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LATIHAN 3

Soal 1

```java
package nomor1;

public interface Displayer {
    public String display();
}
```

```java
package nomor1;

public class Time implements Displayer {
    private int hour, minute;

    public Time(int hour, int minute) {
        //Ada pengondisian jika input jam dan menit diluar rentang
        if (hour < 0 || hour > 23)
            this.hour = 0;
        else
            this.hour = hour;
        if (minute < 0 || minute > 59)
            this.minute = 0;
        else
            this.minute = minute;
    }

    public void setHour(int hour) {
        this.hour = hour;
    }

    public void setMinute(int minute) {
        this.minute = minute;
    }

    public int getHour() {
        return hour;
    }

    public int getMinute() {
        return minute;
    }

    @Override
    public String display() {
```

```java
            return hour + ":" + minute;
    }

    public void print(){
        System.out.print(display());
    }
}
```

```java
package nomor1;

public class TimeFull extends Time{
    private int second;

    public TimeFull(int hour, int minute, int second) {
        super(hour, minute);

        //Ada pengondisian jika input detik diluar rentang
        if (second < 0 || second > 59)
            this.second = 0;
        else
            this.second = second;
    }

    public void setSecond(int second) {
        this.second = second;
    }

    public int getSecond() {
        return second;
    }

    @Override
    public String display() {
        return super.display() + ":" + second;
    }

    public int timeToSecond(){
        return 3600 * getHour() + 60 * getMinute() + second;
    }
}
```

```java
package nomor1;

public class TestTime {
    public static void main(String[] args) {
        //Membuat Objek Time
        Time time = new Time(23, 59);
        time.print();
```
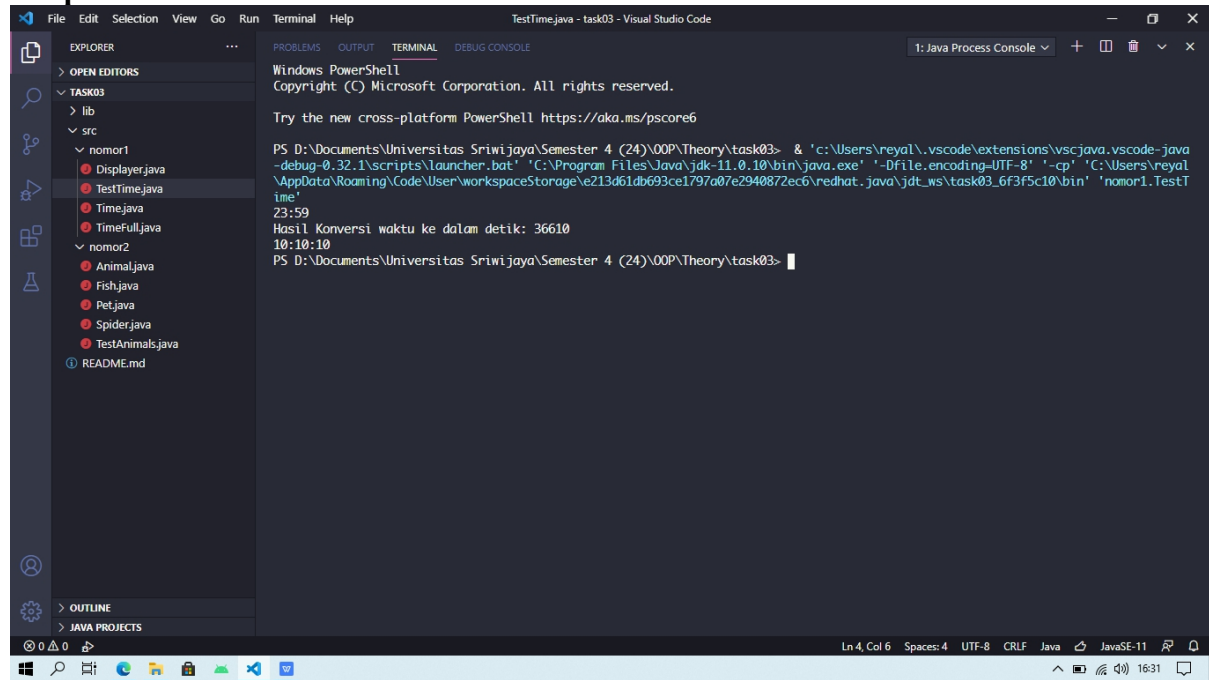
```java
        System.out.println();

        //Membuat Objek TimeFull
        TimeFull timeFull = new TimeFull(10, 10, 10);
        System.out.println("Hasil Konversi waktu ke dalam detik: " + ti
meFull.timeToSecond());
        timeFull.print();
    }
}
```

Output:

Jawaban dari Pertanyaan:
1. Kelas **Time** merupakan kelas konkrit.
2. Kelas **TimeFull** tidak perlu meng-*override* method **print** karena method **print** pada kelas **Time** akan menampilkan ke layar hasil method **display** dari kelas **TimeFull**, bukan method **display** dari kelas **Time**.

Soal 2

```java
package nomor2;

public abstract class Animal {
    private int jumlahKaki;

    public void setJumlahKaki(int jumlahKaki) {
        this.jumlahKaki = jumlahKaki;
    }

    public int getJumlahKaki() {
        return jumlahKaki;
```

```java
    }

    public abstract void eat();

    public void walk() {
        System.out.println("hewan ini berjalan dengan " + jumlahKaki +
" kaki");
    }
}
```

```java
package nomor2;

public interface Pet {
    public void play();
}
```

```java
package nomor2;

public class Spider extends Animal {

    public Spider() {
        setJumlahKaki(8);
    }

    @Override
    public void eat() {
        System.out.println("Laba-laba sedang makan");
    }
}
```

```java
package nomor2;

public class Fish extends Animal implements Pet{

    public Fish(){
        setJumlahKaki(0);
    }

    @Override
    public void eat() {
        System.out.println("Ikan sedang makan");
    }

    @Override
    public void walk() {
        System.out.println("Ikan tidak berjalan, melainkan berenang");
    }

    @Override
```

```java
    public void play() {
        System.out.println("Ikan sedang bermain");
    }

}
```

```java
package nomor2;

public class TestAnimals {
    public static void main(String[] args) {
        Fish f = new Fish();
        Animal a = new Fish();
        Animal e = new Spider();

        // Demonstrate different implementations of an interface
        f.play();

        // Demonstract virtual method invocation
        e.eat();
        e.walk();

        // Demonstrate calling super methods
        a.walk();
    }
}
```

Output: