LAPORAN PRAKTIKUM

PEMROGRAMAN BERORIENTASI OBJEK LANJUT

2023

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Praktikum 2

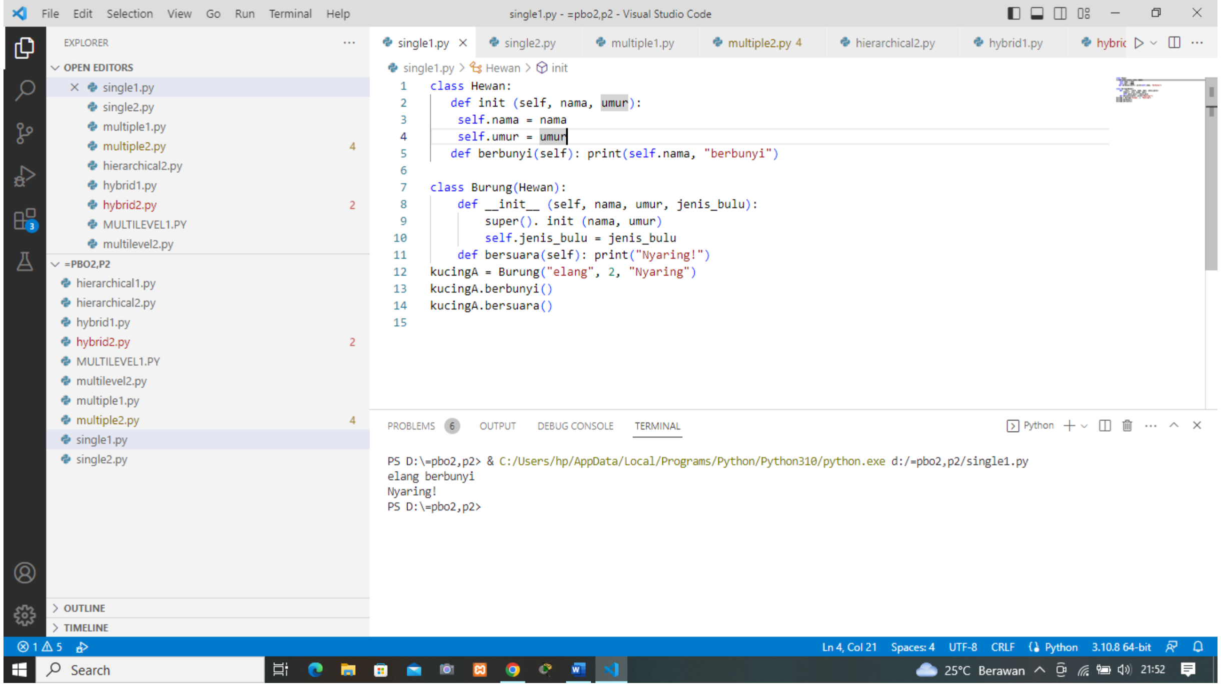
Buatlah masing-masing 2 contoh jenis pewarisan di luar dari contoh yang telah diberikan, beri nama:

1. **Single1**

```
class Hewan:
   def init (self, nama, umur):
    self.nama = nama
    self.umur = umur
   def berbunyi(self): print(self.nama, "berbunyi")

class Burung(Hewan):
    def __init__ (self, nama, umur, jenis_bulu):
        super(). init (nama, umur)
        self.jenis_bulu = jenis_bulu
    def bersuara(self): print("Nyaring!")
kucingA = Burung("elang", 2, "Nyaring")
kucingA.berbunyi()
kucingA.bersuara()
```

Output SS



```
class Hewan:
   def init (self, nama, umur):
    self.nama = nama
    self.umur = umur
   def berbunyi(self): print(self.nama, "berbunyi")

class Burung(Hewan):
    def __init__ (self, nama, umur, jenis_bulu):
        super(). init (nama, umur)
        self.jenis_bulu = jenis_bulu
    def bersuara(self): print("Nyaring!")
kucingA = Burung("elang", 2, "Nyaring")
kucingA.berbunyi()
kucingA.bersuara()
```

