LAPORAN PRAKTIKUM

PEMROGRAMAN BERORIENTASI OBJEK LANJUT

2023

Prepared By:

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NIM. 210511059

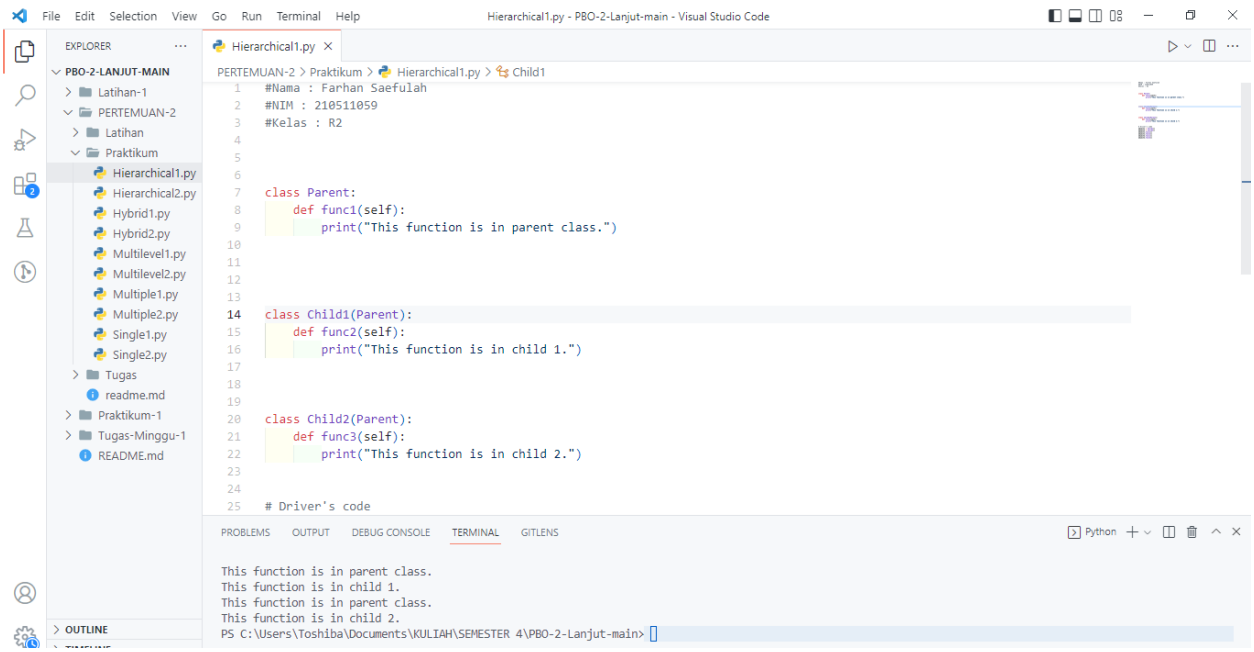
Praktikum 2

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

Hierarchical 1 :

```
#Nama : Farhan Saefulah
#NIM : 210511059
#Kelas : R2



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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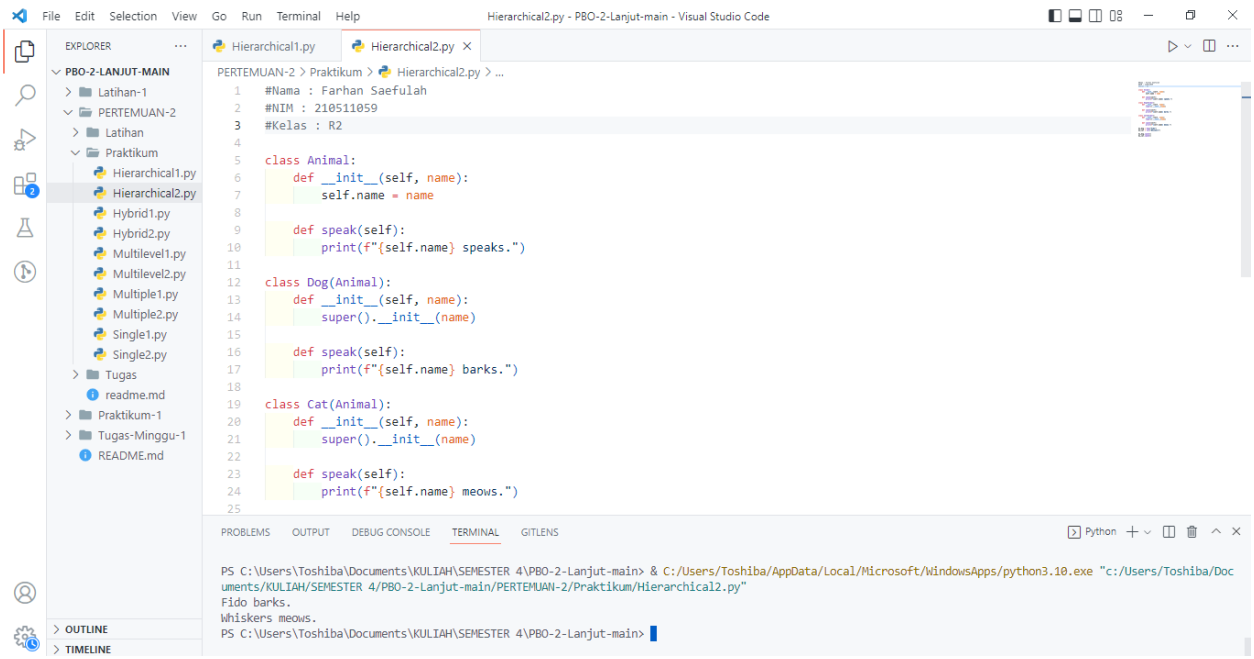
OUTLINE
Hierarchical1.py
PERTEMUAN-2 > Praktikum > Hierarchical1.py > Child1
#Nama : Farhan Saefulah
#NIM : 210511059
#Kelas : R2
class Parent:
def func1(self):
print("This function is in parent class.")
class Child1(Parent):
def func2(self):
print("This function is in child 1.")
class Child2(Parent):
def func3(self):
print("This function is in child 2.")
# Driver's code
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL GITLENS
Python
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\Toshiba\Documents\KULIAH\SEMESTER 4\PBO-2-Lanjut-main>

Hierarchical 2 :

