

# LAPORAN PRAKTIKUM

PEMROGRAMAN BERORIENTASI OBJEK LANJUT

2023



Prepared By:  
**LAIS CAKRAWATI**  
**TI21 A**  
**210511002**

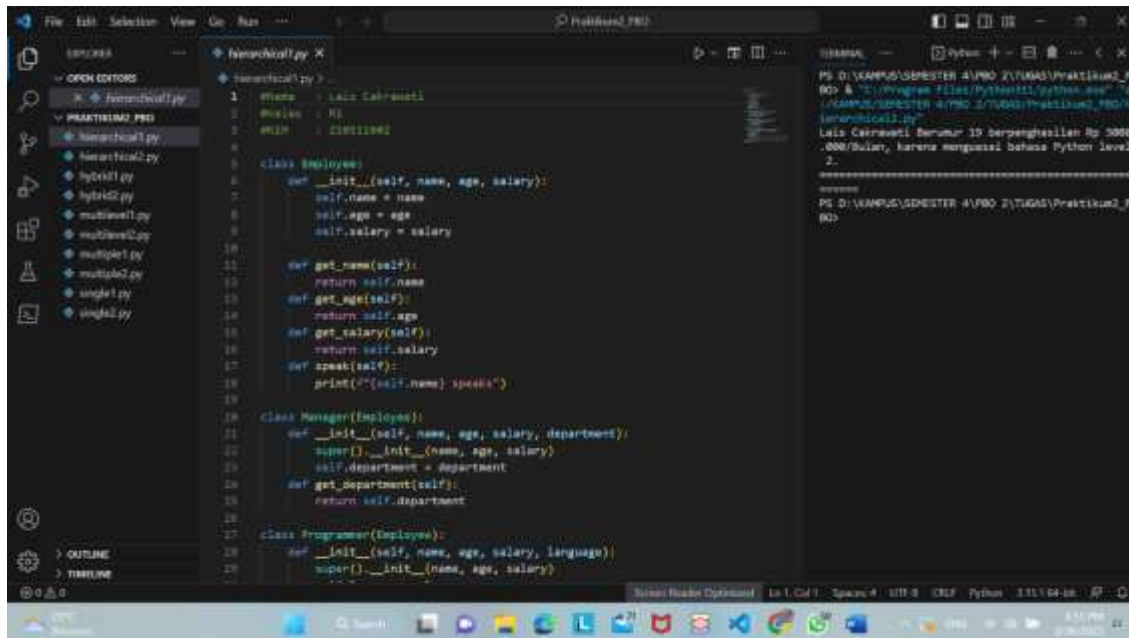
NAMA : LAIS CAKRAWATI

KELAS : TI21 A

NIM : 210511002

PRAKTIKUM-2 PBO2

## Hierarchical-1

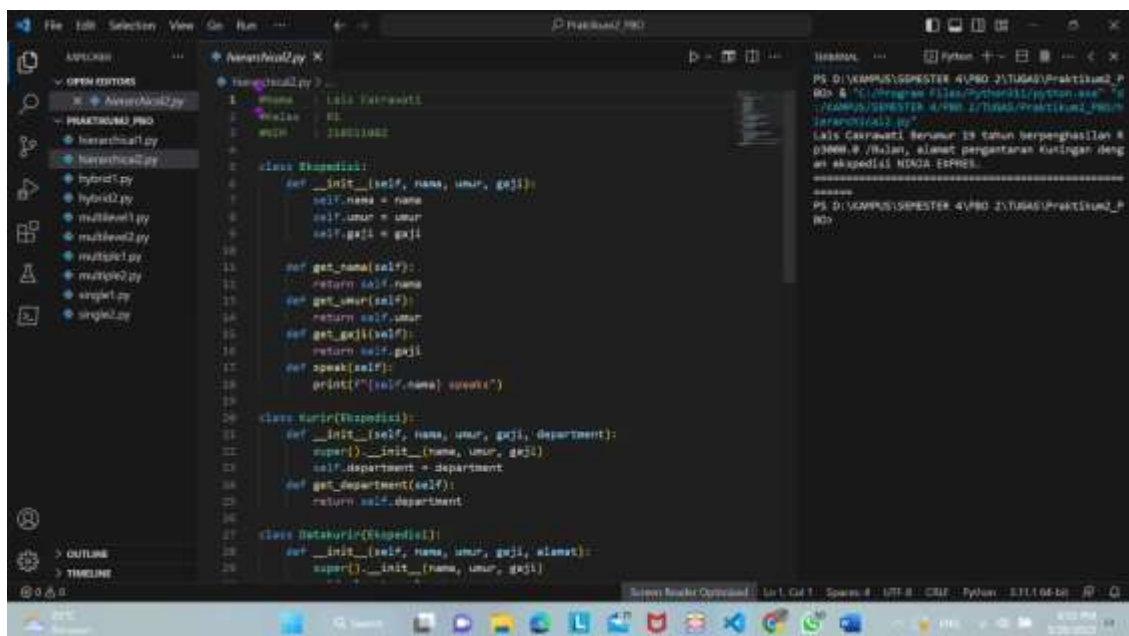


```
1 #nama : lais cakrawati
2 #kelas : TI
3 #NIM : 210511002
4
5 class Employee:
6     def __init__(self, name, age, salary):
7         self.name = name
8         self.age = age
9         self.salary = salary
10
11     def get_name(self):
12         return self.name
13     def get_age(self):
14         return self.age
15     def get_salary(self):
16         return self.salary
17     def speak(self):
18         print(f"{self.name} speaks")
19
20 class Manager(Employee):
21     def __init__(self, name, age, salary, department):
22         super().__init__(name, age, salary)
23         self.department = department
24     def get_department(self):
25         return self.department
26
27 class Programmer(Employee):
28     def __init__(self, name, age, salary, language):
29         super().__init__(name, age, salary)
```

Output:

```
PS D:\KAMPUS\SEMESTER 4\PRO 2\TUGAS\Praktikum2_PBO & TI\Program Files\Python311\python.exe "D:\KAMPUS\SEMESTER 4\PRO 2\TUGAS\Praktikum2_PBO\Hierarchical1.py"
Lais Cakrawati Berumur 19 berpenghasilan Rp 3000.000/Bulan, karena menguasai Bahasa Python level 2.
=====
PS D:\KAMPUS\SEMESTER 4\PRO 2\TUGAS\Praktikum2_PBO
```

