LAPORAN PRAKTIKUM

PEMROGRAMAN BERORIENTASI OBJEK LANJUT

2023

Prepared By:

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Kelas : R2

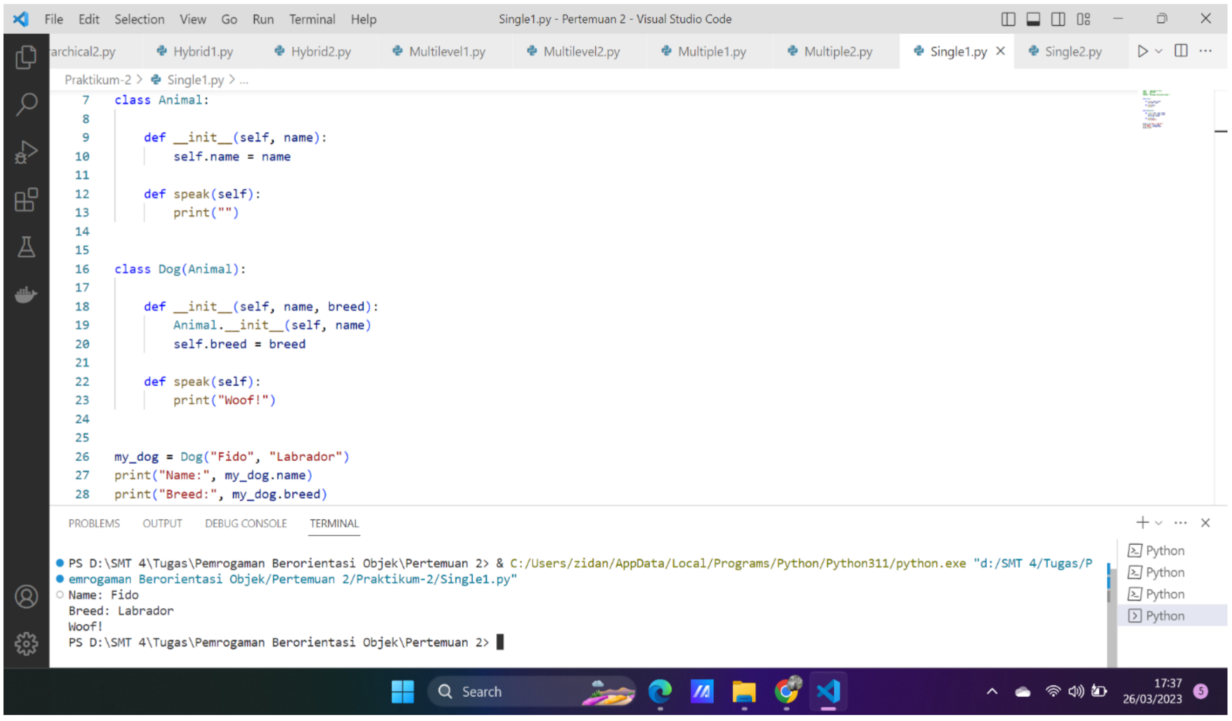
PRAKTIKUM 2

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

1. Single1.py

```python
class Animal:

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

    def speak(self):
        print("")


class Dog(Animal):

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

    def speak(self):
        print("Woof!")


my_dog = Dog("Fido", "Labrador")
print("Name:", my_dog.name)
print("Breed:", my_dog.breed)
my_dog.speak()
```

OUTPUT



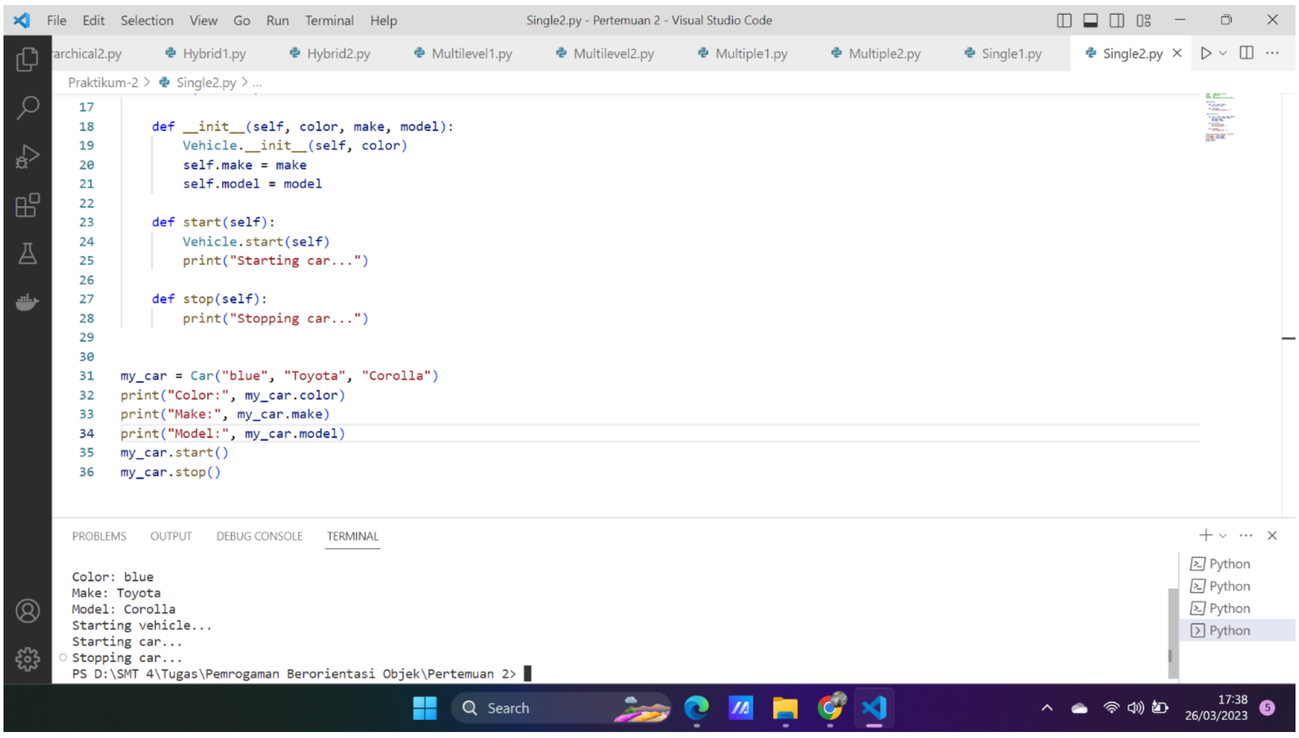
```python
class Animal:

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

    def speak(self):
        print("")


class Dog(Animal):

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

    def speak(self):
        print("Woof!")


my_dog = Dog("Fido", "Labrador")
print("Name:", my_dog.name)
print("Breed:", my_dog.breed)
```

```
PS D:\SMT 4\Tugas\Pemrogaman Berorientasi Objek\Pertemuan 2> & C:/Users/zidan/AppData/Local/Programs/Python/Python311/python.exe "d:/SMT 4/Tugas/P
emrogaman Berorientasi Objek/Pertemuan 2/Praktikum-2/Single1.py"
Name: Fido
Breed: Labrador
Woof!
PS D:\SMT 4\Tugas\Pemrogaman Berorientasi Objek\Pertemuan 2>
```