```
#Nama : Farhan Saefulah
#NIM : 210511059
#Kelas : R2

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("Fido")
my_cat = Cat("Whiskers")

my_dog.speak()
my_cat.speak()
```

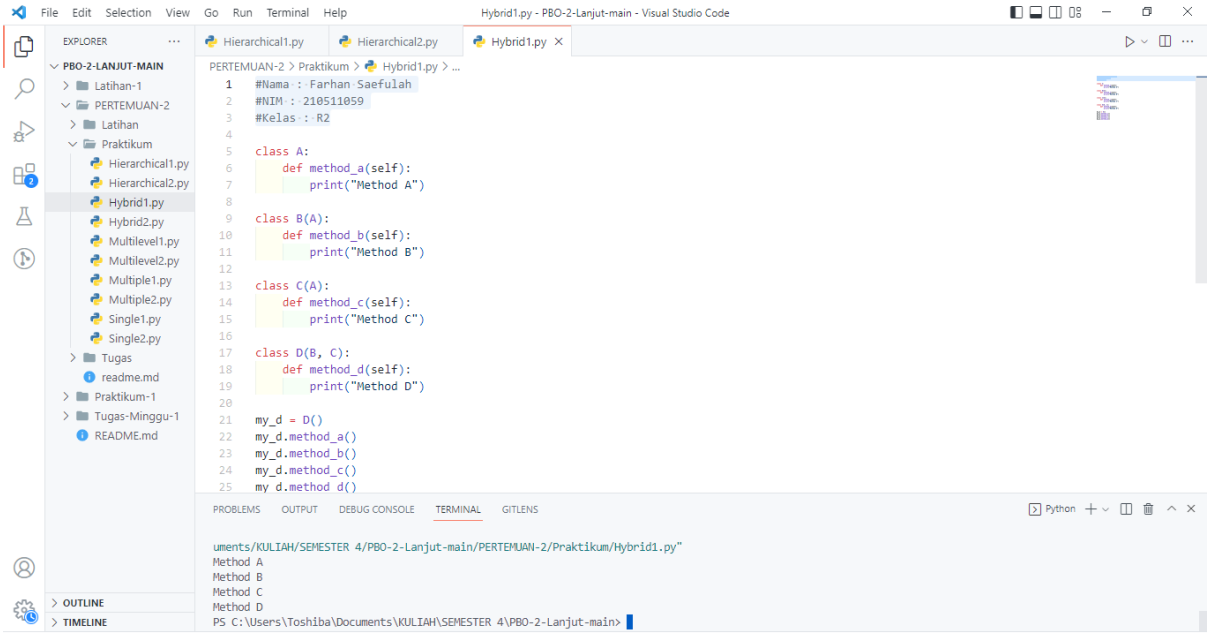
Output



Hybrid1 :