## Hierarchical-2

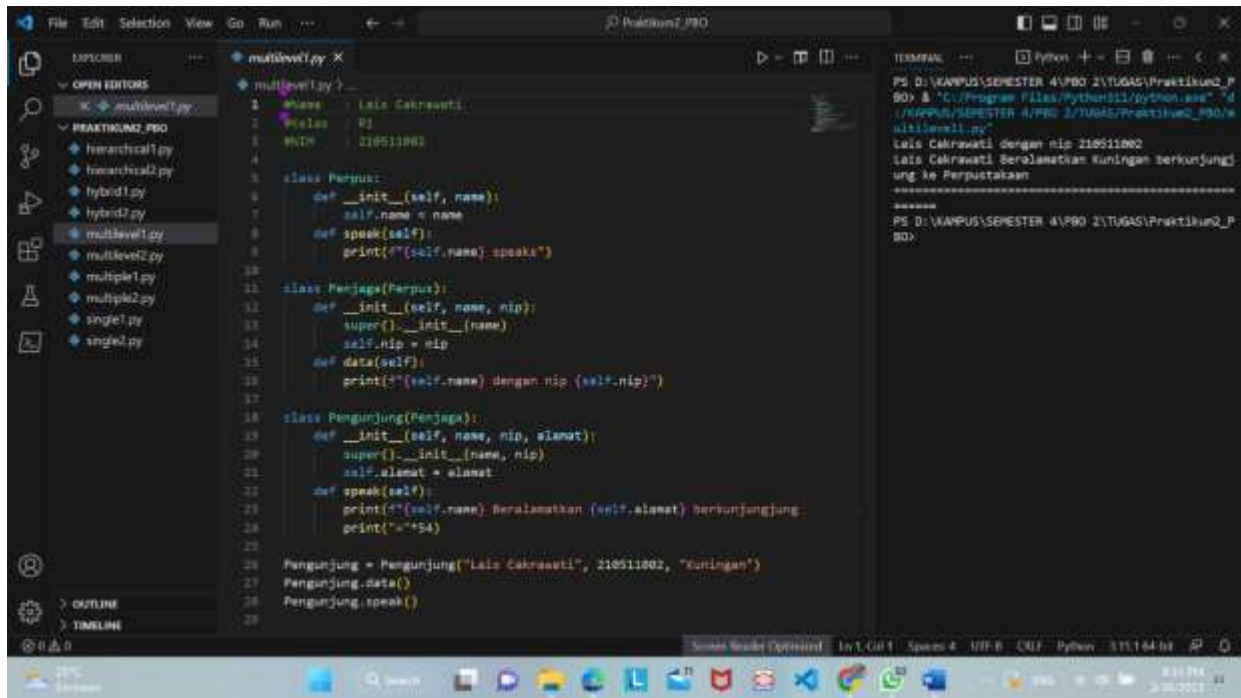


```
1 #nama : lais cakrawati
2 #kelas : TI
3 #NIM : 210511002
4
5 class Kspedisi:
6     def __init__(self, nama, umur, gaji):
7         self.nama = nama
8         self.umur = umur
9         self.gaji = gaji
10
11     def get_nama(self):
12         return self.nama
13     def get_umur(self):
14         return self.umur
15     def get_gaji(self):
16         return self.gaji
17     def speak(self):
18         print(f"{self.nama} speaks")
19
20 class Kurir(Kspedisi):
21     def __init__(self, nama, umur, gaji, department):
22         super().__init__(nama, umur, gaji)
23         self.department = department
24     def get_department(self):
25         return self.department
26
27 class PaketKurir(Kspedisi):
28     def __init__(self, nama, umur, gaji, alamat):
29         super().__init__(nama, umur, gaji)
```

Output:

```
PS D:\KAMPUS\SEMESTER 4\PRO 2\TUGAS\Praktikum2_PBO & TI\Program Files\Python311\python.exe "D:\KAMPUS\SEMESTER 4\PRO 2\TUGAS\Praktikum2_PBO\Hierarchical2.py"
Lais Cakrawati Berumur 19 tahun berpenghasilan 8.000000/Bulan, alamat pengantaran Kurirnya dengan ekspedisi NENGA EXPRESS.
=====
PS D:\KAMPUS\SEMESTER 4\PRO 2\TUGAS\Praktikum2_PBO
```

## Multilevel-1



```
File Edit Selection View Go Run ... multilevel1.py
EXPLORER
  OPEN EDITORS
    multilevel1.py
  PRAKTIKUM2_PBO
    hierarchical1.py
    hierarchical2.py
    hybrid1.py
    hybrid2.py
    multilevel1.py
    multilevel2.py
    multiple1.py
    multiple2.py
    single1.py
    single2.py
  OUTLINE
  TIMELINE
  0.0

1 #Name : Laila Cakrawati
2 #Kelas : R1
3 #NIM : 210511802
4
5 class Perpustakaan:
6     def __init__(self, name):
7         self.name = name
8     def speak(self):
9         print(f"{self.name} speaks")
10
11 class Penjual(Perpustakaan):
12     def __init__(self, name, nip):
13         super().__init__(name)
14         self.nip = nip
15     def data(self):
16         print(f"{self.name} dengan nip {self.nip}")
17
18 class Pengunjung(Penjual):
19     def __init__(self, name, nip, alamat):
20         super().__init__(name, nip)
21         self.alamat = alamat
22     def speak(self):
23         print(f"{self.name} Beralamatkan {self.alamat} berkunjung ke Perpustakaan")
24         print("~"*54)
25
26 Pengunjung = Pengunjung("Laila Cakrawati", 210511802, "Kuningan")
27 Pengunjung.data()
28 Pengunjung.speak()
```

