

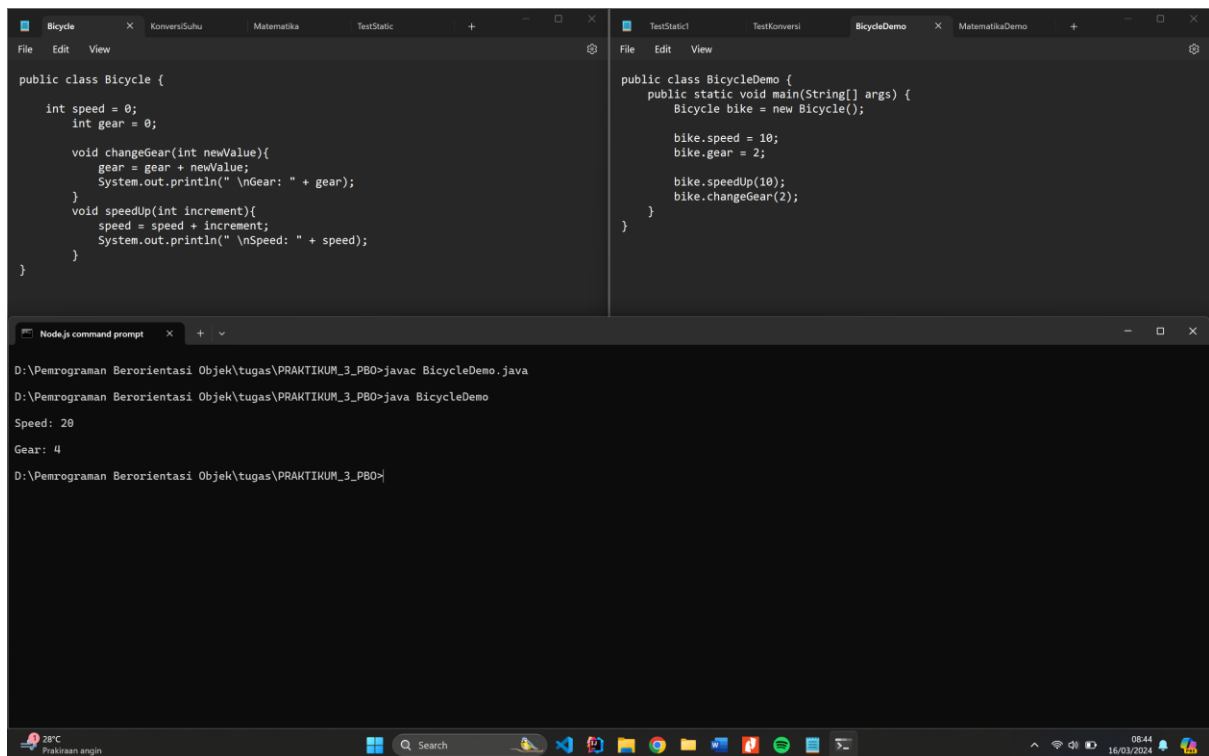
Nama : Restu Lestari Mulianingrum

NIM : A11.2022.14668

Kelompok : A11.4415

PRAKTIKUM 3

Membuat class Bicycle dan BicycleDemo



```
public class Bicycle {  
    int speed = 0;  
    int gear = 0;  
  
    void changeGear(int newValue){  
        gear = gear + newValue;  
        System.out.println(" \nGear: " + gear);  
    }  
    void speedUp(int increment){  
        speed = speed + increment;  
        System.out.println(" \nSpeed: " + speed);  
    }  
}
```

```
public class BicycleDemo {  
    public static void main(String[] args) {  
        Bicycle bike = new Bicycle();  
  
        bike.speed = 10;  
        bike.gear = 2;  
  
        bike.speedUp(10);  
        bike.changeGear(2);  
    }  
}
```

```
D:\Pemrograman Berorientasi Objek\tugas\PRAKTIKUM_3_PBO>javac BicycleDemo.java  
D:\Pemrograman Berorientasi Objek\tugas\PRAKTIKUM_3_PBO>java BicycleDemo  
Speed: 20  
Gear: 4  
D:\Pemrograman Berorientasi Objek\tugas\PRAKTIKUM_3_PBO>
```