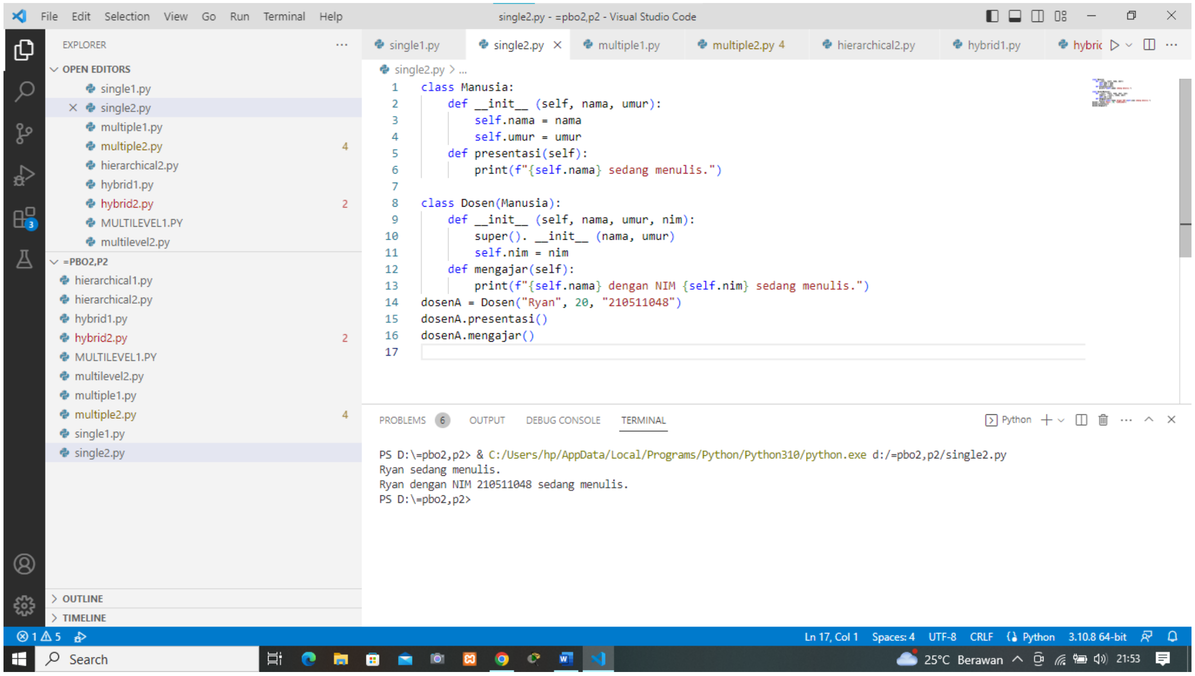
```
PS D:\=pbo2,p2> & C:/Users/hp/AppData/Local/Programs/Python/Python310/python.exe d:/=pbo2,p2/single1.py
elang berbunyi
Nyaring!
PS D:\=pbo2,p2>
```

2. Single2

```python
class Manusia:
    def __init__ (self, nama, umur):
        self.nama = nama
        self.umur = umur
    def presentasi(self):
        print(f"{self.nama} sedang menulis.")

class Dosen(Manusia):
    def __init__ (self, nama, umur, nim):
        super(). __init__ (nama, umur)
        self.nim = nim
    def mengajar(self):
        print(f"{self.nama} dengan NIM {self.nim} sedang menulis.")
dosenA = Dosen("Ryan", 20, "210511048")
dosenA.presentasi()
dosenA.mengajar()
```

Output SS



```python
class Manusia:
    def __init__ (self, nama, umur):
        self.nama = nama
        self.umur = umur
    def presentasi(self):
        print(f"{self.nama} sedang menulis.")

class Dosen(Manusia):
    def __init__ (self, nama, umur, nim):
        super(). __init__ (nama, umur)
        self.nim = nim
    def mengajar(self):
        print(f"{self.nama} dengan NIM {self.nim} sedang menulis.")
dosenA = Dosen("Ryan", 20, "210511048")
dosenA.presentasi()
dosenA.mengajar()
```

```
PS D:\=pbo2,p2> & C:/Users/hp/AppData/Local/Programs/Python/Python310/python.exe d:/=pbo2,p2/single2.py
Ryan sedang menulis.
Ryan dengan NIM 210511048 sedang menulis.
PS D:\=pbo2,p2>
```

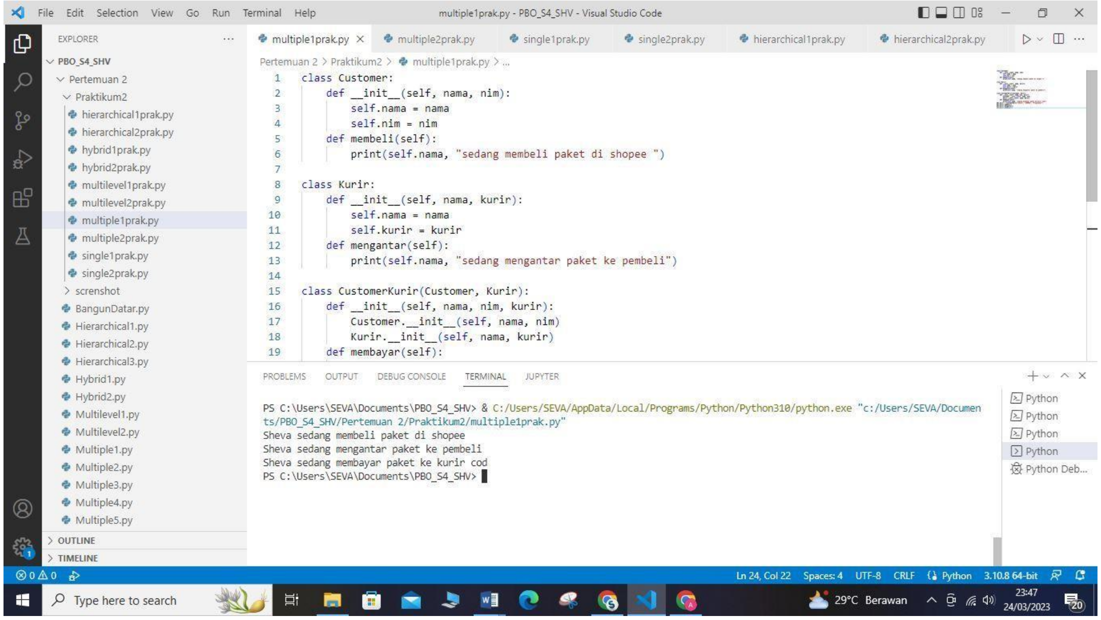
3. Multiple1

```
class Customer:
    def __init__ (self, nama, nim):
         self.nama = nama
         self.nim = nim
    def membeli(self):
        print(self.nama, "sedang membeli produk di online shop ")

class Kurir:
    def __init__ (self, nama, kurir):
        self.nama = nama
        self.kurir = kurir
    def mengantar(self):
        print(self.nama, "sedang mengantar paket ke pembeli")

class CustomerKurir(Customer, Kurir):
    def __init__ (self, nama, nim, kurir):
         Customer. __init__ (self, nama, nim)
         Kurir. __init__ (self, nama, kurir)
    def membayar(self):
     print(self.nama, "sedang membayar paket ke kurir ")
mhs_kurir = CustomerKurir("Ryan", "1922", "Programmer")
mhs_kurir.membeli()
mhs_kurir.mengantar()
mhs_kurir.membayar()
```