```python
#Nama : Farhan Saefulah
#NIM : 210511059
#Kelas : R2

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


File Edit Selection View Go Run Terminal Help
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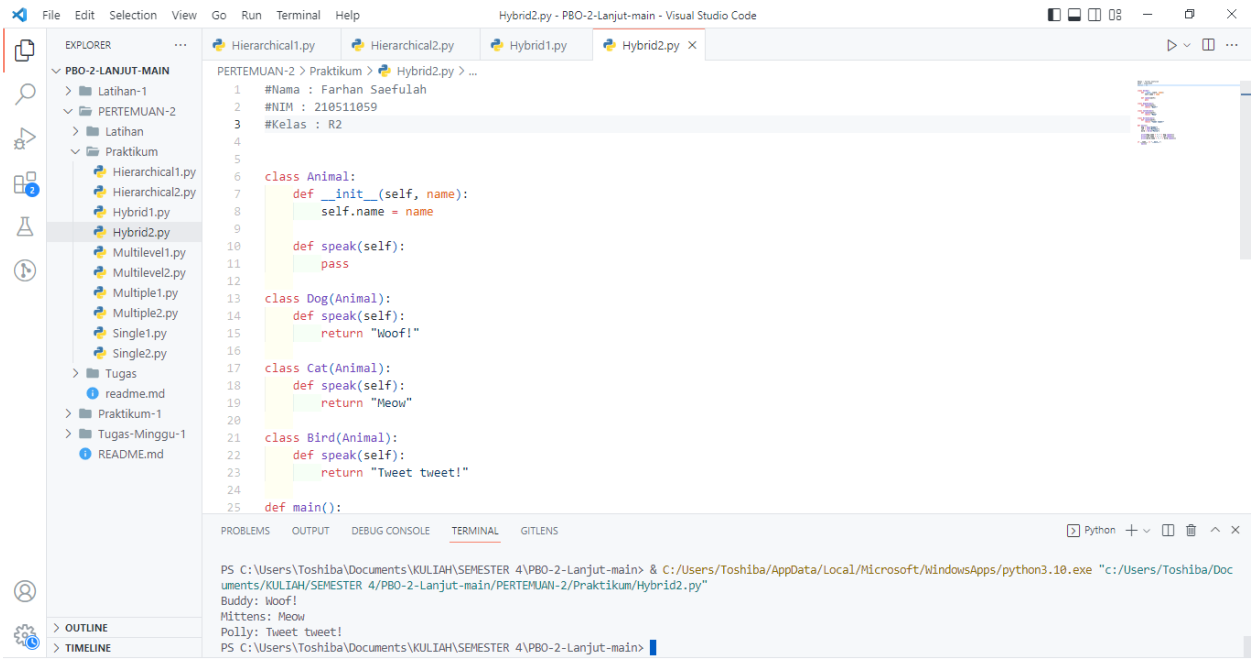
Hierarchical2.py
Hybrid1.py
PERTEMUAN-2 > Praktikum > Hybrid1.py > ...
#Nama : Farhan Saefulah
#NIM : 210511059
#Kelas : R2
class A:
def method_a(self):
print("Method A")
class B(A):
def method_b(self):
print("Method B")
class C(A):
def method_c(self):
print("Method C")
class D(B, C):
def method_d(self):
print("Method D")
my_d = D()
my_d.method_a()
my_d.method_b()
my_d.method_c()
my_d.method_d()
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL GITLENS
Python
uments/KULIAH/SEMESTER 4/PBO-2-Lanjut-main/PERTEMUAN-2/Praktikum/Hybrid1.py"
Method A
Method B
Method C
Method D
PS C:\Users\Toshiba\Documents\KULIAH\SEMESTER 4\PBO-2-Lanjut-main>
OUTLINE
TIMELINE

