

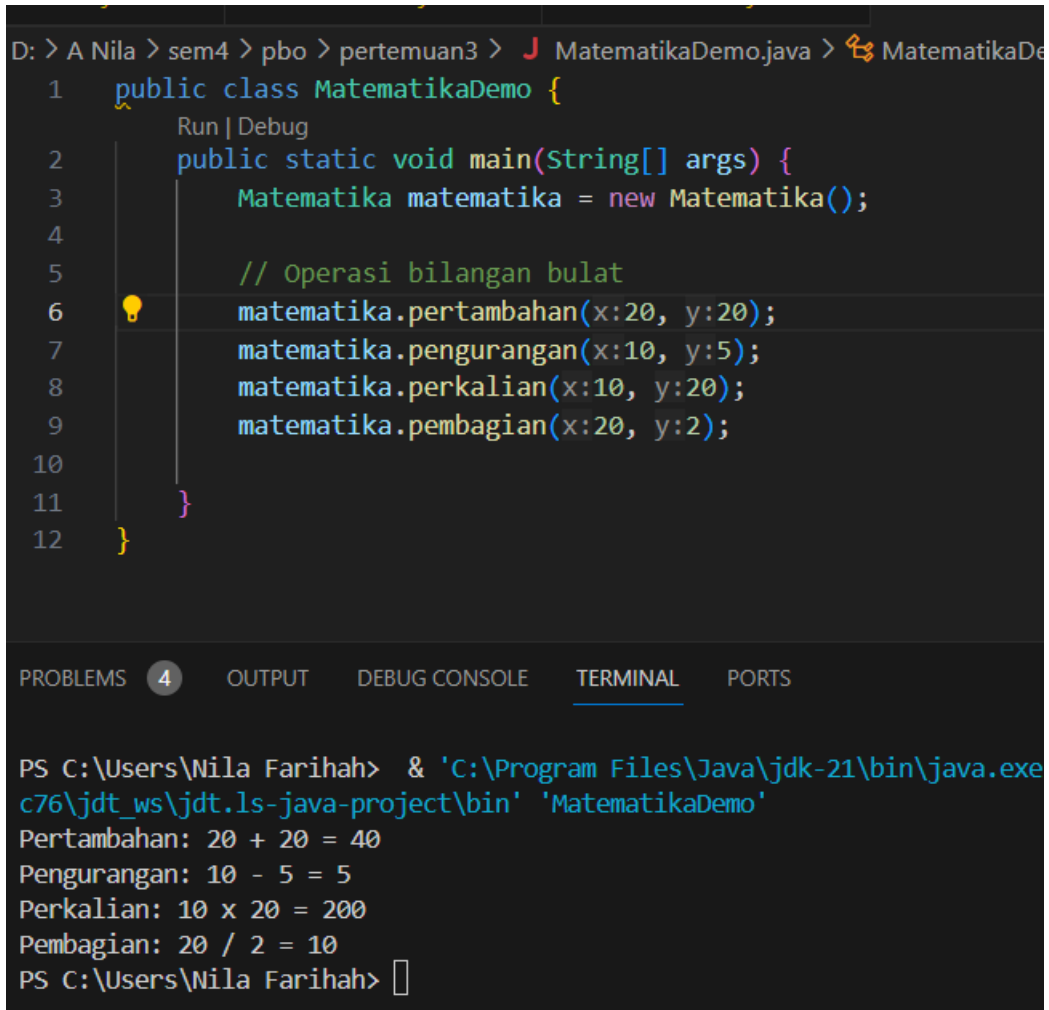
**Mata Kuliah : PBO – TI – S1**

**Pertemuan : 3**

**NIM : A11.2022.14667**

**Nama : Nila Farihah**

**Hasil Program Matematika:**



```
D: > A Nila > sem4 > pbo > pertemuan3 > MatematikaDemo.java > MatematikaDe
1  public class MatematikaDemo {
2      Run | Debug
3      public static void main(String[] args) {
4          Matematika matematika = new Matematika();
5
6          // Operasi bilangan bulat
7          matematika.pertambahan(x:20, y:20);
8          matematika.pengurangan(x:10, y:5);
9          matematika.perkalian(x:10, y:20);
10         matematika.pembagian(x:20, y:2);
11     }
12 }
```