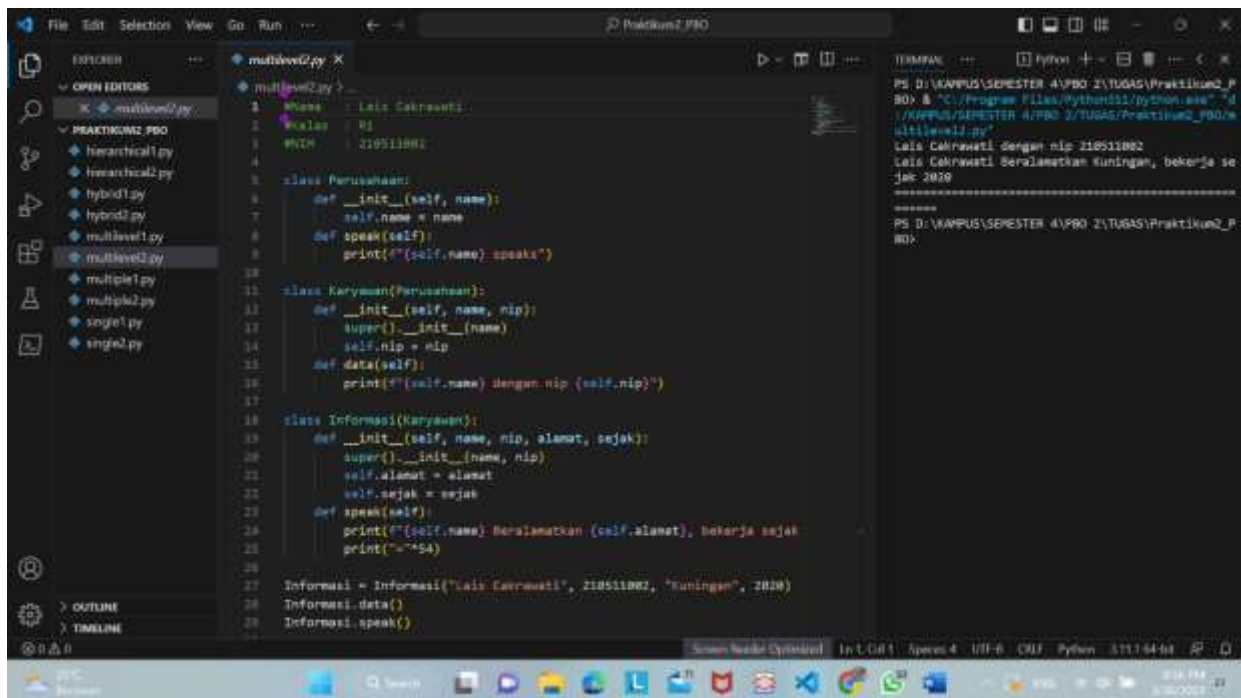
PS D:\KAMPUS\SEMESTER 4\PRO 2\TUGAS\Praktikum2\_PBO> python multilevel1.py

Laila Cakrawati dengan nip 210511802

Laila Cakrawati Beralamatkan Kuningan berkunjung ke Perpustakaan

PS D:\KAMPUS\SEMESTER 4\PRO 2\TUGAS\Praktikum2\_PBO>

## Multilevel-2



```
File Edit Selection View Go Run ... multilevel2.py
EXPLORER
  OPEN EDITORS
    multilevel2.py
  PRAKTIKUM2_PBO
    hierarchical1.py
    hierarchical2.py
    hybrid1.py
    hybrid2.py
    multilevel1.py
    multilevel2.py
    multiple1.py
    multiple2.py
    single1.py
    single2.py
  OUTLINE
  TIMELINE
  0.0

1 #Name : Laila Cakrawati
2 #Kelas : R1
3 #NIM : 210511802
4
5 class Perusahaan:
6     def __init__(self, name):
7         self.name = name
8     def speak(self):
9         print(f"{self.name} speaks")
10
11 class Karyawan(Perusahaan):
12     def __init__(self, name, nip):
13         super().__init__(name)
14         self.nip = nip
15     def data(self):
16         print(f"{self.name} dengan nip {self.nip}")
17
18 class Informasi(Karyawan):
19     def __init__(self, name, nip, alamat, sejak):
20         super().__init__(name, nip)
21         self.alamat = alamat
22         self.sejak = sejak
23     def speak(self):
24         print(f"{self.name} Beralamatkan {self.alamat}, bekerja sejak {self.sejak}")
25         print("~"*54)
26
27 Informasi = Informasi("Laila Cakrawati", 210511802, "Kuningan", 2020)
28 Informasi.data()
29 Informasi.speak()
```