2. Single2.py

```python
class Vehicle:

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

    def start(self):
        print("Starting vehicle...")


class Car(Vehicle):

    def __init__(self, color, make, model):
        Vehicle.__init__(self, color)
        self.make = make
        self.model = model

    def start(self):
        Vehicle.start(self)
        print("Starting car...")

    def stop(self):
        print("Stopping car...")


my_car = Car("blue", "Toyota", "Corolla")
print("Color:", my_car.color)
print("Make:", my_car.make)
print("Model:", my_car.model)
my_car.start()
my_car.stop()
```

OUTPUT



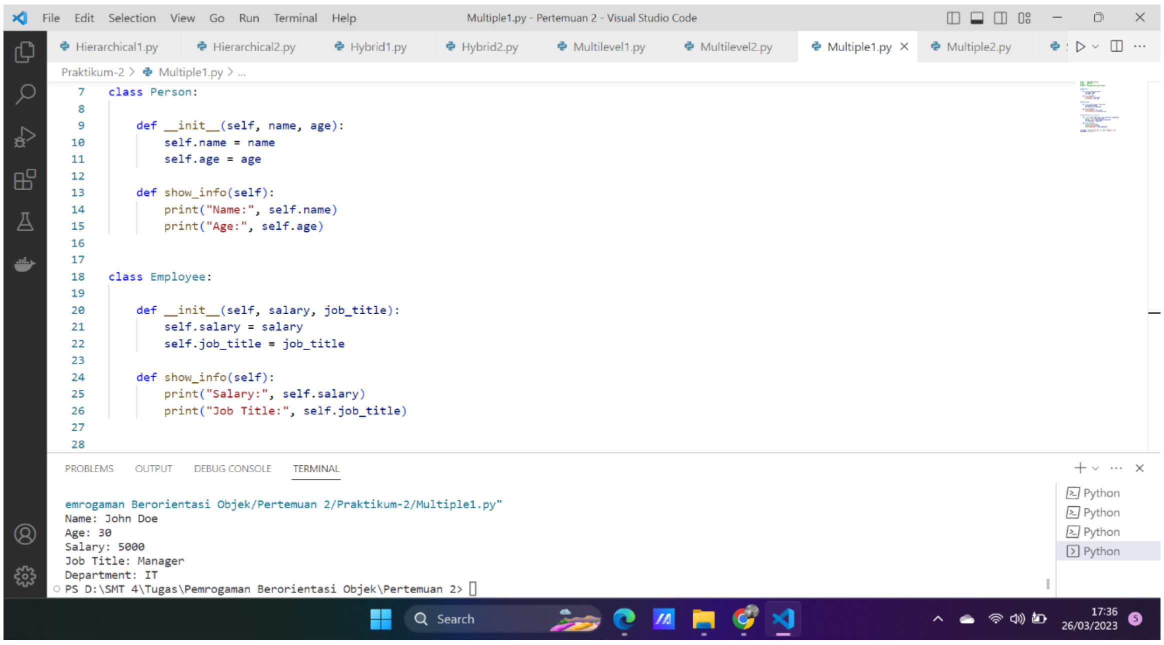
```python
    def __init__(self, color, make, model):
        Vehicle.__init__(self, color)
        self.make = make
        self.model = model

    def start(self):
        Vehicle.start(self)
        print("Starting car...")

    def stop(self):
        print("Stopping car...")


my_car = Car("blue", "Toyota", "Corolla")
print("Color:", my_car.color)
print("Make:", my_car.make)
print("Model:", my_car.model)
my_car.start()
my_car.stop()
```

```
Color: blue
Make: Toyota
Model: Corolla
Starting vehicle...
Starting car...
Stopping car...
PS D:\SMT 4\Tugas\Pemrogaman Berorientasi Objek\Pertemuan 2>
```

