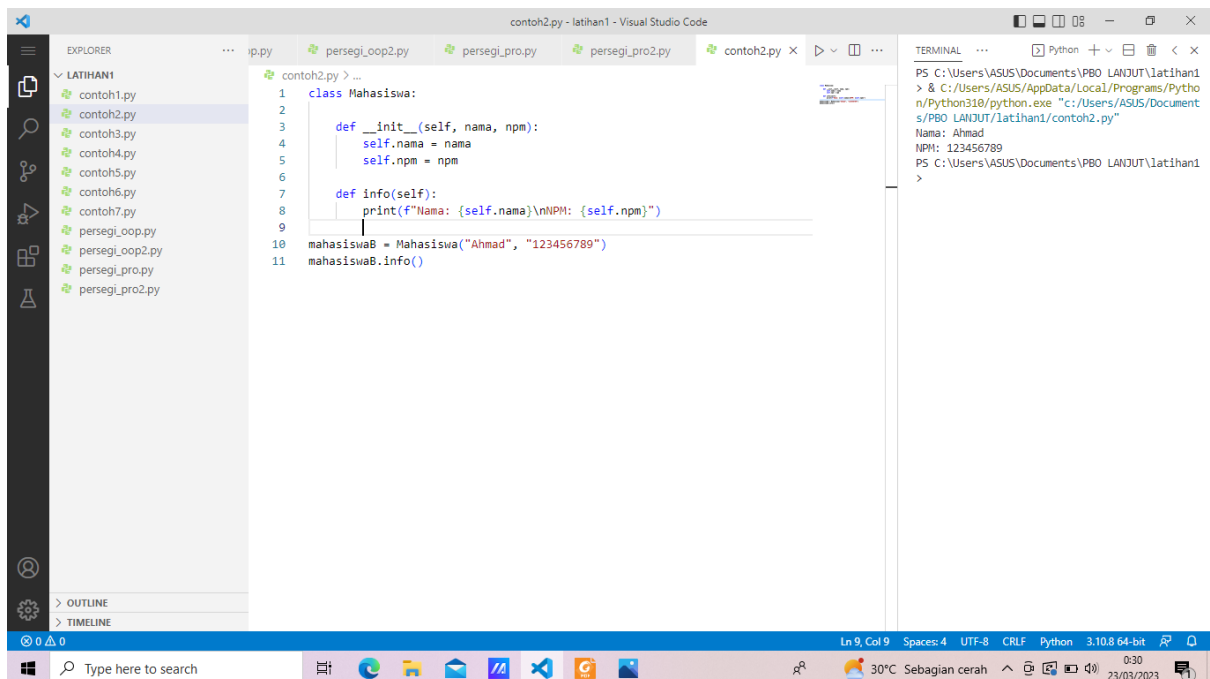
The screenshot shows the Visual Studio Code interface with a file explorer on the left, a code editor in the center, and a terminal on the right. The file explorer shows a project named 'LATIHAN1' with several Python files. The code editor displays the following Python code in 'contoh1.py':

```
1 class Mobil:
2     def __init__(self, merk, warna):
3         self.merk = merk
4         self.warna = warna
5
6     def info(self):
7         print(f"Mobil {self.merk} berwarna {self.warna}")
8
9 mobilA = Mobil("Toyota", "Hitam")
10 mobilA.info()
```

The terminal on the right shows the execution of the code:

```
PS C:\Users\ASUS\Documents\PBO LANJUT\latihan1> & C:/Users/ASUS/AppData/Local/Programs/Python/Python310/python.exe "C:/Users/ASUS/Documents/PBO LANJUT/latihan1/contoh1.py"
Mobil Toyota berwarna Hitam
PS C:\Users\ASUS\Documents\PBO LANJUT\latihan1> & C:/Users/ASUS/AppData/Local/Programs/Python/Python310/python.exe "C:/Users/ASUS/Documents/PBO LANJUT/latihan1/contoh1.py"
Mobil Toyota berwarna Hitam
PS C:\Users\ASUS\Documents\PBO LANJUT\latihan1>
```