Output SS



```
class Customer:
    def __init__(self, nama, nim):
        self.nama = nama
        self.nim = nim
    def membeli(self):
        print(self.nama, "sedang membeli paket di shopee ")

class Kurir:
    def __init__(self, nama, kurir):
        self.nama = nama
        self.kurir = kurir
    def mengantar(self):
        print(self.nama, "sedang mengantar paket ke pembeli")

class CustomerKurir(Customer, Kurir):
    def __init__(self, nama, nim, kurir):
        Customer.__init__(self, nama, nim)
        Kurir.__init__(self, nama, kurir)
    def membayar(self):
```

```
PS C:\Users\SEVA\Documents\PBO_S4_SHV> & C:/Users/SEVA/AppData/Local/Programs/Python/Python310/python.exe "c:/Users/SEVA/Documen
ts/PBO_S4_SHV/Pertemuan 2/Praktikum2/multiple1prak.py"
Sheva sedang membeli paket di shopee
Sheva sedang mengantar paket ke pembeli
Sheva sedang membayar paket ke kurir cod
PS C:\Users\SEVA\Documents\PBO_S4_SHV>
```

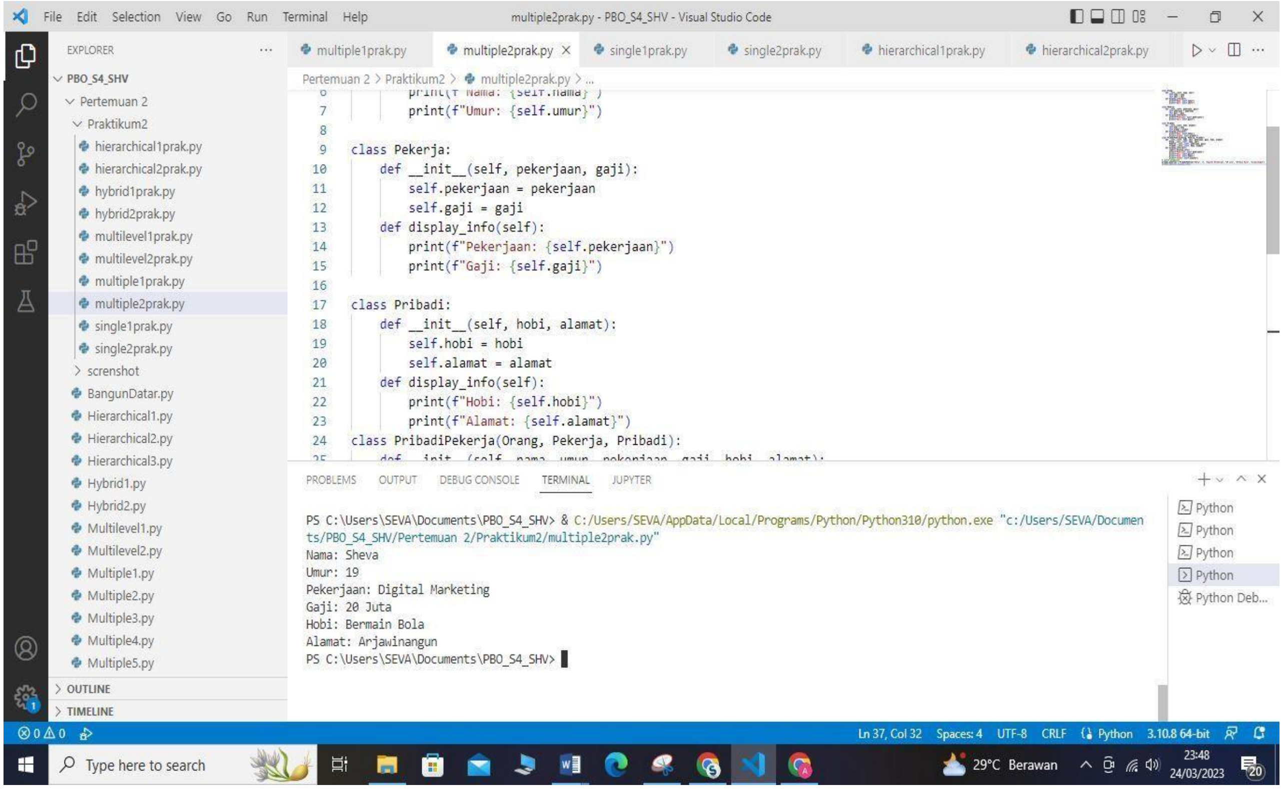
4. Multiple2

```
class Orang:
    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 Pekerja:
    def_init_(self, pekerjaan, gaji):
        self.pekerjaan = pekerjaan
        self.gaji = gaji
    def display_info(self):
        print(f"Pekerjaan: {self.pekerjaan}")
        print(f"Gaji: {self.gaji}")

class Pribadi:
    def_init_(self, hobi, alamat):
        self.hobi = hobi
        self.alamat = alamat
    def display_info(self):
        print(f"Hobi: {self.hobi}")
        print(f"Alamat: {self.alamat}")
class PribadiPekerja(Orang, Pekerja, Pribadi):
    def_init_(self, nama, umur, pekerjaan, gaji, hobi, alamat):
        Orang.__init__(self, nama, umur)
        Pekerja._init_(self, pekerjaan, gaji)
        Pribadi.__init__(self, hobi, alamat)
    def display_info(self):
        super().display_info()
        print(f"Pekerjaan: {self.pekerjaan}")
        print(f"Gaji: {self.gaji}")
        print(f"Hobi: {self.hobi}")
        print(f"Alamat: {self.alamat}")
# contoh penggunaan
pribadi_pekerjaC = PribadiPekerja("Sheva", 19, "Digital Marketing", "20 Juta",
"Bermain Bola", "Arjawinangun")
pribadi_pekerjaC.display_info()
```

