

Mata Kuliah : PBO – TI – S1

Pertemuan : 3

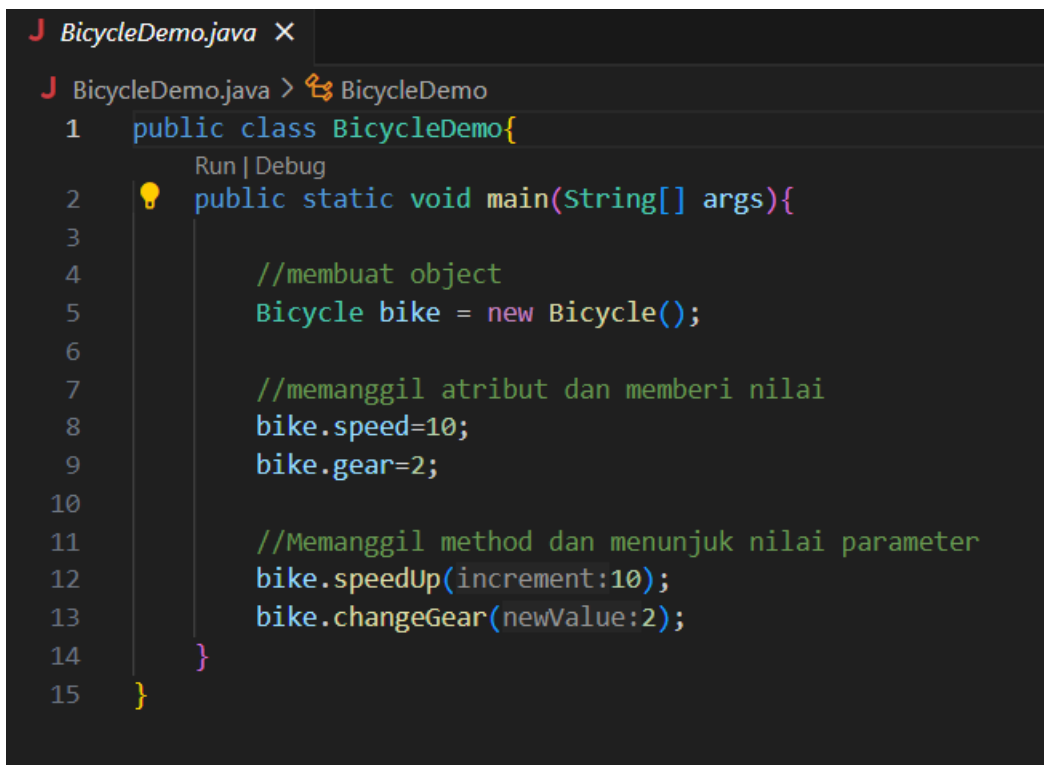
NIM : A11.2022.14667

Nama : Nila Farihah

Hasil Program :

```
D:\A Nila\sem4\pbo\pertemuan3>javac BicycleDemo.java
D:\A Nila\sem4\pbo\pertemuan3>java BicycleDemo
Speed : 20
Gear : 4
D:\A Nila\sem4\pbo\pertemuan3>
```

Kode Program :



