

LAPORAN PRAKTIKUM

PEMROGRAMAN BERORIENTASI OBJEK LANJUT

2023



Prepared By:

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210511132

R3/C

Soal 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

Jawab :

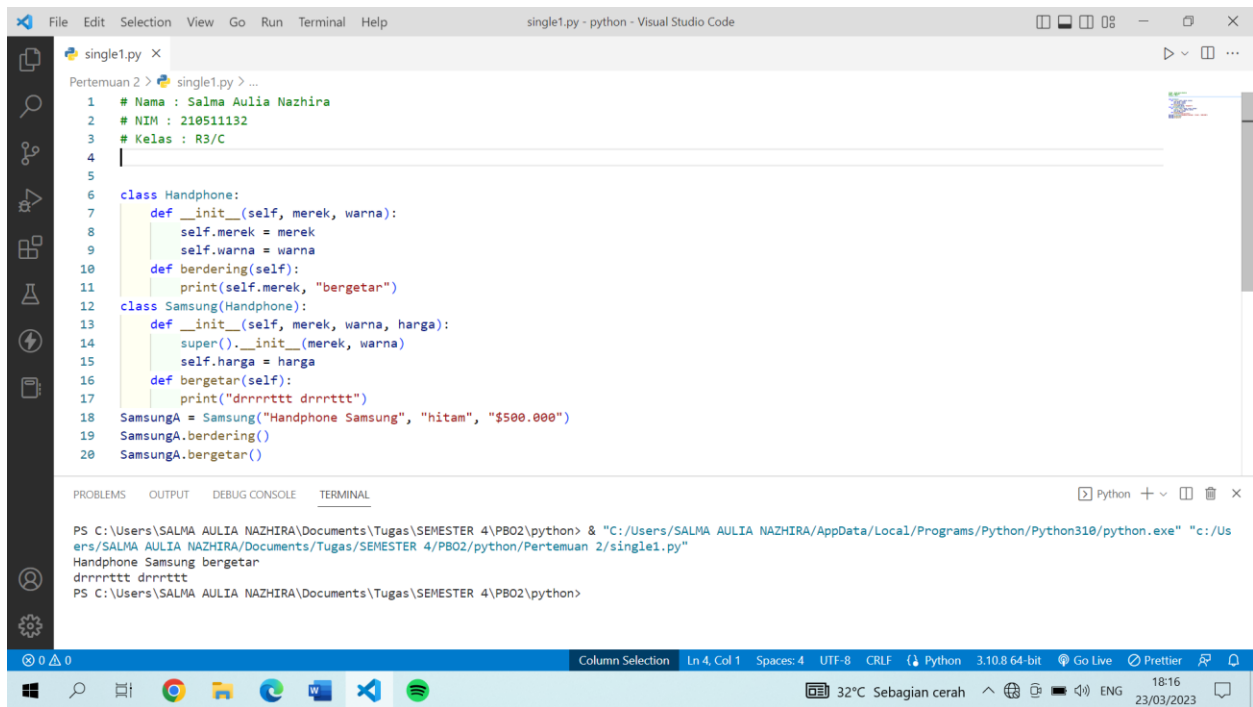
single1.py

Script

```
# Nama : Salma Aulia Nazhira
# NIM : 210511132
# Kelas : R3/C
```

```
class Handphone:
    def __init__(self, merek, warna):
        self.merek = merek
        self.warna = warna
    def berdering(self):
        print(self.merek, "bergetar")
class Samsung(Handphone):
    def __init__(self, merek, warna, harga):
        super().__init__(merek, warna)
        self.harga = harga
    def bergetar(self):
        print("drrrrrttt drrrttt")
SamsungA = Samsung("Handphone Samsung", "hitam", "$500.000")
SamsungA.berdering()
SamsungA.bergetar()
```

Screenshot



```
File Edit Selection View Go Run Terminal Help
single1.py - python - Visual Studio Code

single1.py x
Pertemuan 2 > single1.py > ...
1 # Nama : Salma Aulia Nazhira
2 # NIM : 210511132
3 # Kelas : R3/C
4
5
6 class Handphone:
7     def __init__(self, merek, warna):
8         self.merek = merek
9         self.warna = warna
10    def berdering(self):
11        print(self.merek, "bergetar")
12
13 class Samsung(Handphone):
14     def __init__(self, merek, warna, harga):
15         super().__init__(merek, warna)
16         self.harga = harga
17     def bergetar(self):
18         print("drnrtrttt drnrtrttt")
19
20 SamsungA = Samsung("Handphone Samsung", "hitam", "$500.000")
21 SamsungA.berdering()
22 SamsungA.bergetar()
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL Python + - [] [x] [x] [x]

