

LAPORAN PRAKTIKUM

PEMROGRAMAN BERORIENTASI OBJEK LANJUT

2023



Prepared By:

Nama : Grandies Silvania Verdianto
Kelas : R1
NIM : 210511003

1. Hierarchical1

```
# Nama : Grandies Sylvania Verdianto
# Kelas : R1
# NIM : 210511003

class Employee:

    def __init__(self, name, salary):
        self.name = name
        self.salary = salary

    def display_info(self):
        print("Name:", self.name)
        print("Salary:", self.salary)

class Manager(Employee):

    def __init__(self, name, salary, department):
        super().__init__(name, salary)
        self.department = department

    def display_info(self):

        super().display_info()
        print("Department:", self.department)

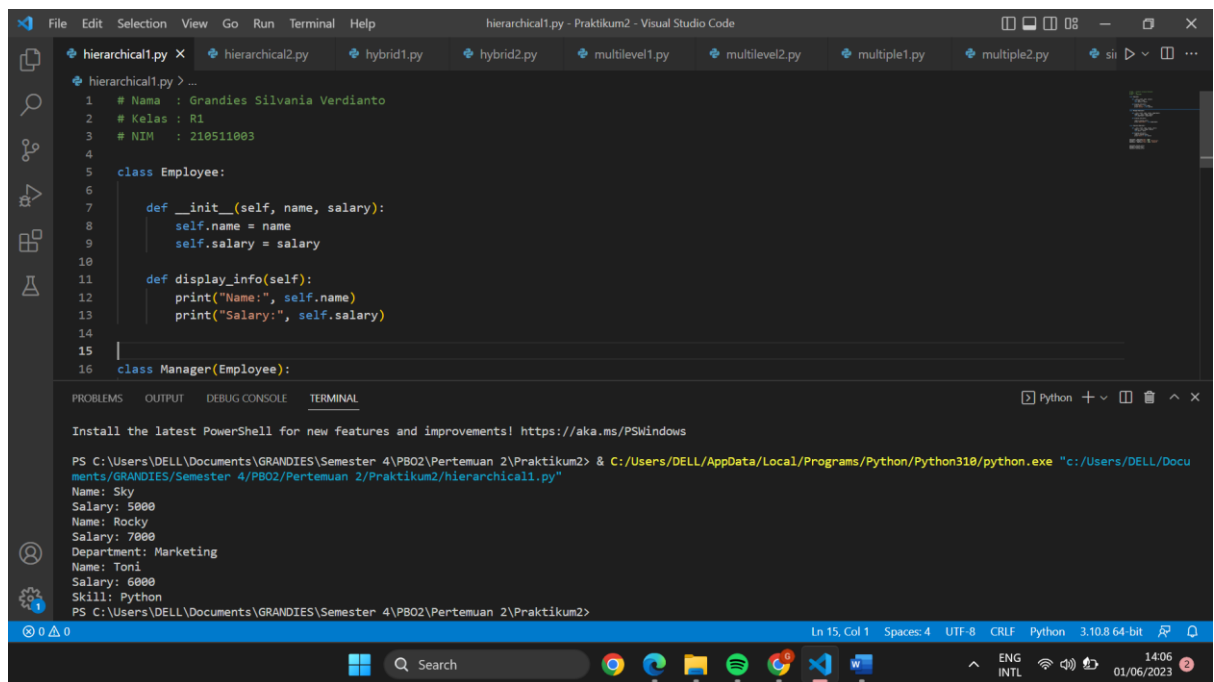
class Engineer(Employee):

    def __init__(self, name, salary, skill):
        super().__init__(name, salary)
        self.skill = skill

    def display_info(self):
        super().display_info()
        print("Skill:", self.skill)

employee1 = Employee("Son", 5000)
manager1 = Manager("Chanwook", 7000, "Marketing")
engineer1 = Engineer("Rommy", 6000, "Python")

employee1.display_info()
manager1.display_info()
engineer1.display_info()
engineer1.display_info()
```