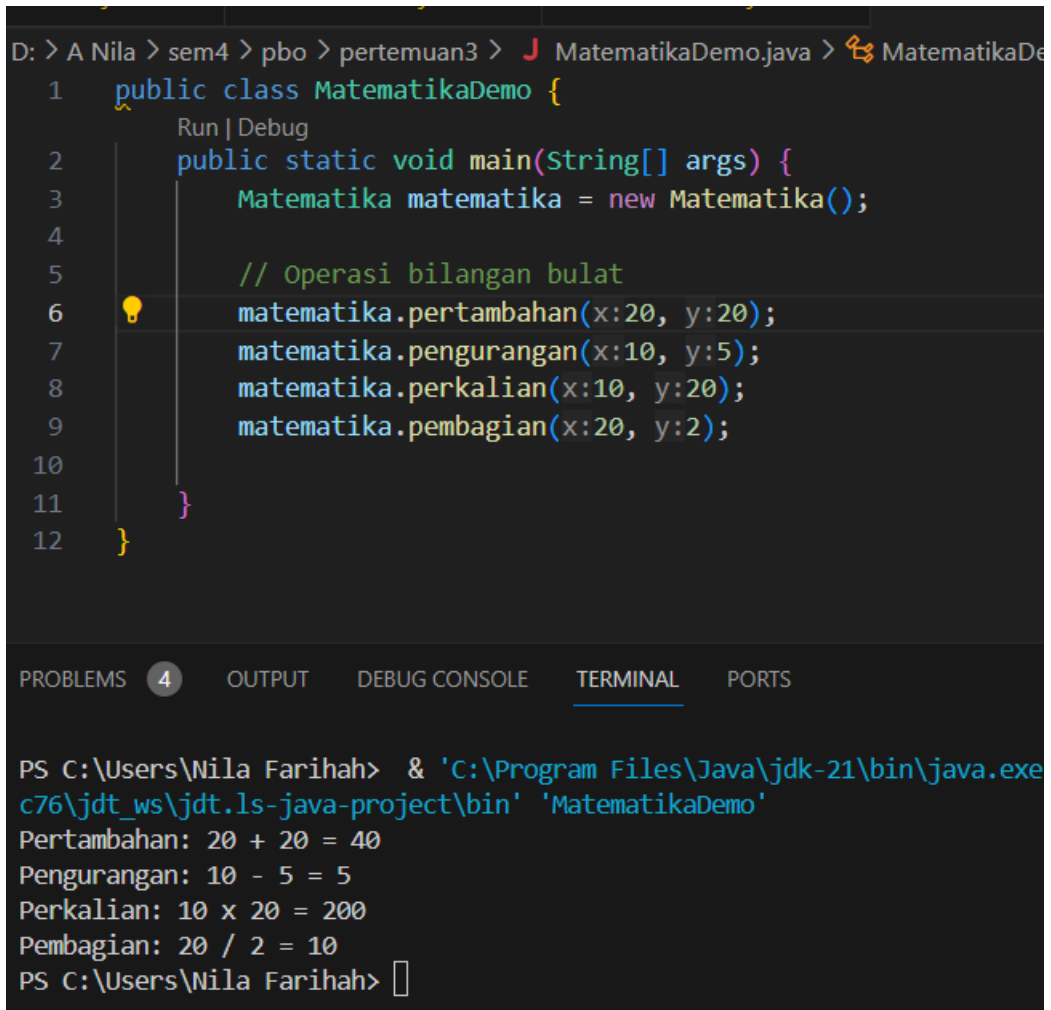
```
J BicycleDemo.java X
J BicycleDemo.java > BicycleDemo
1 public class BicycleDemo{
2     public static void main(String[] args){
3
4         //membuat object
5         Bicycle bike = new Bicycle();
6
7         //memanggil atribut dan memberi nilai
8         bike.speed=10;
9         bike.gear=2;
10
11        //Memanggil method dan menunjuk nilai parameter
12        bike.speedUp(increment:10);
13        bike.changeGear(newValue:2);
14    }
15 }
```

J Bicycle.java ×

J Bicycle.java > Bicycle

```
1 public class Bicycle{
2     int speed = 0;
3     int gear = 0;
4
5     //method
6     void changeGear(int newValue){
7         gear = gear + newValue;
8         System.out.println(" \nGear : "+gear);
9     }
10    void speedUp(int increment){
11        speed =speed + increment;
12        System.out.println(" \nSpeed : "+speed);
13    }
14 }
```

Hasil Program :



```
D: > A Nila > sem4 > pbo > pertemuan3 > J 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 :

```
D:\A Nila\sem4\pbo\pertemuan3>javac suhuDemo.java

D:\A Nila\sem4\pbo\pertemuan3>java suhuDemo
PROGRAM KONVERSI SUHU
=====
Konversi suhu Celcius ke Kelvin      : 36 C adalah 309.15 K
Konversi suhu Celcius ke Farhenheit   : 36 C adalah 96.799995 F
Konversi suhu Celcius ke Rankine      : 36 C adalah 556.47003 Ra
Konversi suhu Celcius ke Dalisle      : 36 C adalah 96.0 De
Konversi suhu Celcius ke Newton       : 36 C adalah 11.0 N
Konversi suhu Celcius ke Reaumur      : 36 C adalah 28.800001 R
Konversi suhu Celcius ke Romer        : 36 C adalah 25.5 Ro