```
PS C:\Users\SALMA AULIA NAZHIRA\Documents\Tugas\SEMESTER 4\PB02\python> & "C:/Users/SALMA AULIA NAZHIRA/AppData/Local/Programs/Python/Python310/python.exe" "c:/Users/SALMA AULIA NAZHIRA/Documents/Tugas/SEMESTER 4/PB02/python/Pertemuan 2/single1.py"
Handphone Samsung bergetar
drnrtrttt drnrtrttt
PS C:\Users\SALMA AULIA NAZHIRA\Documents\Tugas\SEMESTER 4\PB02\python>
```

Column Selection Ln 4, Col 1 Spaces: 4 UTF-8 CRLF Python 3.10.8 64-bit Go Live Prettier 18:16 23/03/2023

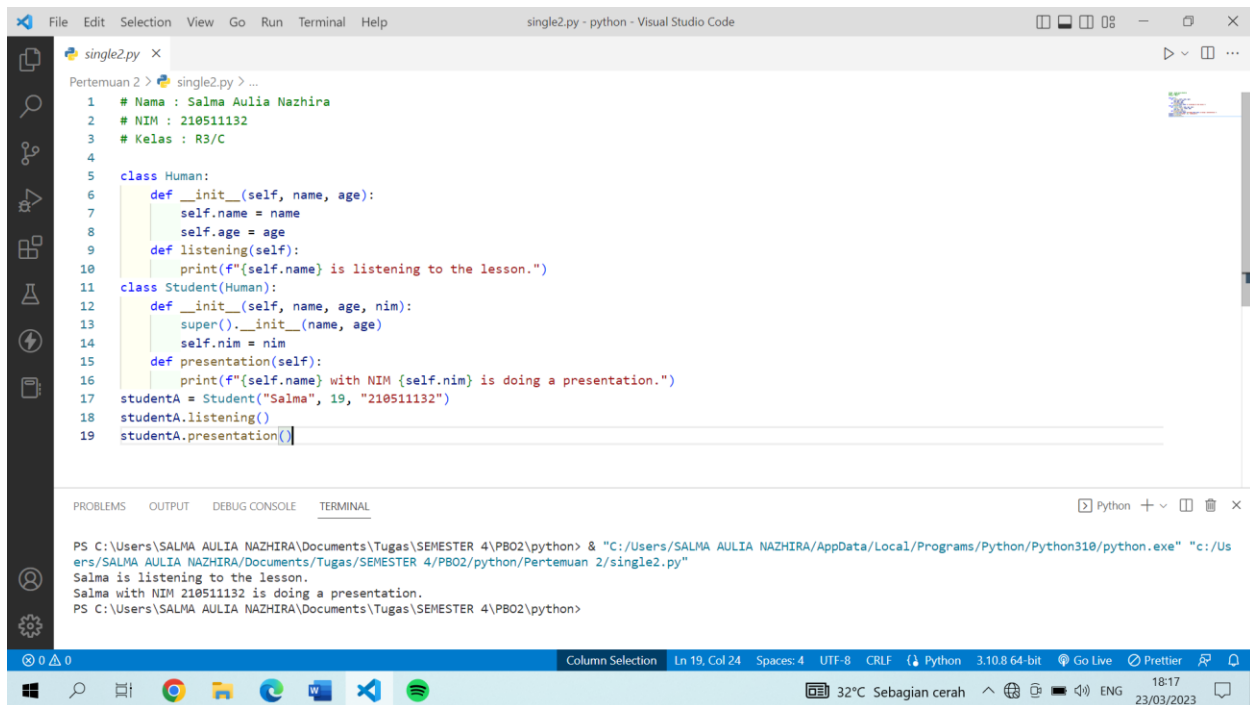
single2.py

Script

```
# Nama : Salma Aulia Nazhira
# NIM : 210511132
# Kelas : R3/C

class Human:
    def __init__(self, name, age):
        self.name = name
        self.age = age
    def listening(self):
        print(f"{self.name} is listening to the lesson.")
class Student(Human):
    def __init__(self, name, age, nim):
        super().__init__(name, age)
        self.nim = nim
    def presentation(self):
        print(f"{self.name} with NIM {self.nim} is doing a presentation.")
studentA = Student("Salma", 19, "210511132")
studentA.listening()
studentA.presentation()
```

Screenshot



```
1 # Nama : Salma Aulia Nazhira
2 # NIM : 210511132
3 # Kelas : R3/C
4
5 class Human:
6     def __init__(self, name, age):
7         self.name = name
8         self.age = age
9     def listening(self):
10        print(f"{self.name} is listening to the lesson.")
11 class Student(Human):
12     def __init__(self, name, age, nim):
13         super().__init__(name, age)
14         self.nim = nim
15     def presentation(self):
16        print(f"{self.name} with NIM {self.nim} is doing a presentation.")
17 studentA = Student("Salma", 19, "210511132")
18 studentA.listening()
19 studentA.presentation()
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

PS C:\Users\SALMA AULIA NAZHIRA\Documents\Tugas\SEMESTER 4\PB02\python> & "C:/Users/SALMA AULIA NAZHIRA/AppData/Local/Programs/Python/Python310/python.exe" "c:/Users/SALMA AULIA NAZHIRA/Documents/Tugas/SEMESTER 4/PB02/python/Pertemuan 2/single2.py"

Salma is listening to the lesson.