Contoh 2



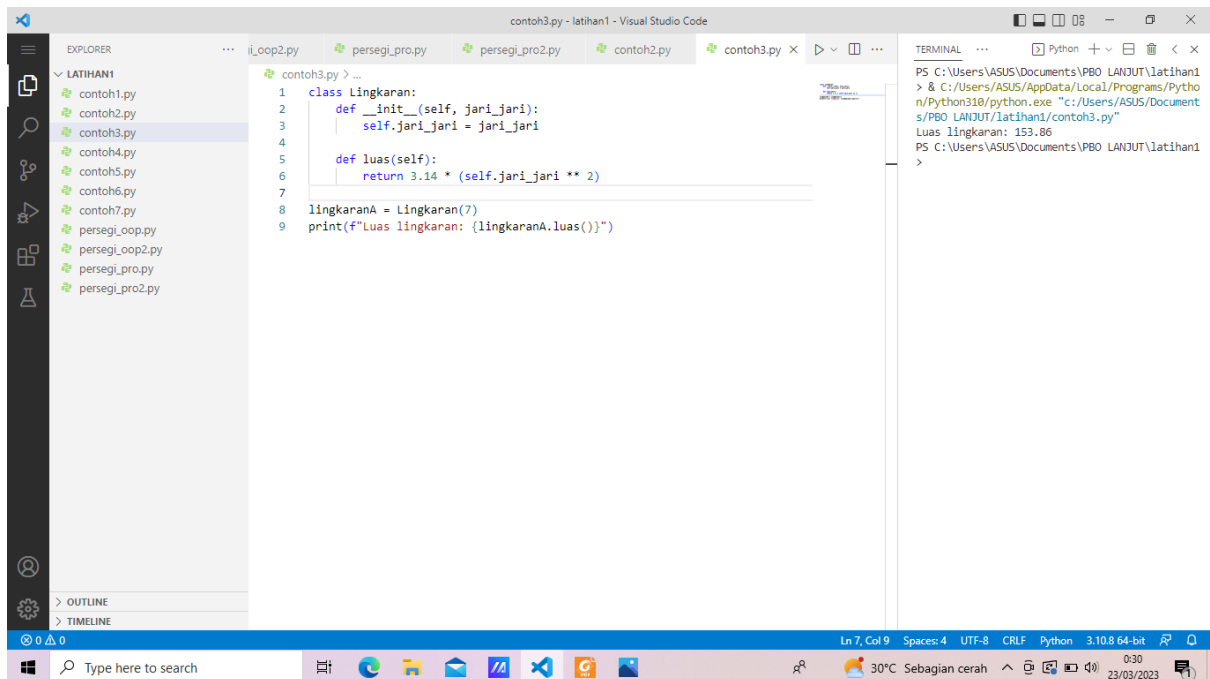
The screenshot shows the Visual Studio Code interface with a file explorer on the left, a code editor in the center, and a terminal on the right. The file explorer shows a project named 'LATIHAN1' with several Python files. The code editor displays the following Python code in 'contoh2.py':

```
1 class Mahasiswa:
2
3     def __init__(self, nama, npm):
4         self.nama = nama
5         self.npm = npm
6
7     def info(self):
8         print(f>Nama: {self.nama}\nNPM: {self.npm}")
9
10 mahasiswaA = Mahasiswa("Ahmad", "123456789")
11 mahasiswaA.info()
```

The terminal on the right shows the execution of the code:

```
PS C:\Users\ASUS\Documents\PBO LANJUT\latihan1> & C:/Users/ASUS/AppData/Local/Programs/Python/Python310/python.exe "C:/Users/ASUS/Documents/PBO LANJUT/latihan1/contoh2.py"
Nama: Ahmad
NPM: 123456789
PS C:\Users\ASUS\Documents\PBO LANJUT\latihan1>
```

Contoh 3



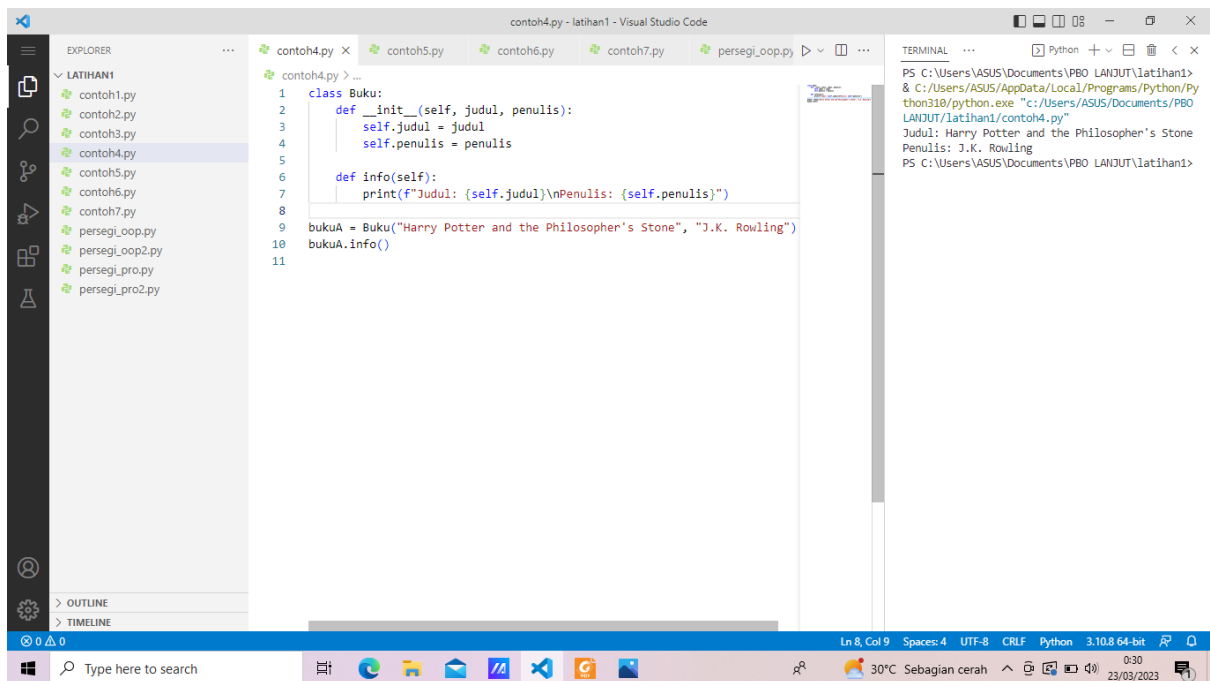
The screenshot shows the Visual Studio Code interface with a file explorer on the left, a code editor in the center, and a terminal on the right. The file explorer shows a project named 'LATIHAN1' with several Python files. The code editor displays the contents of 'contoh3.py', which defines a class 'Lingkaran' with an initialization method and a 'luas' method to calculate the area. The terminal shows the command to run the script and the output, which is 'Luas lingkaran: 153.86'.

```
1 class Lingkaran:
2     def __init__(self, jari_jari):
3         self.jari_jari = jari_jari
4
5     def luas(self):
6         return 3.14 * (self.jari_jari ** 2)
7
8 lingkaranA = Lingkaran(7)
9 print(f"Luas lingkaran: {lingkaranA.luas()}")
```