D:\A Nila\sem4\pbo\pertemuan3>
```

Kode Program :

```
J MatematikaDemo.java • J suhu.java X
J suhu.java > suhu > hitungDalisle(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
13    void hitungKelvin (int Celcius){
14        System.out.println(x:"PROGRAM KONVERSI SUHU");
15        System.out.println(x:"=====");
16        hasil = Celcius + 273.15f;
17        System.out.println("Konversi suhu Celcius ke Kelvin\t\t : "+ Celcius +" C adalah " + hasil + " K");
18    }
19    void hitungFarhenheit (int Celcius){
20        hasil = Celcius * 1.8f + 32;
21        System.out.println("Konversi suhu Celcius ke Farhenheit\t\t : "+ Celcius +" C adalah " + hasil + " F");
22    }
23    void hitungRankine (int Celcius){
24        hasil = Celcius * 1.8f + 491.67f;
25        System.out.println("Konversi suhu Celcius ke Rankine\t\t : "+ Celcius +" C adalah " + hasil + " Ra");
26    }
27    void hitungDalisle (int Celcius){
28        hasil = (100 - Celcius) * 1.5f;
29        System.out.println("Konversi suhu Celcius ke Dalisle\t\t : "+ Celcius +" C adalah " + hasil + " De");
30    }
31    void hitungNewton (int Celcius){
32        hasil = Celcius * 33/100;
33        System.out.println("Konversi suhu Celcius ke Newton\t\t : "+ Celcius +" C adalah " + hasil + " N");
34    }
35    void hitungReaumur (int Celcius){
36        hasil = Celcius * 0.8f;
37        System.out.println("Konversi suhu Celcius ke Reaumur\t\t : "+ Celcius +" C adalah " + hasil + " R");
38    }
39 }
```

File "suhu.java"

```
public class suhu {

    float hasil;
    int Celcius;

