LAPORAN PRAKTIKUM

PEMROGRAMAN BERORIENTASI OBJEK LANJUT

2023

Prepared By:

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210510003

D3

Praktikum :

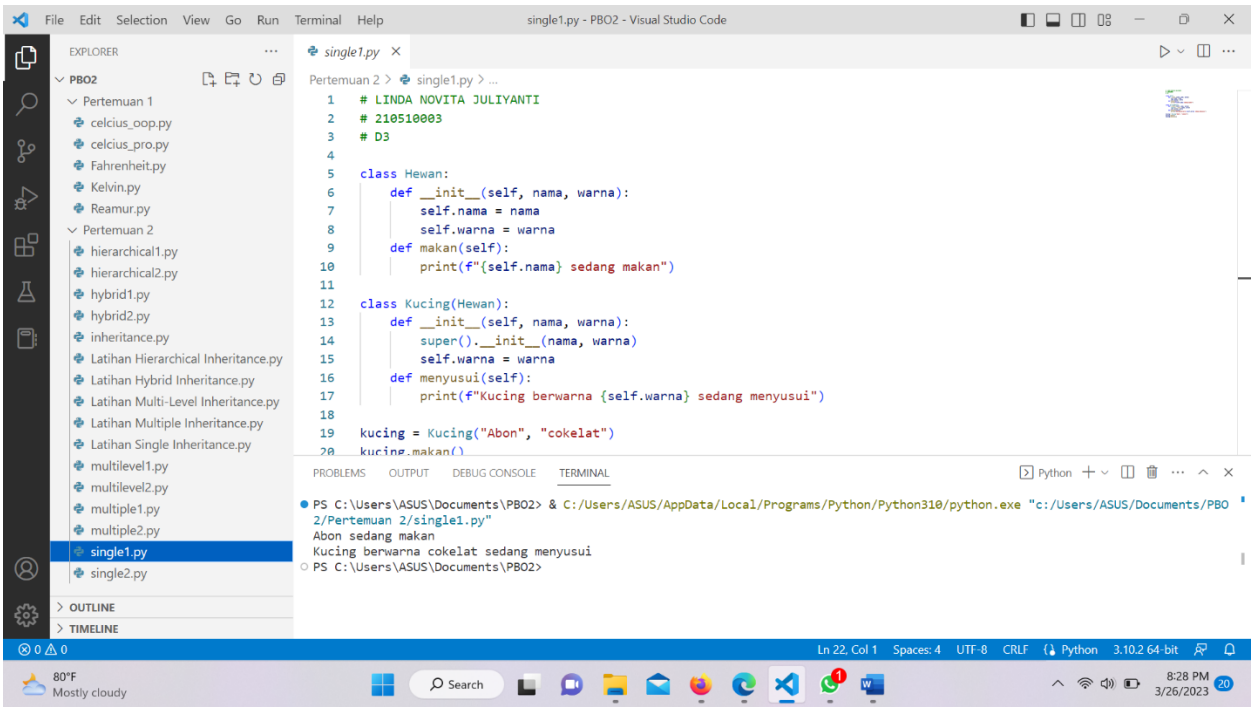
1. Buatlah masing-masing 2 contoh jenis pewarisan di luar dari contoh yang telah diberikan, beri nama:
   single1.py, single2.py,
   multiple1.py, multiple2.py,
   hierarchical1.py, hierarchical2.py,
   multilevel1.py, multilevel2,
   hybrid1.py, hybrid2.py

Jawaban Praktikum :

