PEMROGRAMAN BERORIENTASI OBJEK

(Tugas 4)

Disusun Oleh:

Prames Ray Lapian – 140810210059

PROGRAM STUDI S-1 TEKNIK INFORMATIKA

FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM

UNIVERSITAS PADJADJARAN

JATINANGOR

2022

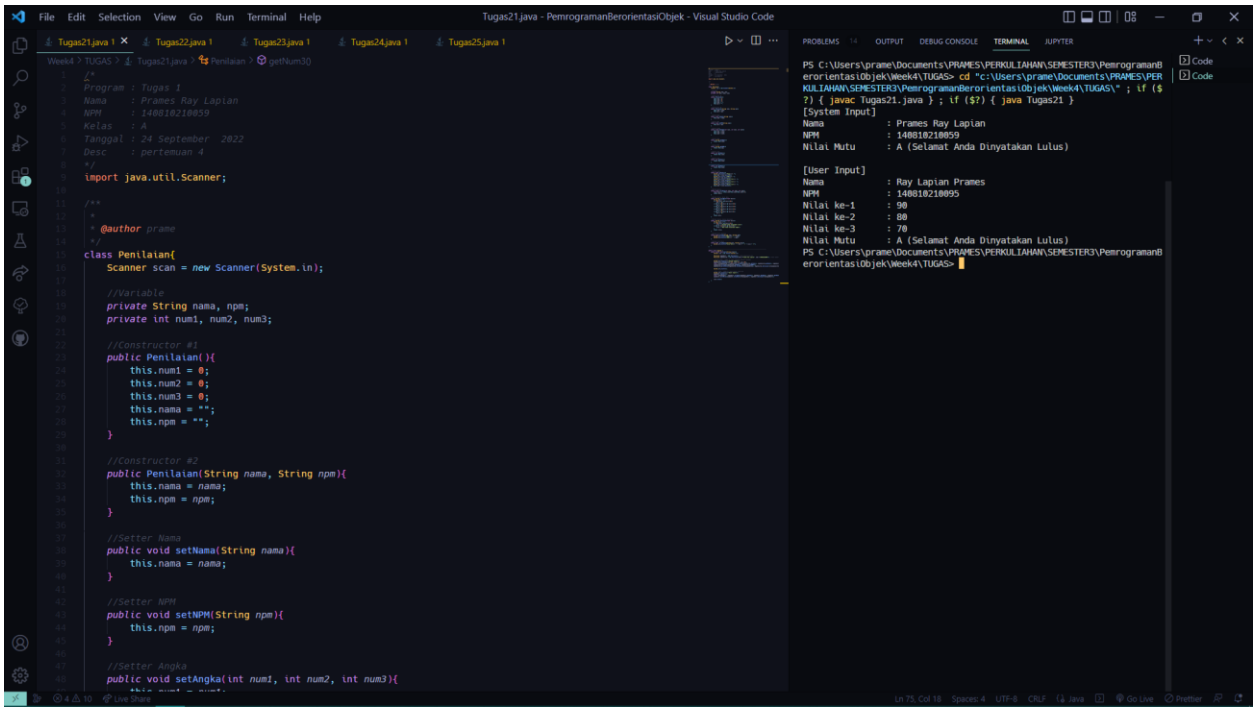
1. Tugas4_1:

```java
/*
Program : Tugas 1
Nama    : Prames Ray Lapian
NPM     : 140810210059
Kelas   : A
Tanggal : 24 September  2022
Desc    : pertemuan 4
*/
import java.util.Scanner;

/**
 *
 * @author prame
 */
class Penilaian{
    Scanner scan = new Scanner(System.in);

    //Variable
    private String nama, npm;
    private int num1, num2, num3;

    //Constructor #1
    public Penilaian(){
        this.num1 = 0;
        this.num2 = 0;
        this.num3 = 0;
        this.nama = "";
        this.npm = "";
    }

    //Constructor #2
    public Penilaian(String nama, String npm){
        this.nama = nama;
        this.npm = npm;
    }

    //Setter Nama
    public void setNama(String nama){
        this.nama = nama;
    }

    //Setter NPM
    public void setNPM(String npm){
```

```
        this.npm = npm;
    }

    //Setter Angka
    public void setAngka(int num1, int num2, int num3){
        this.num1 = num1;
        this.num2 = num2;
        this.num3 = num3;
    }


    //Getter Nama
    public String getNama(){
        return this.nama;
    }

    //Getter NPM
    public String getNPM(){
        return this.npm;
    }

    //Getter num1
    public int getNum1(){
        return this.num1;
    }

    //Getter num2
    public int getNum2(){
        return this.num2;
    }

    //Getter num3
    public int getNum3(){
        return this.num3;
    }

    //Method Input
    public void inputAll(){
        System.out.print("Nama\t\t: ");
        this.nama = scan.nextLine();
        System.out.print("NPM\t\t: ");
        this.npm = scan.nextLine();
        System.out.print("Nilai ke-1\t: ");
        this.num1 = scan.nextInt();
        System.out.print("Nilai ke-2\t: ");
```

```
        this.num2 = scan.nextInt();
        System.out.print("Nilai ke-3\t: ");
        this.num3 = scan.nextInt();
    }

    //Method Operasi
    public float cariRata(int num1, int num2, int num3){
        float hasil = ((this.num1+this.num2+this.num3)/3);
        return hasil;
    }

    //Method Pencari Nilai Mutu
    public String nilaiMutu(float hasil){
        String mutu = "";
        if (100>=hasil && hasil>=80){
            mutu = "A";