Output SS Multiple2



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

class Pekerja:
    def __init__(self, pekerjaan, gaji):
        self.pekerjaan = pekerjaan
        self.gaji = gaji
    def display_info(self):
        print(f"Pekerjaan: {self.pekerjaan}")
        print(f"Gaji: {self.gaji}")

class Pribadi:
    def __init__(self, hobi, alamat):
        self.hobi = hobi
        self.alamat = alamat
    def display_info(self):
        print(f"Hobi: {self.hobi}")
        print(f"Alamat: {self.alamat}")
class PribadiPekerja(Orang, Pekerja, Pribadi):
    def __init__(self, nama, umur, pekerjaan, gaji, hobi, alamat):
```

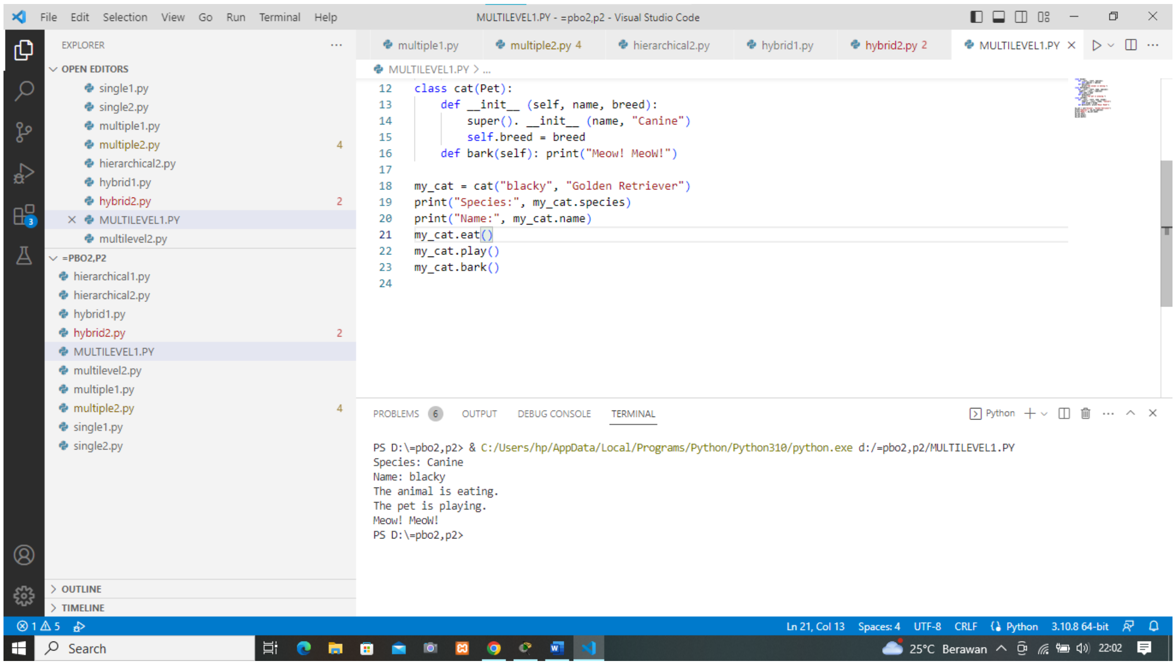
```
PS C:\Users\SEVA\Documents\PBO_S4_SHV> & C:/Users/SEVA/AppData/Local/Programs/Python/Python310/python.exe "c:/Users/SEVA/Documen
ts/PBO_S4_SHV/Pertemuan 2/Praktikum2/multiple2prak.py"
Nama: Sheva
Umur: 19
Pekerjaan: Digital Marketing
Gaji: 20 Juta
Hobi: Bermain Bola
Alamat: Arjawinangun
PS C:\Users\SEVA\Documents\PBO_S4_SHV> 
```

5. Multilevel1