Hybrid 2 :

```
#Nama : Farhan Saefulah
#NIM : 210511059
#Kelas : R2


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


File Edit Selection View Go Run Terminal Help
Hybrid2.py - PBO-2-Lanjut-main - Visual Studio Code
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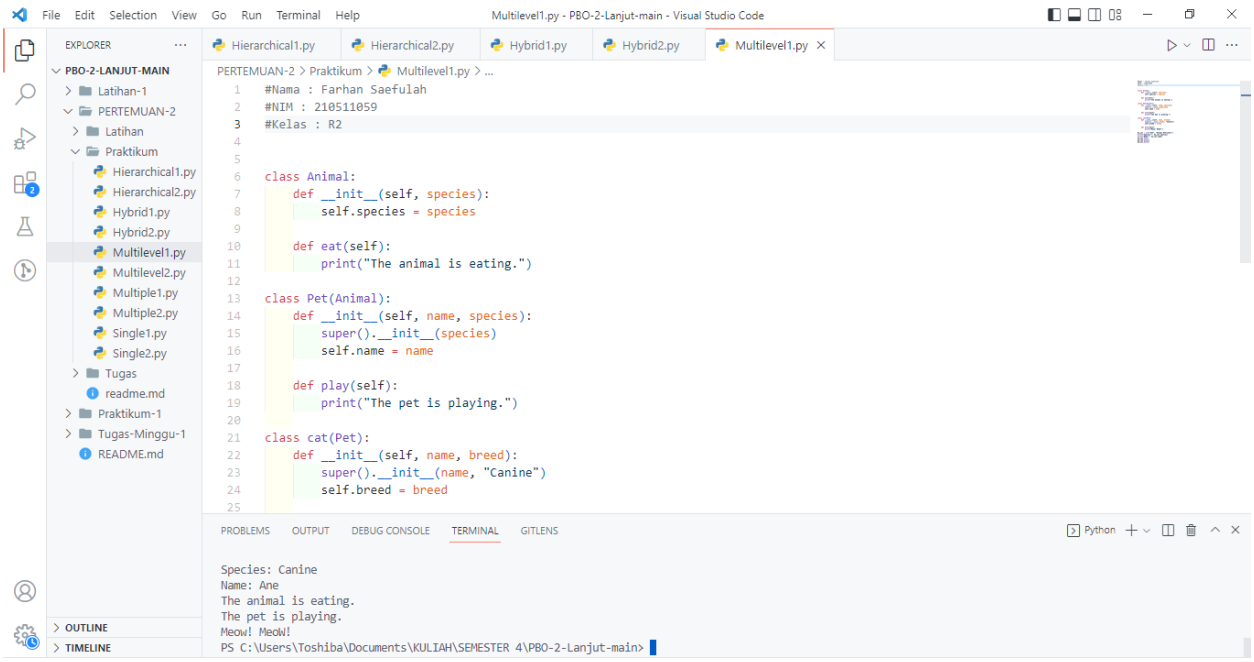
Hierarchical2.py
Hybrid1.py
Hybrid2.py
PERTEMUAN-2 > Praktikum > Hybrid2.py > ...
#Nama : Farhan Saefulah
#NIM : 210511059
#Kelas : R2
class Animal:
def __init__(self, name):
self.name = name
def speak(self):
pass
class Dog(Animal):
def speak(self):
return "Woof!"
class Cat(Animal):
def speak(self):
return "Meow"
class Bird(Animal):
def speak(self):
return "Tweet tweet!"
def main():
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL GITLENS
Python
PS C:\Users\Toshiba\Documents\KULIAH\SEMESTER 4\PBO-2-Lanjut-main> & C:/Users/Toshiba/AppData/Local/Microsoft/WindowsApps/python3.10.exe "c:/Users/Toshiba/Documents/KULIAH/SEMESTER 4/PBO-2-Lanjut-main/PERTEMUAN-2/Praktikum/Hybrid2.py"
Buddy: Woof!
Mittens: Meow
Polly: Tweet tweet!
PS C:\Users\Toshiba\Documents\KULIAH\SEMESTER 4\PBO-2-Lanjut-main>

Multilevel 1 :