3. Multiple1.py

```python
class Person:

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

    def show_info(self):
        print("Name:", self.name)
        print("Age:", self.age)


class Employee:

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

    def show_info(self):
        print("Salary:", self.salary)
        print("Job Title:", self.job_title)


class Manager(Person, Employee):

    def __init__(self, name, age, salary, job_title, department):
        Person.__init__(self, name, age)
        Employee.__init__(self, salary, job_title)
        self.department = department

    def show_info(self):
        Person.show_info(self)
        Employee.show_info(self)
        print("Department:", self.department)


my_manager = Manager("John Doe", 30, 5000, "Manager", "IT")
my_manager.show_info()
```

OUTPUT


File Edit Selection View Go Run Terminal Help
Multiple1.py - Pertemuan 2 - Visual Studio Code
Hierarchical1.py
Hierarchical2.py
Hybrid1.py
Hybrid2.py
Multilevel1.py
Multilevel2.py
Multiple1.py
Multiple2.py
Praktikum-2 > Multiple1.py > ...
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Python
Python
Python
Python
Search
17:36
26/03/2023

```python
class Person:

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

    def show_info(self):
        print("Name:", self.name)
        print("Age:", self.age)


class Employee:

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

    def show_info(self):
        print("Salary:", self.salary)
        print("Job Title:", self.job_title)

```

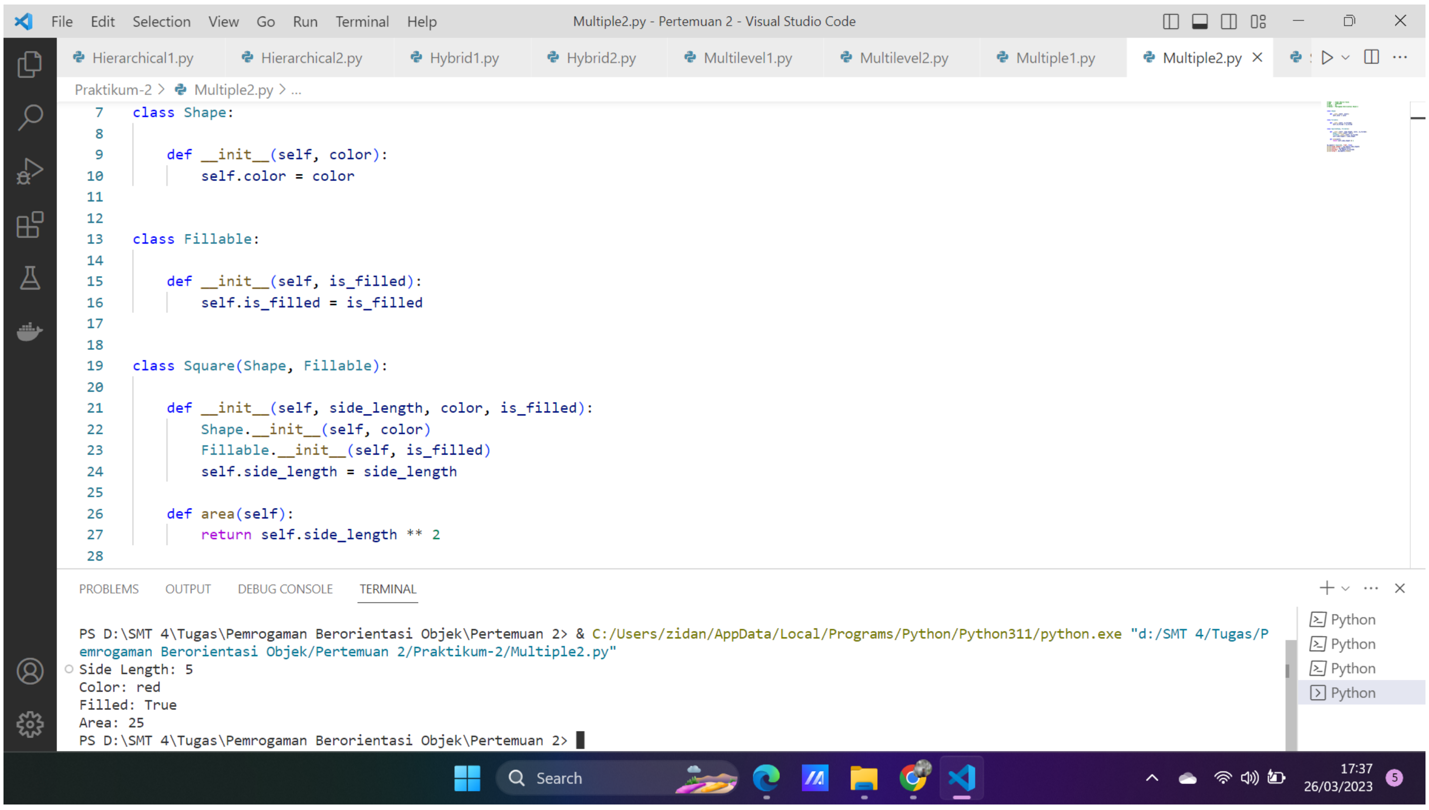
```
emrogaman Berorientasi Objek/Pertemuan 2/Praktikum-2/Multiple1.py"
Name: John Doe
Age: 30
Salary: 5000
Job Title: Manager
Department: IT
PS D:\SMT 4\Tugas\Pemrogaman Berorientasi Objek\Pertemuan 2> 
```

4. Multiple2.py

```python
class Shape:

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


class Fillable:

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


class Square(Shape, Fillable):

    def __init__(self, side_length, color, is_filled):
        Shape.__init__(self, color)
        Fillable.__init__(self, is_filled)
        self.side_length = side_length

    def area(self):
        return self.side_length ** 2
```

```python
my_square = Square(5, "red", True)
print("Side Length:", my_square.side_length)
print("Color:", my_square.color)
print("Filled:", my_square.is_filled)
print("Area:", my_square.area())
```