        } else if (80>hasil && hasil>=68){
            mutu = "B";
        } else if (68>hasil && hasil>=55){
            mutu = "C";
        } else if (55>hasil && hasil>=45){
            mutu = "D";
        } else if (45>hasil && hasil>=0){
            mutu = "E";
        }
        return mutu;
    }

    //Method Penentu Status Kelulusan
    public String kelulusan(float hasil){
        String lulus = "";
        if (100>=hasil && hasil>=55){
            lulus = "Selamat Anda Dinyatakan Lulus";
        } else if (55>hasil && hasil>=0){
            lulus = "Maaf Anda Dinyatakan Gagal";
        }
        return lulus;
    }

    //Method Print Identyty
    public void printId(String nama, String npm){
        System.out.println("Nama\t\t: " + nama);
        System.out.println("NPM\t\t: " + npm);
    }
```

```java
    //Method Print Hasil
    public void  printNilai(String mutu, String lulus){
        System.out.println("Nilai Mutu\t: " + mutu + " (" + lulus +
")");
    }
}

//-----------------------------------------------------------------------
-------------------
public class Tugas21 {
    public static void main(String args[]){
        Scanner scan = new Scanner(System.in);

        Penilaian angkaUser = new Penilaian(); //Test Constructor #1
        Penilaian angkaSystem = new Penilaian("Prames Ray Lapian",
"140810210059"); //Test Constructor #2

        //System Input : Angka di input langsung didalam codingan
        System.out.println("[System Input]");
        angkaSystem.setAngka(85, 70, 90);
        float rataangkaSystem =
angkaSystem.cariRata(angkaSystem.getNum1(), angkaSystem.getNum2(),
angkaSystem.getNum3()); //Variable ini dipakai untuk mempermudah
pemanggilan variable hasil pada fungsi nilaiMutu dan kelulusan
        angkaSystem.printId(angkaSystem.getNama(),
angkaSystem.getNPM());
        angkaSystem.printNilai(angkaSystem.nilaiMutu(rataangkaSystem),
angkaSystem.kelulusan(rataangkaSystem));

        System.out.println();

        //User Input : Angka di input manual oleh User
        System.out.println("[User Input]");
        angkaUser.inputAll();
        float rataangkaUser = angkaUser.cariRata(angkaUser.getNum1(),
angkaUser.getNum2(), angkaUser.getNum3()); //Variable ini dipakai
untuk mempermudah pemanggilan variable hasil pada fungsi nilaiMutu dan
kelulusan
        angkaUser.printNilai(angkaUser.nilaiMutu(rataangkaUser),
angkaUser.kelulusan(rataangkaUser));

        scan.close();
    }
}
```