```
class Animal:
    def __init__ (self, species):
        self.species = species
    def eat(self):
        print("The animal is eating.")
class Pet(Animal):
    def __init__ (self, name, species):
     super(). __init__ (species)
     self.name = name
    def play(self):
        print("The pet is playing.")
class cat(Pet):
    def __init__ (self, name, breed):
        super(). __init__ (name, "Canine")
        self.breed = breed
    def bark(self): print("Meow! MeoW!")

my_cat = cat("blacky", "Golden Retriever")
print("Species:", my_cat.species)
print("Name:", my_cat.name)
my_cat.eat()
my_cat.play()
my_cat.bark()
```

Output SS Multilevel1



```python
class cat(Pet):
    def __init__ (self, name, breed):
        super(). __init__ (name, "Canine")
        self.breed = breed
    def bark(self): print("Meow! MeoW!")

my_cat = cat("blacky", "Golden Retriever")
print("Species:", my_cat.species)
print("Name:", my_cat.name)
my_cat.eat()
my_cat.play()
my_cat.bark()
```

```
PS D:\=pbo2,p2> & C:/Users/hp/AppData/Local/Programs/Python/Python310/python.exe d:/=pbo2,p2/MULTILEVEL1.PY
Species: Canine
Name: blacky
The animal is eating.
The pet is playing.
Meow! MeoW!
PS D:\=pbo2,p2>
```

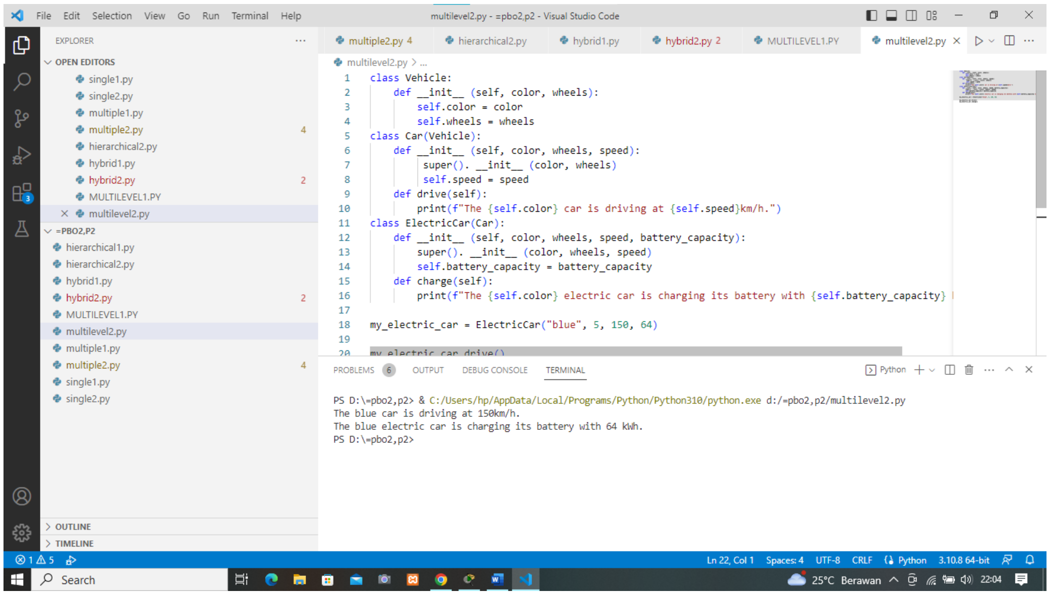
6. Multilevel2

```python
class Vehicle:
    def __init__ (self, color, wheels):
        self.color = color
        self.wheels = wheels
class Car(Vehicle):
    def __init__ (self, color, wheels, speed):
         super(). __init__ (color, wheels)
         self.speed = speed
    def drive(self):
        print(f"The {self.color} car is driving at {self.speed}km/h.")
class ElectricCar(Car):
    def __init__ (self, color, wheels, speed, battery_capacity):
        super(). __init__ (color, wheels, speed)
        self.battery_capacity = battery_capacity
    def charge(self):
        print(f"The {self.color} electric car is charging its battery with
{self.battery_capacity} kWh.")