Salma with NIM 210511132 is doing a presentation.

PS C:\Users\SALMA AULIA NAZHIRA\Documents\Tugas\SEMESTER 4\PB02\python>

Column Selection Ln 19, Col 24 Spaces: 4 UTF-8 CRLF Python 3.10.8 64-bit Go Live Prettier

32°C Sebagian cerah 18:17 23/03/2023

multiple1.py

Script

```
# Nama : Salma Aulia Nazhira
# NIM : 210511132
# Kelas : R3/C
```

```
class Musik:
    def __init__(self, komposer, jenis):
        self.komposer = komposer
        self.jenis = jenis
    def display_info(self):
        print(f"Komposer: {self.komposer}")
        print(f"Jenis: {self.jenis}")
class Judul:
    def __init__(self, judul, tahun):
        self.judul = judul
        self.tahun = tahun
    def display_info(self):
        print(f"Pekerjaan: {self.pekerjaan}")
        print(f"Gaji: {self.gaji}")
class Komposer:
    def __init__(self, lahir, negara):
```

```

        self.negara = negara
        self.lahir = lahir
    def display_info(self):
        print(f"Lahir tanggal: {self.lahir}")
        print(f"Berasal dari negara: {self.negara}")

class KomposerMusik(Musik, Judul, Komposer):
    def __init__(self, komposer, jenis, judul, tahun, negara, lahir):
        Musik.__init__(self, komposer, jenis)
        Judul.__init__(self, judul, tahun)
        Komposer.__init__(self, negara, lahir)
    def display_info(self):
        super().display_info()
        print(f"Berasal dari negara : {self.negara}")
        print(f"Lahir tanggal : {self.lahir}")
        print(f"Judul : {self.judul}")
        print(f"Tahun Rilis : {self.tahun}")

# contoh penggunaan
komposer_musika = KomposerMusik("Wolfgang Amadeus Mozart", "Klasik", "Piano
Sonata No.11", "1784", "27 Jauari 1756", "Austria")
komposer_musika.display_info()

```

Screenshot

The screenshot shows a Visual Studio Code window with a file named `multiple1.py`. The code defines three classes: `Musik`, `Judul`, and `Komposer`. `Musik` and `Judul` are base classes, and `Komposer` inherits from both. The `KomposerMusik` class (though not explicitly named in the code, it's implied by the usage) is used to create an instance of a composer. The terminal output shows the execution of the script, displaying the composer's details.

```

1 # Nama : Salma Aulia Nazhira
2 # NIM : 210511132
3 # Kelas : R3/C
4
5 class Musik:
6     def __init__(self, komposer, jenis):
7         self.komposer = komposer
8         self.jenis = jenis
9     def display_info(self):
10        print(f"Komposer: {self.komposer}")
11        print(f"Jenis: {self.jenis}")
12
13 class Judul:
14     def __init__(self, judul, tahun):
15         self.judul = judul
16         self.tahun = tahun
17     def display_info(self):
18        print(f"Pekerjaan: {self.pekerjaan}")
19        print(f"Gaji: {self.gaji}")
20
21 class Komposer:

```

Terminal Output:

```

PS C:\Users\SALMA AULIA NAZHIRA\Documents\Tugas\SEMESTER 4\PB02\python> & "C:/Users/SALMA AULIA NAZHIRA/AppData/Local/Programs/Python/Python310/python.exe" "c:/Users/SALMA AULIA NAZHIRA/Documents/Tugas/SEMESTER 4/PB02/python/Pertemuan 2/multiple1.py"
Komposer: Wolfgang Amadeus Mozart
Jenis: Klasik
Berasal dari negara : Austria
Lahir tanggal : 27 Jauari 1756
Judul : Piano Sonata No.11
Tahun Rilis : 1784
PS C:\Users\SALMA AULIA NAZHIRA\Documents\Tugas\SEMESTER 4\PB02\python>