PROBLEMS 4 OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS C:\Users\Nila Farihah> & 'C:\Program Files\Java\jdk-21\bin\java.exe
c76\jdt_ws\jdt.ls-java-project\bin' 'MatematikaDemo'
Pertambahan: 20 + 20 = 40
Pengurangan: 10 - 5 = 5
Perkalian: 10 x 20 = 200
Pembagian: 20 / 2 = 10
PS C:\Users\Nila Farihah> 
```

**Kode Program :**

**File “Matematika.java”**

```
public class Matematika {
    public void pertambahan(int x, int y) {
        System.out.println("Pertambahan: " + x + " + " + y + " = "
            + (x + y));
    }

    public void pengurangan(int x, int y) {
```

```

        System.out.println("Pengurangan: " + x + " - " + y + " = "
            + (x - y));
    }

    public void perkalian(int x, int y) {
        System.out.println("Perkalian: " + x + " x " + y + " = "
            + (x * y));
    }

    public void pembagian(int x, int y) {
        if (y != 0) {
            System.out.println("Pembagian: " + x + " / " + y + "
                = " + (x / y));
        } else {
            System.out.println("Error: Pembagian dengan nol
                tidak diperbolehkan");
        }
    }
}

```

**File “MatematikaDemo.java”**

```

public class MatematikaDemo {
    public static void main(String[] args) {
        Matematika matematika = new Matematika();

        // Operasi bilangan bulat
        matematika.pertambahan(20, 20);
        matematika.pengurangan(10, 5);
        matematika.perkalian(10, 20);
        matematika.pembagian(20, 2);
    }
}

```

## Hasil Program suhu:

```
D: > A Nila > sem4 > pbo > pertemuan3 > J suhu.java > suhu > hitungKelvin(int)
1 public class suhu {
2
3     float hasil;
4     int Celcius;
5
6     public suhu(int Celcius){
7         this.Celcius = Celcius;
8     }
9
10    public suhu(){}
11
12    void hitungKelvin (int Celcius){
13        hasil = Celcius + 273.15f;
14        System.out.println("Konversi suhu Celcius ke Kelvin : " + hasil + " K");
15    }
16    void hitungFarhenheit (int Celcius){
17        hasil = Celcius * 1.8f + 32;
18        System.out.println("Konversi suhu Celcius ke Farhenheit : " + hasil + " F");
19    }
20    void hitungRankine (int Celcius){
21        hasil = Celcius * 1.8f + 491.67f;
22        System.out.println("Konversi suhu Celcius ke Rankine : " + hasil + " Ra");
23    }
24 }
```

PROBLEMS 2 OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS C:\Users\Nila Farihah> & 'C:\Program Files\Java\jdk-21\bin\java.exe' '--enable-preview' '-XX:+ShowCodeDetails' 'c76\jdt_ws\jdt.ls-java-project\bin' 'suhuDemo'
Konversi suhu Celcius ke Kelvin : 309.15 K
Konversi suhu Celcius ke Farhenheit : 96.799995 F
Konversi suhu Celcius ke Rankine : 556.47003 Ra
Konversi suhu Celcius ke Dalisle : 96.0 De
Konversi suhu Celcius ke Newton : 11.0 N
Konversi suhu Celcius ke Reaumur : 28.800001 R
Konversi suhu Celcius ke Romer : 25.5 Ro
PS C:\Users\Nila Farihah>
```

## Kode Program :

### File “suhu.java”

```
public class suhu {

    float hasil;
    int Celcius;

    public suhu(int Celcius){
        this.Celcius = Celcius;
    }

    public suhu(){}

    void hitungKelvin (int Celcius){
        hasil = Celcius + 273.15f;
```

```

        System.out.println("Konversi suhu Celcius ke Kelvin : "
+ hasil + " K");
    }
    void hitungFarhenheit (int Celcius){
        hasil = Celcius * 1.8f + 32;
        System.out.println("Konversi suhu Celcius ke Farhenheit
: " + hasil + " F");
    }
    void hitungRankine (int Celcius){
        hasil = Celcius * 1.8f + 491.67f;
        System.out.println("Konversi suhu Celcius ke Rankine : "
+ hasil + " Ra");
    }
    void hitungDalisle (int Celcius){
        hasil = (100 - Celcius) * 1.5f;
        System.out.println("Konversi suhu Celcius ke Dalisle : "
+ hasil + " De");
    }
    void hitungNewton (int Celcius){
        hasil = Celcius * 33/100;
        System.out.println("Konversi suhu Celcius ke Newton : "
+ hasil + " N");
    }
    void hitungReaumur (int Celcius){
        hasil = Celcius * 0.8f;
        System.out.println("Konversi suhu Celcius ke Reaumur : "
+ hasil + " R");
    }
    void hitungRomer(int Celcius){
        hasil = Celcius * 21/40 + 7.5f;
        System.out.println("Konversi suhu Celcius ke Romer : " +
hasil + " Ro");
    }
}