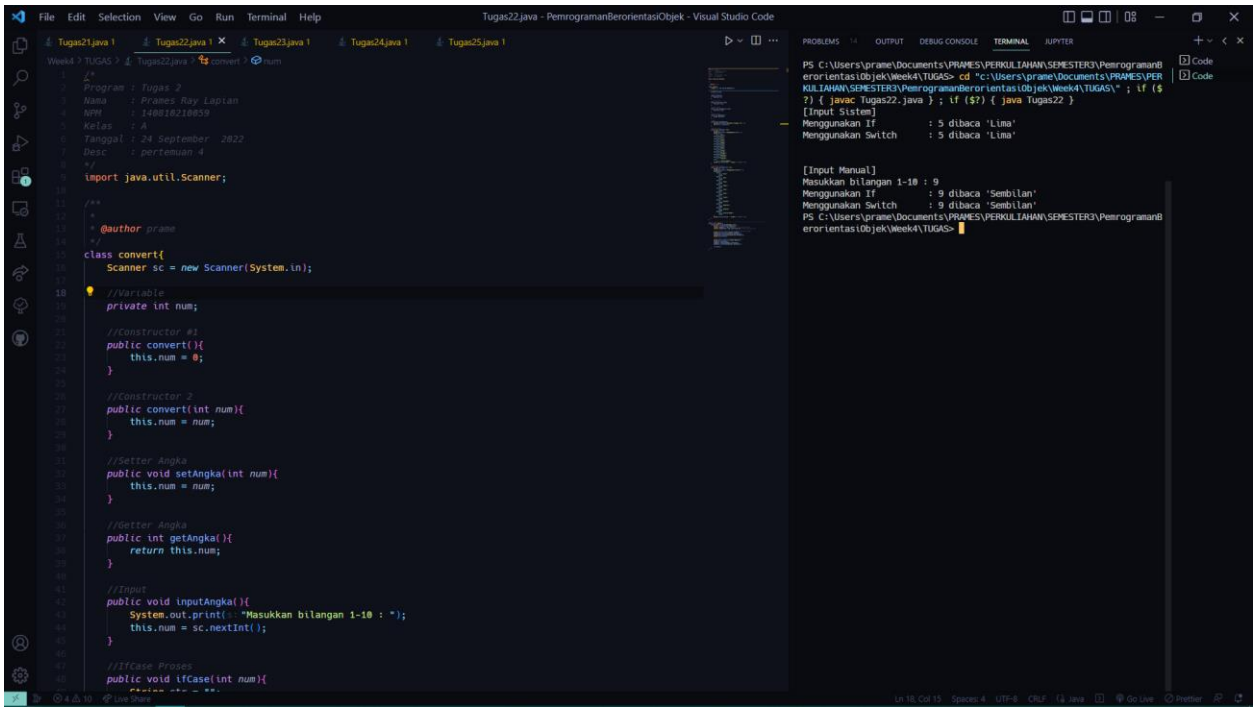
2. Tugas4_2:

```java
/*
Program : Tugas 2
Nama    : Prames Ray Lapian
NPM     : 140810210059
Kelas   : A
Tanggal : 24 September  2022
Desc    : pertemuan 4
*/
import java.util.Scanner;

/**
 *
 * @author prame
 */
class convert{
    Scanner sc = new Scanner(System.in);

    //Variable
    private int num;

    //Constructor #1
    public convert(){
        this.num = 0;
    }
```

```java
    //Constructor 2
    public convert(int num){
        this.num = num;
    }

    //Setter Angka
    public void setAngka(int num){
        this.num = num;
    }

    //Getter Angka
    public int getAngka(){
        return this.num;
    }

    //Input
    public void inputAngka(){
        System.out.print("Masukkan bilangan 1-10 : ");
        this.num = sc.nextInt();
    }

    //IfCase Proses
    public void ifCase(int num){
        String str = "";
        System.out.print("Menggunakan If\t\t: ");
        if(num == 1)
            str = "Satu";
        else if(num == 2)
            str = "Dua";
        else if(num == 3)
            str = "Tiga";
        else if(num == 4)
            str = "Empat";
        else if(num == 5)
            str = "Lima";
        else if(num == 6)
            str = "Enam";
        else if(num == 7)
            str = "Tujuh";
        else if(num == 8)
            str = "Delapan";
        else if(num == 9)
            str = "Sembilan";
        else if(num == 10)
            str = "Sepuluh";
```

```
        else
            str = "Invalid Number";
        System.out.println(num + " dibaca '" + str + "'");
    }

    //SwitchCase Proses
    public void switchCase(int num){
        String str = "";
        System.out.print("Menggunakan Switch\t: ");
        switch(num) {
            case 1:
                str = "Satu";
                break;
            case 2:
                str = "Dua";
                break;
            case 3:
                str = "Tiga";
                break;
            case 4:
                str = "Empat";
                break;
            case 5:
                str = "Lima";
                break;
            case 6:
                str = "Enam";
                break;
            case 7:
                str = "Tujuh";
                break;
            case 8:
                str = "Delapan";
                break;
            case 9:
                str = "Sembilan";
                break;
            case 10:
                str = "Sepuluh";
                break;
            default:
                str = "Invalid Number";
                break;
        }
        System.out.println(num + " dibaca '" + str + "'");
```

```
    }
}

//-------------------------------------------------------------------------
------------------
public class Tugas22 {
    public static void main(String[] args) {
        Scanner sc= new Scanner(System.in);
        convert angkaUser = new convert(); //Test Constructor #1
        convert angkaSystem = new convert(5); //Test Constructor #2

        //System Input : Angka di input langsung didalam codingan
        System.out.println("[Input Sistem]");
        angkaSystem.ifCase(angkaSystem.getAngka());
        angkaSystem.switchCase(angkaSystem.getAngka());
        System.out.println();

        //User Input : Angka di input manual oleh User
        System.out.println("\n[Input Manual]");
        angkaUser.inputAngka();
        angkaUser.ifCase(angkaUser.getAngka());
        angkaUser.switchCase(angkaUser.getAngka());

        sc.close();
    }
}
```