```

multiple2.py

Script

```
# Nama : Salma Aulia Nazhira
# NIM : 210511132
# Kelas : R3/C

class Country:
    def __init__(self, name, capital):
        self.name = name
        self.capital = capital
    def display_info(self):
        print(f"Country Name: {self.name}")
        print(f"Capital City: {self.capital}")

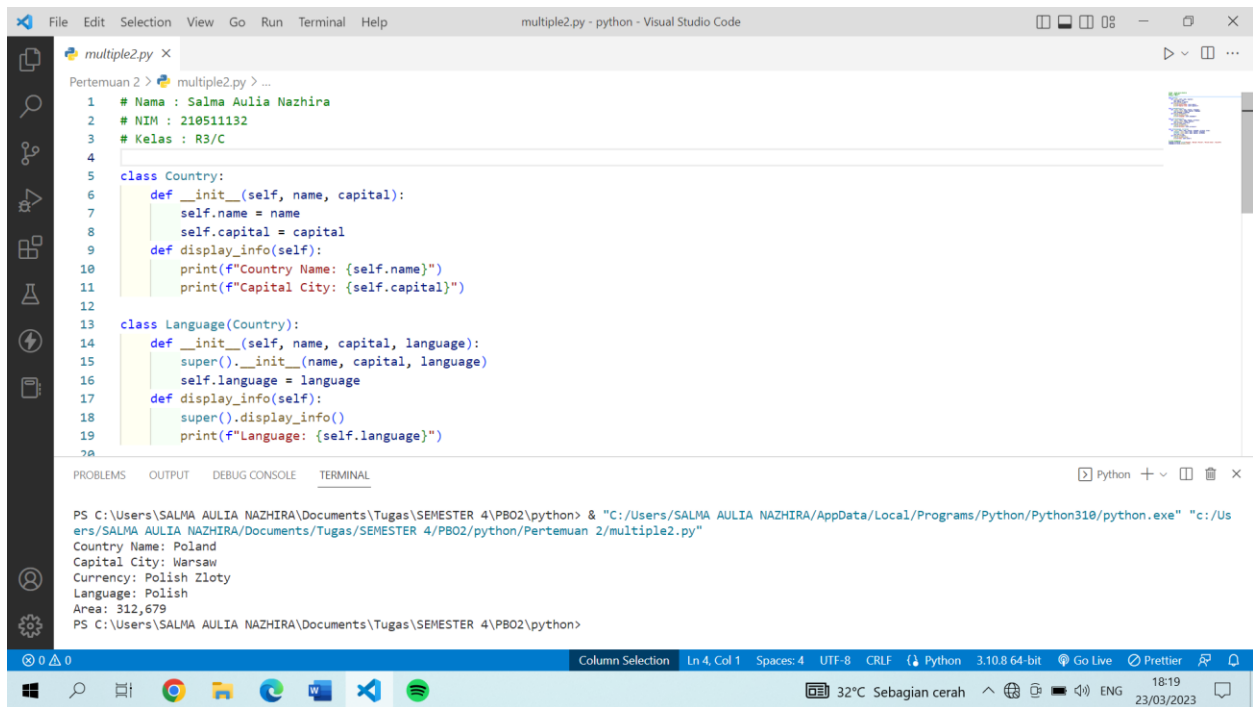
class Language(Country):
    def __init__(self, name, capital, language):
        super().__init__(name, capital, language)
        self.language = language
    def display_info(self):
        super().display_info()
        print(f"Language: {self.language}")

class Currency(Country):
    def __init__(self, name, capital, currency):
        super().__init__(name, capital)
        self.currency = currency
    def display_info(self):
        super().display_info()
        print(f"Currency: {self.currency}")

class Area(Language, Currency):
    def __init__(self, name, capital, language, currency, area):
        Language.__init__(self, name, capital, language)
        Currency.__init__(self, name, capital, currency)
        self.area = area
    def display_info(self):
        super().display_info()
        print(f"Area: {self.area}")

# contoh penggunaan
language_currencyA = Area("Poland", "Warsaw", "Polish", "Polish Zloty", "312,679")
language_currencyA.display_info()
```

Screenshot



```
File Edit Selection View Go Run Terminal Help
multiple2.py - python - Visual Studio Code

multiple2.py x
Pertemuan 2 > multiple2.py > ...
1 # Nama : Salma Aulia Nazhira
2 # NIM : 210511132
3 # Kelas : R3/C
4
5 class Country:
6     def __init__(self, name, capital):
7         self.name = name
8         self.capital = capital
9     def display_info(self):
10        print(f"Country Name: {self.name}")
11        print(f"Capital City: {self.capital}")
12
13 class Language(Country):
14     def __init__(self, name, capital, language):
15         super().__init__(name, capital, language)
16         self.language = language
17     def display_info(self):
18         super().display_info()
19         print(f"Language: {self.language}")
20
21
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Python + - [ ] [x] [x]
PS C:\Users\SALMA AULIA NAZHIRA\Documents\Tugas\SEMESTER 4\PBO2\python> & "C:/Users/SALMA AULIA NAZHIRA/AppData/Local/Programs/Python/Python310/python.exe" "c:/Users/SALMA AULIA NAZHIRA/Documents/Tugas/SEMESTER 4/PBO2/python/Pertemuan 2/multiple2.py"
Country Name: Poland
Capital City: Warsaw
Currency: Polish Zloty
Language: Polish
Area: 312,679
PS C:\Users\SALMA AULIA NAZHIRA\Documents\Tugas\SEMESTER 4\PBO2\python>
```