Terminal output:

```
PS C:\Users\ASUS\Documents\PBO LANJUT\latihan1> & C:/Users/ASUS/AppData/Local/Programs/Python/Python310/python.exe "c:/Users/ASUS/Documents/PBO LANJUT/latihan1/contoh3.py"
Luas lingkaran: 153.86
PS C:\Users\ASUS\Documents\PBO LANJUT\latihan1>
```

Contoh 4



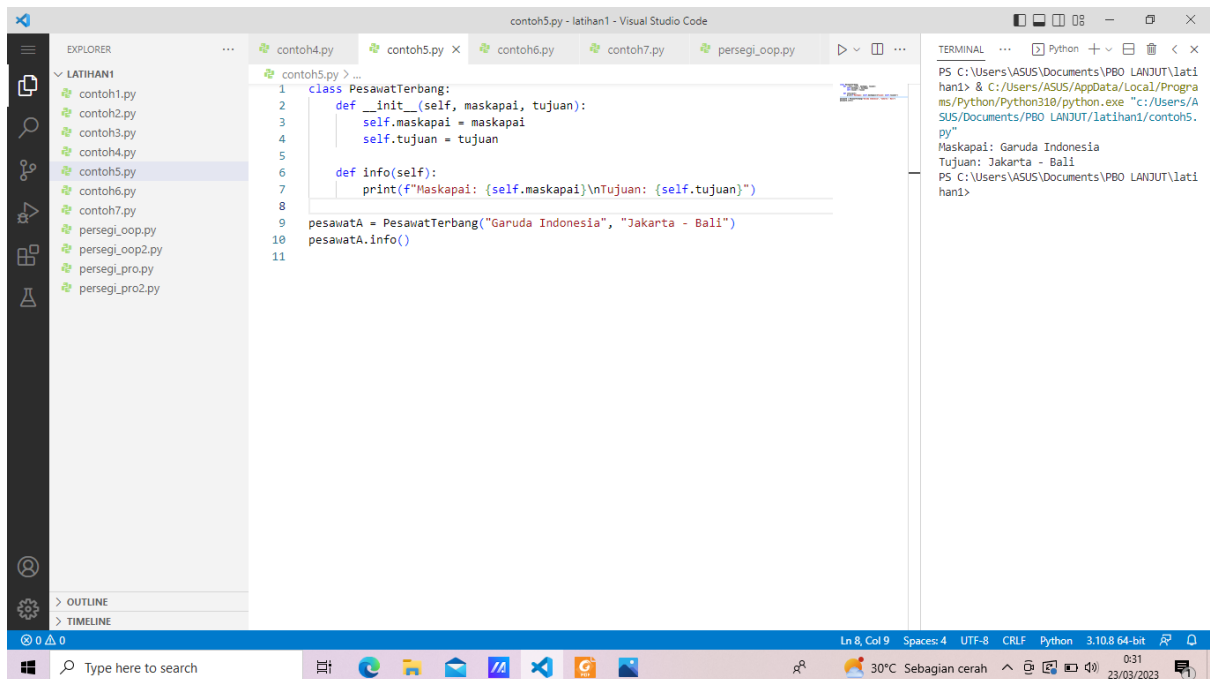
The screenshot shows the Visual Studio Code interface with a file explorer on the left, a code editor in the center, and a terminal on the right. The file explorer shows a project named 'LATIHAN1' with several Python files. The code editor displays the contents of 'contoh4.py', which defines a class 'Buku' with an initialization method and an 'info' method to print the book's details. The terminal shows the command to run the script and the output, which is 'Judul: Harry Potter and the Philosopher's Stone\nPenulis: J.K. Rowling'.

```
1 class Buku:
2     def __init__(self, judul, penulis):
3         self.judul = judul
4         self.penulis = penulis
5
6     def info(self):
7         print(f"Judul: {self.judul}\nPenulis: {self.penulis}")
8
9 bukuA = Buku("Harry Potter and the Philosopher's Stone", "J.K. Rowling")
10 bukuA.info()
11
```