```

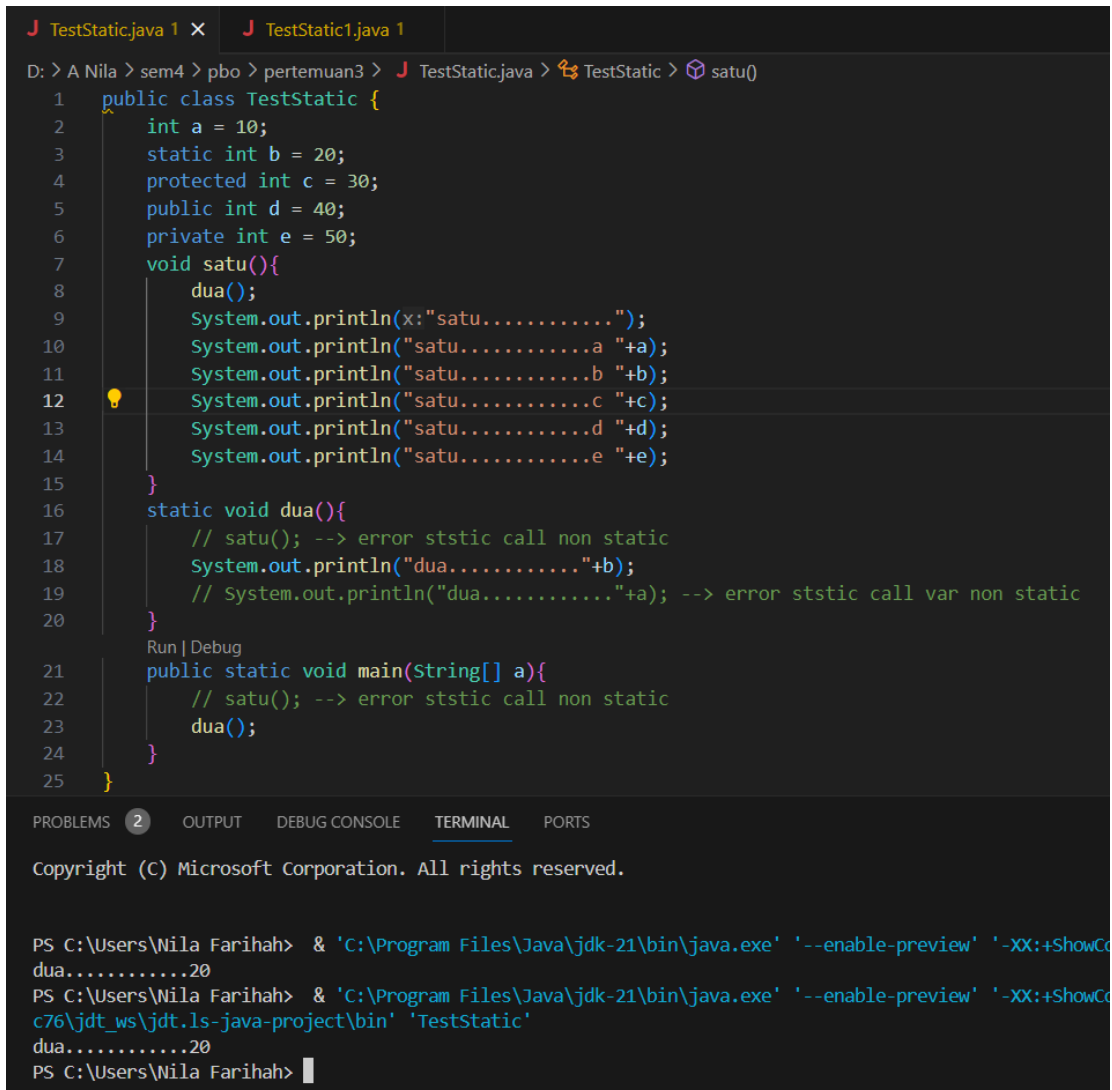
#### File "suhuDemo.java"

```

public class suhuDemo {
    public static void main(String[] args) {
        suhu Suhu = new suhu(36);
        Suhu.hitungKelvin(Suhu.Celcius);
        Suhu.hitungFarhenheit(Suhu.Celcius);
        Suhu.hitungRankine(Suhu.Celcius);
        Suhu.hitungDalisle(Suhu.Celcius);
        Suhu.hitungNewton(Suhu.Celcius);
        Suhu.hitungReaumur(Suhu.Celcius);
        Suhu.hitungRomer(Suhu.Celcius);
    }
}