my_electric_car = ElectricCar("blue", 5, 150, 64)

my_electric_car.drive()
my_electric_car.charge()
```

Output SS Multilevel2



```python
class Vehicle:
    def __init__ (self, color, wheels):
        self.color = color
        self.wheels = wheels
class Car(Vehicle):
    def __init__ (self, color, wheels, speed):
         super(). __init__ (color, wheels)
         self.speed = speed
    def drive(self):
        print(f"The {self.color} car is driving at {self.speed}km/h.")
class ElectricCar(Car):
    def __init__ (self, color, wheels, speed, battery_capacity):
        super(). __init__ (color, wheels, speed)
        self.battery_capacity = battery_capacity
    def charge(self):
        print(f"The {self.color} electric car is charging its battery with {self.battery_capacity}

my_electric_car = ElectricCar("blue", 5, 150, 64)

my_electric_car.drive()
```

```
PS D:\=pbo2,p2> & C:/Users/hp/AppData/Local/Programs/Python/Python310/python.exe d:/=pbo2,p2/multilevel2.py
The blue car is driving at 150km/h.
The blue electric car is charging its battery with 64 kWh.
PS D:\=pbo2,p2>
```

7. Hierarchical1

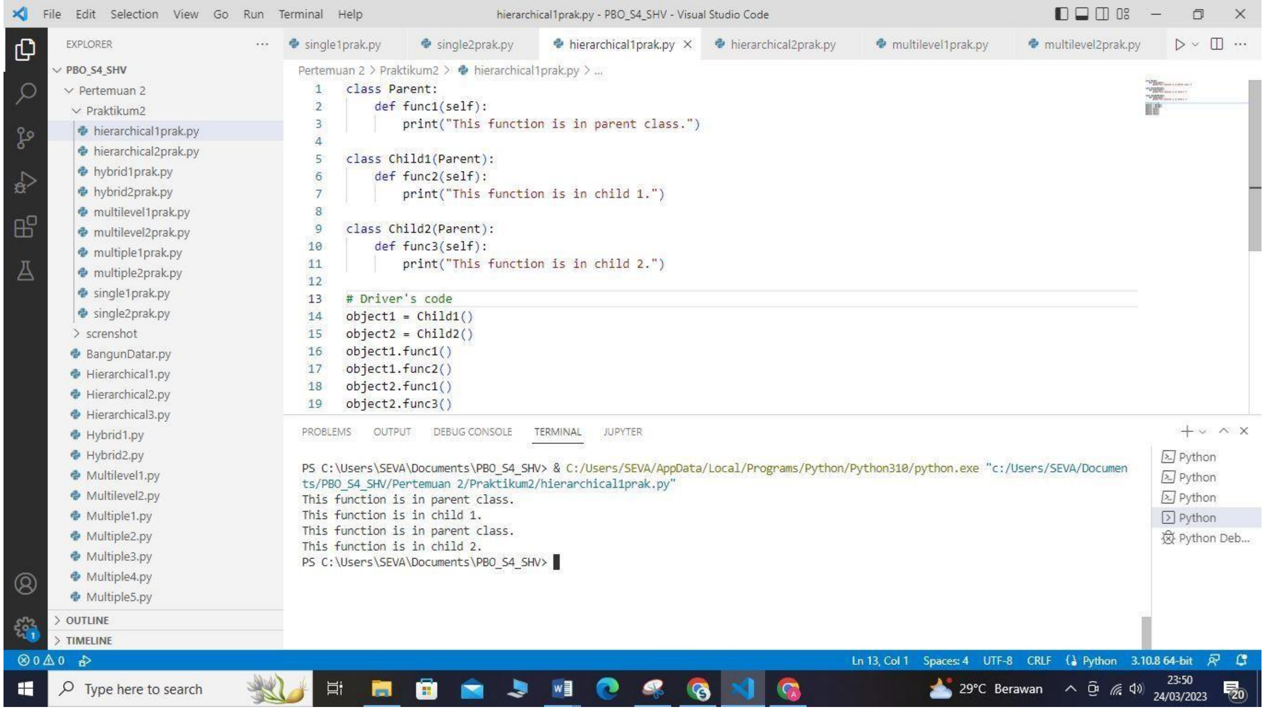
```python
class Parent:
    def func1(self):
        print("This function is in parent class.")

class Child1(Parent):
    def func2(self):
        print("This function is in child 1.")

class Child2(Parent):
    def func3(self):
        print("This function is in child 2.")

# Driver's code
object1 = Child1()
object2 = Child2()
object1.func1()
object1.func2()
object2.func1()
object2.func3()
```

Output SS Hierarchical1



```
class Parent:
    def func1(self):
        print("This function is in parent class.")

class Child1(Parent):
    def func2(self):
        print("This function is in child 1.")

class Child2(Parent):
    def func3(self):
        print("This function is in child 2.")

