KUIS 2

PRAKTIKUM PEMROGRAMAN BERORIENTASI OBJEK

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D4 TEKNIK INFORMATIKA

TEKNOLOGI INFORMASI

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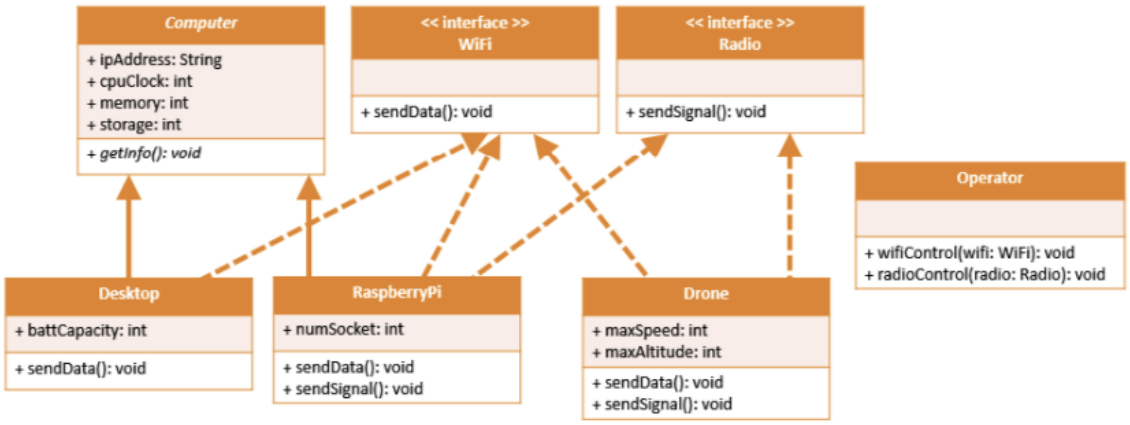
Soal:

Buatlah kode program dari class diagram di bawah ini. Terdapat class computer yang berupa abstract class, berikut class turunannya dan class lain yang mengimplementasikan interface WiFi dan Radio.



Jawaban:

Coding Program:

Computer:

```
abstract class Computer {
    protected String ipAddress;
    protected int cpuClock;
    protected int memory;
    protected int storage;

    public void getInfo(String ipAddress,int cpuClock,int memory,int storage)
{
        this.ipAddress=ipAddress;
        this.cpuClock=cpuClock;
        this.memory=memory;
        this.storage=storage;
        System.out.println("Spesifikasi Computer");
        System.out.println("IP Address : " + ipAddress);
        System.out.println("CPU Clock Speed : " + cpuClock + "GHz");
        System.out.println("Memory Size : " + memory + "GB");
        System.out.println("Storage Size : " + storage + "GB");
    }
}
```

Wifi:

```
public interface Wifi {
    public void sendData();
}
```

Radio:

```
public interface Radio {
    public void sendSignal();
}
```

Desktop:

```
public class Desktop extends Computer implements Wifi {
    public int battCapacity;

    public void sendData() {
        System.out.println("Desktop dikontrol dengan wifi");
        System.out.println("-----------------------------");
    }

    public void getInfoD(int battCapacity){
        this.battCapacity=battCapacity;
        System.out.println("battCapacity : " + battCapacity + "mAh");
    }
}
```

RaspberryPi:

```
public class RaspberryPi extends Computer implements Wifi, Radio {
    public int numSocket;

    public void sendData() {
        System.out.println("RaspberryPi dikontrol dengan Wifi");
        System.out.println("-----------------------------");
    }

    public void sendSignal() {
        System.out.println("RaspberryPi dikontrol dengan Radio");
        System.out.println("-----------------------------");
    }

    public void getInfoR(int numSocket){
        this.numSocket=numSocket;
        System.out.println("numSocket : " + numSocket + "mAh");
    }
}
```