hierarchical1.py

Script

```
class Bangunan:
    def __init__(self, nama):
        self.nama = nama
    def get_nama(self):
        return self.nama

class Rumah(Bangunan):
    def __init__(self, nama, luas):
        super().__init__(nama)
        self.luas = luas
    def get_luas(self):
        return self.luas

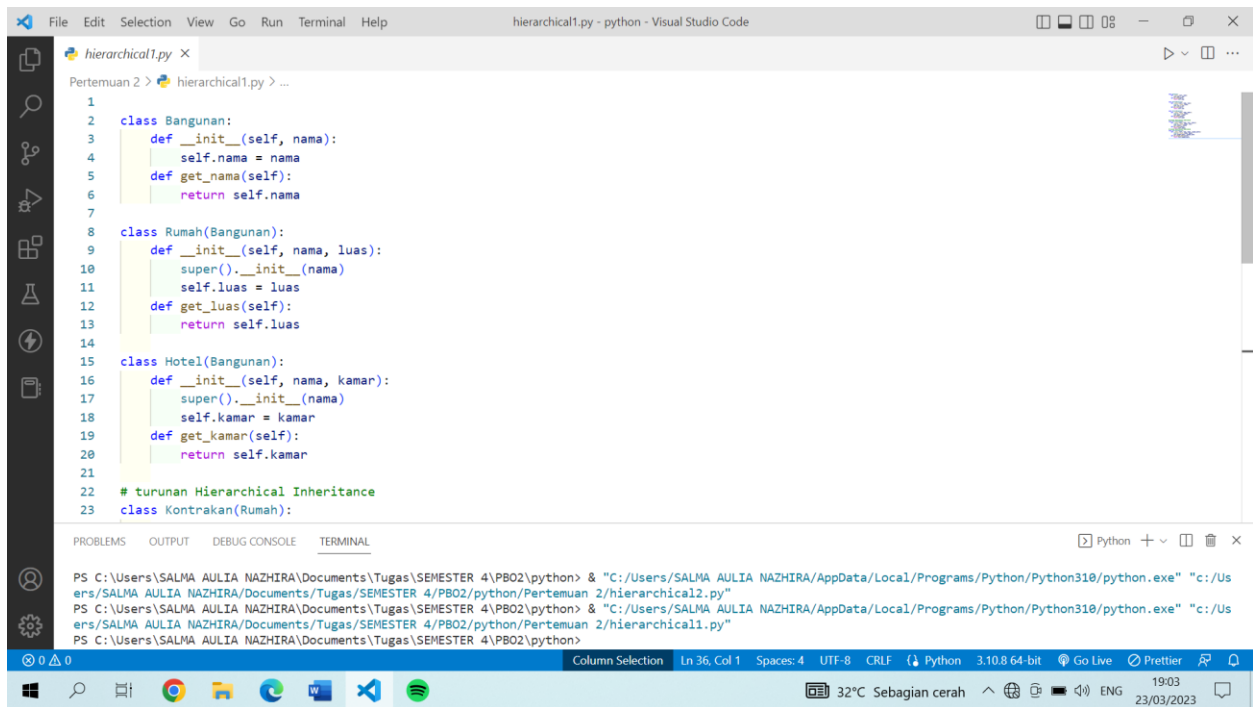
class Hotel(Bangunan):
    def __init__(self, nama, kamar):
        super().__init__(nama)
        self.kamar = kamar
    def get_kamar(self):
        return self.kamar
```

```

# turunan Hierarchical Inheritance
class Kontrakan(Rumah):
    def __init__(self, nama, luas, lokasi):
        super().__init__(nama, luas)
        self.lokasi = lokasi
    def get_lokasi(self):
        return self.lokasi
# turunan Hierarchical Inheritance
class Apartment(Hotel):
    def __init__(self, nama, kamar, jangka_waktu):
        super().__init__(nama, kamar)
        self.jangka_waktu = jangka_waktu
    def get_jangka_waktu(self):
        return self.jangka_waktu

