Nama : Restu Lestari Mulianingrum

NIM : A11.2022.14668

Kelompok : A11.4415

PRAKTIKUM 4

Program mencetak nilai

Code Nilai.java

```
import java.util.Scanner;
public class Nilai {
    String nim;
    String nama;
    float nilaiUts, nilaiTugas, nilaiUas, pNilaiTugas, pNilaiUts, pNilaiUas,
nilaiAkhir;
    String predikat;
    String nHuruf;

    Scanner key = new Scanner(System.in);
    public Nilai(){}; //konstruktor
    public Nilai(String nim, String nama, float nilaiUts, float nilaiTugas,
float nilaiUas) {
        this.nim = nim;
        this.nama = nama;
        this.nilaiUts = nilaiUts;
        this.nilaiTugas = nilaiTugas;
        this.nilaiUas = nilaiUas;
    }
    void inputNilai() {
        System.out.println("========== Input Nilai ==========");
        System.out.print("Nim       : ");
        nim = key.nextLine();
        System.out.print("Nama      : ");
        nama = key.nextLine();
        System.out.print("Nilai Tugas   : ");
        nilaiTugas = key.nextFloat();
        System.out.print("Nilai UTS : ");
        nilaiUts = key.nextFloat();
        System.out.print("Nilai UAS : ");
        nilaiUas = key.nextFloat();
    }

    void hitungNilai() {
        pNilaiTugas = nilaiTugas * 0.20f;
```

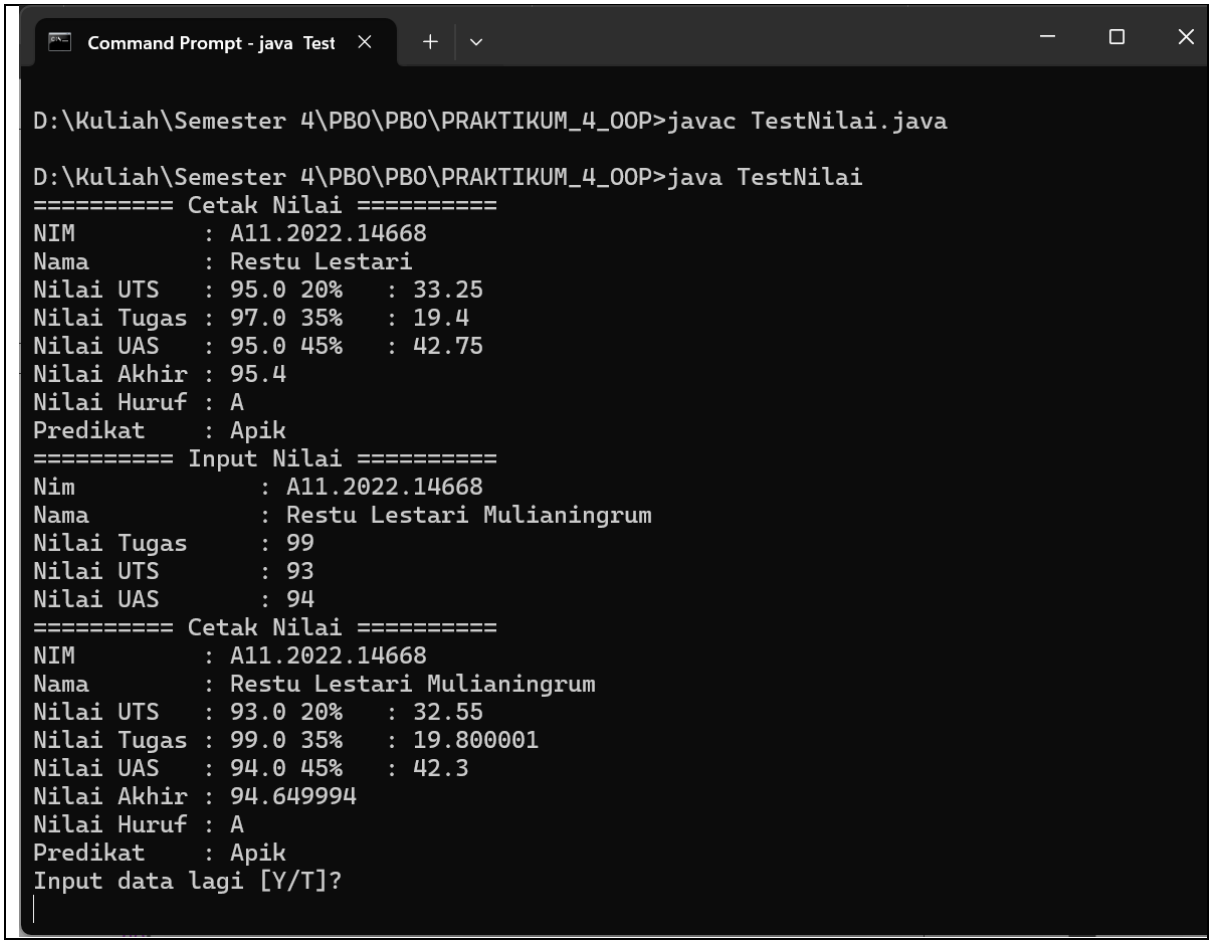
```
        pNilaiUts = nilaiUts * 0.35f;
        pNilaiUas = nilaiUas * 0.45f;
        nilaiAkhir = pNilaiUts + pNilaiTugas + pNilaiUas;
    }

    String getNilHuruf(float nilai) {
        if (nilai >= 85)