```
#Nama : Farhan Saefulah
#NIM : 210511059
#Kelas : R2


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

Output 5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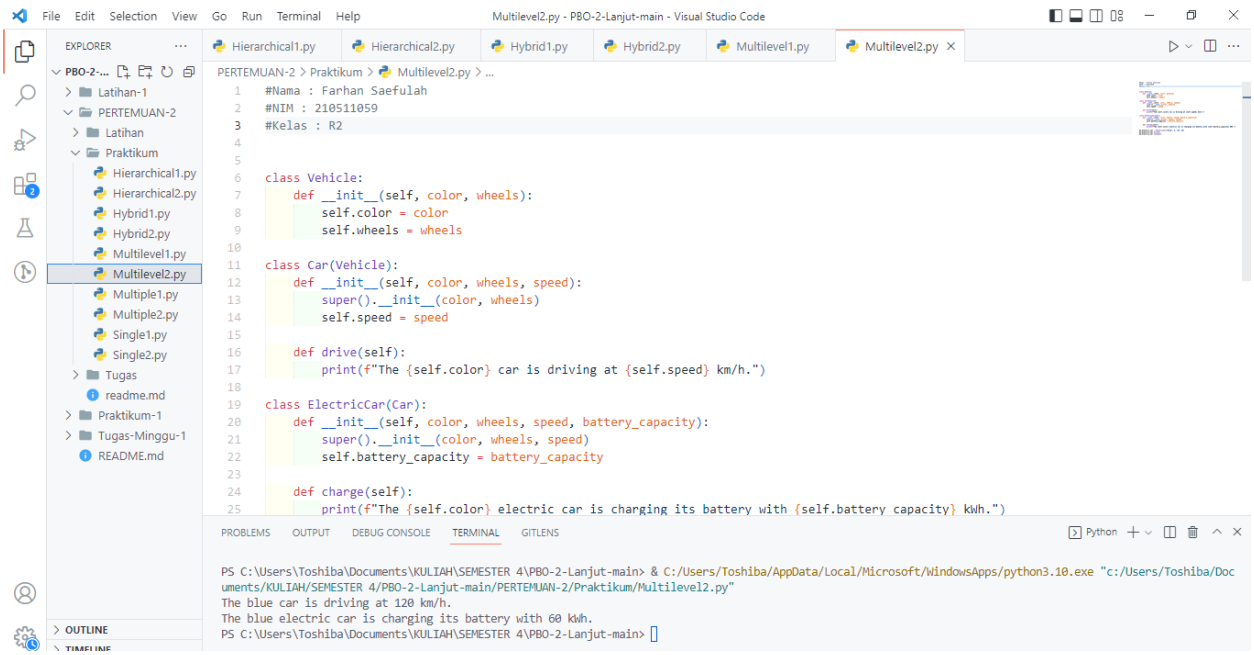
Hybrid2.py
Multilevel1.py
PERTEMUAN-2 > Praktikum > Multilevel1.py > ...
#Nama : Farhan Saefulah
#NIM : 210511059
#Kelas : R2
class Animal:
def __init__(self, species):
self.species = species
def eat(self):
print("The animal is eating.")
class Pet(Animal):
def __init__(self, name, species):
super().__init__(species)
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
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL GITLENS
Python
Species: Canine
Name: Ane
The animal is eating.
The pet is playing.
Meow! Meow!
PS C:\Users\Toshiba\Documents\KULIAH\SEMESTER 4\PBO-2-Lanjut-main>

Multilevel 2 :

```
#Nama : Farhan Saefulah
#NIM : 210511059
#Kelas : R2


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", 4, 120, 60)
my_electric_car.drive()
my_electric_car.charge()
```

Output


File Edit Selection View Go Run Terminal Help
Multilevel2.py - PBO-2-Lanjut-main - Visual Studio Code
EXPLORER
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Hierarchical2.py
Hybrid1.py
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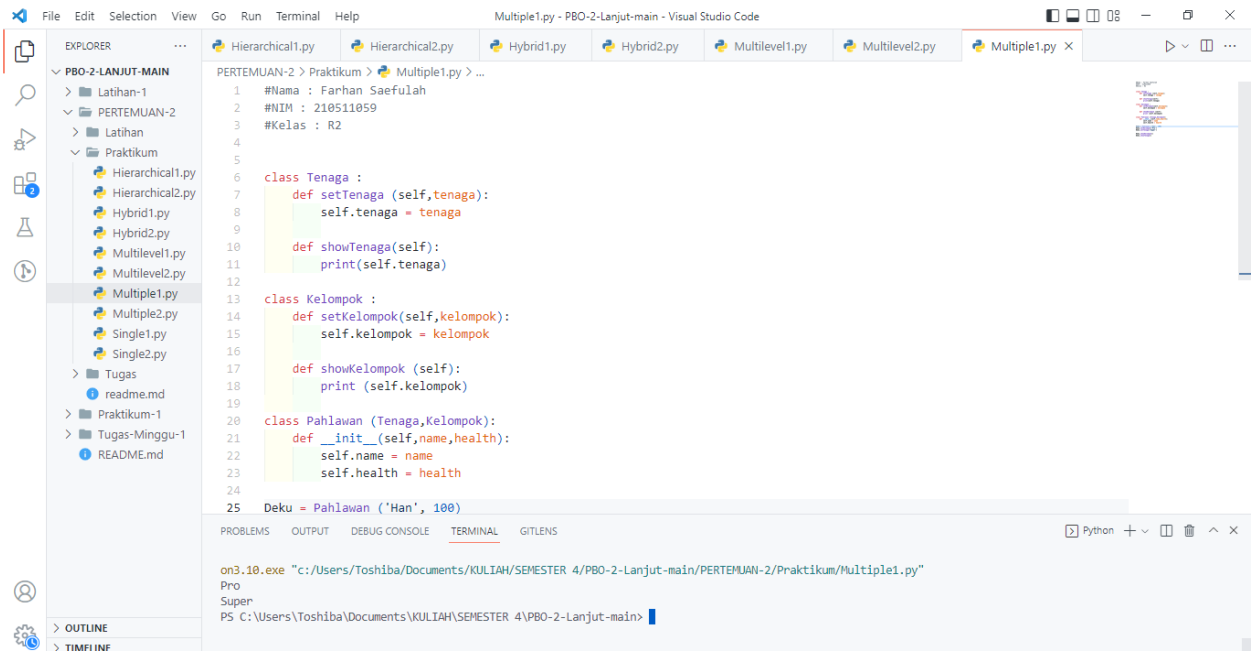
PERTEMUAN-2 > Praktikum > Multilevel2.py > ...
#Nama : Farhan Saefulah
#NIM : 210511059
#Kelas : R2
class Vehicle:
def __init__(self, color, wheels):
self.color = color
self.wheels = wheels
class Car(Vehicle):
def __init__(self, color, wheels, speed):
super().__init__(color, wheels)
self.speed = speed
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.")
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL GITLENS
Python
PS C:\Users\Toshiba\Documents\KULIAH\SEMESTER 4\PBO-2-Lanjut-main> & C:/Users/Toshiba/AppData/Local/Microsoft/WindowsApps/python3.10.exe "c:/Users/Toshiba/Documents/KULIAH/SEMESTER 4/PBO-2-Lanjut-main/PERTEMUAN-2/Praktikum/Multilevel2.py"
The blue car is driving at 120 km/h.
The blue electric car is charging its battery with 60 kWh.
PS C:\Users\Toshiba\Documents\KULIAH\SEMESTER 4\PBO-2-Lanjut-main>