PS D:\KAMPUS\SEMESTER 4\PRO 2\TUGAS\Praktikum2\_PBO> python multilevel2.py

Laila Cakrawati dengan nip 210511802

Laila Cakrawati Beralamatkan Kuningan, bekerja sejak 2020

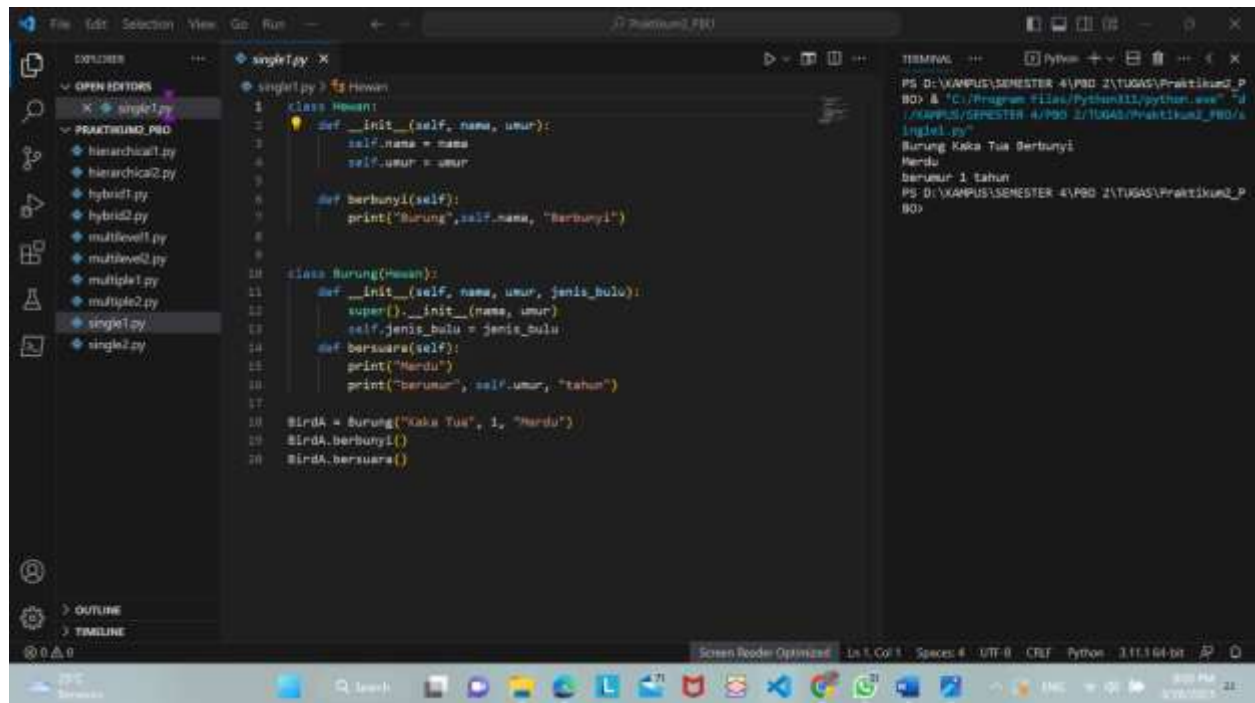
PS D:\KAMPUS\SEMESTER 4\PRO 2\TUGAS\Praktikum2\_PBO>