```

## Hasil Program TestStatic:



The screenshot shows an IDE with two tabs: `TestStatic.java` and `TestStatic1.java`. The `TestStatic.java` tab is active, displaying the following code:

```
1 public class TestStatic {
2     int a = 10;
3     static int b = 20;
4     protected int c = 30;
5     public int d = 40;
6     private int e = 50;
7     void satu(){
8         dua();
9         System.out.println(x:"satu.....");
10        System.out.println("satu.....a "+a);
11        System.out.println("satu.....b "+b);
12        System.out.println("satu.....c "+c);
13        System.out.println("satu.....d "+d);
14        System.out.println("satu.....e "+e);
15    }
16    static void dua(){
17        // satu(); --> error ststic call non static
18        System.out.println("dua....."+b);
19        // System.out.println("dua....."+a); --> error ststic call var non static
20    }
21    Run | Debug
22    public static void main(String[] a){
23        // satu(); --> error ststic call non static
24        dua();
25    }
26 }
```

The IDE interface includes tabs for `PROBLEMS` (2), `OUTPUT`, `DEBUG CONSOLE`, `TERMINAL`, and `PORTS`. The `TERMINAL` tab is active, showing the following output:

```
Copyright (c) Microsoft Corporation. All rights reserved.

PS C:\Users\Nila Farihah> & 'C:\Program Files\Java\jdk-21\bin\java.exe' '--enable-preview' '-XX:+ShowCodeDetails'
dua.....20
PS C:\Users\Nila Farihah> & 'C:\Program Files\Java\jdk-21\bin\java.exe' '--enable-preview' '-XX:+ShowCodeDetails'
c76\jdt_ws\jdt.ls-java-project\bin' 'TestStatic'
dua.....20
PS C:\Users\Nila Farihah>
```