1. Script single1.py dan single2.py

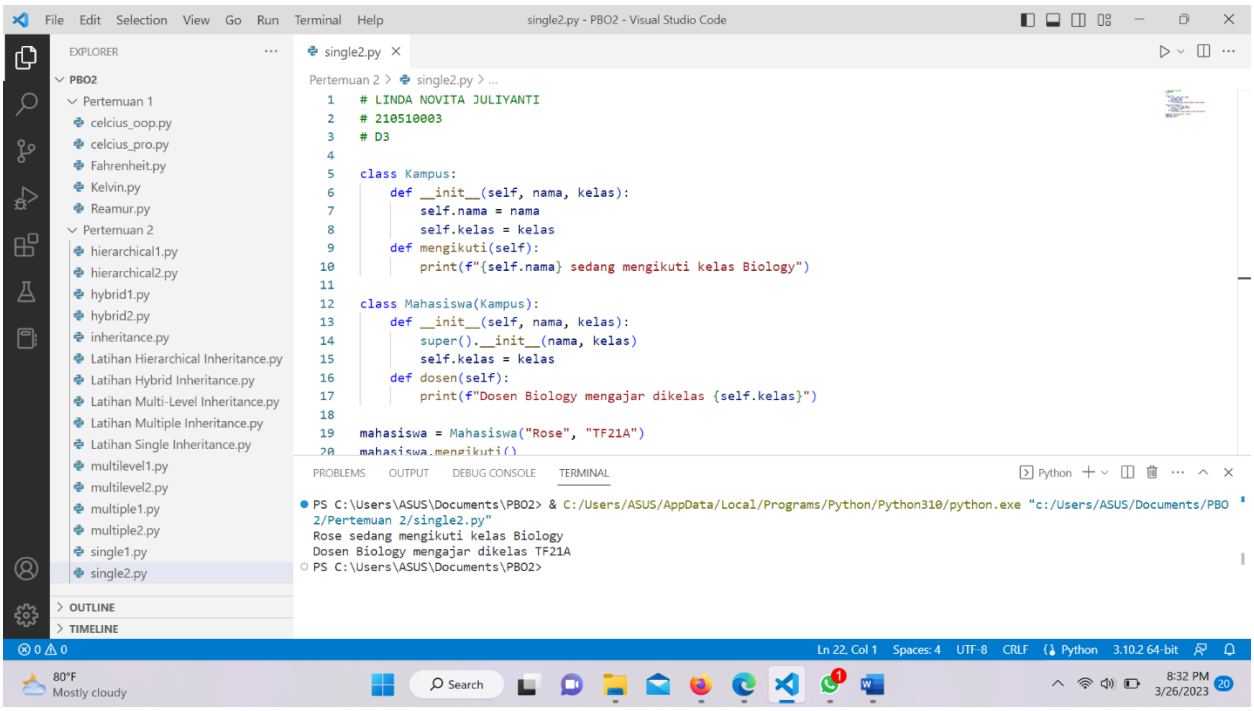
Single1.py

```
# LINDA NOVITA JULIYANTI
# 210510003
# D3

class Hewan:
    def __init__(self, nama, warna):
        self.nama = nama
        self.warna = warna
    def makan(self):
        print(f"{self.nama} sedang makan")

class Kucing(Hewan):
    def __init__(self, nama, warna):
        super().__init__(nama, warna)
        self.warna = warna
    def menyusui(self):
        print(f"Kucing berwarna {self.warna} sedang menyusui")

kucing = Kucing("Abon", "cokelat")
kucing.makan()
kucing.menyusui()
```



Single2.py

```python
# LINDA NOVITA JULIYANTI
# 210510003
# D3

class Kampus:
    def __init__(self, nama, kelas):
        self.nama = nama
        self.kelas = kelas
    def mengikuti(self):
        print(f"{self.nama} sedang mengikuti kelas Biology")

class Mahasiswa(Kampus):
    def __init__(self, nama, kelas):
        super().__init__(nama, kelas)
        self.kelas = kelas
    def dosen(self):
        print(f"Dosen Biology mengajar dikelas {self.kelas}")

mahasiswa = Mahasiswa("Rose", "TF21A")
mahasiswa.mengikuti()
mahasiswa.dosen()
```