2. Hierarchical2

```
# Nama : Grandies Silvania Verdianto
# Kelas : R1
# NIM : 210511003
```

```
class Vehicle:
```

```
    def __init__(self, brand, model):
        self.brand = brand
        self.model = model

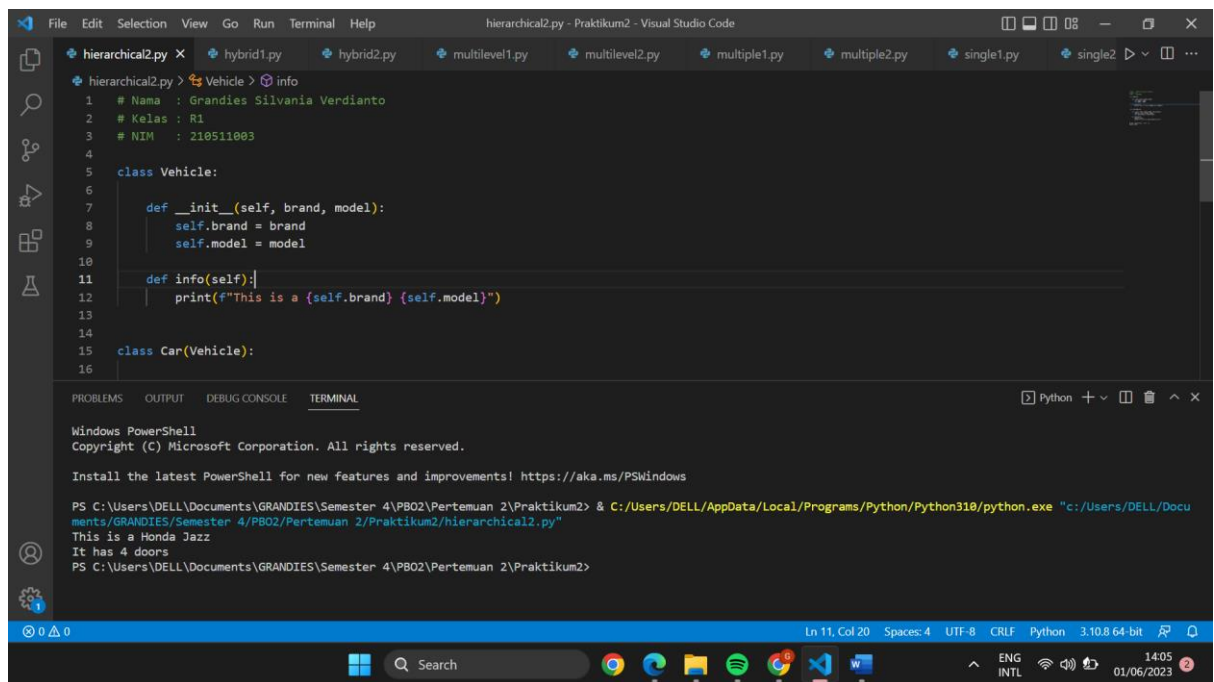
    def info(self):
        print(f"This is a {self.brand} {self.model}")
```

```
class Car(Vehicle):
```

```
    def __init__(self, brand, model, num_of_doors):
        super().__init__(brand, model)
        self.num_of_doors = num_of_doors

    def info(self):
        super().info()
        print(f"It has {self.num_of_doors} doors")
```

```
my_car = Car("Honda", "Jazz", 4)
my_car.info()
```



3. Hybrid1

```

# Nama : Grandies Silvania Verdianto
# Kelas : R1
# NIM : 210511003

```

```

class Grup:
    def __init__(self, Nama, Usia):
        self.Nama = Nama
        self.Usia = Usia

    def Info(self):
        print("Identitas\nNama: ", self.Nama)
        print("Usia: ", self.Usia)

```

```

class Membership(Grup):
    def __init__(self, Nama, Usia, Status):
        super().__init__(Nama, Usia)
        self.Status = Status

    def Info(self):
        super().Info()
        print("Status: ", self.Status)

```

```

class Member(Grup):
    def __init__(self, Nama, Usia, Jenis_Membership):
        super().__init__(Nama, Usia, Jenis_Membership)
        self.Jenis_Membership = Jenis_Membership

    def Info(self):

```

```

super().Info()
print("Jenis_Membership: ", self.Jenis_Membership)