            nHuruf = "A";
        else if (nilai >= 70 && nilai < 85)
            nHuruf = "B";
        else if (nilai >= 60 && nilai < 70)
            nHuruf = "C";
        else if (nilai >= 40 && nilai < 60)
            nHuruf = "D";
        else
            nHuruf = "E";
        return nHuruf;
    }

    String getPredikat(String huruf) {
        switch (huruf) {
            case "A":
                predikat = "Apik";
                break;
            case "B":
                predikat = "Baik";
                break;
            case "C":
                predikat = "Cukup";
                break;
            case "D":
                predikat = "Dablek";
                break;
            default:
                predikat = "Elek";
        }
        return predikat;
    }

    void cetakNilai() {
        hitungNilai();
        System.out.println("========== Cetak Nilai ==========");
        System.out.println("NIM         : " + nim);
        System.out.println("Nama        : " + nama);
        System.out.println("Nilai UTS   : " + nilaiUts +" 20%   : "
+pNilaiUts);
        System.out.println("Nilai Tugas : " + nilaiTugas +" 35%   : "
+pNilaiTugas);
```

```
        System.out.println("Nilai UAS   : " + nilaiUas +" 45%   : "
+pNilaiUas);
        System.out.println("Nilai Akhir : " + nilaiAkhir);
        System.out.println("Nilai Huruf : " + getNilHuruf(nilaiAkhir));
        System.out.println("Predikat    : " + getPredikat(nHuruf));
    }

}
```