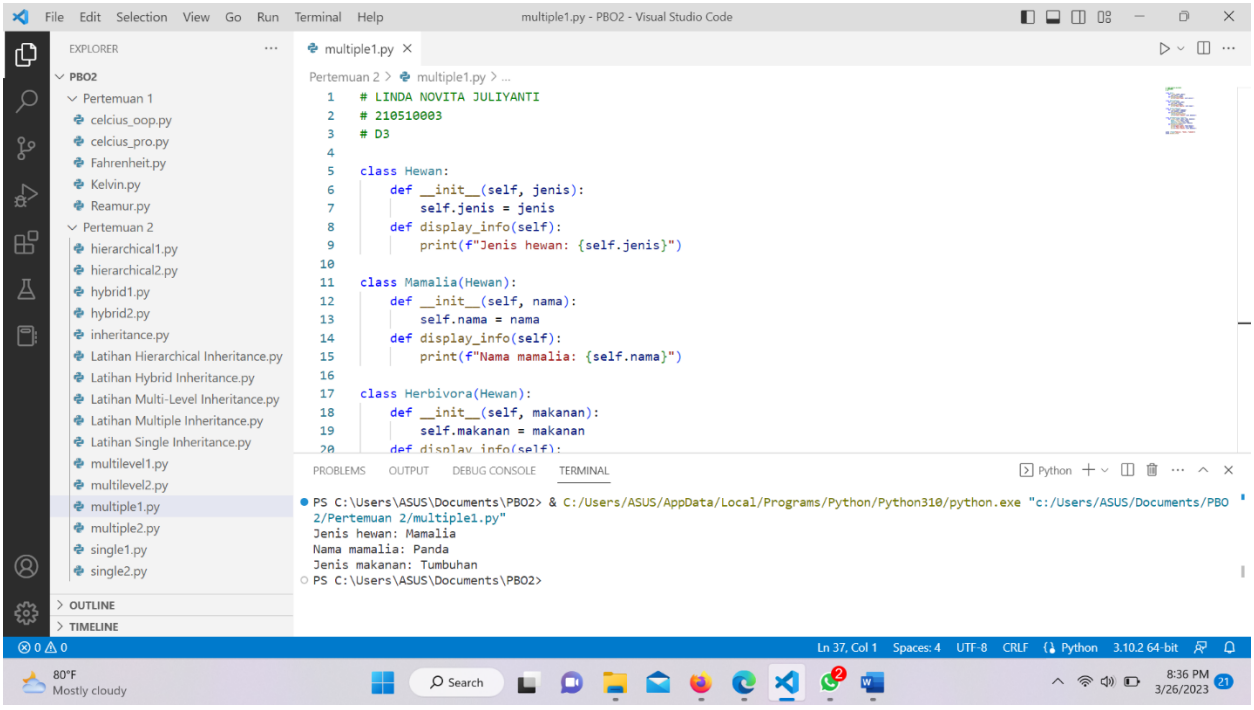


2. Script multiple1.py dan multiple2.py

Multiple1.py

```
# LINDA NOVITA JULIYANTI
# 210510003
# D3

class Hewan:
    def __init__(self, jenis):
        self.jenis = jenis
    def display_info(self):
        print(f"Jenis hewan: {self.jenis}")

class Mamalia(Hewan):
    def __init__(self, nama):
        self.nama = nama
    def display_info(self):
        print(f"Nama mamalia: {self.nama}")

class Herbivora(Hewan):
    def __init__(self, makanan):
        self.makanan = makanan
    def display_info(self):
        super().display_info()
```

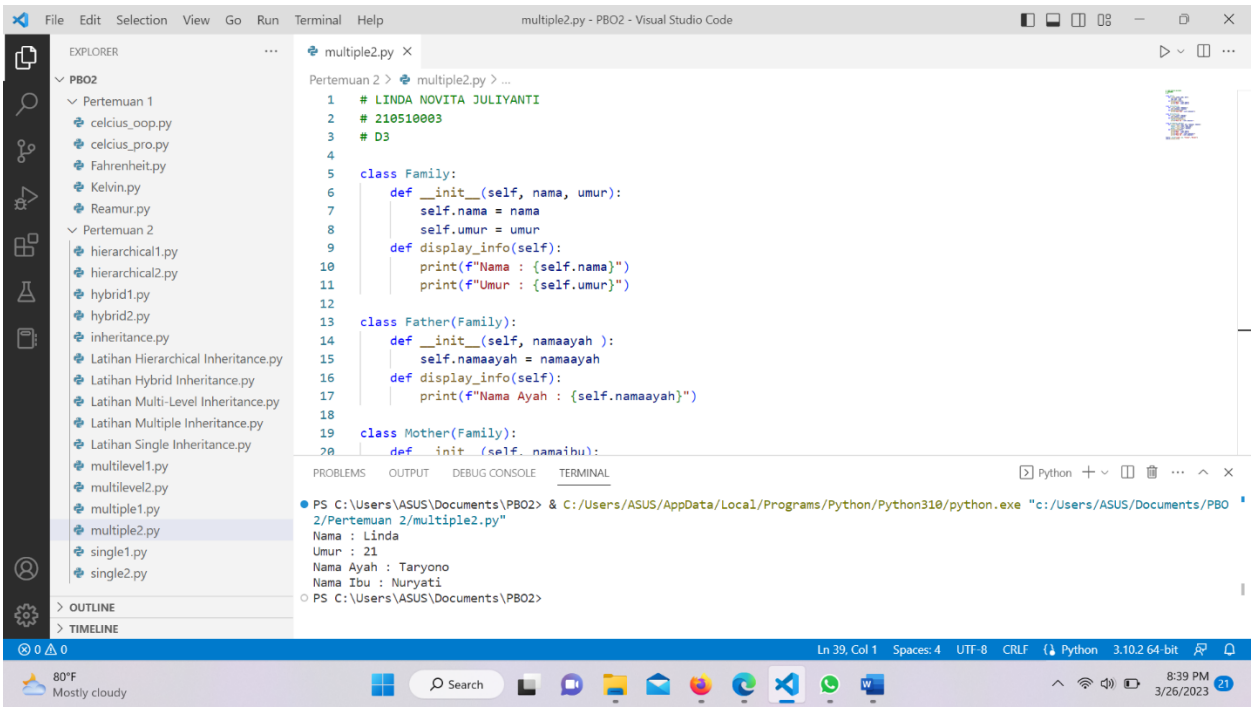
```
        print(f"Jenis makanan: {self.makanan}")

class Panda(Herbivora, Mamalia):
    def __init__(self, jenis, nama, makanan):
        Hewan.__init__(self, jenis)
        Mamalia.__init__(self, nama)
        Herbivora.__init__(self, makanan)
    def display_info(self):
        print(f"Jenis hewan: {self.jenis}")
        print(f"Nama mamalia: {self.nama}")
        print(f"Jenis makanan: {self.makanan}")


panda = Panda("Mamalia", "Panda", "Tumbuhan")
panda.display_info()
```



Multiple2.py

```
# LINDA NOVITA JULIYANTI
# 210510003
# D3

class Family:
    def __init__(self, nama, umur):
```

```
        self.nama = nama
        self.umur = umur
    def display_info(self):
        print(f"Nama : {self.nama}")
        print(f"Umur : {self.umur}")

class Father(Family):
    def __init__(self, namaayah ):
        self.namaayah = namaayah
    def display_info(self):
        print(f"Nama Ayah : {self.namaayah}")

class Mother(Family):
    def __init__(self, namaibu):
        self.namaibu = namaibu
    def display_info(self):
        super().display_info()
        print(f"Nama Ibu : {self.namaibu}")

class Child(Father, Mother):
    def __init__(self, nama, umur, namaayah, namaibu):
        Family.__init__(self, nama, umur)
        Father.__init__(self, namaayah)
        Mother.__init__(self, namaibu)
    def display_info(self):
        print(f"Nama : {self.nama}")
        print(f"Umur : {self.umur}")
        print(f"Nama Ayah : {self.namaayah}")
        print(f"Nama Ibu : {self.namaibu}")

family = Child("Linda", 21, "Taryono", "Nuryati")
family.display_info()
```