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

    public suhu(){}

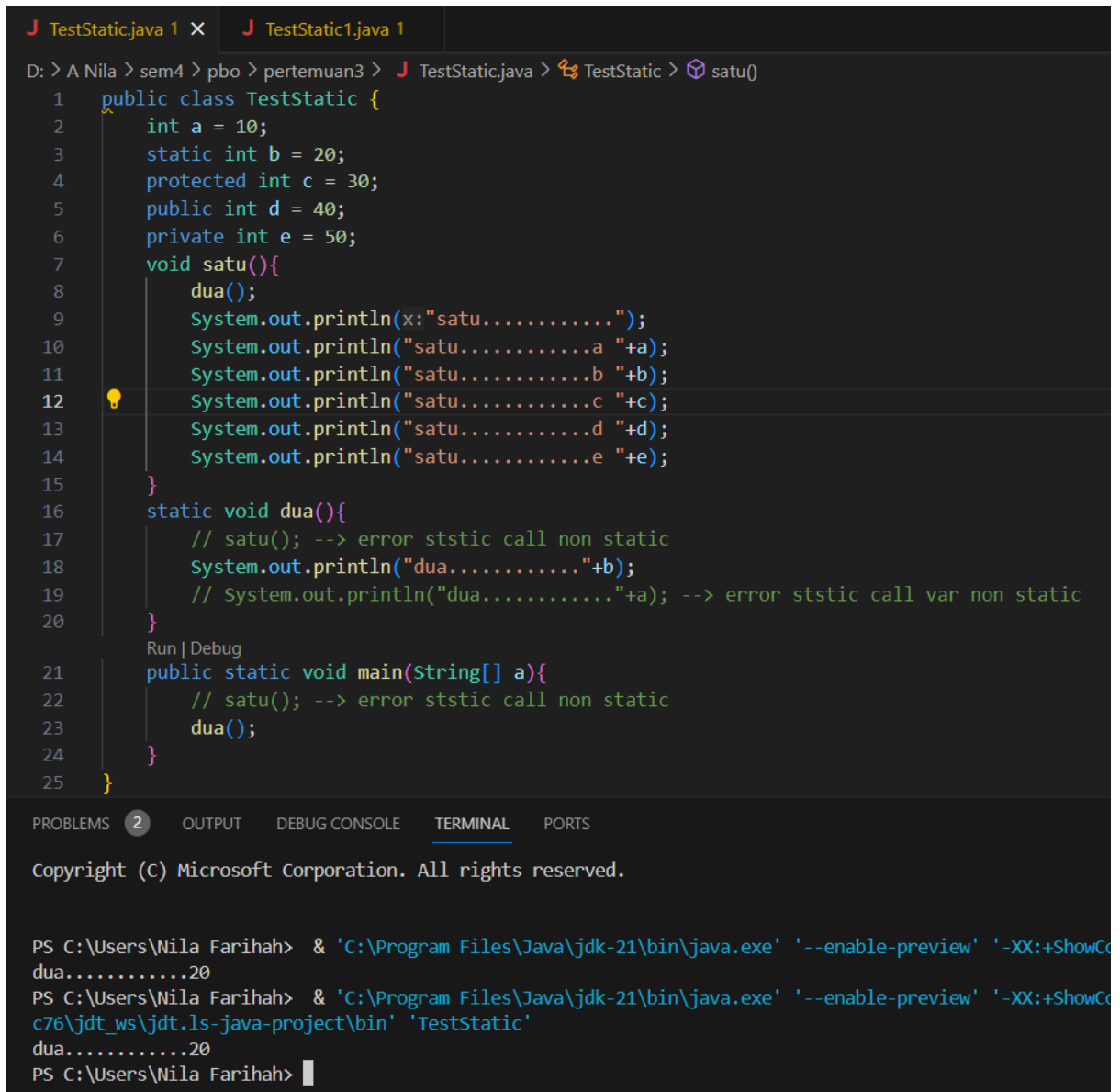
    void hitungKelvin (int Celcius){
        System.out.println("PROGRAM KONVERSI SUHU");
        System.out.println("=====");
        hasil = Celcius + 273.15f;
        System.out.println("Konversi suhu Celcius ke Kelvin\t\t
: "+ Celcius +" C adalah " + hasil + " K");
    }
    void hitungFarhenheit (int Celcius){
        hasil = Celcius * 1.8f + 32;
        System.out.println("Konversi suhu Celcius ke
Farhenheit\t : "+ Celcius +" C adalah " + hasil + " F");
    }
    void hitungRankine (int Celcius){
        hasil = Celcius * 1.8f + 491.67f;
        System.out.println("Konversi suhu Celcius ke Rankine\t :
"+ Celcius +" C adalah " + hasil + " Ra");
    }
    void hitungDalisle (int Celcius){
        hasil = (100 - Celcius) * 1.5f;
        System.out.println("Konversi suhu Celcius ke Dalisle\t :
"+ Celcius +" C adalah " + hasil + " De");
    }
    void hitungNewton (int Celcius){
        hasil = Celcius * 33/100;
        System.out.println("Konversi suhu Celcius ke Newton\t\t
: "+ Celcius +" C adalah " + hasil + " N");
    }
    void hitungReaumur (int Celcius){
        hasil = Celcius * 0.8f;
        System.out.println("Konversi suhu Celcius ke Reaumur\t :
"+ Celcius +" C adalah " + hasil + " R");
    }
    void hitungRomer(int Celcius){
        hasil = Celcius * 21/40 + 7.5f;
        System.out.println("Konversi suhu Celcius ke Romer\t\t :
"+ Celcius +" C adalah " + 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 :



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    public static void main(String[] a){
22        // satu(); --> error ststic call non static
23        dua();
24    }
25 }
```

The IDE shows two errors: "error ststic call non static" for the call to `satu()` in `dua()` (line 17) and `main()` (line 22), and "error ststic call var non static" for the use of `a` in `dua()` (line 19). The terminal output shows the execution of the program, displaying the output of the `satu()` and `dua()` methods.