OUTPUT



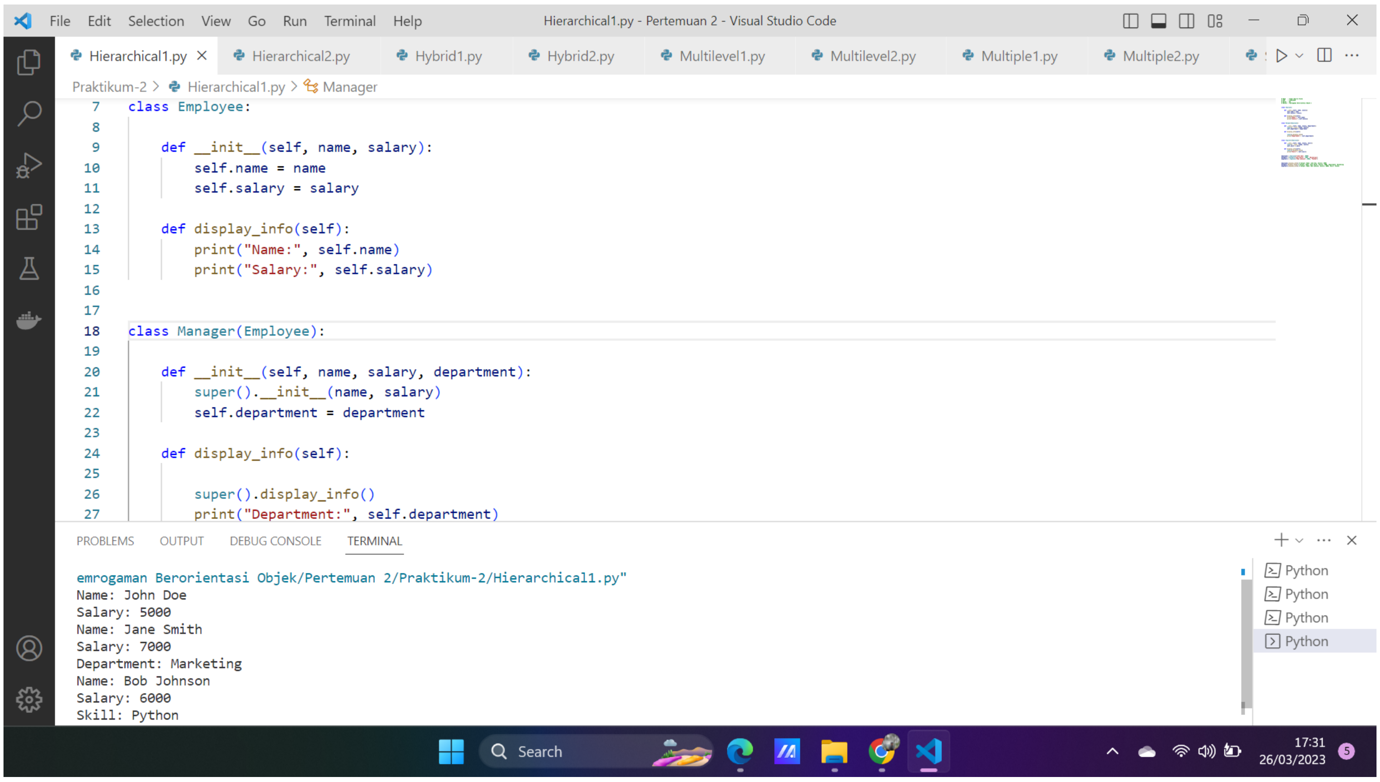
```python
class Shape:

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


class Fillable:

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


class Square(Shape, Fillable):

    def __init__(self, side_length, color, is_filled):
        Shape.__init__(self, color)
        Fillable.__init__(self, is_filled)
        self.side_length = side_length

    def area(self):
        return self.side_length ** 2

```

```
PS D:\SMT 4\Tugas\Pemrogaman Berorientasi Objek\Pertemuan 2> & C:/Users/zidan/AppData/Local/Programs/Python/Python311/python.exe "d:/SMT 4/Tugas/P
emrogaman Berorientasi Objek/Pertemuan 2/Praktikum-2/Multiple2.py"
Side Length: 5
Color: red
Filled: True
Area: 25
PS D:\SMT 4\Tugas\Pemrogaman Berorientasi Objek\Pertemuan 2>
```

5. Hierarchical1.py

```python
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("John Doe", 5000)
manager1 = Manager("Jane Smith", 7000, "Marketing")
engineer1 = Engineer("Bob Johnson", 6000, "Python")


employee1.display_info() # Output: Name: John Doe, Salary: 5000
manager1.display_info() # Output: Name: Jane Smith, Salary: 7000, Department:
Marketing
engineer1.display_info() # Output: Name: Bob Johnson, Salary: 6000, Skill:
Python
```