## Multiple-1

## Multiple-2



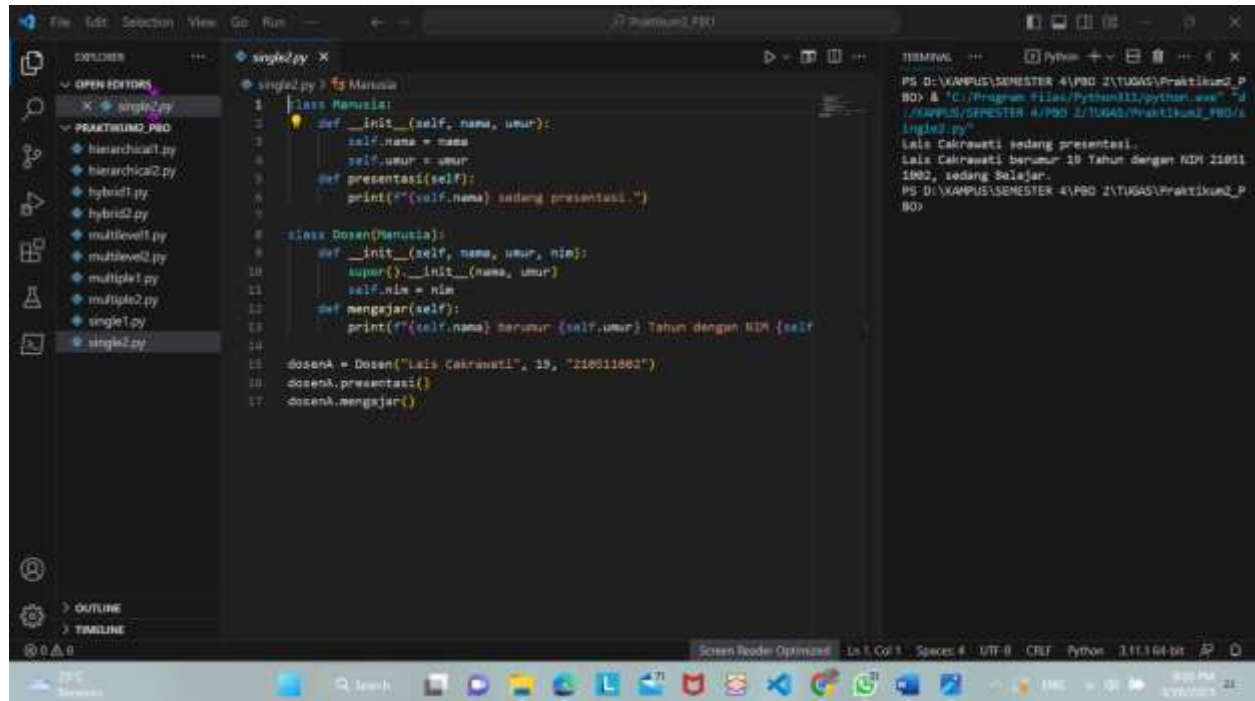
## Single-1



```
1 class Hewan:
2     def __init__(self, nama, umur):
3         self.nama = nama
4         self.umur = umur
5
6     def berbunyi(self):
7         print("Burung", self.nama, "Berbunyi")
8
9
10 class Burung(Hewan):
11     def __init__(self, nama, umur, jenis_bulu):
12         super().__init__(nama, umur)
13         self.jenis_bulu = jenis_bulu
14     def bersuara(self):
15         print("Merdu")
16         print("berumur", self.umur, "tahun")
17
18 BirdA = Burung("Kaka Tua", 1, "Merdu")
19 BirdA.berbunyi()
20 BirdA.bersuara()
```

PS D:\XAMPUS\SEMESTER 4\PSD 2\TUGAS\Praktikum2\_P80> & "C:/Program Files/Python311/python.exe" "d:/XAMPUS/SEMESTER 4/PSD 2/TUGAS/Praktikum2\_P80/singl1.py"  
Burung Kaka Tua Berbunyi  
Merdu  
Berumur 1 tahun