Terminal output:

```
PS C:\Users\ASUS\Documents\PBO LANJUT\latihan1> & C:/Users/ASUS/AppData/Local/Programs/Python/Python310/python.exe "c:/Users/ASUS/Documents/PBO LANJUT/latihan1/contoh4.py"
Judul: Harry Potter and the Philosopher's Stone
Penulis: J.K. Rowling
PS C:\Users\ASUS\Documents\PBO LANJUT\latihan1>
```

Contoh 5



The screenshot shows the Visual Studio Code interface with a file explorer on the left containing a folder named 'LATIHAN1' with several Python files. The main editor displays 'contoh5.py' with the following code:

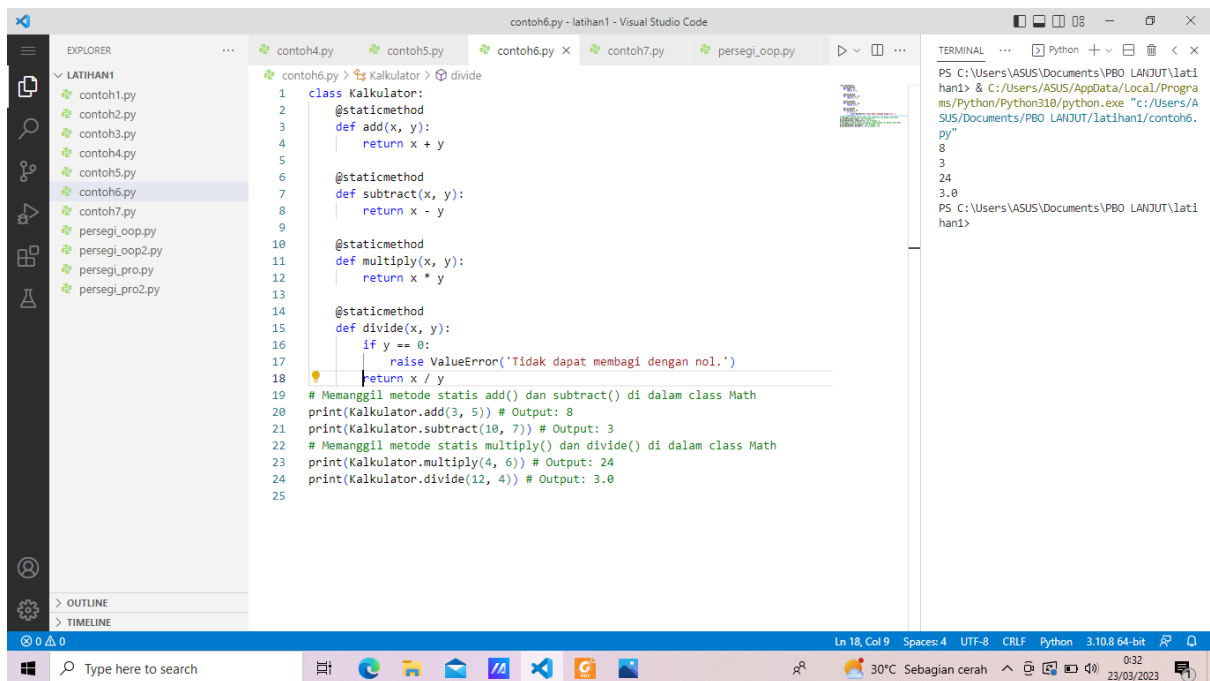
```
1 class PesawatTerbang:
2     def __init__(self, maskapai, tujuan):
3         self.maskapai = maskapai
4         self.tujuan = tujuan
5
6     def info(self):
7         print(f'Maskapai: {self.maskapai}\nTujuan: {self.tujuan}')
8
9 pesawatA = PesawatTerbang("Garuda Indonesia", "Jakarta - Bali")
10 pesawatA.info()
11
```

The terminal on the right shows the execution output:

```
PS C:\Users\ASUS\Documents\PBO LANOUT\latihan1> python.exe "c:/Users/ASUS/Documents/PBO LANOUT/latihan1/contoh5.py"
Maskapai: Garuda Indonesia
Tujuan: Jakarta - Bali
PS C:\Users\ASUS\Documents\PBO LANOUT\latihan1>
```

The status bar at the bottom indicates the file is at line 8, column 9, using UTF-8 encoding, with 4 spaces and CRLF line endings. The system tray shows a temperature of 30°C and the date 23/03/2023.