```

```

class Orang(Member, Membership):
    def __init__(self, Nama, Usia, Status, Jenis_Membership, Alamat):
        Member.__init__(self, Nama, Usia, Jenis_Membership)
        Membership.__init__(self, Nama, Usia, Status)
        self.Alatamat = Alamat

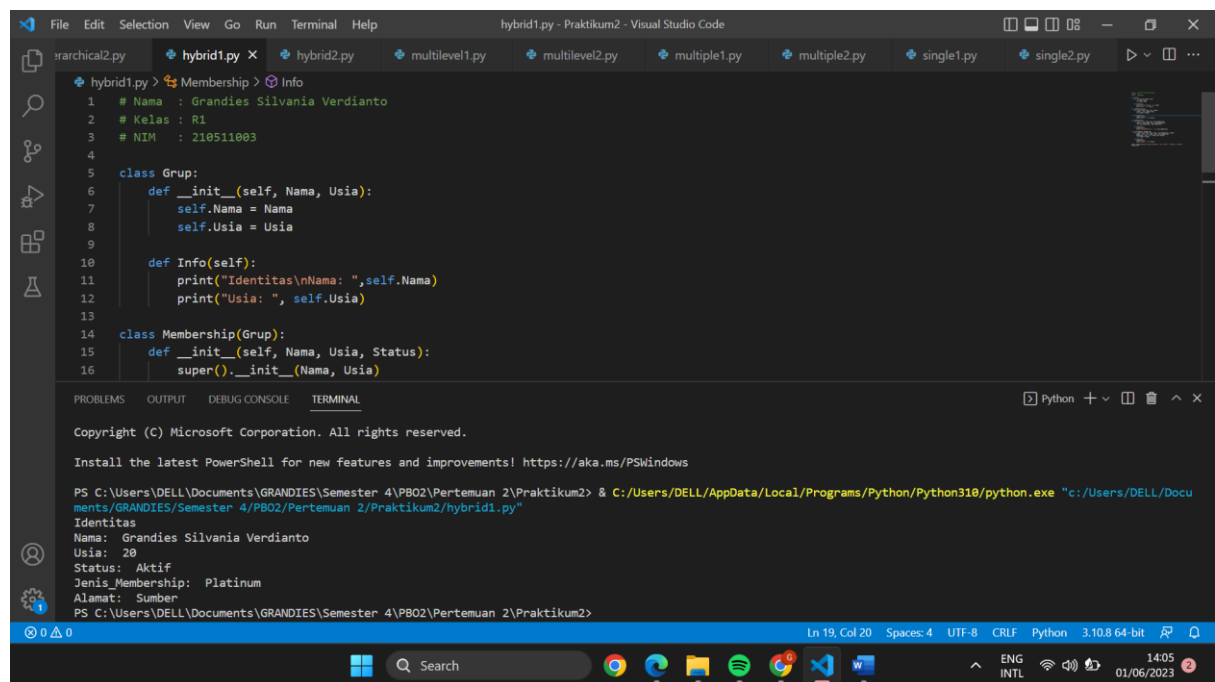
    def Info(self):
        super().Info()
        print("Alamat: ",self.Alatamat)

```

```

orang = Orang("Grandies Silvania Verdianto", "20", "Aktif", "Platinum",
"Sumber")
orang.Info()

```



```

hybrid1.py > Membership > Info
1 # Nama : Grandies Silvania Verdianto
2 # Kelas : R1
3 # NIM : 210511003
4
5 class Grup:
6     def __init__(self, Nama, Usia):
7         self.Nama = Nama
8         self.Usia = Usia
9
10    def Info(self):
11        print("Identitas\nNama: ",self.Nama)
12        print("Usia: ", self.Usia)
13
14    class Membership(Grup):
15        def __init__(self, Nama, Usia, Status):
16            super().__init__(Nama, Usia)

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! <https://aka.ms/PSWindows>

```

PS C:\Users\DELL\Documents\GRANDIES\Semester 4\PMO2\Pertemuan 2\Praktikum2> & C:/Users/DELL/AppData/Local/Programs/Python/Python310/python.exe "c:/Users/DELL/Docu
ments/GRANDIES/Semester 4/PMO2/Pertemuan 2/Praktikum2/hybrid1.py"
Identitas
Nama: Grandies Silvania Verdianto
Usia: 20
Status: Aktif
Jenis_Membership: Platinum
Alamat: Sumber
PS C:\Users\DELL\Documents\GRANDIES\Semester 4\PMO2\Pertemuan 2\Praktikum2>

```

Ln 19, Col 20 Spaces: 4 UTF-8 CRLF Python 3.10.8 64-bit

4. Hybrid2

```

# Nama : Grandies Silvania Verdianto
# Kelas : R1
# NIM : 210511003

```

```

class Animal:

    def __init__(self, name):
        self.name = name

    def speak(self):
        pass

```

```
class Mammal(Animal):

    def __init__(self, name):
        super().__init__(name)

    def give_birth(self):
        pass


class Dog(Mammal):

    def __init__(self, name, breed):
        super().__init__(name)
        self.breed = breed

    def speak(self):
        return "Woof"


class Cat(Mammal):