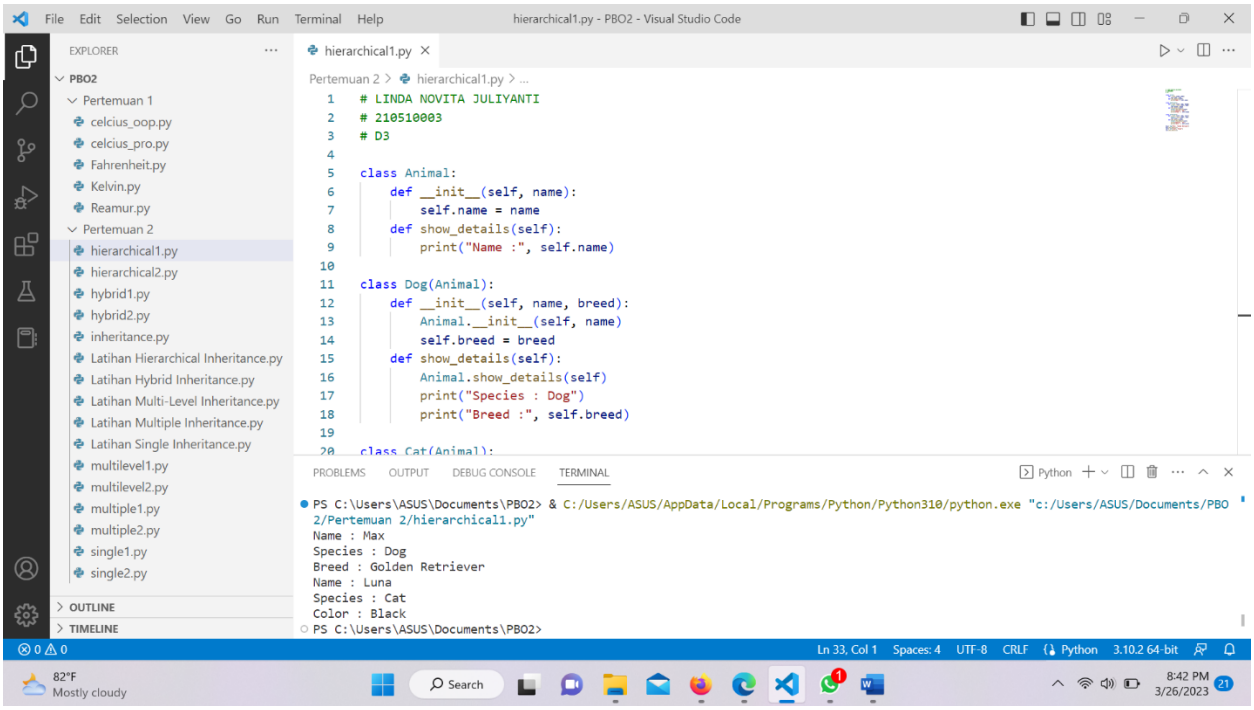


3. Script hierarchical1.py dan hierarchical2.py

Hierarchical1.py

```
# LINDA NOVITA JULIYANTI
# 210510003
# D3

class Animal:
    def __init__(self, name):
        self.name = name
    def show_details(self):
        print("Name :", self.name)

class Dog(Animal):
    def __init__(self, name, breed):
        Animal.__init__(self, name)
        self.breed = breed
    def show_details(self):
        Animal.show_details(self)
        print("Species : Dog")
        print("Breed :", self.breed)

class Cat(Animal):
    def __init__(self, name, color):
```