Multiple 1 :

```
#Nama : Farhan Saefulah
#NIM : 210511059
#Kelas : R2


class Tenaga :
    def setTenaga (self,tenaga):
        self.tenaga = tenaga

    def showTenaga(self):
        print(self.tenaga)

class Kelompok :
    def setKelompok(self,kelompok):
        self.kelompok = kelompok

    def showKelompok (self):
        print (self.kelompok)

class Pahlawan (Tenaga,Kelompok):
    def __init__(self,name,health):
        self.name = name
        self.health = health

Deku = Pahlawan ('Han', 100)
Deku.setKelompok('Pro')
Deku.setTenaga('Super')

Deku.showKelompok()
Deku.showTenaga()
```

Output


File Edit Selection View Go Run Terminal Help
Multiple1.py - PBO-2-Lanjut-main - Visual Studio Code
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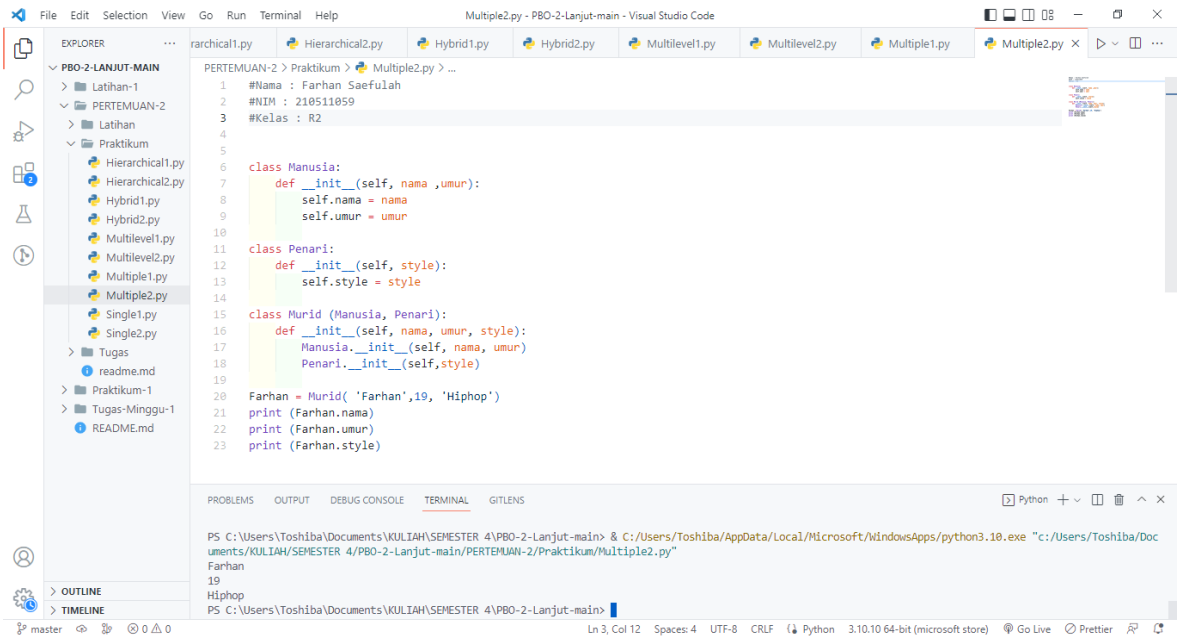
PERTEMUAN-2 > Praktikum > Multiple1.py > ...
#Nama : Farhan Saefulah
#NIM : 210511059
#Kelas : R2
class Tenaga :
def setTenaga (self,tenaga):
self.tenaga = tenaga
def showTenaga(self):
print(self.tenaga)
class Kelompok :
def setKelompok(self,kelompok):
self.kelompok = kelompok
def showKelompok (self):
print (self.kelompok)
class Pahlawan (Tenaga,Kelompok):
def __init__(self,name,health):
self.name = name
self.health = health
Deku = Pahlawan ('Han', 100)
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL GITLENS
Python
on3.10.exe "c:/Users/Toshiba/Documents/KULIAH/SEMESTER 4/PBO-2-Lanjut-main/PERTEMUAN-2/Praktikum/Multiple1.py"
Pro
Super
PS C:\Users\Toshiba\Documents\KULIAH\SEMESTER 4\PBO-2-Lanjut-main>