Code TestNilai.java

```
import java.util.Scanner;
import java.io.*;

public class TestNilai {
    public static void main(String[] args) throws IOException{
        Scanner input = new Scanner(System.in);
        BufferedReader br = new BufferedReader(
            new InputStreamReader(System.in));
        String inputLagi = "";

        Nilai nilaiku = new Nilai();
        nilaiku.nim = "A11.2022.14668";
        nilaiku.nama = "Restu Lestari";
        nilaiku.nilaiTugas = 97;
        nilaiku.nilaiUts = 95;
        nilaiku.nilaiUas = 95;
        nilaiku.hitungNilai();
        nilaiku.cetakNilai();

        do{
        Nilai mahasiswa1 = new Nilai();
        mahasiswa1.inputNilai();
        mahasiswa1.hitungNilai();
        mahasiswa1.cetakNilai();

        System.out.println("Input data lagi [Y/T]? ");
        inputLagi = input.nextLine();
        } while (inputLagi.equalsIgnoreCase("Y"));

    }

}
```

Output



Latihan 1

Code Penjualan.java

```
import java.util.Scanner;

public class Penjualan {
    String kode, nama;
    float harga;
    double total;
    int jumlah;
    Scanner key = new Scanner(System.in);


    public Penjualan() {
    };

    public void setData(String kode, String nama, float harga, int jumlah) {
        this.kode = kode;
        this.nama = nama;
        this.harga = harga;
        this.jumlah = jumlah;
```