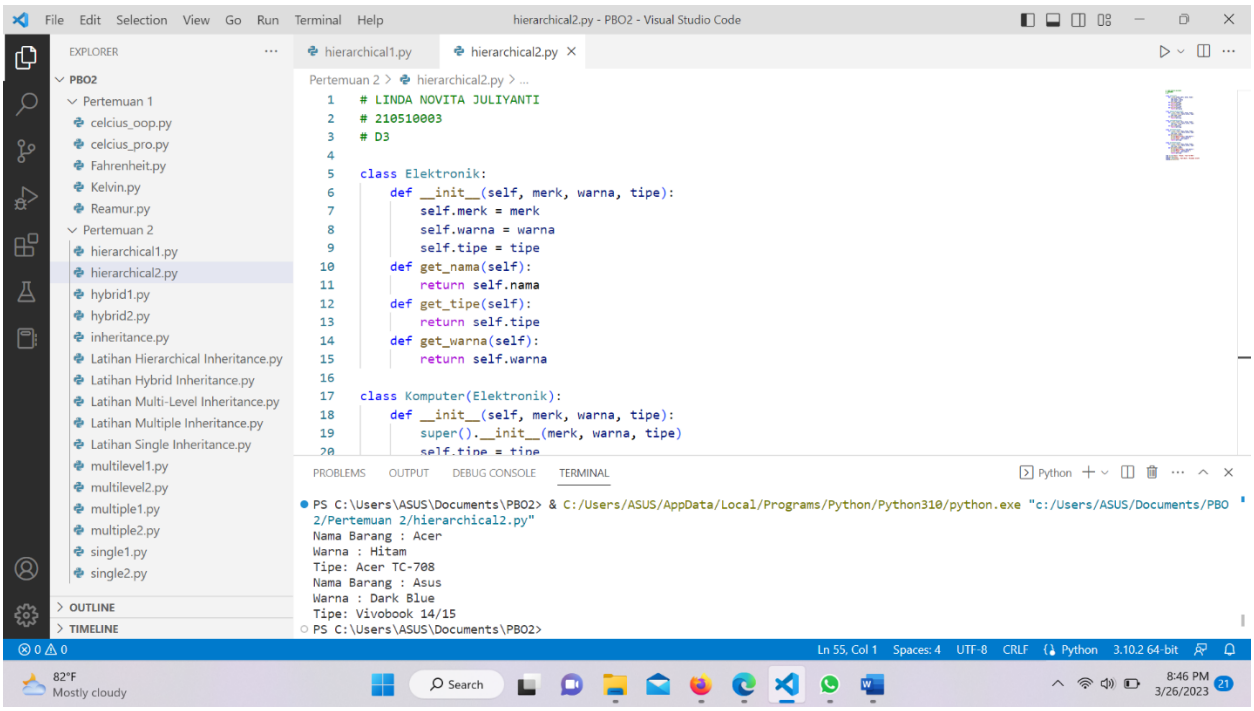
```
        Animal.__init__(self, name)
        self.color = color
    def show_details(self):
        Animal.show_details(self)
        print("Species : Cat")
        print("Color :", self.color)

dog = Dog("Max", "Golden Retriever")
dog.show_details()
cat = Cat("Luna", "Black")
cat.show_details()
```



Hierarchical2.py

```
# LINDA NOVITA JULIYANTI
# 210510003
# D3

class Elektronik:
    def __init__(self, merk, warna, tipe):
        self.merk = merk
        self.warna = warna
        self.tipe = tipe
    def get_nama(self):
```

```
        return self.nama
    def get_tipe(self):
        return self.tipe
    def get_warna(self):
        return self.warna

class Komputer(Elektronik):
    def __init__(self, merk, warna, tipe):
        super().__init__(merk, warna, tipe)
        self.tipe = tipe
    def get_tipe(self):
        return self.tipe

class Laptop(Elektronik):
    def __init__(self, merk, warna, tipe):
        super().__init__(merk, warna, tipe)
        self.tipe = tipe
    def get_tipe(self):
        return self.tipe

class Acer(Elektronik):
    def __init__(self, merk, warna, tipe):
        super().__init__(merk, warna, tipe)
        self.tipe = tipe
    def get_details(self):
        print(f"Nama Barang : {self.merk}")
        print(f"Warna : {self.warna}")
        print(f"Tipe: {self.tipe}")
        return self.tipe

class Asus(Elektronik):
    def __init__(self, merk, warna, tipe):
        super().__init__(merk, warna, tipe)
        self.tipe = tipe
    def get_details(self):
        print(f"Nama Barang : {self.merk}")
        print(f"Warna : {self.warna}")
        print(f"Tipe: {self.tipe}")
        return self.tipe

comp = Acer("Acer", "Hitam", "Acer TC-708")
comp.get_details()
laptop = Asus("Asus", "Dark Blue", "Vivobook 14/15")
laptop.get_details()
```