Multiple 2 :

```
#Nama : Farhan Saefulah
#NIM : 210511059
#Kelas : R2


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

class Penari:
    def __init__(self, style):
        self.style = style

class Murid (Manusia, Penari):
    def __init__(self, nama, umur, style):
        Manusia.__init__(self, nama, umur)
        Penari.__init__(self,style)

Farhan = Murid( 'Farhan',19, 'Hiphop')
print (Farhan.nama)
print (Farhan.umur)
print (Farhan.style)
```

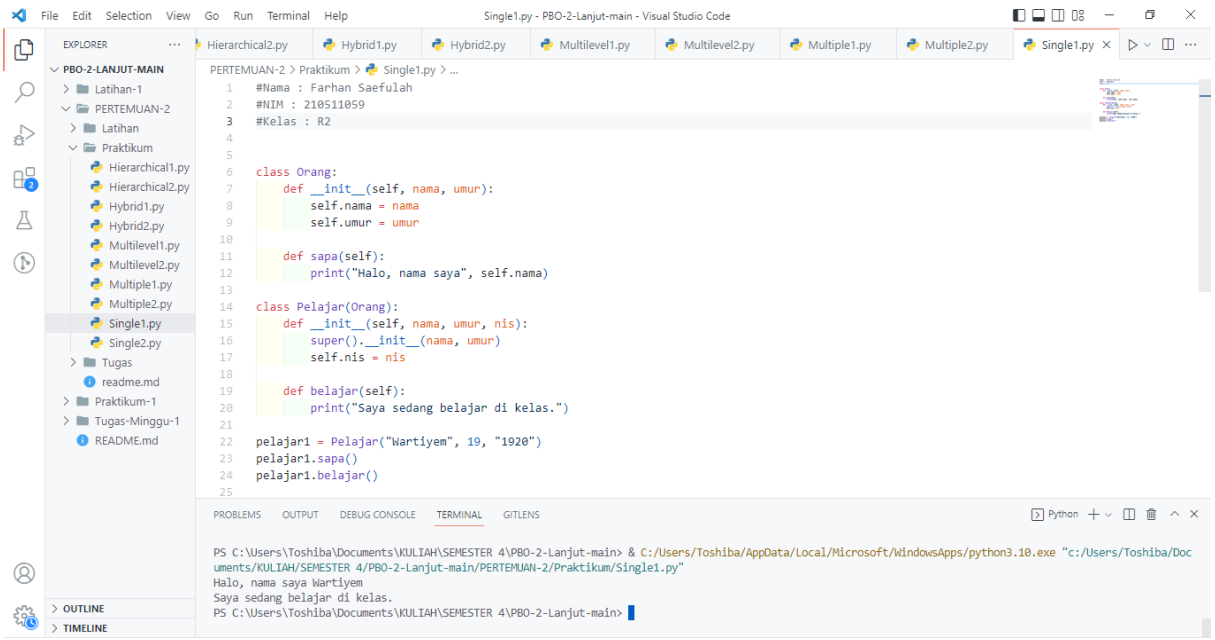
Output Screenshot



Single 1 :

```python
#Nama : Farhan Saefulah
#NIM : 210511059
#Kelas : R2


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

    def sapa(self):
        print("Halo, nama saya", self.nama)

class Pelajar(Orang):
    def __init__(self, nama, umur, nis):
        super().__init__(nama, umur)
        self.nis = nis

    def belajar(self):
        print("Saya sedang belajar di kelas.")

pelajar1 = Pelajar("Wartiyem", 19, "1920")
pelajar1.sapa()
pelajar1.belajar()
```