3. Tugas4_3:

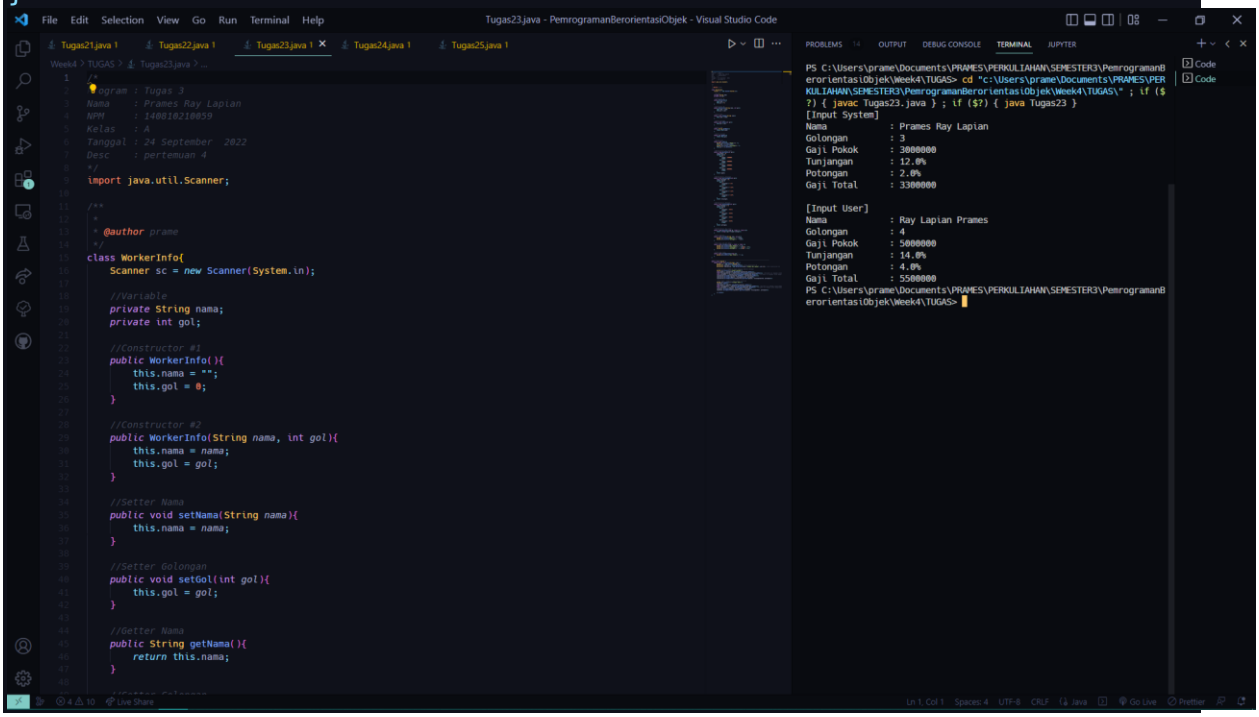
```java
/*
Program : Tugas 3
Nama    : Prames Ray Lapian
NPM     : 140810210059
Kelas   : A
Tanggal : 24 September  2022
Desc    : pertemuan 4
*/
import java.util.Scanner;

/**
 *
 * @author prame
 */
class WorkerInfo{
    Scanner sc = new Scanner(System.in);

    //Variable
    private String nama;
    private int gol;

    //Constructor #1
    public WorkerInfo(){
        this.nama = "";
        this.gol = 0;
```

```
    }

    //Constructor #2
    public WorkerInfo(String nama, int gol){
        this.nama = nama;
        this.gol = gol;
    }

    //Setter Nama
    public void setNama(String nama){
        this.nama = nama;
    }

    //Setter Golongan
    public void setGol(int gol){
        this.gol = gol;
    }

    //Getter Nama
    public String getNama(){
        return this.nama;
    }

    //Getter Golongan
    public int getGol(){
        return this.gol;
    }

    //Method Input
    public void input(){
        System.out.print("Nama\t\t: ");
        this.nama = sc.nextLine();
        System.out.print("Golongan\t: ");
        this.gol = sc.nextInt();
    }

    //Method Pencari Gaji Pokok
    public long gajiPokok(int gol){
        long gapok = 0;
        switch (gol){
            case 1:
                gapok = 1500000;
                break;
            case 2:
                gapok = 2000000;
```

```
            break;
        case 3:
            gapok = 3000000;
            break;
        case 4:
            gapok = 5000000;
            break;
    }
    return gapok;
}

//Method Pencari Tunjangan
public float golTunjangan(int gol){
    float tunjangan = 0;
    switch (gol){
        case 1:
            tunjangan = 0.1f;
            break;
        case 2:
            tunjangan = 0.12f;
            break;
        case 3:
            tunjangan = 0.12f;
            break;
        case 4:
            tunjangan = 0.14f;
            break;
    }
    return tunjangan;
}

//Method Pencari Potongan
public float golPotongan(int gol){
    float potongan = 0;
    switch (gol){
        case 1:
            potongan = 0.01f;
            break;
        case 2:
            potongan = 0.02f;
            break;
        case 3:
            potongan = 0.02f;
            break;
        case 4:
```

```
                potongan = 0.04f;
                break;
        }
        return potongan;
    }

    //Method Pencari Gaji Total