# Driver's code
object1 = Child1()
object2 = Child2()
object1.func1()
object1.func2()
object2.func1()
object2.func3()
```

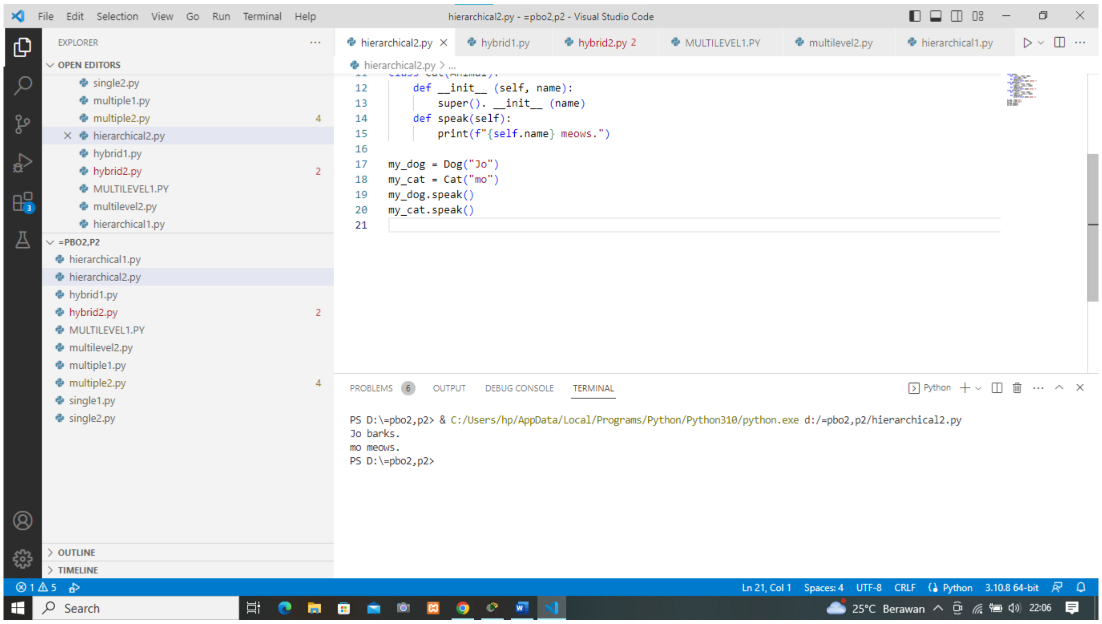
```
PS C:\Users\SEVA\Documents\PBO_S4_SHV> & C:/Users/SEVA/AppData/Local/Programs/Python/Python310/python.exe "c:/Users/SEVA/Documen
ts/PBO_S4_SHV/Pertemuan 2/Praktikum2/hierarchical1prak.py"
This function is in parent class.
This function is in child 1.
This function is in parent class.
This function is in child 2.
PS C:\Users\SEVA\Documents\PBO_S4_SHV>
```

8. Hierarchical2

```
class Animal:
    def __init__ (self, name):
        self.name = name
    def speak(self):
        print(f"{self.name} speaks.")
class Dog(Animal):
    def __init__ (self, name):
        super(). __init__ (name)
    def speak(self):
        print(f"{self.name} barks.")
class Cat(Animal):
    def __init__ (self, name):
        super(). __init__ (name)
    def speak(self):
        print(f"{self.name} meows.")

my_dog = Dog("Jo")
my_cat = Cat("mo")
my_dog.speak()
my_cat.speak()
```

Output SS Hierarchical2



```
    def __init__ (self, name):
        super(). __init__ (name)
    def speak(self):
        print(f"{self.name} meows.")

my_dog = Dog("Jo")
my_cat = Cat("mo")
my_dog.speak()
my_cat.speak()
```

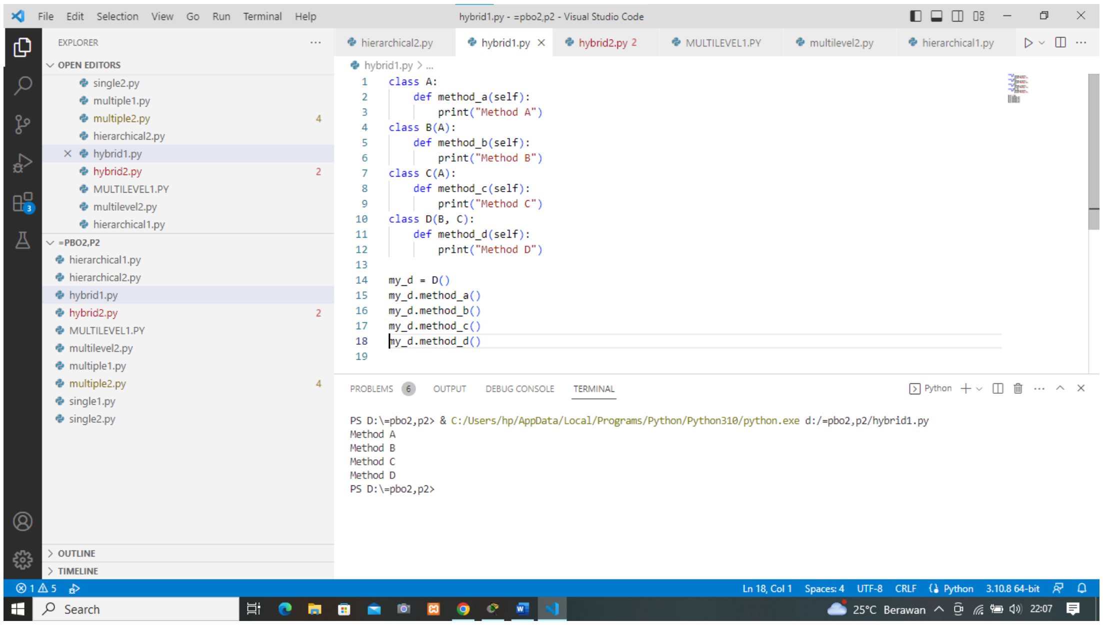
```
PS D:\=pbo2,p2> & C:/Users/hp/AppData/Local/Programs/Python/Python310/python.exe d:/=pbo2,p2/hierarchical2.py
Jo barks.
mo meows.
PS D:\=pbo2,p2>
```

9. Hybrid1