OUTPUT



```python
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)
```

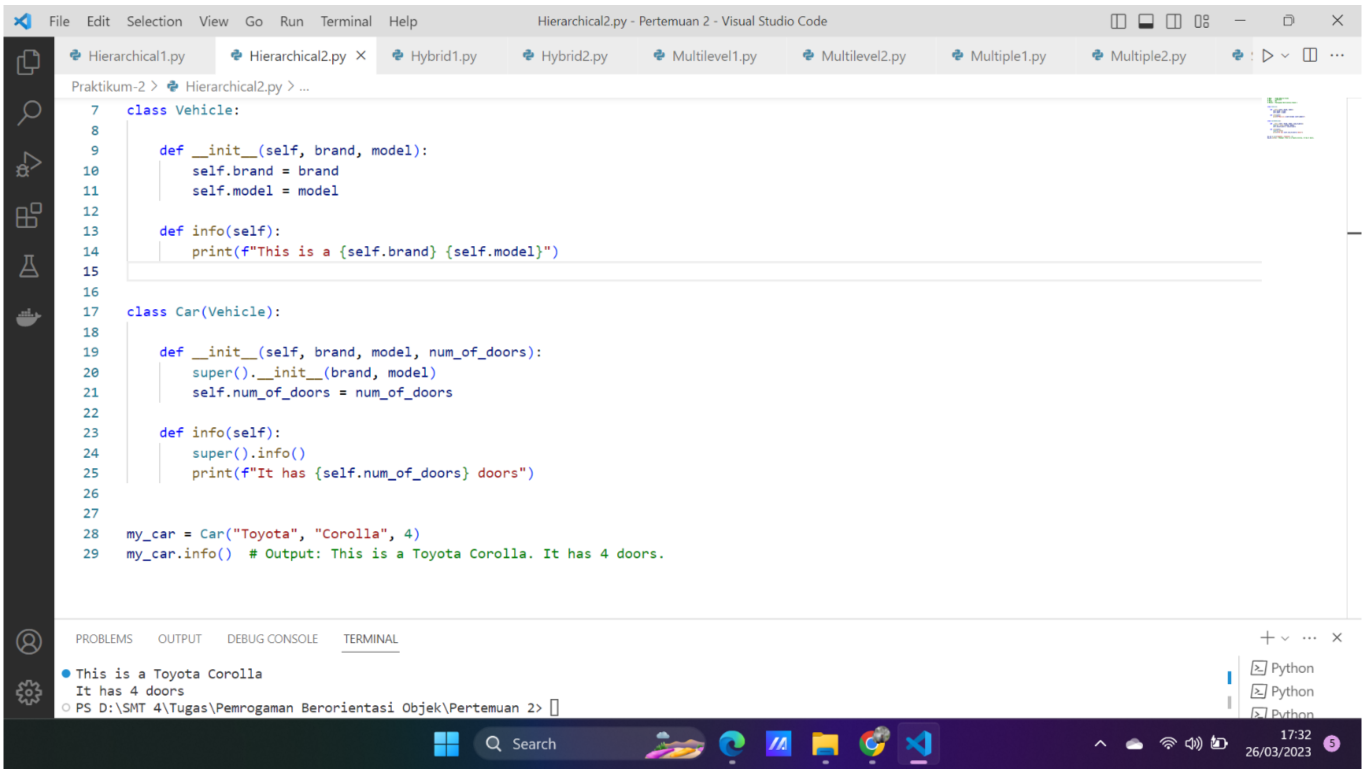
```
emrogaman Berorientasi Objek/Pertemuan 2/Praktikum-2/Hierarchical1.py"
Name: John Doe
Salary: 5000
Name: Jane Smith
Salary: 7000
Department: Marketing
Name: Bob Johnson
Salary: 6000
Skill: Python
```

6. Hierarchical2.py

```python
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")
```

```python
my_car = Car("Toyota", "Corolla", 4)
my_car.info()  # Output: This is a Toyota Corolla. It has 4 doors.
```

OUTPUT



File Edit Selection View Go Run Terminal Help
Hierarchical2.py - Pertemuan 2 - Visual Studio Code
Hierarchical1.py
Hierarchical2.py
Hybrid1.py
Hybrid2.py
Multilevel1.py
Multilevel2.py
Multiple1.py
Multiple2.py
Praktikum-2 > Hierarchical2.py > ...
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Python
Python
Python
Search
17:32
26/03/2023

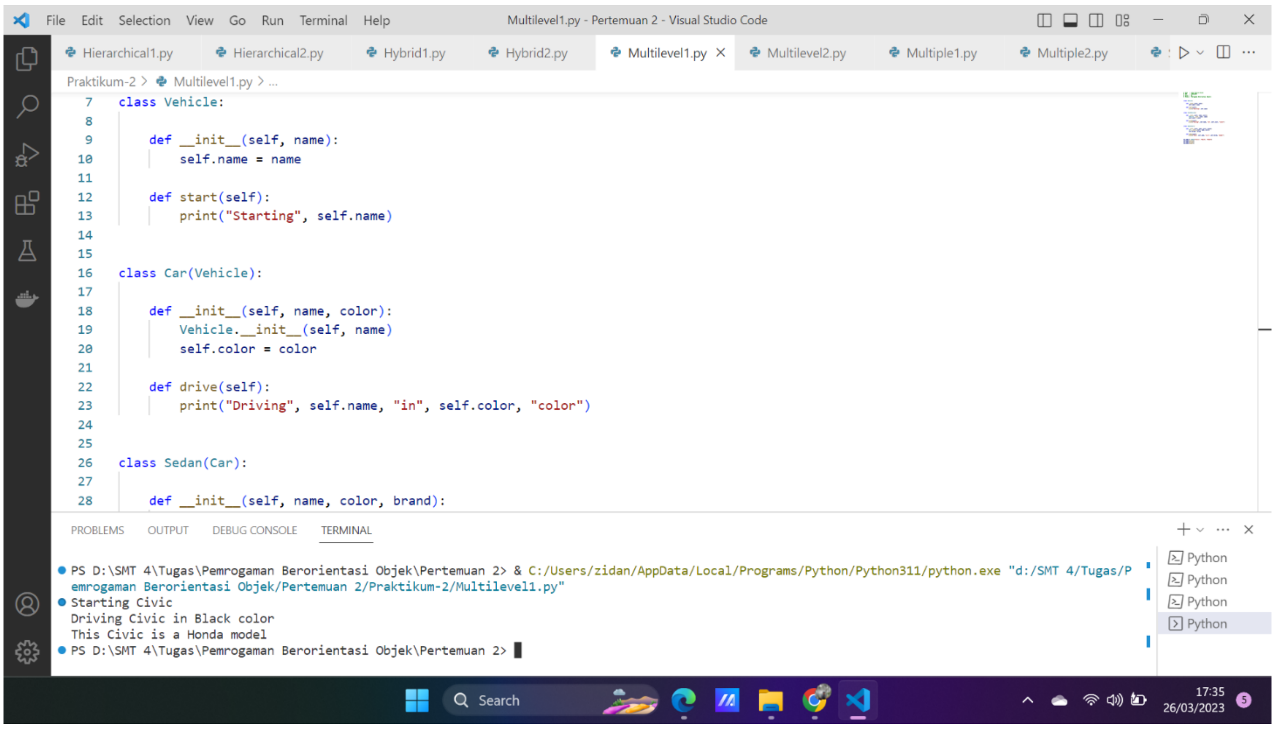
```python
class Vehicle:

    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("Toyota", "Corolla", 4)
my_car.info()  # Output: This is a Toyota Corolla. It has 4 doors.
```

```
This is a Toyota Corolla
It has 4 doors
PS D:\SMT 4\Tugas\Pemrogaman Berorientasi Objek\Pertemuan 2> 
```