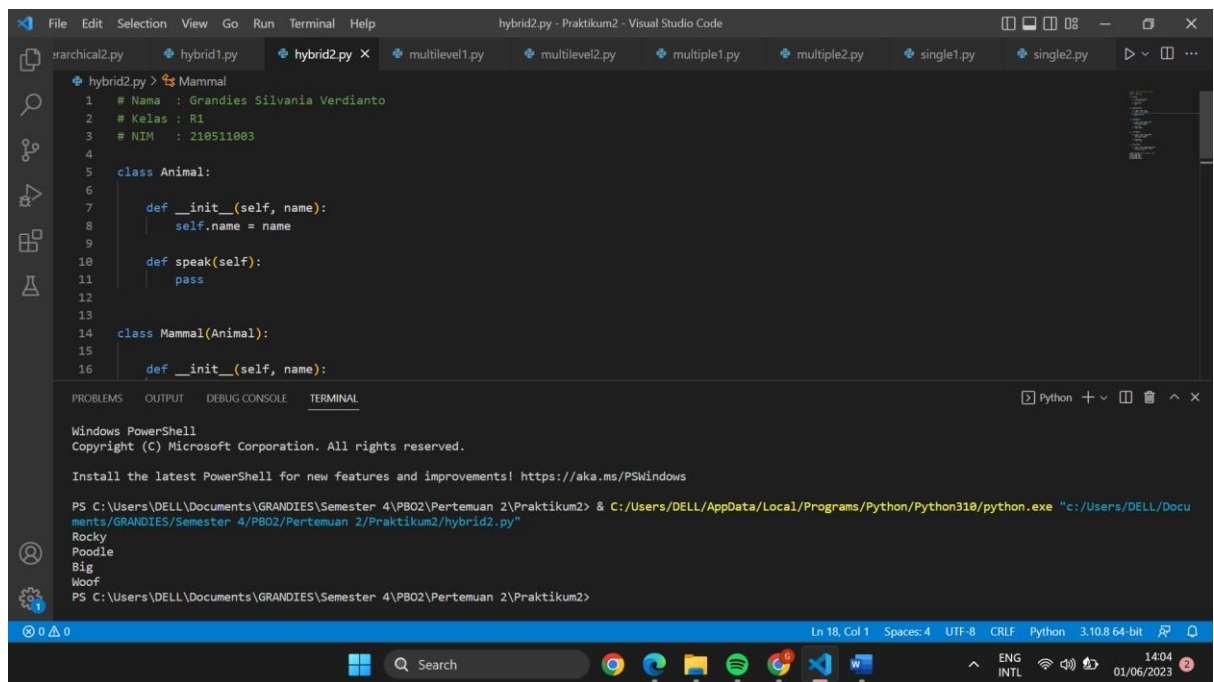
    def __init__(self, name, breed):
        super().__init__(name)
        self.breed = breed

    def speak(self):
        return "Meow"


class Poodle(Dog):

    def __init__(self, name, breed, size):
        super().__init__(name, breed)
        self.size = size


my_dog = Poodle("Rocky", "Poodle", "Big")
print(my_dog.name)
print(my_dog.breed)
print(my_dog.size)
print(my_dog.speak())
```



5. Multilevel1

```
# Nama : Grandies Silvania Verdianto
# Kelas : R1
# NIM : 210511003
```

```
class Animal:
```

```
    def __init__(self, name):
        self.name = name
```

```
    def speak(self):
        print(f"{self.name} speaks")
```

```
class Bird(Animal):
```

```
    def __init__(self, name, wingspan):
        super().__init__(name)
        self.wingspan = wingspan
```

```
    def fly(self):
        print(f"{self.name} is flying with a wingspan of {self.wingspan}")
```

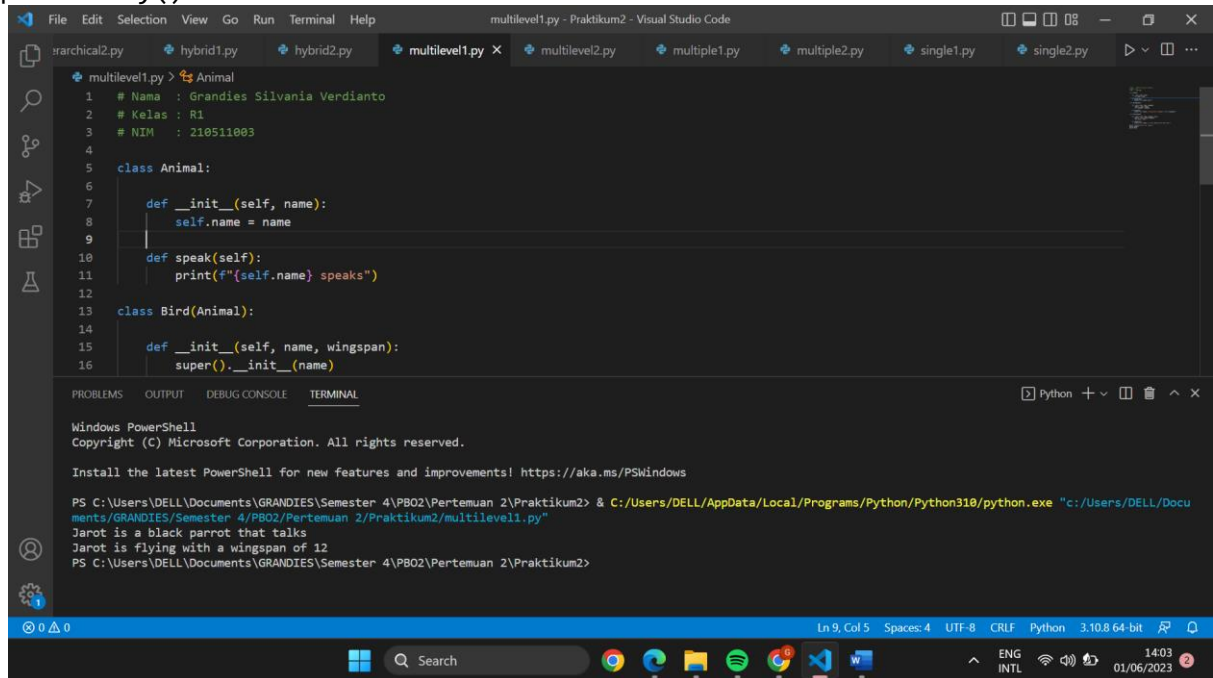
```
class Parrot(Bird):
```