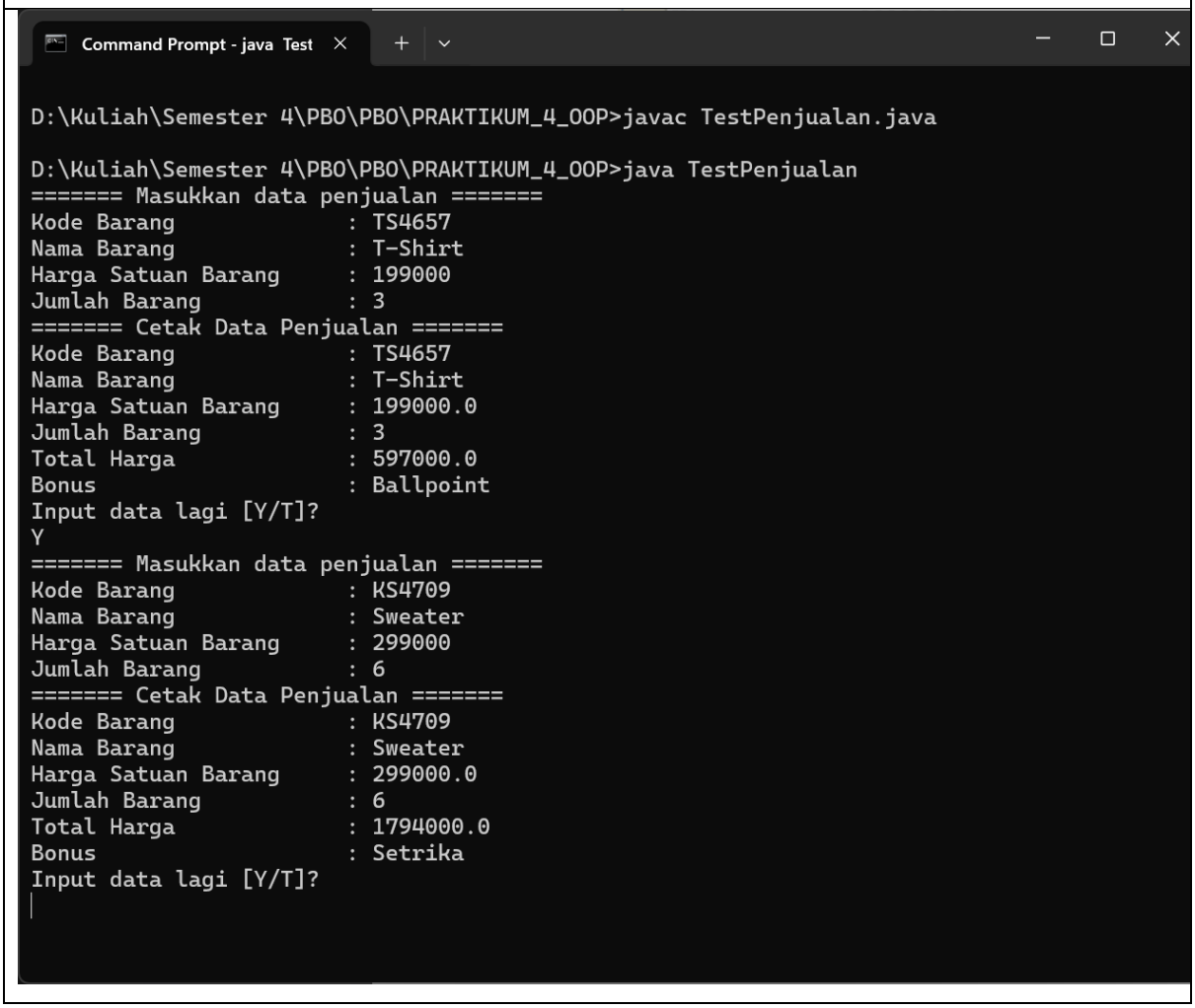
```
    }

    void inputData(){
        System.out.println("Masukkan data penjualan");
        System.out.print("Kode Barang   : ");
        kode = key.nextLine();
        System.out.print("Nama Barang   : ");
        nama = key.nextLine();
        System.out.print("Harga Satuan Barang   : ");
        harga = key.nextFloat();
        System.out.print("Jumlah Barang : ");
        jumlah = key.nextInt();
    }

    void hitungTotal() {
        total = harga * jumlah;
        System.out.println("Total Harga : " + total);
    }

    String getBonus() {
        String bonus = "";

        if (total >= 500000 && jumlah > 5) {
            bonus = "Setrika";
        } else if (total >= 100000 && jumlah > 3) {
            bonus = "Payung";
        } else if (total >= 50000 && jumlah > 2) {
            bonus = "Ballpoint";
        } else
            bonus = "tidak mendapatkan bonus";
        return bonus;
    }

    void cetakNota() {
        System.out.println("========== Data Penjualan ==========");
        System.out.println("Kode Barang : " + kode);
        System.out.println("Nama Barang : " + nama);
        System.out.println("Harga Satuan Barang : " + harga);
        System.out.println("Jumlah Barang : " + jumlah);
        hitungTotal();
        System.out.println("Bonus : " + getBonus());
    }
}
```