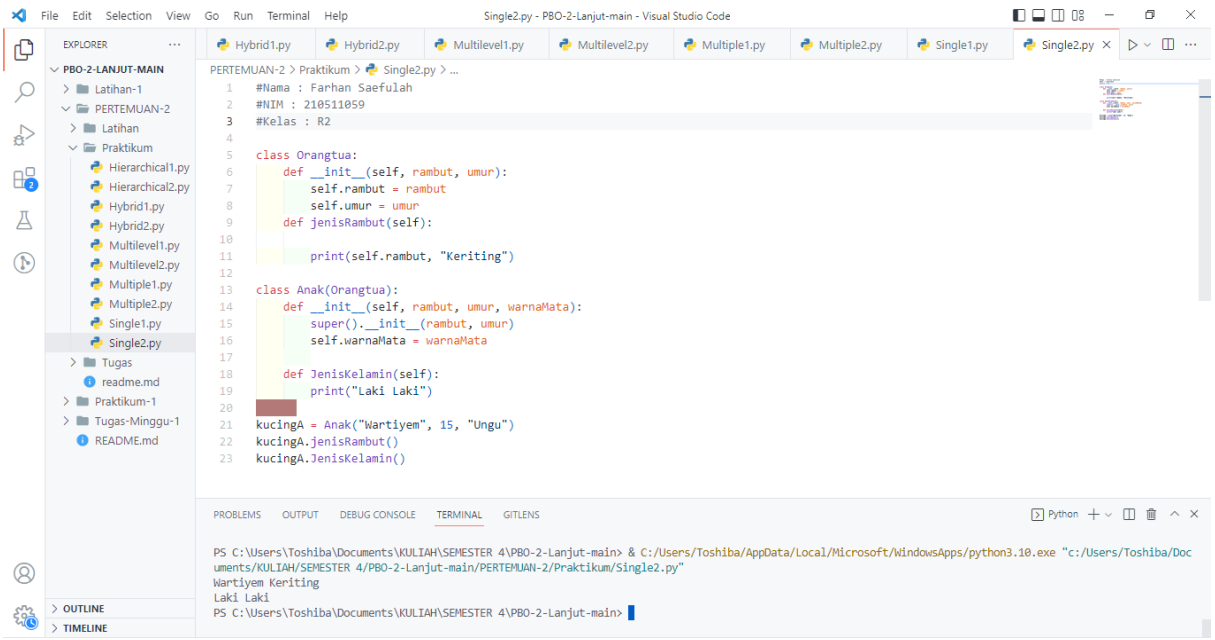
Output



Single 2 :

```python
#Nama : Farhan Saefulah
#NIM : 210511059
#Kelas : R2

class Orangtua:
    def __init__(self, rambut, umur):
        self.rambut = rambut
        self.umur = umur
    def jenisRambut(self):

        print(self.rambut, "Keriting")

class Anak(Orangtua):
    def __init__(self, rambut, umur, warnaMata):
        super().__init__(rambut, umur)
        self.warnaMata = warnaMata

    def JenisKelamin(self):
        print("Laki Laki")

kucingA = Anak("Wartiyem", 15, "Ungu")
kucingA.jenisRambut()
kucingA.JenisKelamin()
```

Output


File Edit Selection View Go Run Terminal Help
Single2.py - PBO-2-Lanjut-main - Visual Studio Code
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Hybrid2.py
Multilevel1.py
Multilevel2.py
Multiple1.py
Multiple2.py
Single1.py
Single2.py
PERTEMUAN-2 > Praktikum > Single2.py > ...
#Nama : Farhan Saefulah
#NIM : 210511059
#Kelas : R2
class Orangtua:
def __init__(self, rambut, umur):
self.rambut = rambut
self.umur = umur
def jenisRambut(self):
print(self.rambut, "Keriting")
class Anak(Orangtua):
def __init__(self, rambut, umur, warnaMata):
super().__init__(rambut, umur)
self.warnaMata = warnaMata
def JenisKelamin(self):
print("Laki Laki")
kucingA = Anak("Wartiyem", 15, "Ungu")
kucingA.jenisRambut()
kucingA.JenisKelamin()
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL GITLENS
Python
PS C:\Users\Toshiba\Documents\KULIAH\SEMESTER 4\PBO-2-Lanjut-main> & C:/Users/Toshiba/AppData/Local/Microsoft/WindowsApps/python3.10.exe "c:/Users/Toshiba/Documents/KULIAH/SEMESTER 4/PBO-2-Lanjut-main/PERTEMUAN-2/Praktikum/Single2.py"
Wartiyem Keriting
Laki Laki
PS C:\Users\Toshiba\Documents\KULIAH\SEMESTER 4\PBO-2-Lanjut-main>
OUTLINE
TIMELINE