```
    def __init__(self, name, wingspan, color):
        super().__init__(name, wingspan)
        self.color = color
```

```
    def speak(self):
```

```
print(f"{self.name} is a {self.color} parrot that talks")
```

```
parrot = Parrot("Jarot", 12, "black")  
parrot.speak()  
parrot.fly()
```



The screenshot shows a Visual Studio Code window with the file 'multilevel1.py' open. The code defines a base class 'Animal' with attributes 'name' and 'color', and methods 'speak' and 'fly'. A subclass 'Bird' inherits from 'Animal' and adds a 'wingspan' attribute. The terminal output shows the execution of the code, displaying the parrot's name, color, and wingspan, and the output of the 'speak' and 'fly' methods.

```
multilevel1.py > Animal  
1 # Nama : Grandies Silvania Verdianto  
2 # Kelas : R1  
3 # NIM : 210511003  
4  
5 class Animal:  
6  
7     def __init__(self, name):  
8         self.name = name  
9  
10    def speak(self):  
11        print(f"{self.name} speaks")  
12  
13    class Bird(Animal):  
14  
15        def __init__(self, name, wingspan):  
16            super().__init__(name)
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\DELL\Documents\GRANDIES\Semester 4\PB02\Pertemuan 2\Praktikum2> & C:/Users/DELL/AppData/Local/Programs/Python/Python310/python.exe "c:/Users/DELL/Docu
ments/GRANDIES/Semester 4/PB02/Pertemuan 2/Praktikum2/multilevel1.py"
Jarot is a black parrot that talks
Jarot is flying with a wingspan of 12
PS C:\Users\DELL\Documents\GRANDIES\Semester 4\PB02\Pertemuan 2\Praktikum2>

6. Multilevel2

```
# Nama : Grandies Silvania Verdianto  
# Kelas : R1  
# NIM : 210511003
```

```
class Buah:  
    def __init__(self, name):  
        self.name = name  
    def Rasa(self):  
        print("Buah-buahan memiliki banyak manfaat")
```

```
class Mangga(Buah):  
    def __init__(self, name, rasa):  
        super().__init__(name)  
        self.rasa = rasa  
    def Rasa(self):  
        print("Mangga mengandung vitamin A")
```

```
class ManggaCengkir(Mangga):  
    def __init__(self, name, rasa, asal):  
        super().__init__(name, rasa)  
        self.asal = asal  
    def Rasa(self):  
        print("Mangga Cengkir memiliki rasa yang manis")
```



```

ManggaCengkirA = ManggaCengkir("Mangga Cengkir", "manis", "Indonesia")
ManggaB = Mangga("Mangga", "Manis")
buahC = Buah("Buah apa yang enak?")
ManggaCengkirA.Rasa()
ManggaB.Rasa()
buahC.Rasa()

```

The screenshot shows a Visual Studio Code window with a Python file named 'multilevel2.py'. The code defines a 'Buah' class with an 'Rasa' method and a 'Mangga' class that inherits from 'Buah'. The terminal output shows the execution of the code, displaying the name, class, and NIM of the user, followed by the output of the 'Rasa' method for 'ManggaCengkirA', 'ManggaB', and 'buahC'.

```

# Nama : Grandies Silvania Verdianto
# Kelas : R1
# NIM : 210511003

class Buah:
    def __init__(self, name):
        self.name = name
    def Rasa(self):
        print("Buah-buahan memiliki banyak manfaat")

class Mangga(Buah):
    def __init__(self, name, rasa):
        super().__init__(name)
        self.rasa = rasa
    def Rasa(self):
        print("Mangga mengandung vitamin A")

```

Terminal Output:

```

Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\DELL\Documents\GRANDIES\Semester 4\PB02\Pertemuan 2\Praktikum2> & C:/Users/DELL/AppData/Local/Programs/Python/Python310/python.exe "c:/Users/DELL/Docu
ments/GRANDIES/Semester 4/PB02/Pertemuan 2/Praktikum2/multilevel2.py"
Mangga Cengkir memiliki rasa yang manis
Mangga mengandung vitamin A
Buah-buahan memiliki banyak manfaat
PS C:\Users\DELL\Documents\GRANDIES\Semester 4\PB02\Pertemuan 2\Praktikum2>

