

# Week 6

Subject	Object Oriented Programming
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Type	Assignment
Semester	Semester 3
Time	@October 7, 2023

## Jobsheet 4

### Question 1

1. setter is used to set the variable so that we can use the variable that we already use it, while getter is used to get the variable that we already set before
2. if the constructor is already have a parameter, we don't need to use setter to set the variable, while the default constructor we need to set it with setter
3. the attribute that is an object is `this.proc = new Processor();`
4. inside the constructor, `this.proc = new Processor();`
5. it is used to show the information that we already filled in inside the `Laptop` class, such as the brand and the processor which contains the brand and the cache
6. `p` is the object that we created for the `processor` class  
if we change the code, it will show the same, but we change the parameter inside the object that we already created

### Question 2

1. `Pelanggan` has relation with `Mobil` and `Sopir` at this line

```
private Mobil mobil;  
private Sopir sopir;
```

2. it requires `hari` as argument because in order to count how long will the customer use the services, so after all the costs has been counted, it will multiplied by `hari`
3. it used to count the price of the services of the `Mobil` and the `Sopir` class
4. those syntax is used to set the object so that the object can be used by the `Mobil` and `Sopir` class
5. the process is used to count the total price of the services, the price of the `Mobil`, `Sopir` and `hari`
6. it is used to get the `merk` of the `Mobil` class that is already set in the `MainPercobaan2` class

## Question 3

1. that line is used to call the `info()` method of `masinis` and `asisten`
2. shows as error

```
Exception in thread "main" java.lang.NullPointerException: Cannot invoke "jobsheet.relasicclass.prac3.KeretaApi.info(KeretaApi.java:26)"  
at jobsheet.relasicclass.prac3.KeretaApi.info(KeretaApi.java:26)  
at jobsheet.relasicclass.prac3.Main2.main(Main2.java:8)
```

3. it shows as error because we haven't declare the `asistent` as an object but we already call it in the `keretaApi.info()` method
4. by removing `info += "Asisten : " + this.asisten.info() + "\n";` inside `info()` method

## Question 4

1. there are 10 chairs inside the train carriage
2. it used to check whether the `penumpang` is not null, if it isn't null, it will execute the code
3. because array started their index from 0 not 1 (0 as the first index), thus if we want to access the same number as `nomor` we need to decrease the array by 1,

otherwise it will access the next array

- the first passenger is replaced with `budi`
- add `isEmpty()` method inside `kursi` class, and change the code of `setPenumpang()` method like this

```
boolean isEmpty(){
    return this.penumpang == null;
}

void setPenumpang(Penumpang penumpang){
    if (this.isEmpty()){
        this.penumpang = penumpang;
    }
    else {
        System.out.println("Kursi Sudah Terisi");
    }
}
```

## Task

```
package jobsheet.relasticlass.task;

public class Switch {
    private final String name;
    private final String type;

    Switch(String name, String type){
        this.name = name;
        this.type = type;
    }

    String info(){
        String info = "";
        info += "Switch Name\t: " + this.name + "\n";
        info += "Switch Type\t: " + this.type + "\n";
        return info;
    }
}
```

```
package jobsheet.relasticlass.task;

public class Plate {
```

```

    private final String type;
    private Switch switches;

    Plate(String type){
        this.type = type;
    }

    public void setSwitches(Switch switches) {
        this.switches = switches;
    }

    String info(){
        String info = "";
        info += "Plate Type\t: " + this.type + "\n";
        info += this.switches.info();
        return info;
    }
}

```

```

package jobsheet.relasticlass.task;

public class PCB {
    private final String name;
    private final Plate plate;

    PCB(String name, Plate plate){
        this.name = name;
        this.plate = plate;
    }

    String info(){
        String info = "";
        info += "PCB Name\t: " + this.name + "\n";
        info += this.plate.info();
        return info;
    }
}

```

```

package jobsheet.relasticlass.task;

public class Case {
    private final String type;
    private final PCB pcb;

    Case(String name, PCB pcb){
        this.type = name;
        this.pcb = pcb;
    }
}

```

```

    }

    String info(){
        String info = "";
        info += "Case Type\t: " + this.type + "\n";
        info += this.pcb.info();
        return info;
    }
}

```

```

package jobsheet.relasicclass.task;

public class Main {
    public static void main(String[] args) {
        Switch switches = new Switch("Akko ", "Linear");
        Plate plate = new Plate("Flex-cut Polycarbonate");
        PCB pcb = new PCB("Akko Alice PCB", plate);
        Case case1 = new Case("Aluminium Alice Case", pcb);
        plate.setSwitches(switches);
        System.out.println(case1.info());
    }
}

```