7. Multilevel1.py

```python
class Vehicle:

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

    def start(self):
        print("Starting", self.name)


class Car(Vehicle):

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

    def drive(self):
        print("Driving", self.name, "in", self.color, "color")


class Sedan(Car):

    def __init__(self, name, color, brand):
        Car.__init__(self, name, color)
        self.brand = brand

    def model(self):
        print("This", self.name, "is a", self.brand, "model")


my_sedan = Sedan("Civic", "Black", "Honda")
my_sedan.start()
my_sedan.drive()
my_sedan.model()
```

OUTPUT



File Edit Selection View Go Run Terminal Help
Multilevel1.py - Pertemuan 2 - Visual Studio Code
Hierarchical1.py
Hierarchical2.py
Hybrid1.py
Hybrid2.py
Multilevel1.py
Multilevel2.py
Multiple1.py
Multiple2.py
Praktikum-2 > Multilevel1.py > ...
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Python
Python
Python
Python
Search
17:35
26/03/2023

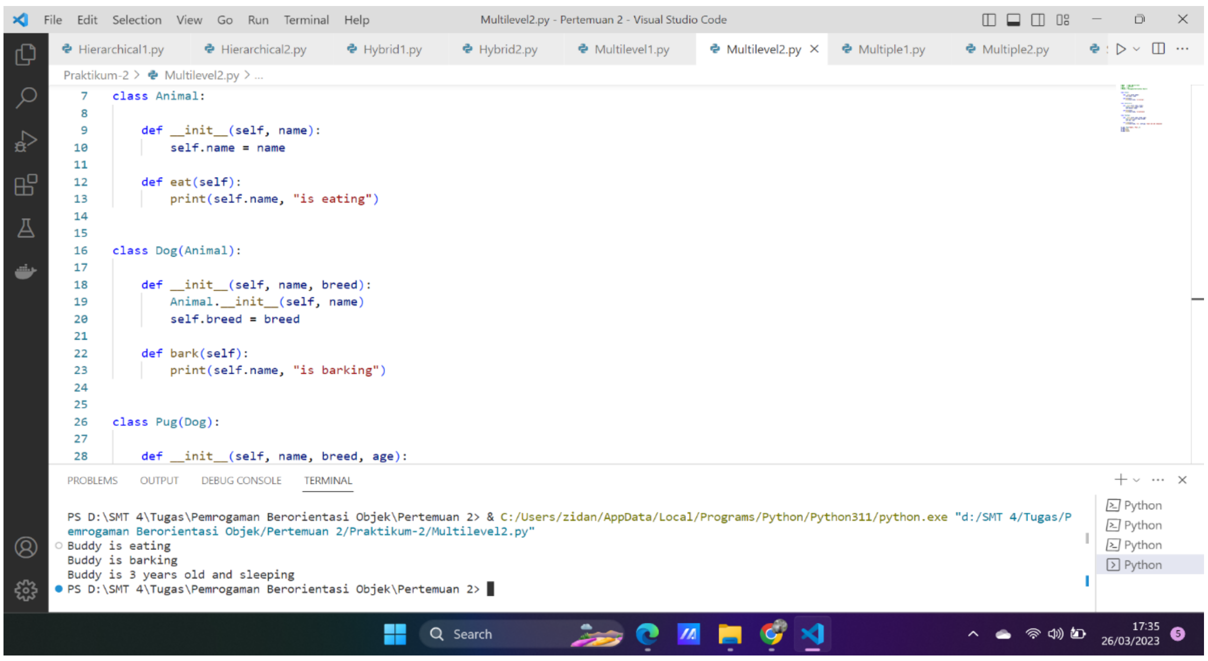
```python
class Vehicle:

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

    def start(self):
        print("Starting", self.name)


class Car(Vehicle):

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

    def drive(self):
        print("Driving", self.name, "in", self.color, "color")


class Sedan(Car):

    def __init__(self, name, color, brand):
```

```
PS D:\SMT 4\Tugas\Pemrogaman Berorientasi Objek\Pertemuan 2> & C:/Users/zidan/AppData/Local/Programs/Python/Python311/python.exe "d:/SMT 4/Tugas/P
emrogaman Berorientasi Objek/Pertemuan 2/Praktikum-2/Multilevel1.py"
Starting Civic
Driving Civic in Black color
This Civic is a Honda model
PS D:\SMT 4\Tugas\Pemrogaman Berorientasi Objek\Pertemuan 2>
```