```
PS C:\Users\Nila Farihah> & 'C:\Program Files\Java\jdk-21\bin\java.exe' '--enable-preview' '-XX:+ShowCodeDetails' 'TestStatic'
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.....");
    }
}
```

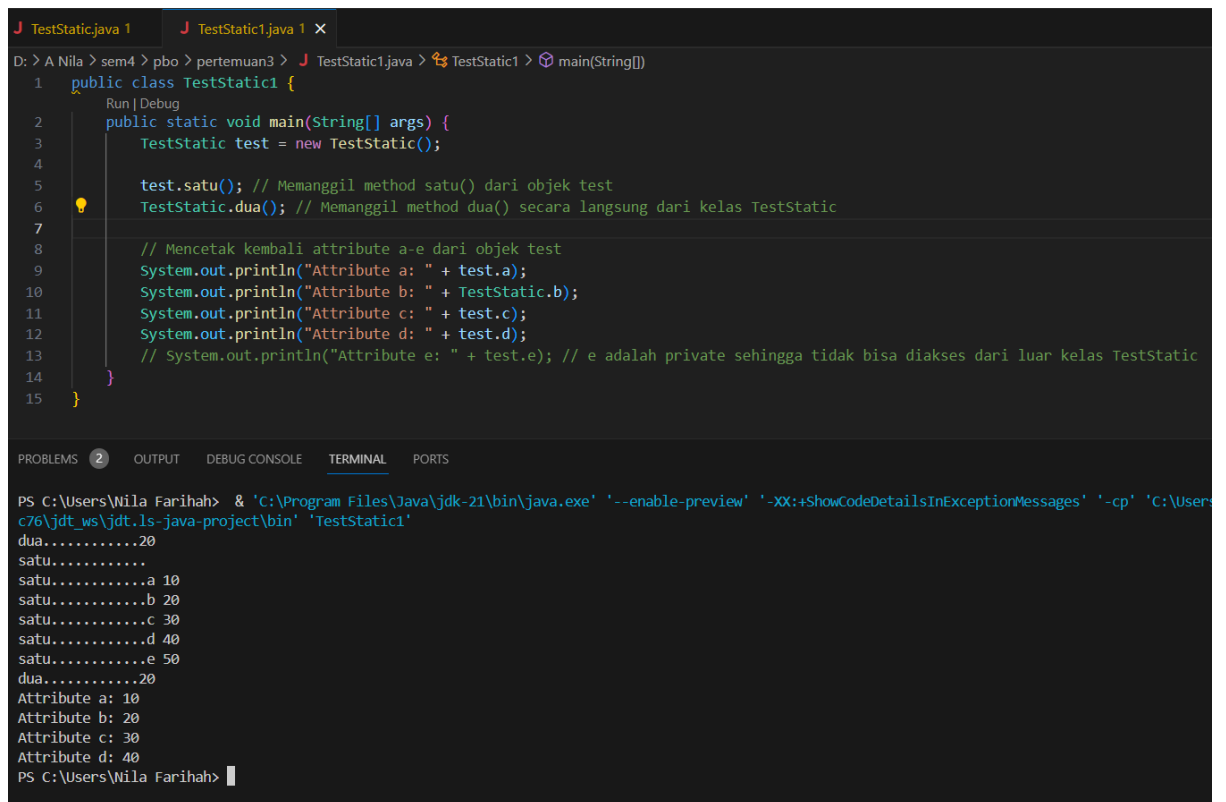


```

        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 :



The screenshot shows an IDE with two tabs: 'TestStatic.java 1' and 'TestStatic1.java 1'. The 'TestStatic1.java 1' tab is active, displaying the following code:

```
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 shows the execution of the program:

```
PS C:\Users\Nila Fariyah> & 'C:\Program Files\Java\jdk-21\bin\java.exe' '--enable-preview' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\Nila Fariyah\Documents\jdt_ws\jdt.ls-java-project\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>
```

Kode Program :

File “TestStatic1.java”

```
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
    }
}
```