    public long gajiTotal(long gp, float tj, float pt){
        return ((long)((gp)+(tj*gp)-(pt*gp)));
    }

    //Print Identyty
    public void printId(String nama, int gol){
        System.out.println("Nama\t\t: " + nama);
        System.out.println("Golongan\t: " + gol);
    }

    //Print Gaji and the detail
    public void printGaji(long a, float b, float c){
        System.out.println("Gaji Pokok\t: " + a);
        System.out.println("Tunjangan\t: " + (b*100) + "%");
        System.out.println("Potongan\t: " + (c*100) + "%");
    }

    //Print Gaji Total
    public void printgajiTotal(long a){
        System.out.println("Gaji Total\t: " + a);
    }
}

//-------------------------------------------------------------------
------------------
public class Tugas23 {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        WorkerInfo inputUser = new WorkerInfo(); //Test Constructor #1
        WorkerInfo inputSystem = new WorkerInfo("Prames Ray Lapian",
3); //Test Constructor #2

        //System Input : Angka di input langsung didalam codingan
        System.out.println("[Input System]");
        long gapok1 = inputSystem.gajiPokok(inputSystem.getGol());
        float tunjanganSystem =
inputSystem.golTunjangan(inputSystem.getGol()); //Variable ini dipakai
untuk mempermudah pemanggilan fungsi printGaji dan printGajiTotal
```

```java
        float potongan1 =
inputSystem.golPotongan(inputSystem.getGol()); //Variable ini dipakai
untuk mempermudah pemanggilan fungsi printGaji dan printGajiTotal
        inputSystem.printId(inputSystem.getNama(),
inputSystem.getGol());
        inputSystem.printGaji(gapok1, tunjanganSystem, potongan1);
        inputSystem.printgajiTotal(inputSystem.gajiTotal(gapok1,
tunjanganSystem, potongan1));

        //User Input : Angka di input manual oleh User
        System.out.println("\n[Input User]");
        inputUser.input();
        long gapok2 = inputUser.gajiPokok(inputUser.getGol());
        float tunjanganUser =
inputUser.golTunjangan(inputUser.getGol()); //Variable ini dipakai
untuk mempermudah pemanggilan fungsi printGaji dan printGajiTotal
        float potongan2 = inputUser.golPotongan(inputUser.getGol());
//Variable ini dipakai untuk mempermudah pemanggilan fungsi printGaji
dan printGajiTotal
        inputUser.printGaji(gapok2, tunjanganUser, potongan2);
        inputUser.printgajiTotal(inputUser.gajiTotal(gapok2,
tunjanganUser, potongan2));

        sc.close();
    }
}
```