8. Multilevel2.py

```python
class Animal:

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

    def eat(self):
        print(self.name, "is eating")


class Dog(Animal):

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

    def bark(self):
        print(self.name, "is barking")


class Pug(Dog):

    def __init__(self, name, breed, age):
        Dog.__init__(self, name, breed)
        self.age = age

    def sleep(self):
        print(self.name, "is", self.age, "years old and sleeping")


my_pug = Pug("Buddy", "Pug", 3)
my_pug.eat()
my_pug.bark()
my_pug.sleep()
```

OUTPUT


File Edit Selection View Go Run Terminal Help
Multilevel2.py - Pertemuan 2 - Visual Studio Code
Hierarchical1.py
Hierarchical2.py
Hybrid1.py
Hybrid2.py
Multilevel1.py
Multilevel2.py
Multiple1.py
Multiple2.py
Praktikum-2 > Multilevel2.py > ...
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Python
Python
Python
Python
Search
17:35
26/03/2023

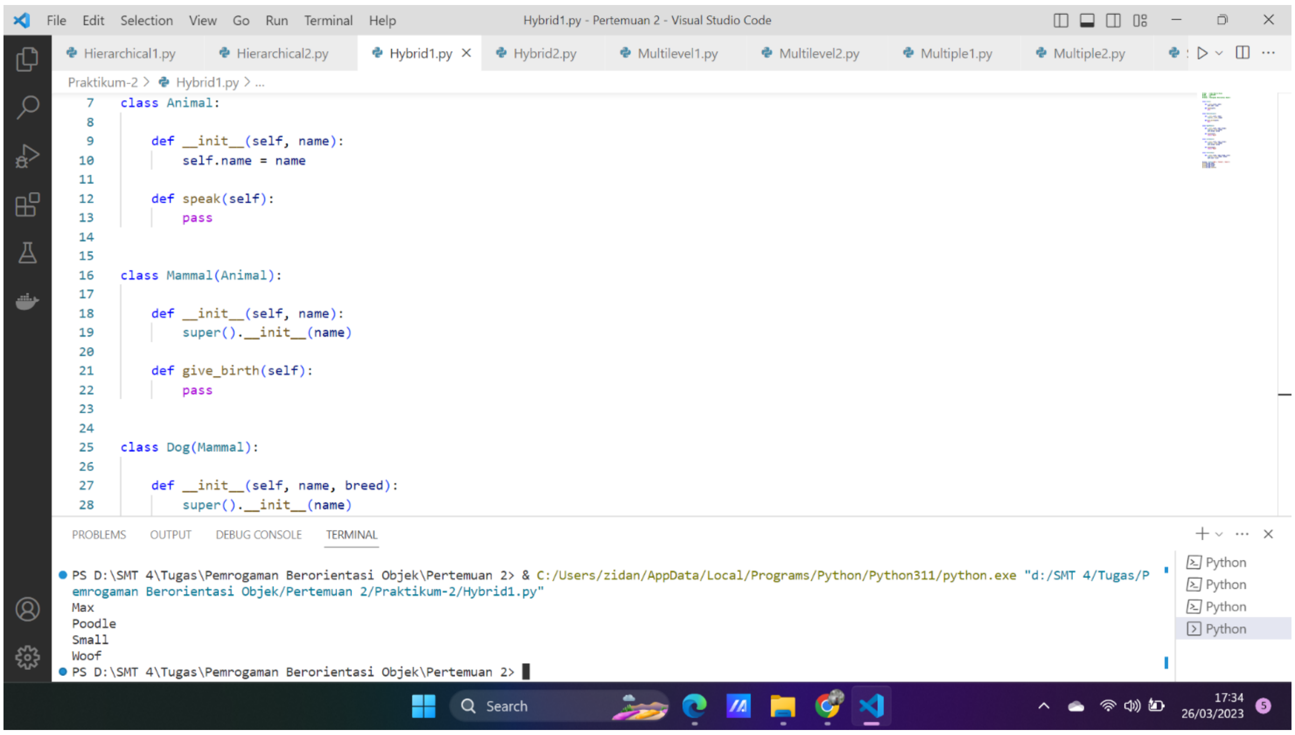
```python
class Animal:

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

    def eat(self):
        print(self.name, "is eating")


class Dog(Animal):

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

    def bark(self):
        print(self.name, "is barking")


class Pug(Dog):

    def __init__(self, name, breed, age):
```

```
PS D:\SMT 4\Tugas\Pemrogaman Berorientasi Objek\Pertemuan 2> & C:/Users/zidan/AppData/Local/Programs/Python/Python311/python.exe "d:/SMT 4/Tugas/P
emrogaman Berorientasi Objek/Pertemuan 2/Praktikum-2/Multilevel2.py"
Buddy is eating
Buddy is barking
Buddy is 3 years old and sleeping
PS D:\SMT 4\Tugas\Pemrogaman Berorientasi Objek\Pertemuan 2>
```

9. Hybrid1.py

```python
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("Max", "Poodle", "Small")
print(my_dog.name)
print(my_dog.breed)
print(my_dog.size)
print(my_dog.speak())
```