Contoh 6



The screenshot shows the Visual Studio Code interface with a file explorer on the left containing a folder named 'LATIHAN1' with several Python files. The main editor displays 'contoh6.py' with the following code:

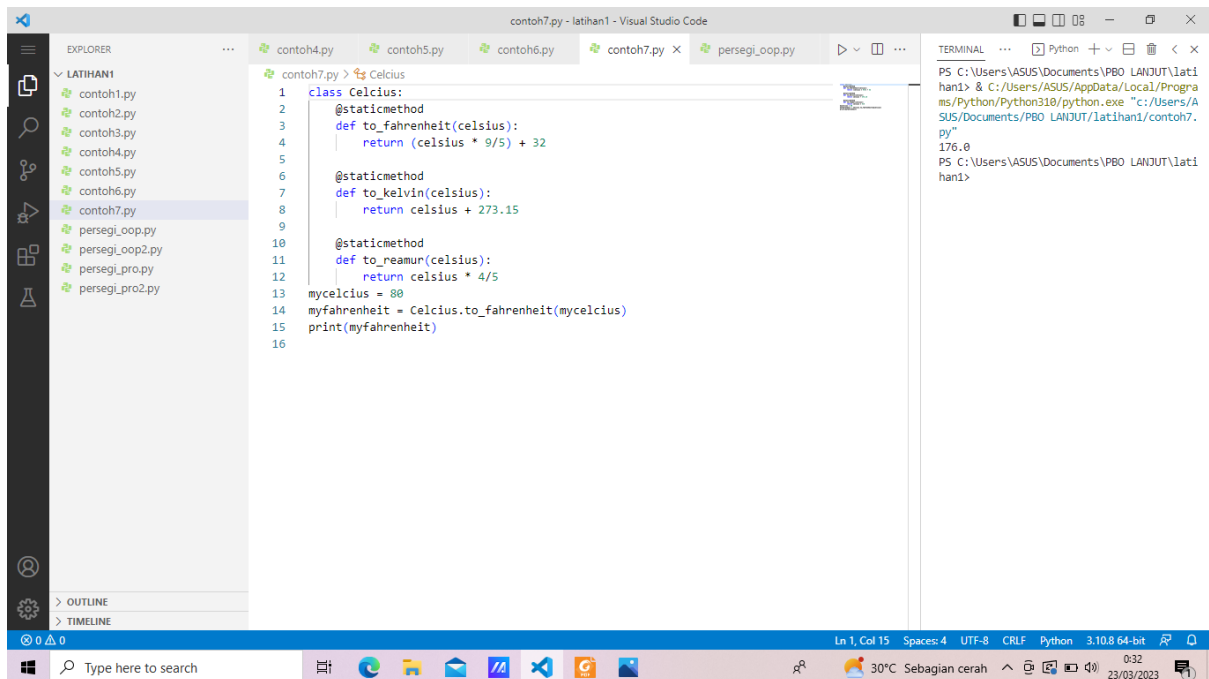
```
1 class Kalkulator:
2     @staticmethod
3     def add(x, y):
4         return x + y
5
6     @staticmethod
7     def subtract(x, y):
8         return x - y
9
10    @staticmethod
11    def multiply(x, y):
12        return x * y
13
14    @staticmethod
15    def divide(x, y):
16        if y == 0:
17            raise ValueError('Tidak dapat membagi dengan nol.')
18        return x / y
19
20 # Memanggil metode statis add() dan subtract() di dalam class Math
21 print(Kalkulator.add(3, 5)) # Output: 8
22 print(Kalkulator.subtract(10, 7)) # Output: 3
23 # Memanggil metode statis multiply() dan divide() di dalam class Math
24 print(Kalkulator.multiply(4, 6)) # Output: 24
25 print(Kalkulator.divide(12, 4)) # Output: 3.0
26
```

The terminal on the right shows the execution output:

```
PS C:\Users\ASUS\Documents\PBO LANOUT\latihan1> python.exe "c:/Users/ASUS/Documents/PBO LANOUT/latihan1/contoh6.py"
8
3
24
3.0
PS C:\Users\ASUS\Documents\PBO LANOUT\latihan1>
```

The status bar at the bottom indicates the file is at line 18, column 9, using UTF-8 encoding, with 4 spaces and CRLF line endings. The system tray shows a temperature of 30°C and the date 23/03/2023.