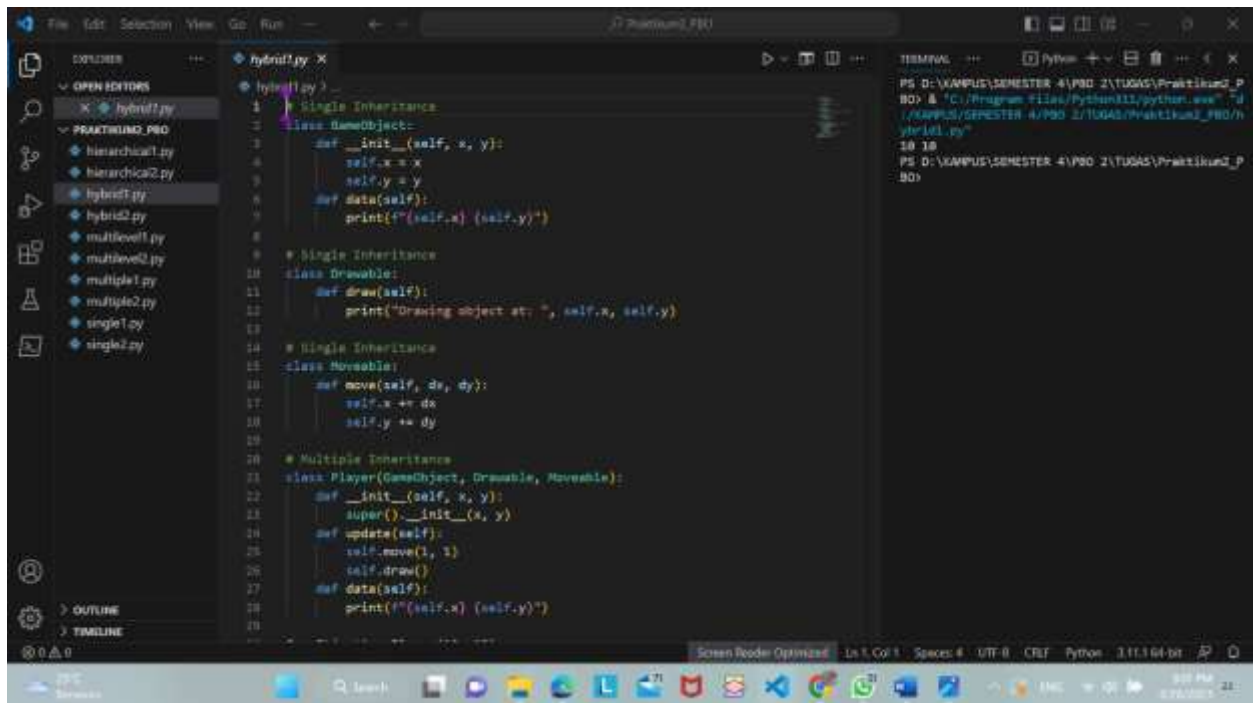
## Single-2



```
1 class Manusia:
2     def __init__(self, nama, umur):
3         self.nama = nama
4         self.umur = umur
5     def presentasi(self):
6         print(f"{self.nama} sedang presentasi.")
7
8 class Dosen(Manusia):
9     def __init__(self, nama, umur, nim):
10         super().__init__(nama, umur)
11         self.nim = nim
12     def mengajar(self):
13         print(f"{self.nama} berumur {self.umur} Tahun dengan NIM {self.nim}")
14
15 dosenA = Dosen("Laila Cakrawati", 19, "218011802")
16 dosenA.presentasi()
17 dosenA.mengajar()
```