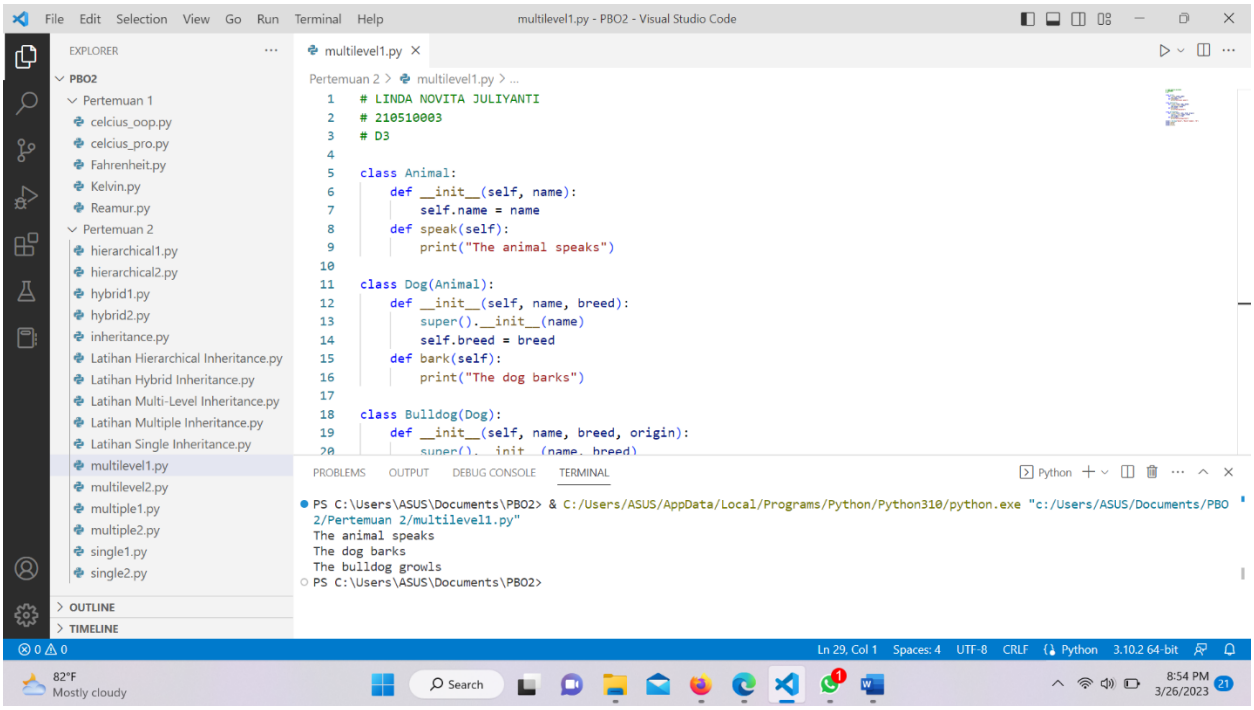


4. Script multilevel1.py dan multilevel2.py

Multilevel1.py

```
# LINDA NOVITA JULIYANTI
# 210510003
# D3

class Animal:
    def __init__(self, name):
        self.name = name
    def speak(self):
        print("The animal speaks")

class Dog(Animal):
    def __init__(self, name, breed):
        super().__init__(name)
        self.breed = breed
    def bark(self):
        print("The dog barks")

class Bulldog(Dog):
    def __init__(self, name, breed, origin):
        super().__init__(name, breed)
        self.origin = origin
```

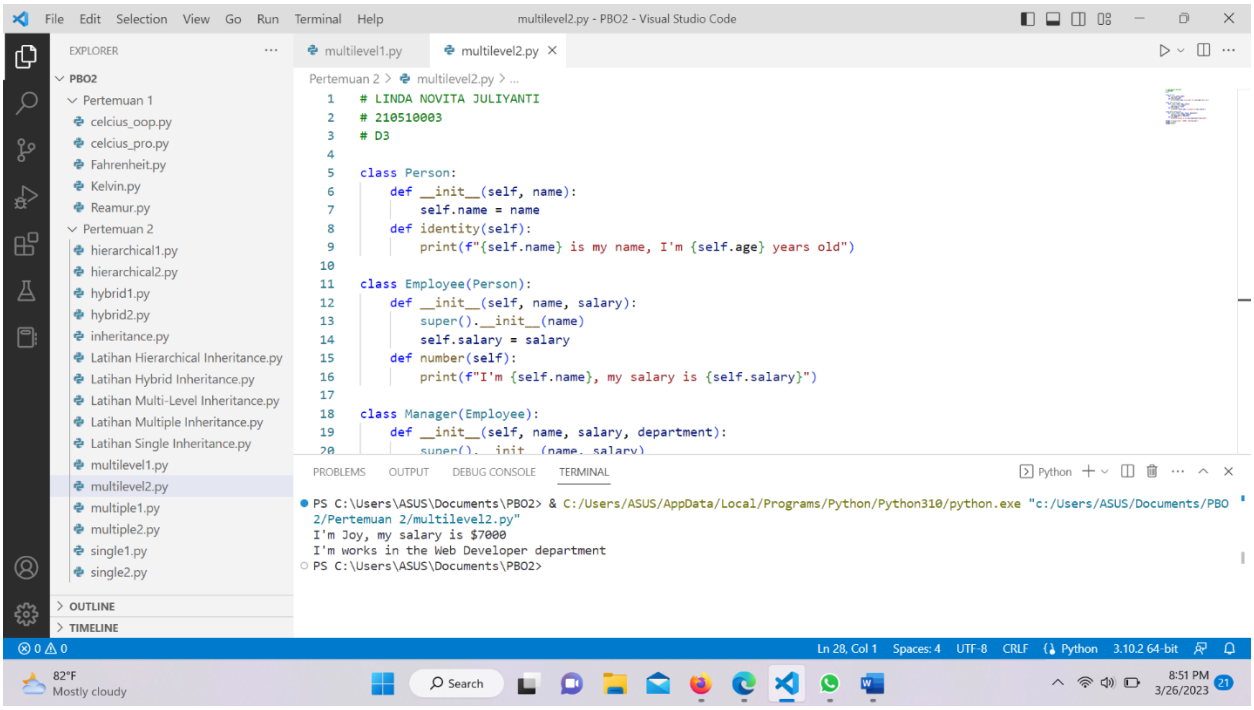
```
    def growl(self):
        print("The bulldog growls")

animal = Bulldog("Basset", "Mastiff Combat", "UK")
animal.speak()
animal.bark()
animal.growl()
```