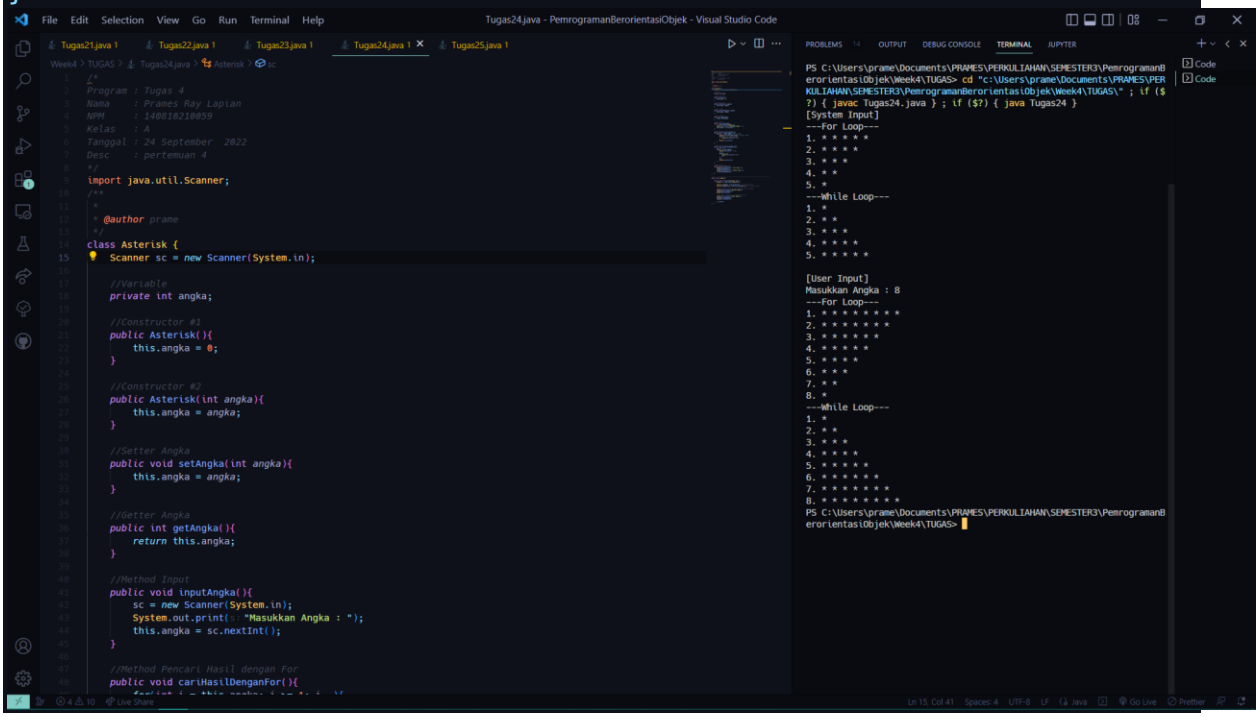


4. Tugas4_4:

```java
/*
Program : Tugas 4
Nama    : Prames Ray Lapian
NPM     : 140810210059
Kelas   : A
Tanggal : 24 September  2022
Desc    : pertemuan 4
*/
import java.util.Scanner;
/**
 *
 * @author prame
 */
class Asterisk {
    Scanner sc = new Scanner(System.in);

    //Variable
    private int angka;

    //Constructor #1
    public Asterisk(){
        this.angka = 0;
    }

    //Constructor #2
    public Asterisk(int angka){
        this.angka = angka;
    }

    //Setter Angka
    public void setAngka(int angka){
        this.angka = angka;
    }

    //Getter Angka
    public int getAngka(){
        return this.angka;
    }

    //Method Input
    public void inputAngka(){
        sc = new Scanner(System.in);
```

```
        System.out.print("Masukkan Angka : ");
        this.angka = sc.nextInt();
    }

    //Method Pencari Hasil dengan For
    public void cariHasilDenganFor(){
        for(int i = this.angka; i >= 1; i--){
            System.out.print((this.angka - i + 1) + ".");
            for(int j = i; j >= 1; j--){
                System.out.print(" *");
            }
            System.out.println();
        }
    }

    //Method Pencari Hasil dengan While
    public void cariHasilDenganWhile(){
        int i = 1, j;
        while(i <= this.angka){
            System.out.print(i + ".");
            j = 1;
            while(j <= i){
                System.out.print(" *");
                j++;
            }
            i++;
            System.out.println();
        }
    }

    //Method Print
    public void printHasil(){
        System.out.println("---For Loop---");
        cariHasilDenganFor();
        System.out.println("---While Loop---");
        cariHasilDenganWhile();
    }
}

//-------------------------------------------------------------------------
------------------
public class Tugas24 {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
```

```
        Asterisk angkaUser = new Asterisk(); //Tes Constructor#1
        Asterisk angkaSystem = new Asterisk(5); //Tes Constructor#2

        //System Input : Angka di input langsung didalam codingan
        System.out.println("[System Input]");
        angkaSystem.printHasil();
        System.out.println();

        //User Input : Angka di input manual oleh User
        System.out.println("[User Input]");
        angkaUser.inputAngka();
        angkaUser.printHasil();

        sc.close();
    }
}
```