```

Screenshot



hierarchical2.py

Script

```

# Nama : Salma Aulia Nazhira
# NIM : 210511132
# Kelas : R3/C

```



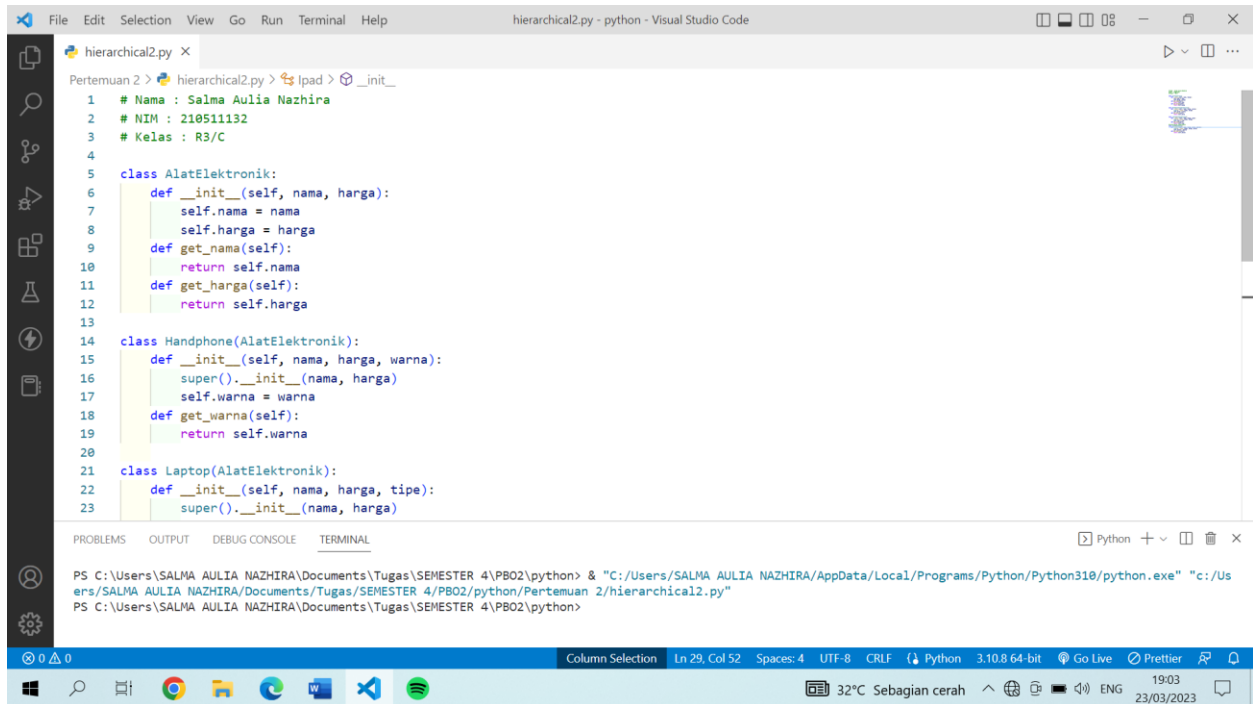
```
class AlatElektronik:
    def __init__(self, nama, harga):
        self.nama = nama
        self.harga = harga
    def get_nama(self):
        return self.nama
    def get_harga(self):
        return self.harga

class Handphone(AlatElektronik):
    def __init__(self, nama, harga, warna):
        super().__init__(nama, harga)
        self.warna = warna
    def get_warna(self):
        return self.warna

class Laptop(AlatElektronik):
    def __init__(self, nama, harga, tipe):
        super().__init__(nama, harga)
        self.tipe = tipe
    def get_tipe(self):
        return self.tipe

# Hierarchical Inheritance
class Ipad(Handphone):
    def __init__(self, nama, harga, warna, ukuran):
        super().__init__(nama, harga, warna)
        self.ukuran = ukuran
    def get_ukuran(self):
        return self.ukuran
```

Screenshot



multilevel1.py

Script

```
# Nama : Salma Aulia Nazhira
# NIM : 210511132
# Kelas : R3/C
```

```
class Makanan:
    def __init__(self, jenis, rasa):
        self.jenis = jenis
        self.rasa = rasa
    def get_details(self):
        print(f"Jenis: {self.jenis}, rasa: {self.rasa}")
```

```
class Daerah(Makanan):
    def __init__(self, jenis, rasa, daerah, nama):
        super().__init__(jenis, rasa)
        self.daerah = daerah
        self.nama = nama
    def get_details(self):
        super().get_details()
        print(f"Berasal dari daerah: {self.daerah}, Nama Makanan: {self.nama}")
```

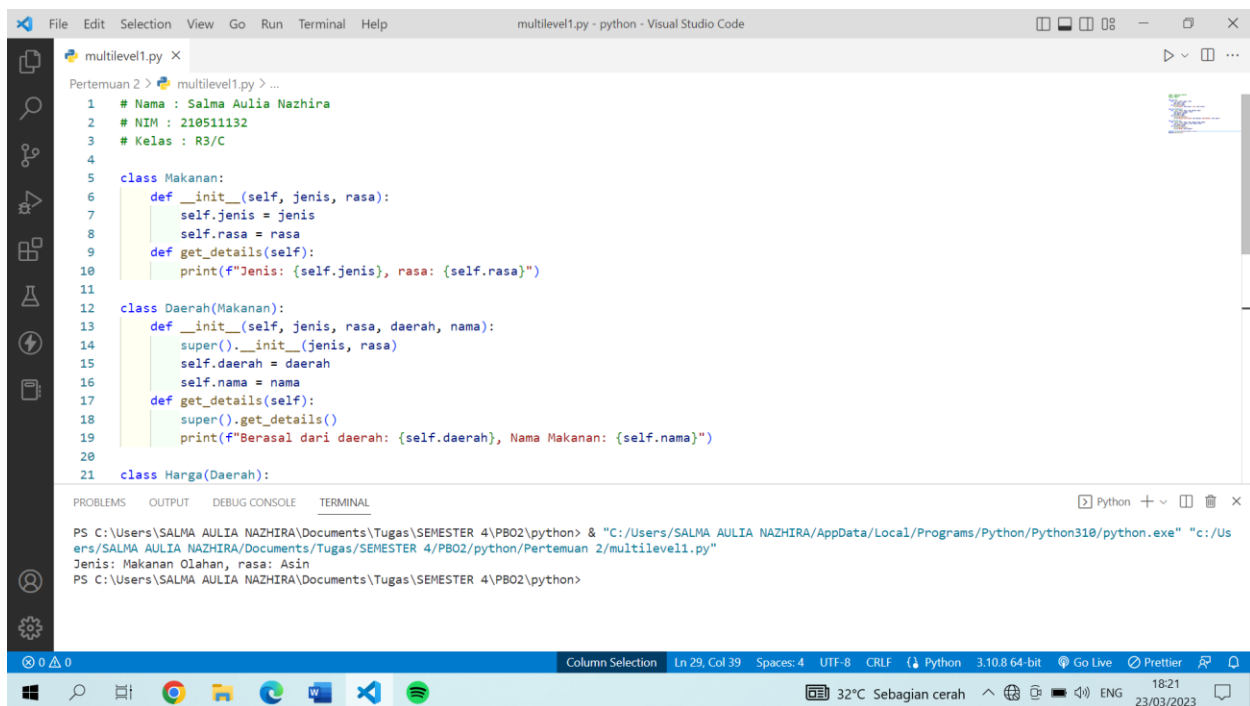
```

class Harga(Daerah):
    def __init__(self, jenis, rasa, daerah, nama, harga):
        super().__init__(jenis, rasa, daerah, nama)
        self.harga = harga
    def get_details(self):
        super().get_details()
        print(f"Harga: {self.harga}")

makananA = Makanan("Makanan Olahan", "Asin")
makananA.get_details()