Contoh 7

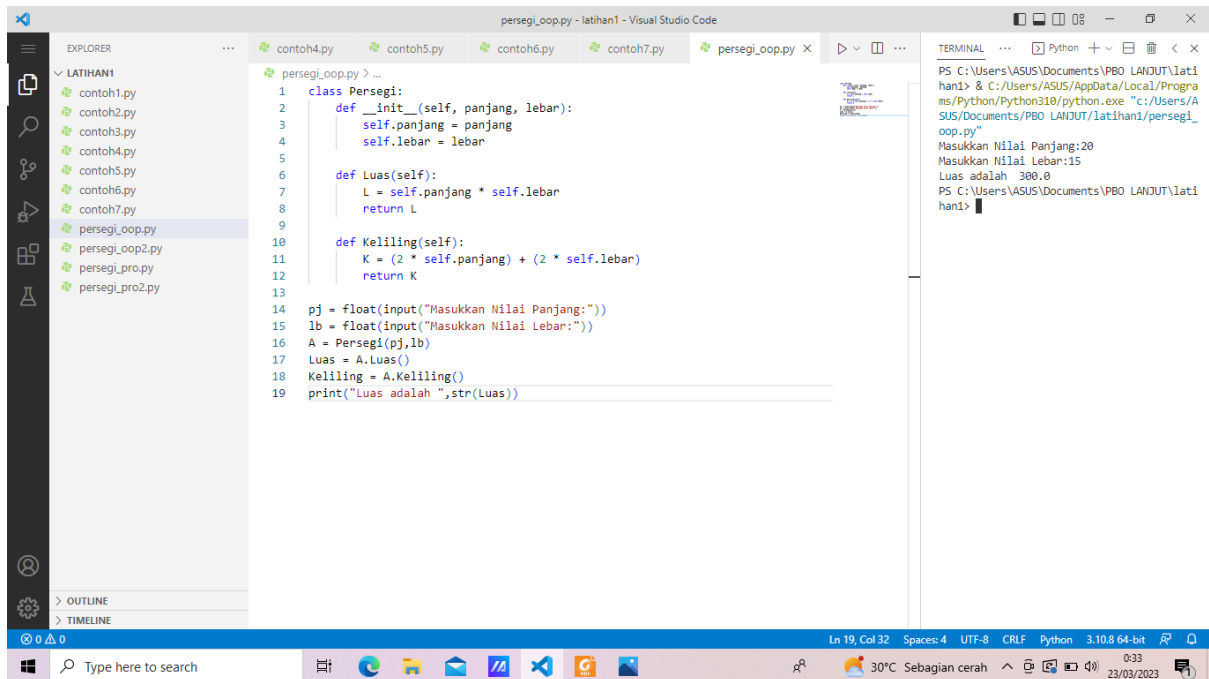


The screenshot shows the Visual Studio Code interface with the file explorer on the left displaying a project named 'LATIHAN1' containing several Python files. The main editor window shows the file 'contoh7.py' which contains a Python class named 'Celcius' with three static methods: 'to_fahrenheit', 'to_kelvin', and 'to_reamur'. Below the class definition, there is an instance 'mycelcius' with a value of 80, and two lines of code that use the 'to_fahrenheit' method to calculate and print the equivalent Fahrenheit value.

```
1 class Celcius:
2     @staticmethod
3     def to_fahrenheit(celsius):
4         return (celsius * 9/5) + 32
5
6     @staticmethod
7     def to_kelvin(celsius):
8         return celsius + 273.15
9
10    @staticmethod
11    def to_reamur(celsius):
12        return celsius * 4/5
13
14    mycelcius = 80
15    myfahrenheit = Celcius.to_fahrenheit(mycelcius)
16    print(myfahrenheit)
```

The terminal window on the right shows the execution of the script, displaying the output '176.0'.