Multilevel2.py

```
# LINDA NOVITA JULIYANTI
# 210510003
# D3

class Person:
    def __init__(self, name):
        self.name = name
    def identity(self):
        print(f"{self.name} is my name, I'm {self.age} years old")

class Employee(Person):
    def __init__(self, name, salary):
        super().__init__(name)
        self.salary = salary
```

```
    def number(self):
        print(f"I'm {self.name}, my salary is {self.salary}")

class Manager(Employee):
    def __init__(self, name, salary, department):
        super().__init__(name, salary)
        self.department = department
    def work(self):
        print(f"I'm works in the {self.department} department")

manager = Manager("Joy", "$7000", "Web Developer")
manager.number()
manager.work()
```

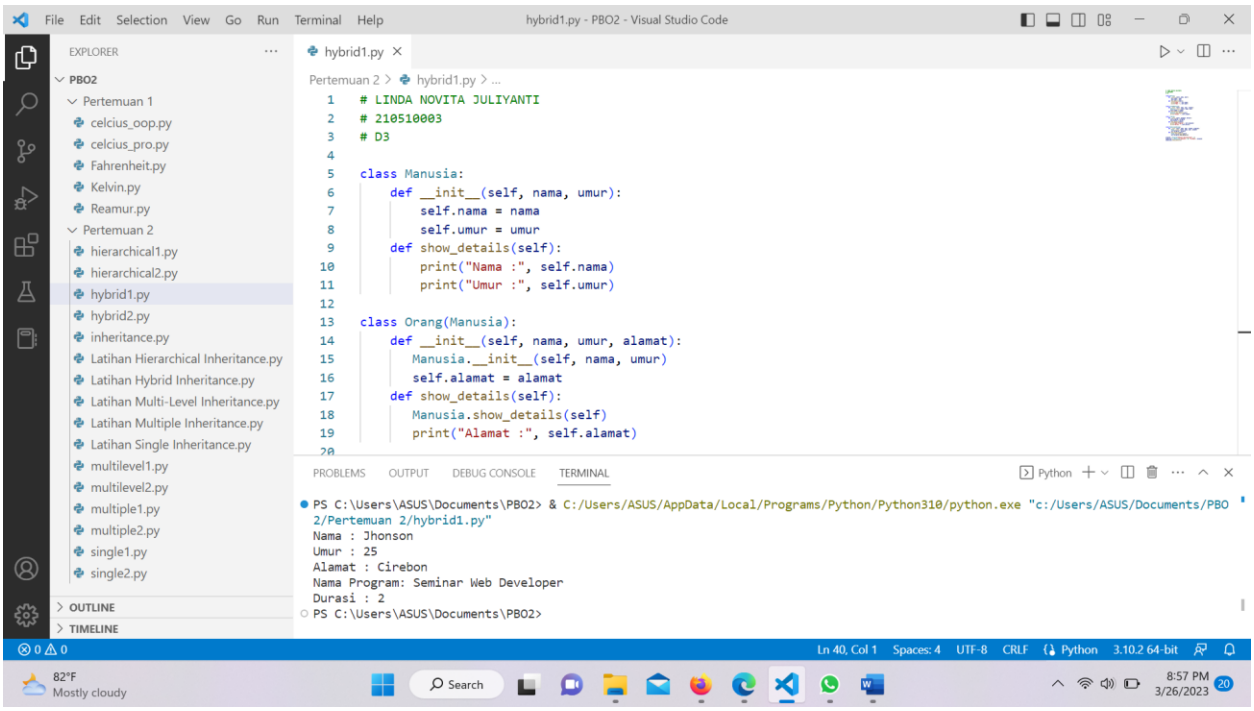


5. Script hybrid1.py dan hybrid2.py

Hybrid1.py

```
# LINDA NOVITA JULIYANTI
# 210510003
# D3

class Manusia:
    def __init__(self, nama, umur):
        self.nama = nama
```