```

Screenshot



multilevel2

Script

```

# Nama : Salma Aulia Nazhira
# NIM : 210511132
# Kelas : R3/C

class Plant:
    def __init__(self, name):
        self.name = name
    def grew(self):
        print(f"the {self.name} grew")

```

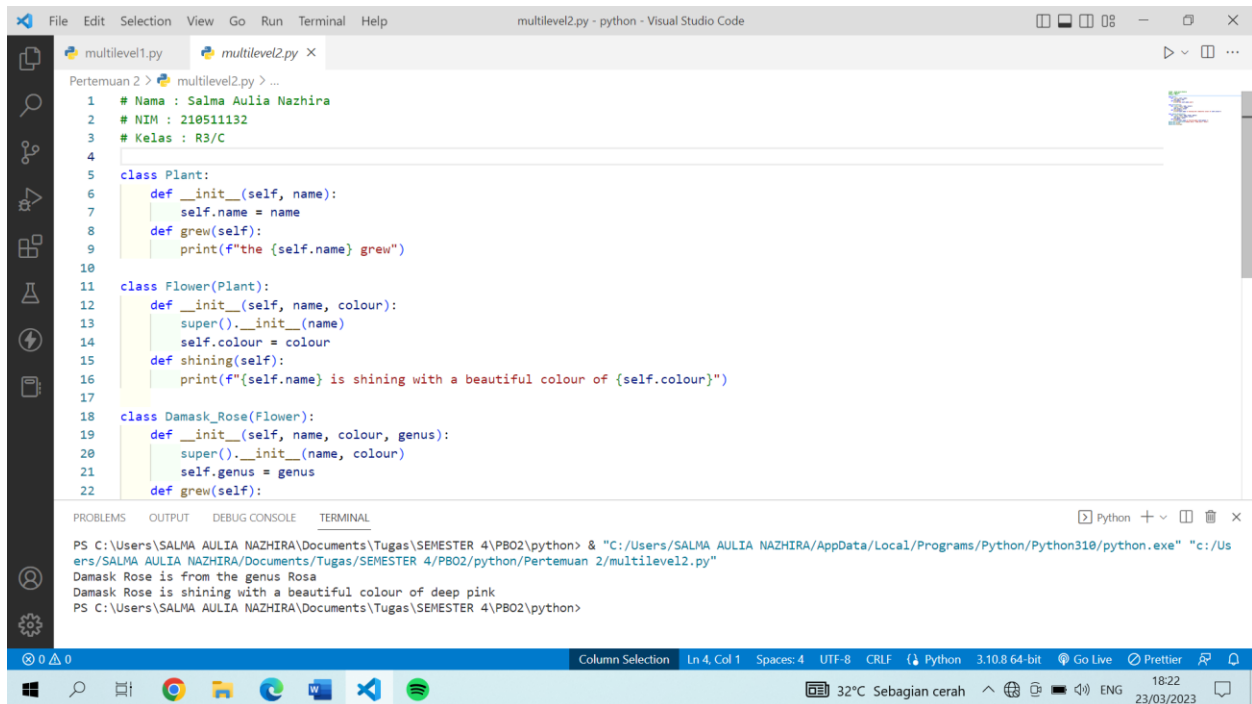
```

class Flower(Plant):
    def __init__(self, name, colour):
        super().__init__(name)
        self.colour = colour
    def shining(self):
        print(f"{self.name} is shining with a beautiful colour of {self.colour}")

class Damask_Rose(Flower):
    def __init__(self, name, colour, genus):
        super().__init__(name, colour)
        self.genus = genus
    def grew(self):
        print(f"{self.name} is from the genus {self.genus} ")
Damask_Rose = Damask_Rose("Damask Rose", "deep pink", "Rosa")
Damask_Rose.grew()
Damask_Rose.shining()