Persegi_oop

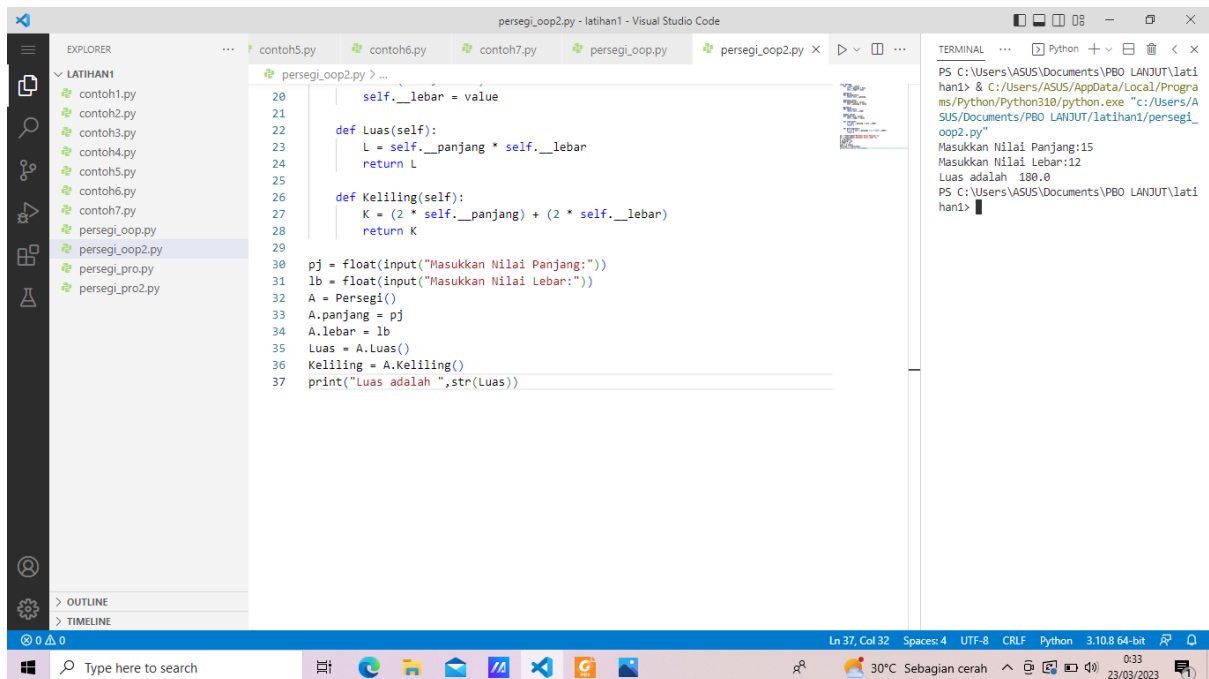


The screenshot shows the Visual Studio Code interface with the file explorer on the left displaying a project named 'LATIHAN1' containing several Python files. The main editor window shows the file 'persegi_oop.py' which contains a Python class named 'Persegi' with three methods: '__init__', 'Luas', and 'Keliling'. Below the class definition, there is an instance 'A' of the 'Persegi' class, and two lines of code that use the 'Luas' and 'Keliling' methods to calculate and print the area and perimeter of a square.

```
1 class Persegi:
2     def __init__(self, panjang, lebar):
3         self.panjang = panjang
4         self.lebar = lebar
5
6     def Luas(self):
7         L = self.panjang * self.lebar
8         return L
9
10    def Keliling(self):
11        K = (2 * self.panjang) + (2 * self.lebar)
12        return K
13
14    pj = float(input("Masukkan Nilai Panjang:"))
15    lb = float(input("Masukkan Nilai Lebar:"))
16    A = Persegi(pj,lb)
17    Luas = A.Luas()
18    Keliling = A.Keliling()
19    print("Luas adalah ",str(Luas))
```

The terminal window on the right shows the execution of the script, displaying the output 'Masukkan Nilai Panjang:20' and 'Masukkan Nilai Lebar:15' followed by the calculated area 'Luas adalah 300.0'.

Persegi_oop2

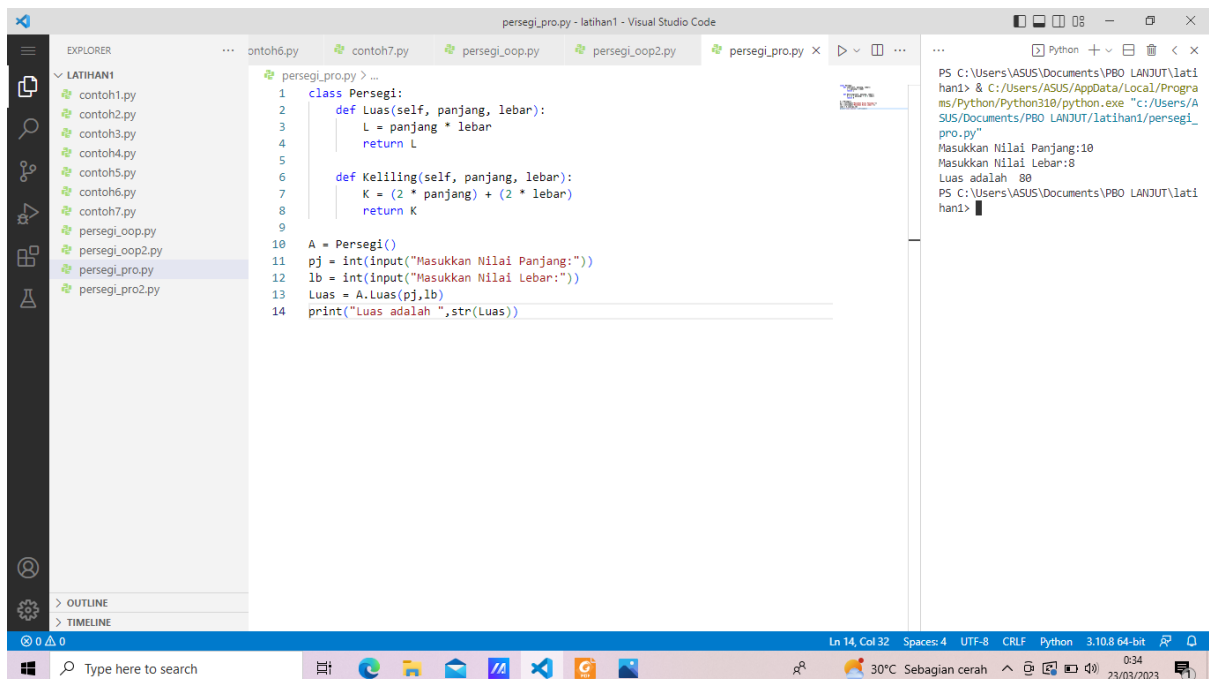


```
20     self.__lebar = value
21
22     def Luas(self):
23         L = self.__panjang * self.__lebar
24         return L
25
26     def Keliling(self):
27         K = (2 * self.__panjang) + (2 * self.__lebar)
28         return K
29
30 pj = float(input("Masukkan Nilai Panjang:"))
31 lb = float(input("Masukkan Nilai Lebar:"))
32 A = Persegi()
33 A.panjang = pj
34 A.lebar = lb
35 Luas = A.Luas()
36 Keliling = A.Keliling()
37 print("Luas adalah ",str(Luas))
```

TERMINAL

```
PS C:\Users\ASUS\Documents\PBO LANOUT\latihan1> & C:/Users/ASUS/AppData/Local/Programs/Python/Python310/python.exe "c:/Users/ASUS/Documents/PBO LANOUT/latihan1/persegi_oop2.py"
Masukkan Nilai Panjang:15
Masukkan Nilai Lebar:12
Luas adalah 180.0
PS C:\Users\ASUS\Documents\PBO LANOUT\latihan1>
```