Drone:

```
public class Drone implements Wifi, Radio {
    public int maxSpeed;
    public int maxAltitude;

    public void sendData() {
        System.out.println("Drone dikontrol dengan Wifi");
        System.out.println("-----------------------------");
    }

    public void sendSignal() {
        System.out.println("Drone dikontrol dengan Radio");
        System.out.println("-----------------------------");
    }

    public void getData(int maxSpeed, int maxAltitude){
```

```
        this.maxSpeed=maxSpeed;
        this.maxAltitude=maxAltitude;
        System.out.println("Maximum Speed : " + maxSpeed + "km/h");
        System.out.println("Maximum Altitude : " + maxAltitude + "m");
    }
}
```

Operator:

```
public class Operator {
    public void wifiControl(Wifi w) {
        w.sendData();
    }

    public void radioControl(Radio r) {
        r.sendSignal();
    }
}
```

Main:

```
public class Main {
    public static void main(String[] args) {
        Desktop asus = new Desktop();
        RaspberryPi r = new RaspberryPi();
        RaspberryPi r2 = new RaspberryPi();
        Drone dji = new Drone();
        Drone sym = new Drone();
        Operator o = new Operator();

        System.out.println("Komputer Desktop Asus:");
        System.out.println("-----------------------------");
        asus.getInfo("204.172.0091", 4, 8, 512);
        asus.getInfoD(48000);
        System.out.println("Kontrol Desktop:");
        o.wifiControl(asus);
        System.out.println("Komputer RaspberryPi 2 model B");
        System.out.println("-----------------------------");
        r.getInfo("204.172.0091", 1, 1, 16);
        r.getInfoR(4);
        System.out.println("Kontrol RaspberryPi:");
        o.wifiControl(r);
        System.out.println("Drone DJI Mavic 2 Pro");
        System.out.println("-----------------------------");
        dji.getData(70, 120);
        System.out.println("Kontrol Drone:");
        o.wifiControl(dji);
        System.out.println("Komputer RaspberryPi 3 model B+");
        System.out.println("-----------------------------");
        r.getInfo("204.172.0091", 2, 1, 32);
        r.getInfoR(3);
        System.out.println("Kontrol RaspberryPi:");
```

```
        o.radioControl(r2);
        System.out.println("Drone SYMA X8 Pro");
        System.out.println("-----------------------------");
        sym.getData(30, 120);
        System.out.println("Kontrol Drone:");
        o.radioControl(sym);
    }
}
```

Hasil:

```
Komputer Desktop Asus:
-----------------------------
Spesifikasi Computer
IP Address : 204.172.0091
CPU Clock Speed : 4GHz
Memory Size : 8GB
Storage Size : 512GB
battCapacity : 48000mAh
Kontrol Desktop:
Desktop dikontrol dengan wifi
-----------------------------
Komputer RaspberryPi 2 model B
-----------------------------
Spesifikasi Computer
IP Address : 204.172.0091
CPU Clock Speed : 1GHz
Memory Size : 1GB
Storage Size : 16GB
numSocket : 4mAh
Kontrol RaspberryPi:
RaspberryPi dikontrol dengan Wifi
-----------------------------
Drone DJI Mavic 2 Pro
-----------------------------
Maximum Speed : 70km/h
Maximum Altitude : 120m
Kontrol Drone:
Drone dikontrol dengan Wifi
-----------------------------
Komputer RaspberryPi 3 model B+
-----------------------------
Spesifikasi Computer
IP Address : 204.172.0091
CPU Clock Speed : 2GHz
Memory Size : 1GB
Storage Size : 32GB
numSocket : 3mAh
Kontrol RaspberryPi:
RaspberryPi dikontrol dengan Radio
-----------------------------
Drone SYMA X8 Pro
-----------------------------
Maximum Speed : 30km/h
Maximum Altitude : 120m
Kontrol Drone:
Drone dikontrol dengan Radio
-----------------------------
```