```

Screenshot



hybrid1.py

Script

```
# Nama : Salma Aulia Nazhira
# NIM : 210511132
# Kelas : R3/C
```

```
class Minuman:
    def __init__(self, nama, jenis, ):
        self.nama = nama
        self.jenis = jenis
    def get_info(self):
        print("nama:", self.nama)
        print("jenis:", self.jenis)

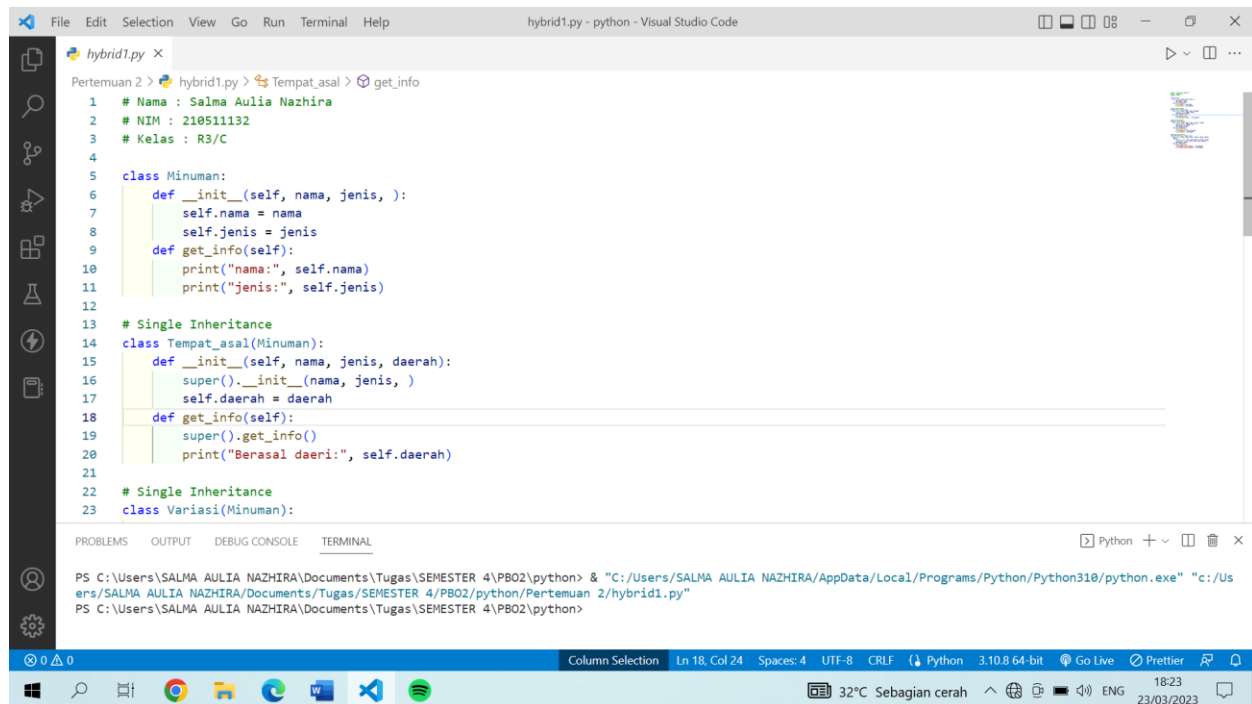
# Single Inheritance
class Tempat_asal(Minuman):
    def __init__(self, nama, jenis, daerah):
        super().__init__(nama, jenis, )
        self.daerah = daerah
    def get_info(self):
        super().get_info()
        print("Berasal daeri:", self.daerah)

# Single Inheritance
class Variasi(Minuman):
    def __init__(self, nama, jenis, variasi, harga):
        super().__init__(nama, jenis, )
        self.variasi = variasi
        self.harga = harga
    def get_info(self):
        super().get_info()
        print("Variasi:", self.variasi)
        print("Harga:", self.harga)

# Multiple Inheritance
class Bahan(Variasi, Tempat_asal):
    def __init__(self, nama, jenis, variasi, harga, daerah,
bahan):
        Variasi.__init__(self, nama, jenis, variasi, harga)
        Tempat_asal.__init__(self, nama, jenis, daerah)
        self.bahan = bahan
    def get_info(self):
        super().get_info()
        print("Berasal dari Negara:", self.daerah)
```

```
print("Bahan yang digunakan:", self.bahan)
```

Screenshot



hybrid2.py

Script

```
# Nama : Salma Aulia Nazhira
# NIM : 210511132
# Kelas : R3/C

# Single Inheritance
class Calculator:
    def __init__(self, x, y):
        self.x = x
        self.y = y

# Single Inheritance
class Subtract:
    def subtract(self):
        print( self.x, "-", self.y)

# Single Inheritance
class Multiply:
```

```

def multiply(self, dx, dy):
    self.x * dx
    self.y * dy

# Multiple Inheritance
class Divide(Calculator, Subtract, Multiply):
    def __init__(self, x, y):
        super().__init__(x, y)
    def divide(self):
        self.multiply(1, 1)
        self.subtract()

```

Screenshot