OUTPUT



```python
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)
```

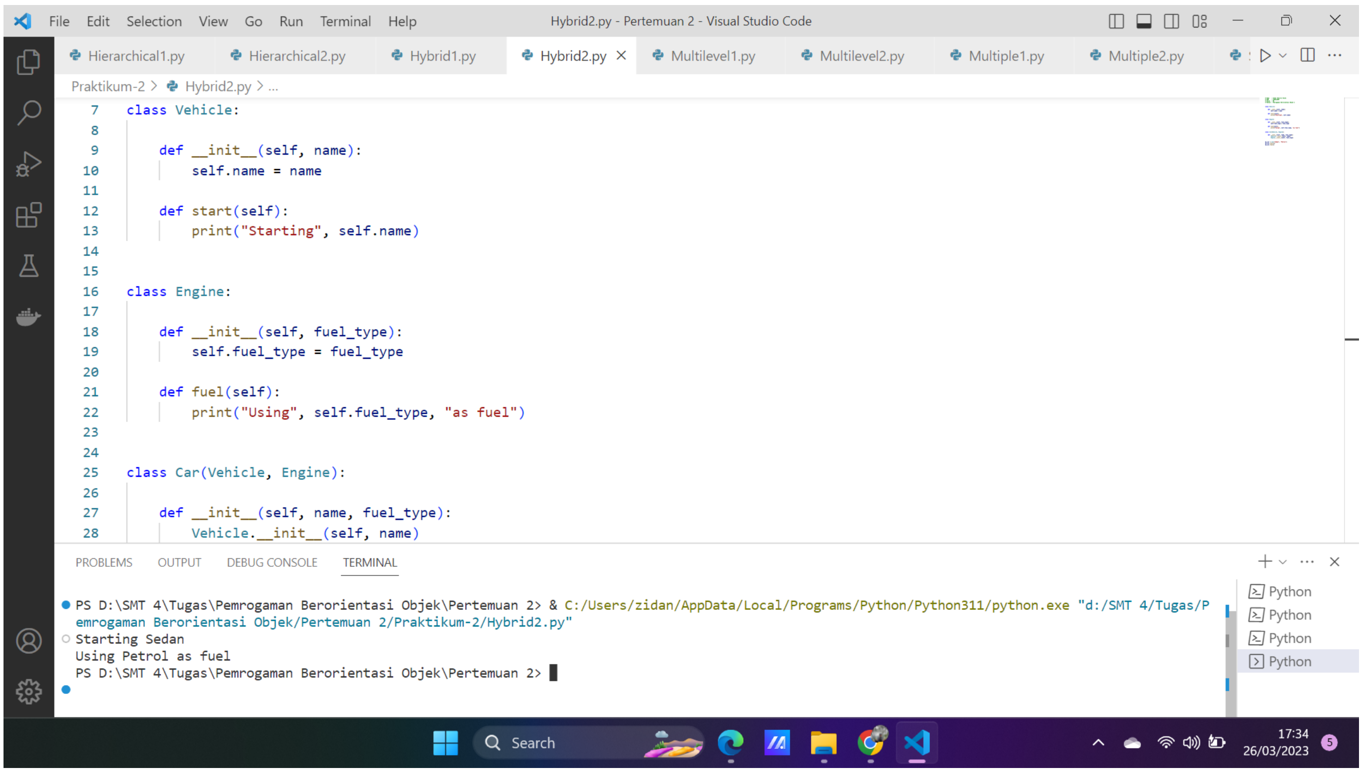
```
PS D:\SMT 4\Tugas\Pemrogaman Berorientasi Objek\Pertemuan 2> & C:/Users/zidan/AppData/Local/Programs/Python/Python311/python.exe "d:/SMT 4/Tugas/P
emrogaman Berorientasi Objek/Pertemuan 2/Praktikum-2/Hybrid1.py"
Max
Poodle
Small
Woof
PS D:\SMT 4\Tugas\Pemrogaman Berorientasi Objek\Pertemuan 2> 
```

10. Hybrid2.py

```python
class Vehicle:

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

    def start(self):
        print("Starting", self.name)


class Engine:

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

    def fuel(self):
        print("Using", self.fuel_type, "as fuel")
```

```python
class Car(Vehicle, Engine):

    def __init__(self, name, fuel_type):
        Vehicle.__init__(self, name)
        Engine.__init__(self, fuel_type)


my_car = Car("Sedan", "Petrol")
my_car.start()
my_car.fuel()
```

OUTPUT



File Edit Selection View Go Run Terminal Help
Hybrid2.py - Pertemuan 2 - Visual Studio Code
Hierarchical1.py
Hierarchical2.py
Hybrid1.py
Hybrid2.py
Multilevel1.py
Multilevel2.py
Multiple1.py
Multiple2.py
Praktikum-2 > Hybrid2.py > ...
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Python
Python
Python
Python
Search
17:34
26/03/2023

```python
class Vehicle:

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

    def start(self):
        print("Starting", self.name)


class Engine:

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

    def fuel(self):
        print("Using", self.fuel_type, "as fuel")


class Car(Vehicle, Engine):

    def __init__(self, name, fuel_type):
        Vehicle.__init__(self, name)
```

```
PS D:\SMT 4\Tugas\Pemrogaman Berorientasi Objek\Pertemuan 2> & C:/Users/zidan/AppData/Local/Programs/Python/Python311/python.exe "d:/SMT 4/Tugas/P
emrogaman Berorientasi Objek/Pertemuan 2/Praktikum-2/Hybrid2.py"
Starting Sedan
Using Petrol as fuel
PS D:\SMT 4\Tugas\Pemrogaman Berorientasi Objek\Pertemuan 2>
```