Code TestPenjualan.java

```
import java.util.Scanner;
```

```java
public class TestPenjualan {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        String inputLagi;

        do {
            Penjualan penjualan = new Penjualan();
            penjualan.inputData();
            penjualan.cetakNota();
            System.out.println("Input data lagi [Y/T]? ");
            inputLagi = input.nextLine();

        } while (inputLagi.equalsIgnoreCase("Y"));

        input.close();
    }
}
```

Output



Latihan 2

Code Determinan.java

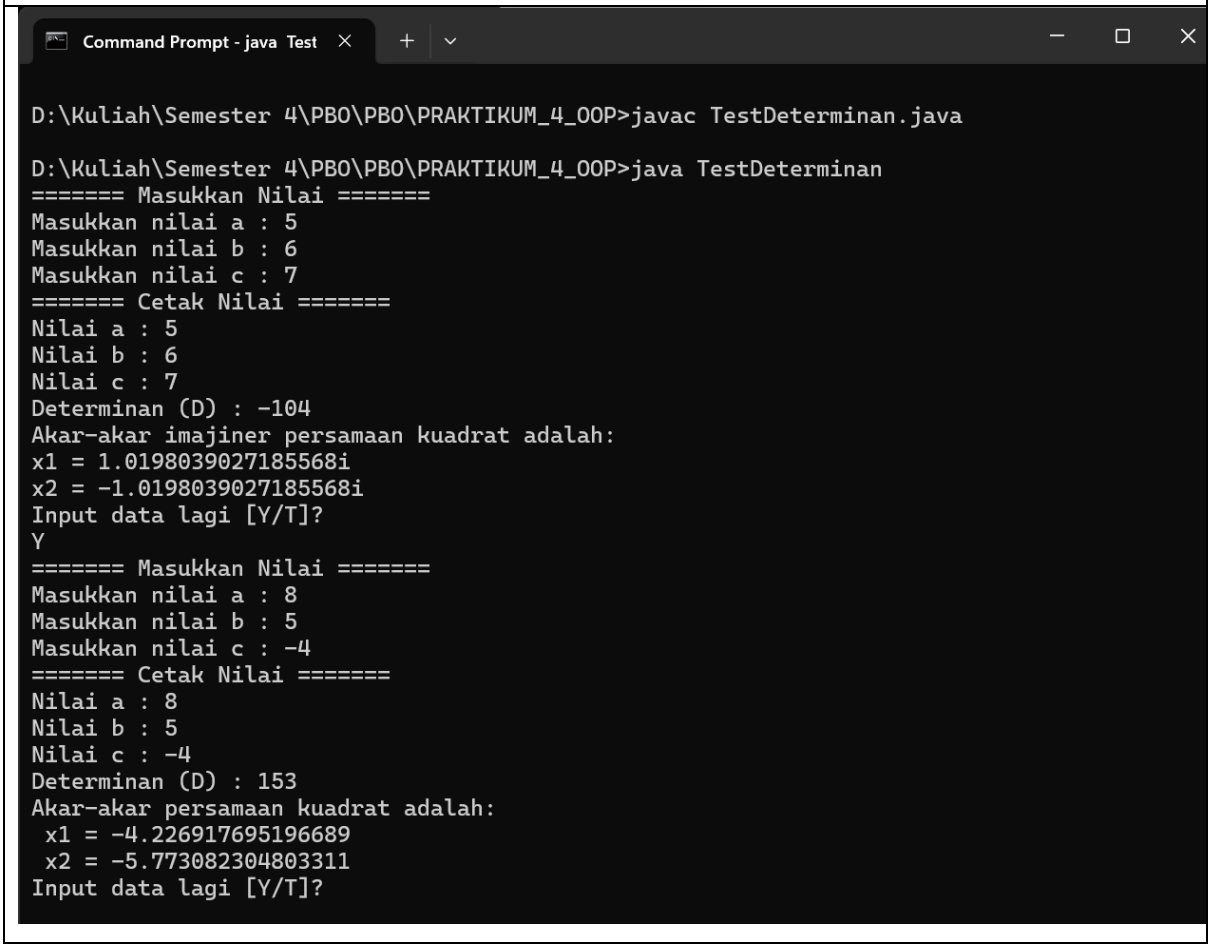
```
import static java.lang.Math.sqrt;

import java.util.Scanner;

public class Determinan {
    int a, b, c;
    long D;
    double x1, x2;
    Scanner key = new Scanner(System.in);

    void inputABC() {
        System.out.println("======= Masukkan Nilai =======");
        System.out.print("Masukkan nilai a : "); a = key.nextInt();
        System.out.print("Masukkan nilai b : "); b = key.nextInt();
        System.out.print("Masukkan nilai c : "); c = key.nextInt();
    }

    void hitungD() {
        D = (b * b)-(4 * a * c);
    }

    void hitungX1X2() {
        if (D > 0) {
            x1 = (-b + Math.sqrt(D) / (2 * a));
            x2 = (-b - Math.sqrt(D) / (2 * a));
            System.out.println("Akar-akar persamaan kuadrat adalah: \n x1 =
" + x1 + "\n x2 = " + x2);
        } else if (D == 0) {
            x1 = x2 = -b / (2 * a);
            System.out.println("Akar-akar persamaan kuadrat adalah: x1 = x2"
+ x1);
        } else {
            x1 = -b / (2 * a) + Math.sqrt(-D) / (2 * a);
            x2 = -b / (2 * a) - Math.sqrt(-D) / (2 * a);
            System.out.println("Akar-akar imajiner persamaan kuadrat
adalah:\nx1 = " + x1 + "i\nx2 = " + x2 + "i");
        }
    }

    void cetakdeterminan() {
        hitungD();
        System.out.println("======= Cetak Nilai =======");
        System.out.println("Nilai a : " + a);
        System.out.println("Nilai b : " + b);
        System.out.println("Nilai c : " + c);
```

```
        System.out.println("Determinan (D) : " + D);
        hitungX1X2();
    }
}
```