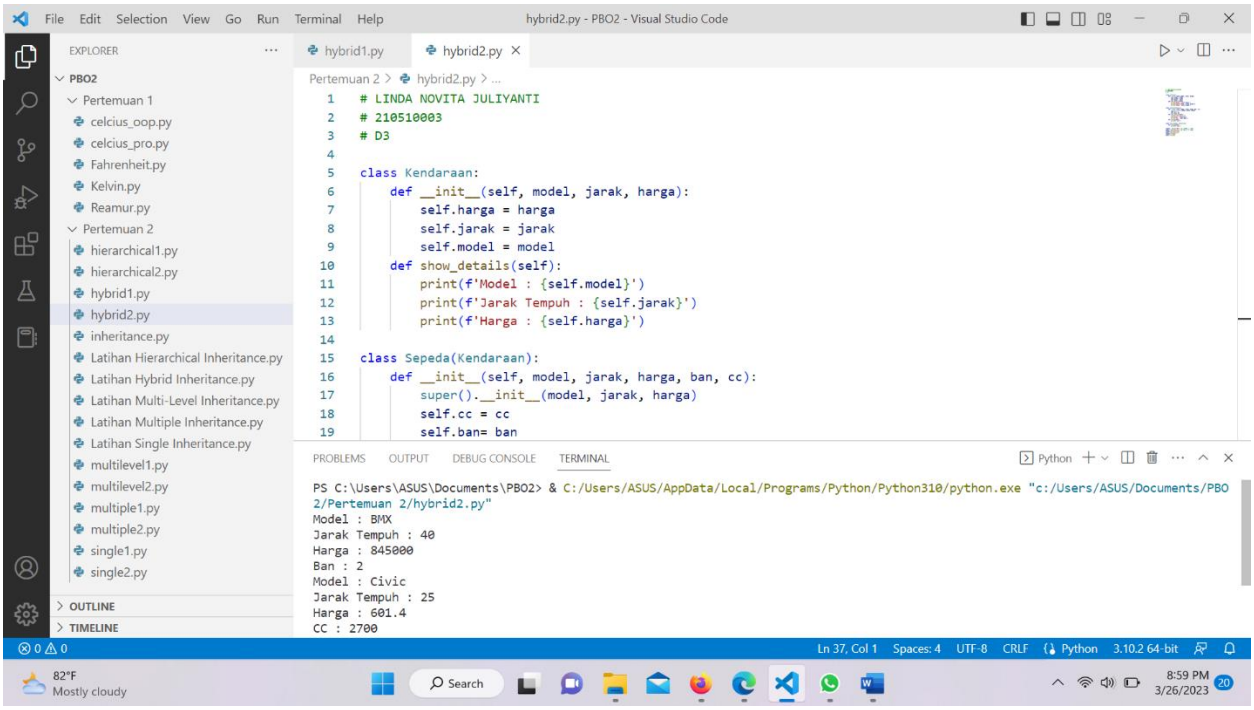
```
        self.umur = umur
    def show_details(self):
        print("Nama :", self.nama)
        print("Umur :", self.umur)

class Orang(Manusia):
    def __init__(self, nama, umur, alamat):
       Manusia.__init__(self, nama, umur)
       self.alamat = alamat
    def show_details(self):
       Manusia.show_details(self)
       print("Alamat :", self.alamat)

class Program:
    def __init__(self, program, durasi):
       self.program = program
       self.durasi = durasi
    def show_details(self):
       print("Nama Program:", self.program)
       print("Durasi :", self.durasi)

class Mahasiswa(Orang):
    def __init__(self, nama, umur, alamat, program):
        Orang.__init__(self, nama, umur, alamat)
        self.program = program
    def show_details(self):
        Orang.show_details(self)
        self.program.show_details()

program = Program("Seminar Web Developer", 2)
mahasiswa = Mahasiswa("Jhonson", 25, "Cirebon", program)
mahasiswa.show_details()
```



Hybrid2.py

```python
# LINDA NOVITA JULIYANTI
# 210510003
# D3

class Kendaraan:
    def __init__(self, model, jarak, harga):
        self.harga = harga
        self.jarak = jarak
        self.model = model
    def show_details(self):
        print(f'Model : {self.model}')
        print(f'Jarak Tempuh : {self.jarak}')
        print(f'Harga : {self.harga}')

class Sepeda(Kendaraan):
    def __init__(self, model, jarak, harga, ban, cc):
        super().__init__(model, jarak, harga)
        self.cc = cc
        self.ban= ban
    def show_details(self):
        super().show_details()
        print(f'CC : {self.cc}')
```

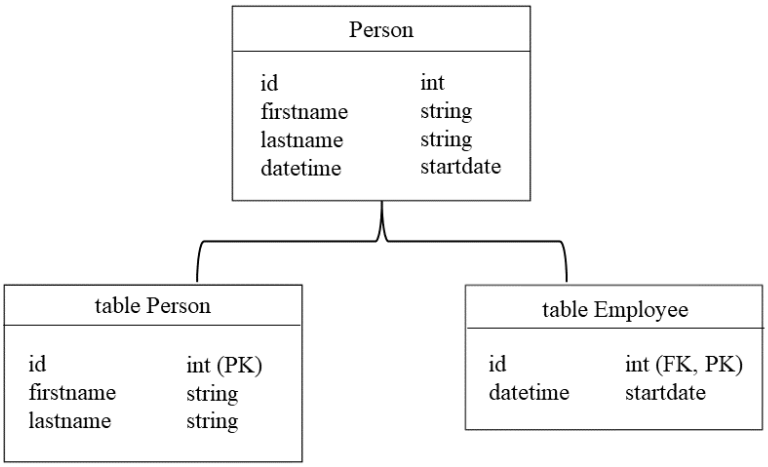
```
        print(f'Ban : {self.ban}')
    def rating(self):
        print('4 star')

class Mobil(Sepeda, Kendaraan):
    def rating(self):
        print('5 star')

sepeda = Sepeda("BMX", 40, 845000, 2, 500)
mobil = Mobil("Civic", 25, 601.4, 4, 2700)
sepeda.show_details()
mobil.show_details()
sepeda.rating()
mobil.rating()
```



Tugas :

Buatlah design tabel sebuah aplikasi database yang menerapkan Inheritance

Jawaban Tugas :


Person
id int
firstname string
lastname string
datetime startdate
table Person
id int (PK)
firstname string
lastname string
table Employee
id int (FK, PK)
datetime startdate