```
class A:
    def method_a(self):
        print("Method A")
class B(A):
    def method_b(self):
        print("Method B")
class C(A):
    def method_c(self):
        print("Method C")
class D(B, C):
    def method_d(self):
        print("Method D")

my_d = D()
my_d.method_a()
my_d.method_b()
my_d.method_c()
my_d.method_d()
```

Output SS Hybrid1



```python
class A:
    def method_a(self):
        print("Method A")
class B(A):
    def method_b(self):
        print("Method B")
class C(A):
    def method_c(self):
        print("Method C")
class D(B, C):
    def method_d(self):
        print("Method D")

my_d = D()
my_d.method_a()
my_d.method_b()
my_d.method_c()
my_d.method_d()
```

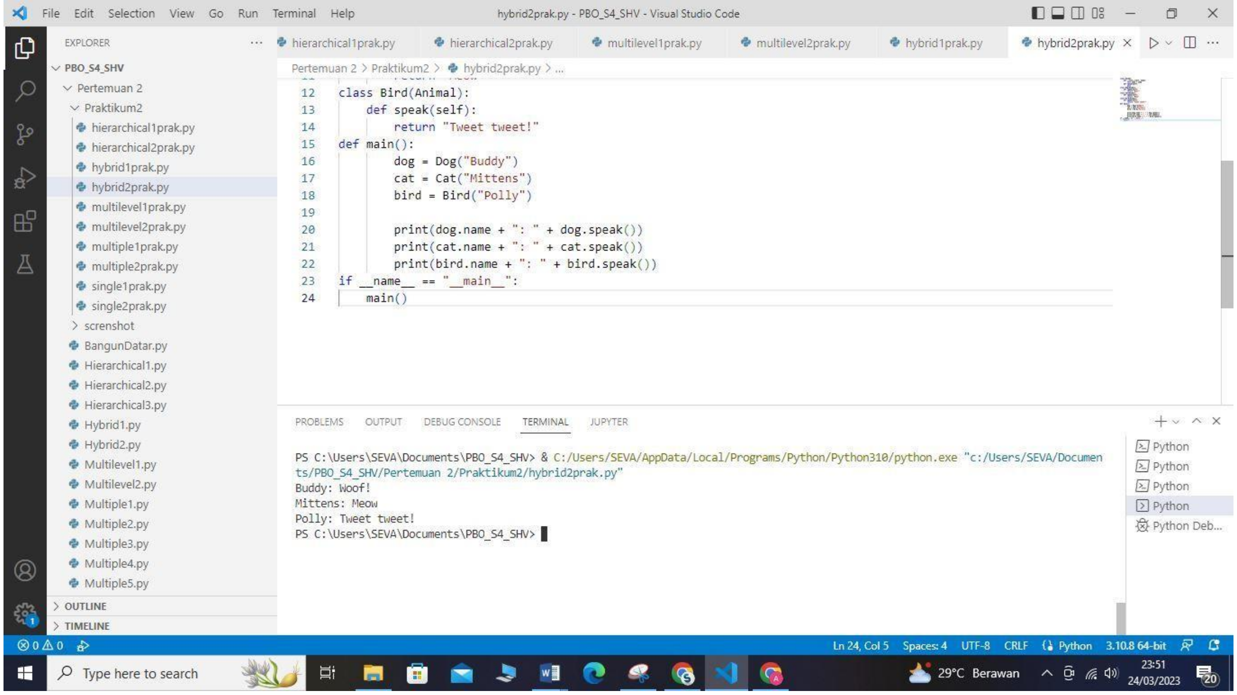
```
PS D:\=pbo2,p2> & C:/Users/hp/AppData/Local/Programs/Python/Python310/python.exe d:/=pbo2,p2/hybrid1.py
Method A
Method B
Method C
Method D
PS D:\=pbo2,p2>
```

10. Hybrid2

```python
class Animal:
    def__init__(self, name):
        self.name = name
    def speak(self):
        pass
class Dog(Animal):
    def speak(self):
        return "Woof!"
class Cat(Animal):
    def speak(self):
        return "Meow"
class Bird(Animal):
    def speak(self):
        return "Tweet tweet!"
def main():
        dog = Dog("Buddy")
        cat = Cat("Mittens")
        bird = Bird("Polly")

        print(dog.name + ": " + dog.speak())
        print(cat.name + ": " + cat.speak())
        print(bird.name + ": " + bird.speak())
if__name__== "__main__":
    main()
```

Output SS Hybrid2



```python
class Bird(Animal):
    def speak(self):
        return "Tweet tweet!"
def main():
        dog = Dog("Buddy")
        cat = Cat("Mittens")
        bird = Bird("Polly")

        print(dog.name + ": " + dog.speak())
        print(cat.name + ": " + cat.speak())
        print(bird.name + ": " + bird.speak())
if __name__ == "__main__":
    main()
```

```
PS C:\Users\SEVA\Documents\PBO_S4_SHV> & C:/Users/SEVA/AppData/Local/Programs/Python/Python310/python.exe "c:/Users/SEVA/Documen
ts/PBO_S4_SHV/Pertemuan 2/Praktikum2/hybrid2prak.py"
Buddy: Woof!
Mittens: Meow
Polly: Tweet tweet!
PS C:\Users\SEVA\Documents\PBO_S4_SHV>
```