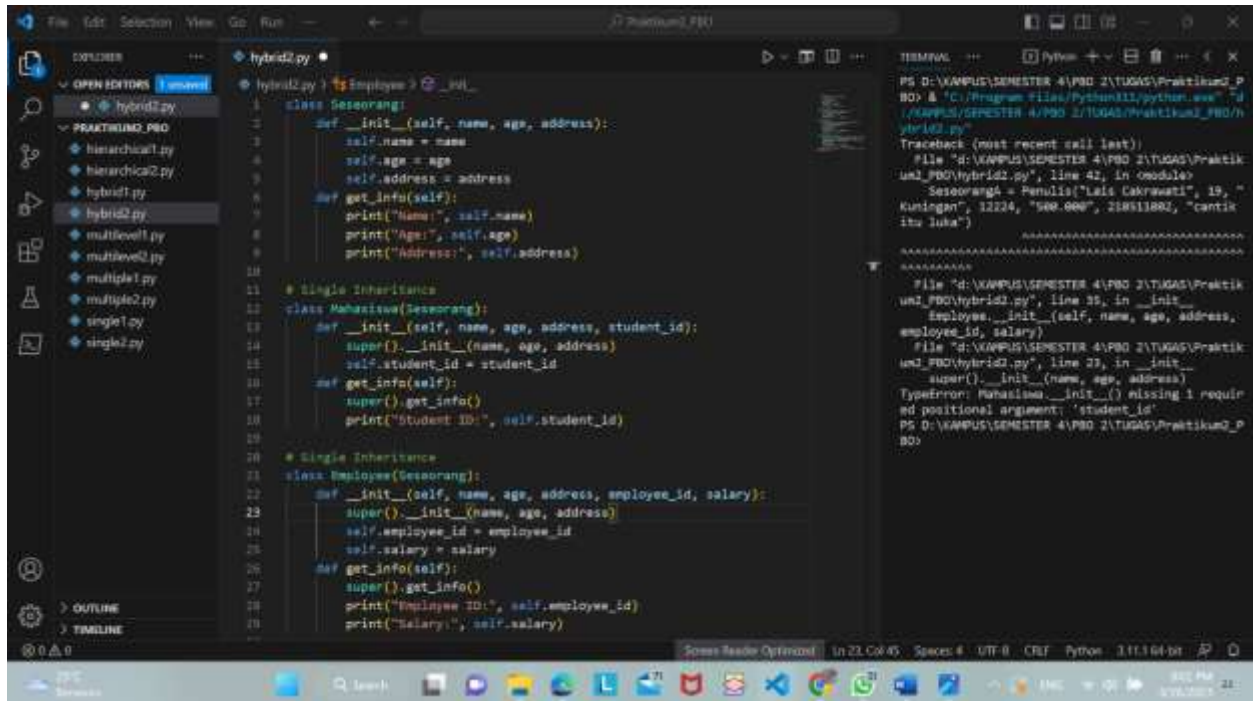
PS D:\XAMPUS\SEMESTER 4\PSD 2\TUGAS\Praktikum2\_P80> & "C:/Program Files/Python311/python.exe" "d:/XAMPUS/SEMESTER 4/PSD 2/TUGAS/Praktikum2\_P80/singl2.py"  
Laila Cakrawati sedang presentasi.  
Laila Cakrawati berumur 19 Tahun dengan NIM 218011802, sedang Belajar.  
PS D:\XAMPUS\SEMESTER 4\PSD 2\TUGAS\Praktikum2\_P80>

## Hybrid-1



```
1 # Single Inheritance
2 class GameObject:
3     def __init__(self, x, y):
4         self.x = x
5         self.y = y
6     def data(self):
7         print(f"({self.x}) ({self.y})")
8
9 # Single Inheritance
10 class Drawable:
11     def draw(self):
12         print("Drawing object at: ", self.x, self.y)
13
14 # Single Inheritance
15 class Moveable:
16     def move(self, dx, dy):
17         self.x += dx
18         self.y += dy
19
20 # Multiple Inheritance
21 class Player(GameObject, Drawable, Moveable):
22     def __init__(self, x, y):
23         super().__init__(x, y)
24     def update(self):
25         self.move(1, 1)
26         self.draw()
27     def data(self):
28         print(f"({self.x}) ({self.y})")
```

## Hybrid-2



```
1 class Seseorang:
2     def __init__(self, name, age, address):
3         self.name = name
4         self.age = age
5         self.address = address
6     def get_info(self):
7         print("Name:", self.name)
8         print("Age:", self.age)
9         print("Address:", self.address)
10
11 # Single Inheritance
12 class Mahasiswa(Seseorang):
13     def __init__(self, name, age, address, student_id):
14         super().__init__(name, age, address)
15         self.student_id = student_id
16     def get_info(self):
17         super().get_info()
18         print("Student ID:", self.student_id)
19
20 # Single Inheritance
21 class Employee(Seseorang):
22     def __init__(self, name, age, address, employee_id, salary):
23         super().__init__(name, age, address)
24         self.employee_id = employee_id
25         self.salary = salary
26     def get_info(self):
27         super().get_info()
28         print("Employee ID:", self.employee_id)
29         print("Salary:", self.salary)
```