

Question Test

1. Explain the difference between object and class!

- **Class:** A blueprint or template that defines attributes (fields) and behaviors (methods). Example: Sepeda is a class.
- **Object:** An instance of a class that has real data stored in it. Example: Sepeda spd1 = new Sepeda(); creates an object spd1 from the class Sepeda.

2. State your reason why color and engine type can be classified as attribute for car object!

Because **color** and **engine type** describe the **characteristics (state)** of a car. Attributes represent properties of an object, and for a car, its color and engine type are essential properties that differentiate one car from another.

3. State one of OOP better point than procedural programming!

OOP provides *encapsulation*, which means data (attributes) and methods (behaviors) are bundled inside classes. This makes code more **organized, reusable, and easier to maintain** compared to procedural programming.

4. Is it allowed to define two attributes in one line code such “public String nama, alamat;”?

Yes, it is allowed. You can declare multiple variables of the same type in one line. Example public String nama, alamat; This declares two attributes nama and alamat, both of type String.

5. In SepedaGunung class, state your reason why merk, kecepatan, and gear attributes are not written again in this class!

Because SepedaGunung is a subclass of Sepeda (it extends Sepeda). Therefore, it **inherits** the attributes merk, kecepatan, and gear from the parent class Sepeda. There is no need to rewrite them, since inheritance allows code reuse and extension of functionality.

Assignment

a. Take 4 photographs of objects around you, 2 objects must be implementation of inheritance

- Chosen objects (I don't have the objects but these what I can get):
 1. Sofa → standalone
 2. Wardrobe → standalone
 3. Bed (parent)
 4. Two types of bed as inheritance: BunkBed and CanopyBed

b. Observe those objects to define the attribute and method!

- **Sofa**: material, seats → methods: setMaterial, setSeats, showInfo
- **Wardrobe**: doors, hasMirror → methods: setDoors, setMirror, showInfo
- **Bed (parent)**: size, hasStorage → methods: setSize, setStorage, showInfo
- **BunkBed (child)**: levels, hasLadder → methods: setLevels, setLadder, showInfo
- **CanopyBed (child)**: canopyMaterial, hasCurtains → methods: setCanopyMaterial, setCurtains, showInfo

The rest is on the Assignment folder here are the output

```
Sofa Material: Leather
Number of Seats: 3

Wardrobe Doors: 4
Has Mirror: true

Bed Size: Queen
Has Storage: true

Bed Size: Single
Has Storage: false
Number of Levels: 2
Has Ladder: true

Bed Size: King
Has Storage: true
Canopy Material: Wooden Frame
Has Curtains: true
```