Persegi_pro

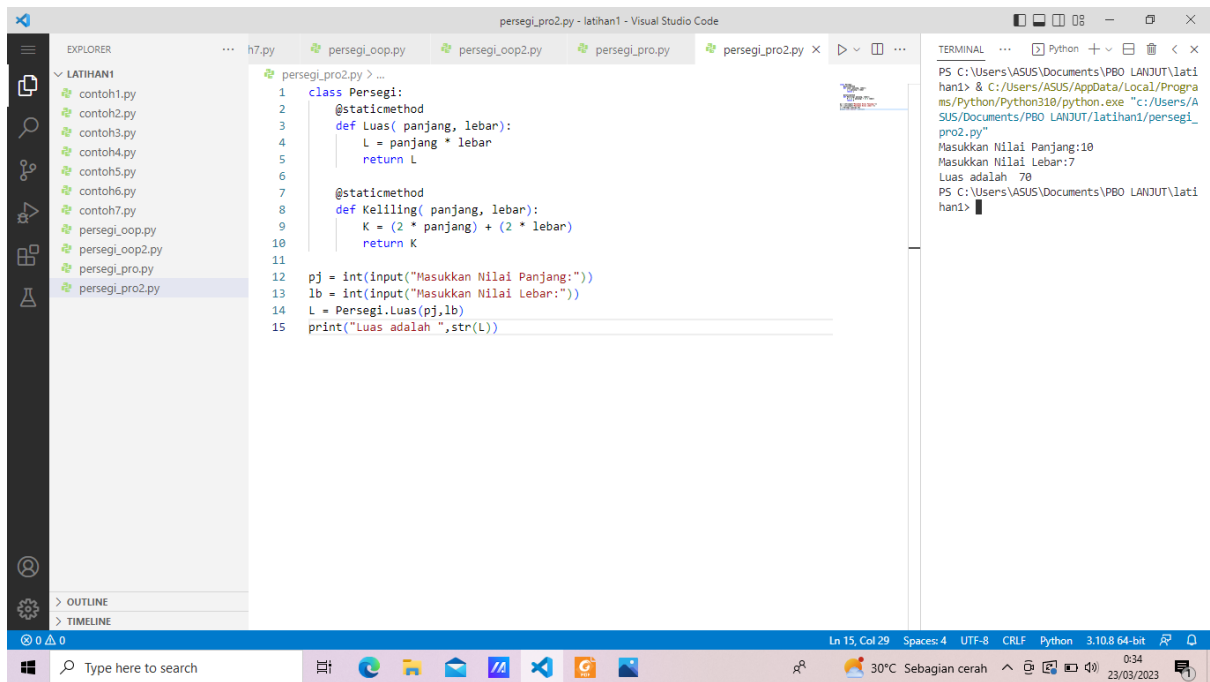


```
1 class Persegi:
2     def Luas(self, panjang, lebar):
3         L = panjang * lebar
4         return L
5
6     def Keliling(self, panjang, lebar):
7         K = (2 * panjang) + (2 * lebar)
8         return K
9
10 A = Persegi()
11 pj = int(input("Masukkan Nilai Panjang:"))
12 lb = int(input("Masukkan Nilai Lebar:"))
13 Luas = A.Luas(pj,lb)
14 print("Luas adalah ",str(Luas))
```

TERMINAL

```
PS C:\Users\ASUS\Documents\PBO LANOUT\latihan1> & C:/Users/ASUS/AppData/Local/Programs/Python/Python310/python.exe "c:/Users/ASUS/Documents/PBO LANOUT/latihan1/persegi_pro.py"
Masukkan Nilai Panjang:10
Masukkan Nilai Lebar:8
Luas adalah 80
PS C:\Users\ASUS\Documents\PBO LANOUT\latihan1>
```

Persegi_pro2



```
persegi_pro2.py - latihan1 - Visual Studio Code

EXPLORER
└─ LATIHAN1
   ├── contoh1.py
   ├── contoh2.py
   ├── contoh3.py
   ├── contoh4.py
   ├── contoh5.py
   ├── contoh6.py
   ├── contoh7.py
   ├── persegi_oop.py
   ├── persegi_oop2.py
   ├── persegi_pro.py
   └── persegi_pro2.py

persegi_pro2.py
1 class Persegi:
2     @staticmethod
3     def Luas( panjang, lebar):
4         L = panjang * lebar
5         return L
6
7     @staticmethod
8     def Keliling( panjang, lebar):
9         K = (2 * panjang) + (2 * lebar)
10        return K
11
12 pj = int(input("Masukkan Nilai Panjang:"))
13 lb = int(input("Masukkan Nilai Lebar:"))
14 L = Persegi.Luas(pj,lb)
15 print("Luas adalah ",str(L))

TERMINAL
PS C:\Users\ASUS\Documents\PBO LANDUT\latihan1> & C:/Users/ASUS/AppData/Local/Programs/Python/Python310/python.exe "c:/Users/ASUS/Documents/PBO LANDUT/latihan1/persegi_pro2.py"
Masukkan Nilai Panjang:10
Masukkan Nilai Lebar:7
Luas adalah 70
PS C:\Users\ASUS\Documents\PBO LANDUT\latihan1>
```