Code TestDeterminan.java

```
import java.util.Scanner;

public class TestDeterminan {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        String inputLagi;

        do {
            Determinan abc = new Determinan();
            abc.inputABC();
            abc.hitungD();
            //abc.hitungX1X2();
            abc.cetakdeterminan();

            System.out.println("Input data lagi [Y/T]?");
            inputLagi = input.next();

        } while (inputLagi.equalsIgnoreCase("Y"));

        input.close();
    }
}
```

Output



Latihan 3

Code KonversiDetik.java

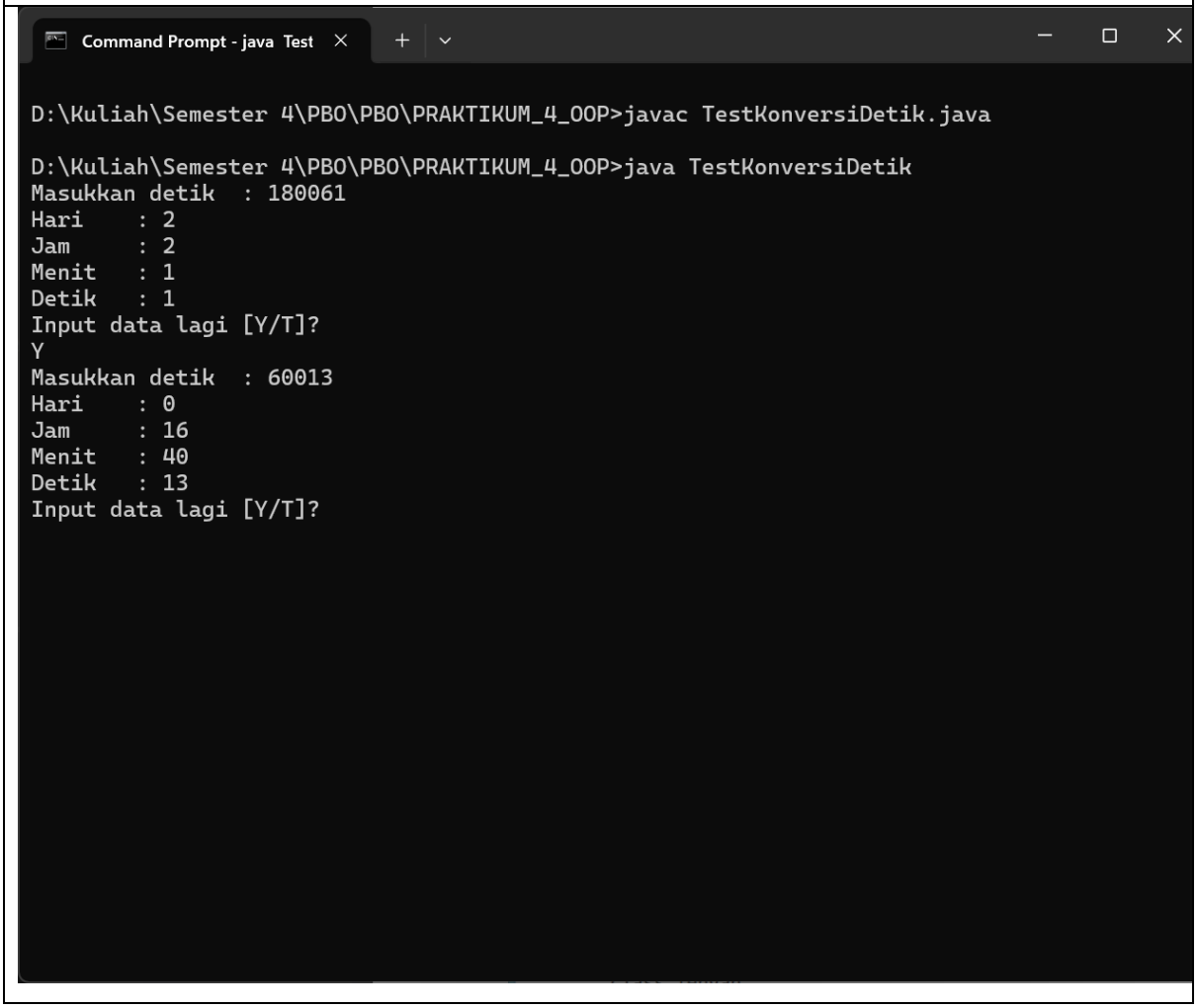
```java
import java.util.Scanner;

public class KonversiDetik {
    int detik;
    int hasil;

    Scanner key = new Scanner(System.in);

    public KonversiDetik(int detik){
        this.detik = detik;
    }

    public KonversiDetik(){}

    void inputDetik(){
        System.out.print("Masukkan detik    : "); detik = key.nextInt();
    }
```

```
    void hari(){
        hasil = detik/86400;
        System.out.println("Hari    : " + hasil);
    }
    void jam(){
        hasil = (detik%86400)/3600;
        System.out.println("Jam : " + hasil);
    }
    void menit(){
        hasil = ((detik%86400)%3600)/60;
        System.out.println("Menit   : " + hasil);
    }
    void detik(){
        hasil = ((detik%86400)%3600)%60;
        System.out.println("Detik   : " + hasil);
    }


}
```

Code TestKonversiDetik.java

```
import java.util.Scanner;

public class TestKonversiDetik {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        String inputLagi;

        do {
            KonversiDetik konversi = new KonversiDetik();

            konversi.inputDetik();
            konversi.hari();
            konversi.jam();
            konversi.menit();
            konversi.detik();

            System.out.println("Input data lagi [Y/T]? ");
            inputLagi = input.nextLine();

        } while (inputLagi.equalsIgnoreCase("Y"));

        input.close();
    }
}
```

Output


Command Prompt - java Test
D:\Kuliah\Semester 4\PBO\PBO\PRAKTIKUM_4_OOP>javac TestKonversiDetik.java
D:\Kuliah\Semester 4\PBO\PBO\PRAKTIKUM_4_OOP>java TestKonversiDetik
Masukkan detik : 180061
Hari : 2
Jam : 2
Menit : 1
Detik : 1
Input data lagi [Y/T]?
Y
Masukkan detik : 60013
Hari : 0
Jam : 16
Menit : 40
Detik : 13
Input data lagi [Y/T]?