```

7. Multiple

```

# Nama : Grandies Silvania Verdianto
# Kelas : R1
# NIM : 210511003

```

```

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

```

```

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

```

```

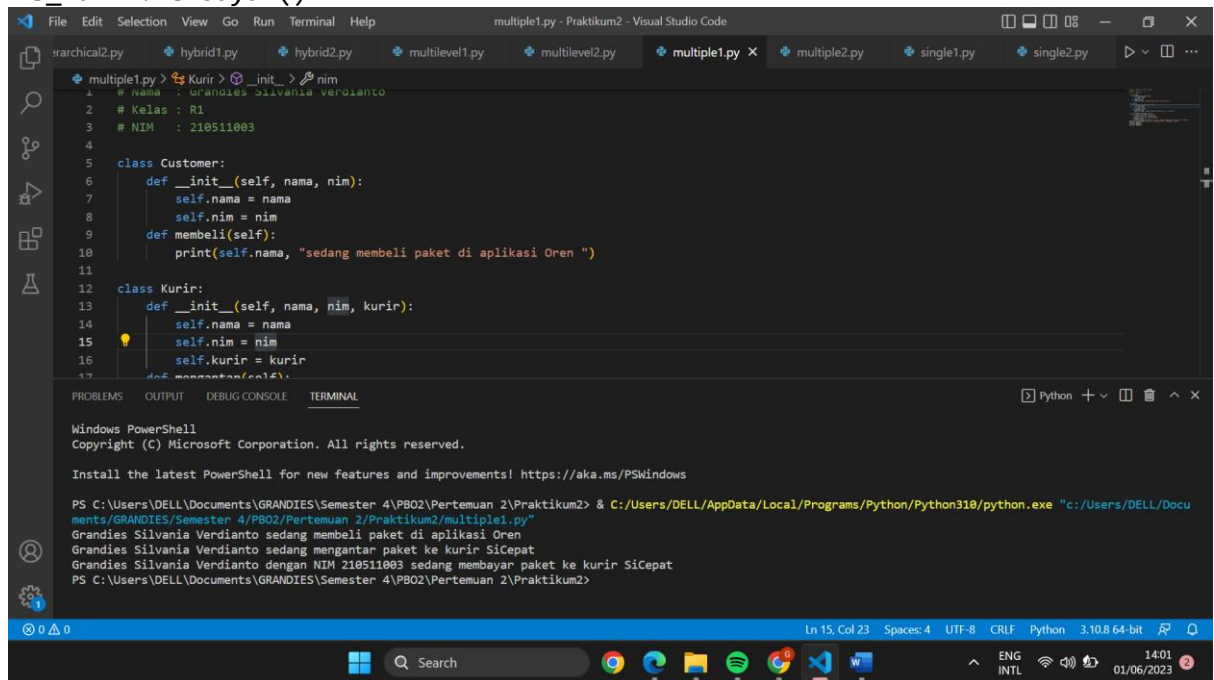
class CustomerKurir(Customer, Kurir):

```

```

def __init__(self, nama, nim, kurir):
    Customer.__init__(self, nama, nim)
    Kurir.__init__(self, nama, nim, kurir)
def membayar(self):
    print(self.nama, "dengan NIM", self.nim, "sedang membayar paket ke
kurir", self.kurir)
mhs_kurir = CustomerKurir("Grandies Silvania Verdianto", "210511003",
"SiCepat")
mhs_kurir.membeli()
mhs_kurir.mengantar()
mhs_kurir.membayar()

```



8. Multiple2

```

# Nama : Grandies Silvania Verdianto
# Kelas : R1
# NIM : 210511003

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):
        super().display_info()
        print(f>Nama hewan: {self.nama}")
class Herbivora(Hewan):
    def __init__(self, jenis, makanan):

```

```

        super().__init__(jenis)
        self.makanan = makanan
    def display_info(self):
        super().display_info()
        print(f"Jenis makanan: {self.makanan}")
class Kangguru(Mamalia, Herbivora):
    def __init__(self, jenis, nama, makanan):
        Mamalia.__init__(self, nama)
        Herbivora.__init__(self, jenis, makanan)
    def display_info(self):
        super().display_info()
        print(f"Jenis hewan: {self.jenis}")
# contoh penggunaan
kangguruA = Kangguru("Mamalia", "Sapi", "Rerumputan")
kangguruA.display_info()