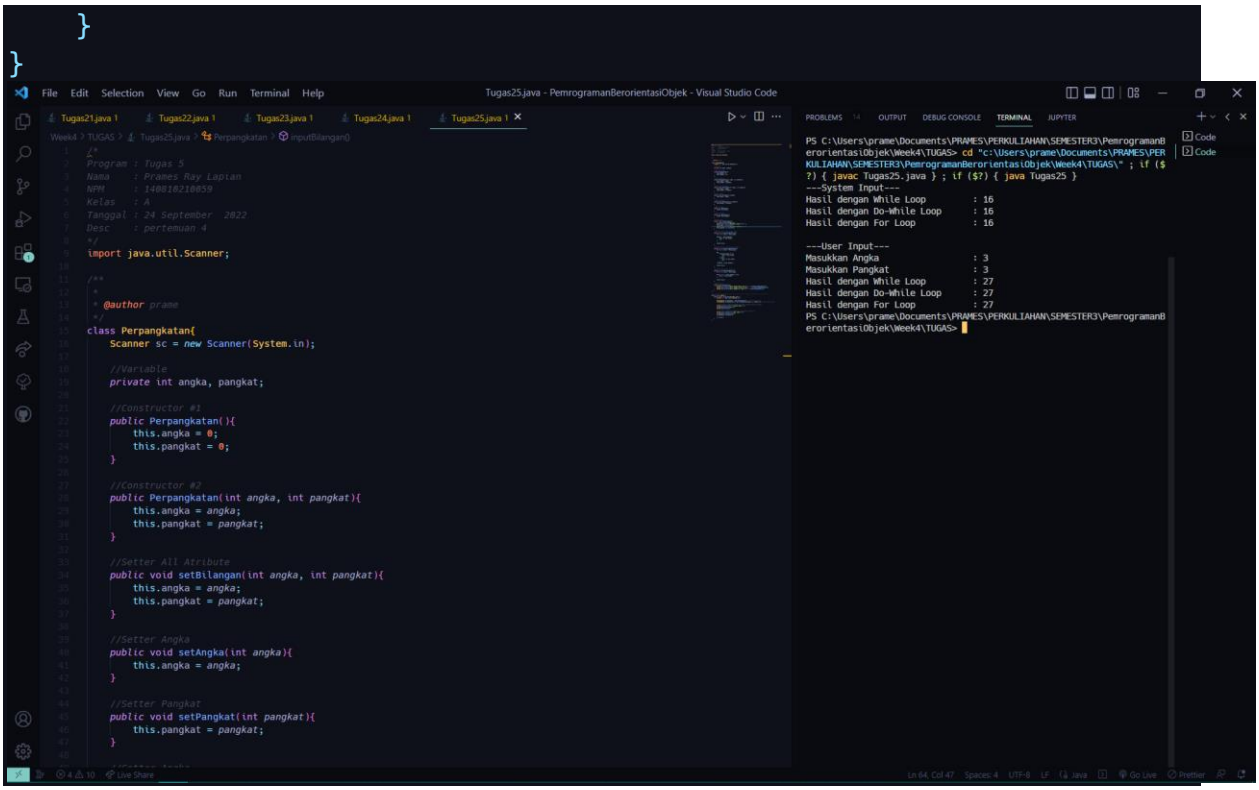
5. Tugas4_5:

```
/*
Program : Tugas 5
Nama    : Prames Ray Lapian
NPM     : 140810210059
Kelas   : A
Tanggal : 24 September  2022
```

```java
Desc    : pertemuan 4
*/
import java.util.Scanner;

/**
 *
 * @author prame
 */
class Perpangkatan{
    Scanner sc = new Scanner(System.in);

    //Variable
    private int angka, pangkat;

    //Constructor #1
    public Perpangkatan( ){
        this.angka = 0;
        this.pangkat = 0;
    }

    //Constructor #2
    public Perpangkatan(int angka, int pangkat){
        this.angka = angka;
        this.pangkat = pangkat;
    }

    //Setter All Atribute
    public void setBilangan(int angka, int pangkat){
        this.angka = angka;
        this.pangkat = pangkat;
    }

    //Setter Angka
    public void setAngka(int angka){
        this.angka = angka;
    }

    //Setter Pangkat
    public void setPangkat(int pangkat){
        this.pangkat = pangkat;
    }

    //Getter Angka
    public int getAngka( ){
        return this.angka;
```

```java
    }

    //Getter Pangkat
    public int getpangkat(){
        return this.pangkat;
    }

    //Method Input
    public void inputBilangan(){
        sc = new Scanner(System.in);
        System.out.print("Masukkan Angka\t\t\t: ");
        this.angka = sc.nextInt();
        System.out.print("Masukkan Pangkat\t\t: ");
        this.pangkat = sc.nextInt();
    }

    //Method Pencari Hasil dengan While
    public int cariHasilDenganWhile(){
        int i = 1, hasil = this.angka;

        while(i < this.pangkat){
            hasil *= this.angka;
            i++;
        }

        return hasil;
    }

    //Method Pencari Hasil dengan Do-While
    public int cariHasilDenganDoWhile(){
        int i = 1, hasil = this.angka;

        do{
            if(this.pangkat == 1){
                hasil = this.angka;
                i++;
            } else {
                hasil *= this.angka;
                i++;
            }
        } while(i < this.pangkat);

        return hasil;
    }
```

```java
    //Method Pencari Hasil dengan For
    public int cariHasilDenganFor(){
        int i = 1, hasil = this.angka;

        for(i = 1; i < this.pangkat; i++){
            hasil *= this.angka;
        }

        return hasil;
    }

    //Method Print
    public void printHasil(){
        System.out.println("Hasil dengan While Loop\t\t: " +
cariHasilDenganWhile());
        System.out.println("Hasil dengan Do-While Loop\t: " +
cariHasilDenganDoWhile());
        System.out.println("Hasil dengan For Loop\t\t: " +
cariHasilDenganFor());
    }
}

//-----------------------------------------------------------------------
-------------------
public class Tugas25 {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        Perpangkatan bilanganUser = new Perpangkatan(); //Tes
Constructor#1
        Perpangkatan bilanganSystem = new Perpangkatan(2, 4); //Tes
Constructor#2

        //System Input : Angka dan Pangkat di input langsung didalam
codingan
        System.out.println("---System Input---");
        bilanganSystem.printHasil();
        System.out.println();

        //User Input : Angka dan Pangkat di input manual oleh User
        System.out.println("---User Input---");
        bilanganUser.inputBilangan();
        bilanganUser.printHasil();

        sc.close();
```