## Kode Program :

### File “TestStatic.java”

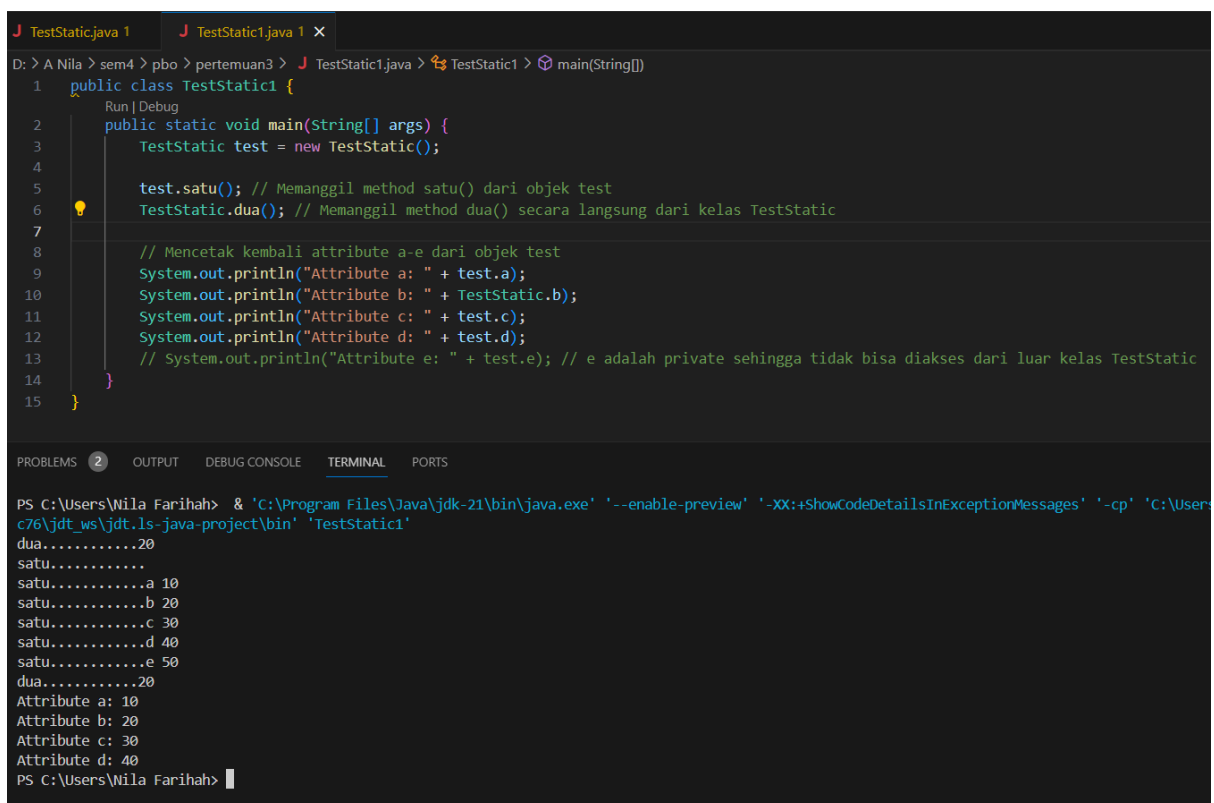
```
public class TestStatic {
    int a = 10;
    static int b = 20;
    protected int c = 30;
    public int d = 40;
    private int e = 50;
    void satu(){
        dua();
        System.out.println("satu.....");
        System.out.println("satu.....a "+a);
        System.out.println("satu.....b "+b);
        System.out.println("satu.....c "+c);
        System.out.println("satu.....d "+d);
        System.out.println("satu.....e "+e);
    }
}
```

```

    }
    static void dua(){
        // satu(); --> error ststic call non static
        System.out.println("dua....."+b);
        // System.out.println("dua....."+a); --> error
ststic call var non static
    }
    public static void main(String[] a){
        // satu(); --> error ststic call non static
        dua();
    }
}

```

### Hasil Program TestStatic1:



The screenshot shows an IDE with two tabs: 'TestStatic.java 1' and 'TestStatic1.java 1'. The code in the editor is as follows:

```

1 public class TestStatic1 {
2     public static void main(String[] args) {
3         TestStatic test = new TestStatic();
4
5         test.satu(); // Memanggil method satu() dari objek test
6         TestStatic.dua(); // Memanggil method dua() secara langsung dari kelas TestStatic
7
8         // Mencetak kembali attribute a-e dari objek test
9         System.out.println("Attribute a: " + test.a);
10        System.out.println("Attribute b: " + TestStatic.b);
11        System.out.println("Attribute c: " + test.c);
12        System.out.println("Attribute d: " + test.d);
13        // System.out.println("Attribute e: " + test.e); // e adalah private sehingga tidak bisa diakses dari luar kelas TestStatic
14    }
15 }

```

The terminal output at the bottom shows the execution results:

```

PS C:\Users\Nila Fariyah> & 'C:\Program Files\Java\jdk-21\bin\java.exe' '--enable-preview' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\Nila Fariyah\Documents\sem4\pbo\pertemuan3\bin' 'TestStatic1'
dua.....20
satu.....
satu.....a 10
satu.....b 20
satu.....c 30
satu.....d 40
satu.....e 50
dua.....20
Attribute a: 10
Attribute b: 20
Attribute c: 30
Attribute d: 40
PS C:\Users\Nila Fariyah>

```

```

public class TestStatic1 {
    public static void main(String[] args) {
        TestStatic test = new TestStatic();

        test.satu(); // Memanggil method satu() dari objek test
        TestStatic.dua(); // Memanggil method dua() secara
langsung dari kelas TestStatic
    }
}

```

```
        // Mencetak kembali attribute a-e dari objek test
        System.out.println("Attribute a: " + test.a);
        System.out.println("Attribute b: " + TestStatic.b);
        System.out.println("Attribute c: " + test.c);
        System.out.println("Attribute d: " + test.d);
        // System.out.println("Attribute e: " + test.e); // e
        // adalah private sehingga tidak bisa diakses dari luar kelas
        TestStatic
    }
}
```