```

```

multiple2.py > Kangguru > __init__
17 def __init__(self, jenis, makanan):
18     super().__init__(jenis)
19     self.makanan = makanan
20 def display_info(self):
21     super().display_info()
22     print(f"Jenis makanan: {self.makanan}")
23 class Kangguru(Mamalia, Herbivora):
24     def __init__(self, jenis, nama, makanan):
25         Mamalia.__init__(self, nama)
26         Herbivora.__init__(self, jenis, makanan)
27     def display_info(self):
28         super().display_info()
29         print(f"Jenis hewan: {self.jenis}")
30 # contoh penggunaan
31 kangguruA = Kangguru("Mamalia", "Sapi", "Rerumputan")
32 kangguruA.display_info()

```

```

Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\DELL\Documents\GRANDIES\Semester 4\PBO2\Pertemuan 2\Praktikum2> & C:/Users/DELL/AppData/Local/Programs/Python/Python310/python.exe "c:/Users/DELL/Docu
ments/GRANDIES/Semester 4/PBO2/Pertemuan 2/Praktikum2/multiple2.py"
Jenis makanan: Mamalia
Jenis hewan: Rerumputan
Nama hewan: Sapi
Jenis hewan: Mamalia
PS C:\Users\DELL\Documents\GRANDIES\Semester 4\PBO2\Pertemuan 2\Praktikum2>

```

9. Single

```

# Nama : Grandies Silvania Verdianto
# Kelas : R1
# NIM : 210511003

```

```

class Hewan:
    def __init__(self, nama, umur):
        self.nama = nama
        self.umur = umur
    def bergerak(self):
        print(self.nama, "bergerak")
class Kucing(Hewan):
    def __init__(self, nama, umur, jenis_bulu):

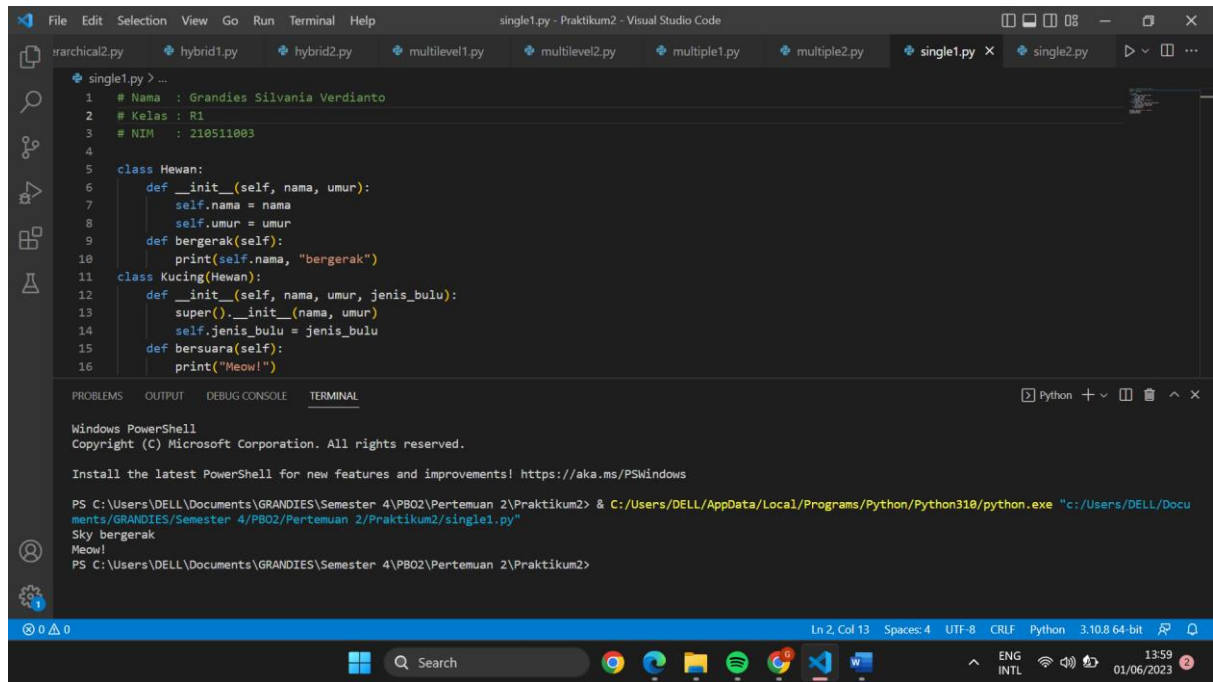
```

```

        super().__init__(nama, umur)
        self.jenis_bulu = jenis_bulu
    def bersuara(self):
        print("Meow!")

kucingA = Kucing("Sky", 1, "Persia")
kucingA.bergerak()
kucingA.bersuara()