File Edit Selection View Go Run Terminal Help
Tugas25.java - PemrogramanBerorientasiObjek - Visual Studio Code
Tugas21.java 1
Tugas22.java 1
Tugas23.java 1
Tugas24.java 1
Tugas25.java 1
Week4 > TUGAS > Tugas25.java > Perpangkatan > inputBilangan()
/*
Program : Tugas 5
Nama : Prames Ray Lapian
NPM : 140818210059
Kelas : A
Tanggal : 24 September 2022
Desc : pertemuan 4
*/
import java.util.Scanner;
/**
*
* @author prame
*/
class Perpangkatan{
Scanner sc = new Scanner(System.in);
//Variable
private int angka, pangkat;
//Constructor #1
public Perpangkatan(){
this.angka = 0;
this.pangkat = 0;
}
//Constructor #2
public Perpangkatan(int angka, int pangkat){
this.angka = angka;
this.pangkat = pangkat;
}
//Setter All Atribute
public void setBilangan(int angka, int pangkat){
this.angka = angka;
this.pangkat = pangkat;
}
//Setter Angka
public void setAngka(int angka){
this.angka = angka;
}
//Setter Pangkat
public void setPangkat(int pangkat){
this.pangkat = pangkat;
}
PROBLEMS 14 OUTPUT DEBUG CONSOLE TERMINAL JUPYTER
PS C:\Users\prame\Documents\PRAMES\PERKULIAHAN\SEMESTER3\PemrogramanBerorientasiObjek\Week4\TUGAS> cd "c:\Users\prame\Documents\PRAMES\PERKULIAHAN\SEMESTER3\PemrogramanBerorientasiObjek\Week4\TUGAS\" ; if ($?) { javac Tugas25.java } ; if ($?) { java Tugas25 }
---System Input---
Hasil dengan While Loop : 16
Hasil dengan Do-While Loop : 16
Hasil dengan For Loop : 16
---User Input---
Masukkan Angka : 3
Masukkan Pangkat : 3
Hasil dengan While Loop : 27
Hasil dengan Do-While Loop : 27
Hasil dengan For Loop : 27
PS C:\Users\prame\Documents\PRAMES\PERKULIAHAN\SEMESTER3\PemrogramanBerorientasiObjek\Week4\TUGAS>
Code
Code