```



10. Single2

```

# Nama : Grandies Silvania Verdianto
# Kelas : R1
# NIM : 210511003

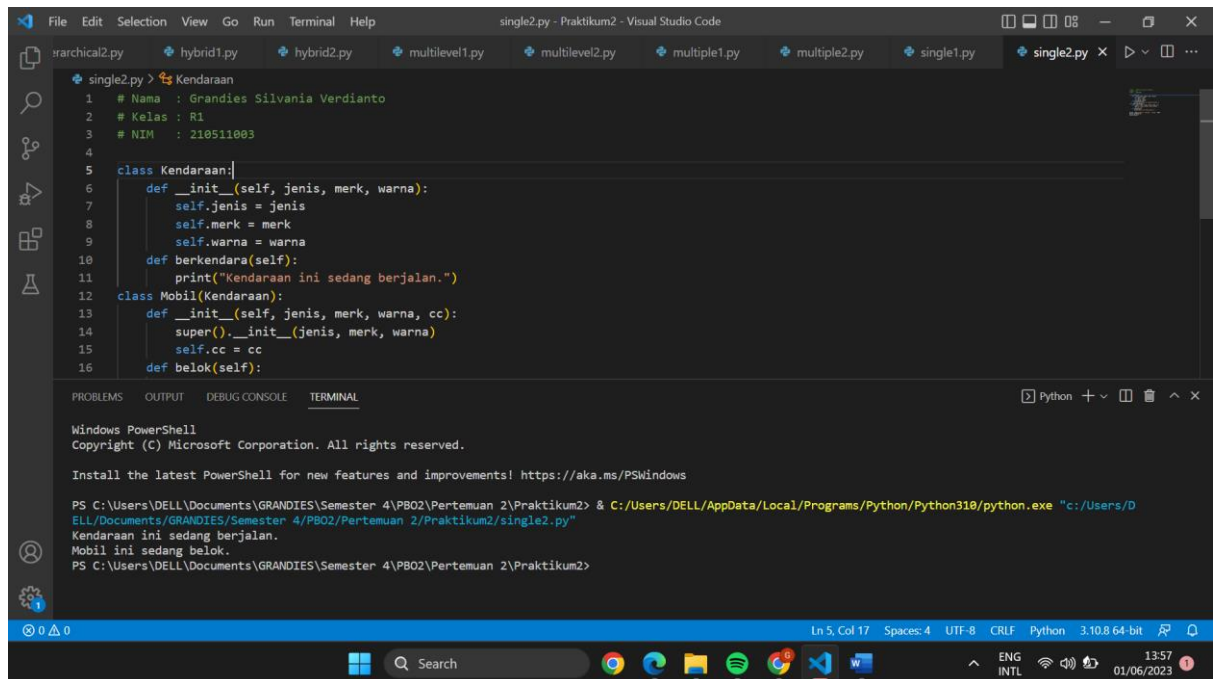
class Kendaraan:
    def __init__(self, jenis, merk, warna):
        self.jenis = jenis
        self.merk = merk
        self.warna = warna
    def berkendara(self):
        print("Kendaraan ini sedang berjalan.")

class Mobil(Kendaraan):
    def __init__(self, jenis, merk, warna, cc):
        super().__init__(jenis, merk, warna)
        self.cc = cc
    def belok(self):
        print("Mobil ini sedang belok.")

motorA = Mobil("Mobil", "Minibus", "Hitam", 2000)

```

```
motorA.berkendara()  
motorA.belok()
```



The screenshot shows the Visual Studio Code interface. The editor window displays a Python file named `single2.py` with the following code:

```
1 # Nama : Grandies Silvana Verdianto  
2 # Kelas : R1  
3 # NIM : 210511003  
4  
5 class Kendaraan:  
6     def __init__(self, jenis, merk, warna):  
7         self.jenis = jenis  
8         self.merk = merk  
9         self.warna = warna  
10    def berkendara(self):  
11        print("Kendaraan ini sedang berjalan.")  
12  
13 class Mobil(Kendaraan):  
14     def __init__(self, jenis, merk, warna, cc):  
15         super().__init__(jenis, merk, warna)  
16         self.cc = cc  
17     def belok(self):
```

The terminal window at the bottom shows the execution of the code:

```
Windows PowerShell  
Copyright (C) Microsoft Corporation. All rights reserved.  
  
Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows  
  
PS C:\Users\DELL\Documents\GRANDIES\Semester 4\PB02\Pertemuan 2\Praktikum2> & C:/Users/DELL/AppData/Local/Programs/Python/Python310/python.exe "c:/Users/D  
ELL/Documents/GRANDIES/Semester 4/PB02/Pertemuan 2/Praktikum2/single2.py"  
Kendaraan ini sedang berjalan.  
Mobil ini sedang belok.  
PS C:\Users\DELL\Documents\GRANDIES\Semester 4\PB02\Pertemuan 2\Praktikum2>
```

The status bar at the bottom indicates the file is at line 5, column 17, with 4 spaces, UTF-8 encoding, CRLF line endings, and Python 3.10.8 64-bit interpreter.