Code Bicycle.java:

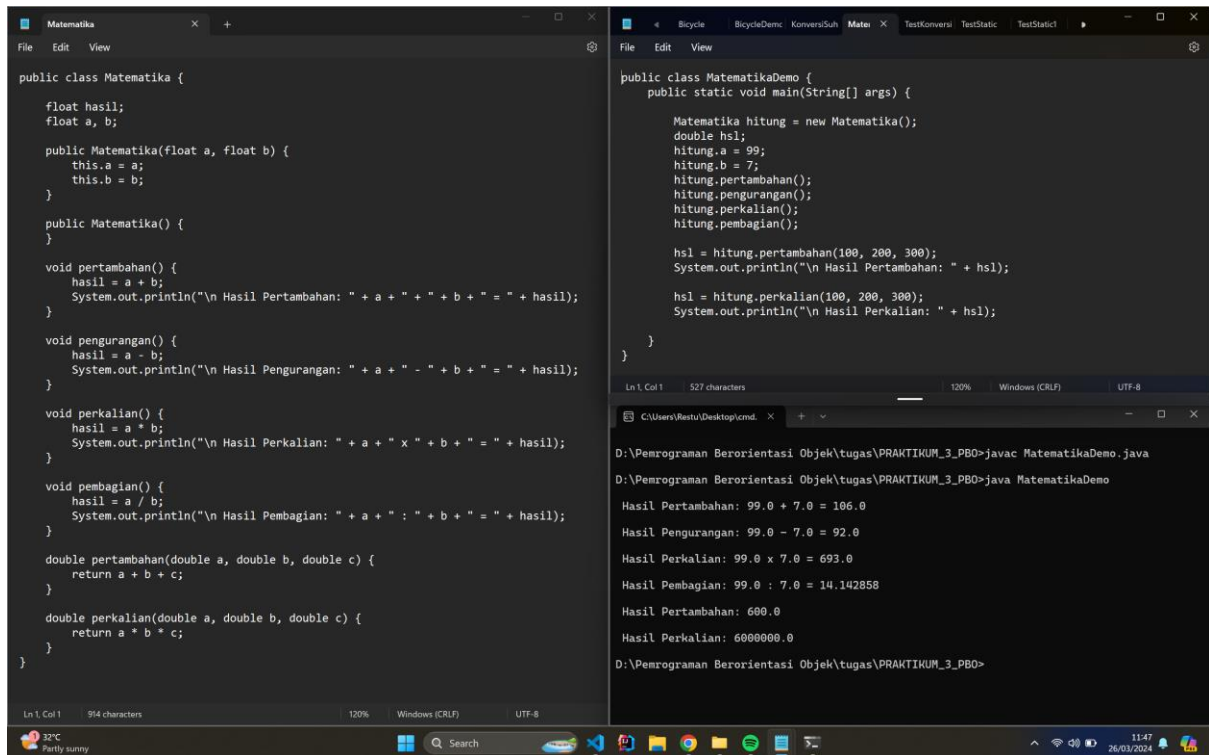
```
public class Bicycle {  
  
    int speed = 0;  
    int gear = 0;  
  
    void changeGear(int newValue){  
        gear = gear + newValue;  
        System.out.println(" \nGear: " + gear);  
    }  
    void speedUp(int increment){  
        speed = speed + increment;  
        System.out.println(" \nSpeed: " + speed);  
    }  
}
```

```
}
```

Code BicycleDemo.java:

```
public class BicycleDemo {  
    public static void main(String[] args) {  
        Bicycle bike = new Bicycle();  
  
        bike.speed = 10;  
        bike.gear = 2;  
  
        bike.speedUp(10);  
        bike.changeGear(2);  
    }  
}
```

Latihan 1



```
public class Matematika {  
    float hasil;  
    float a, b;  
  
    public Matematika(float a, float b) {  
        this.a = a;  
        this.b = b;  
    }  
  
    public Matematika() {  
    }  
  
    void pertambahan() {  
        hasil = a + b;  
        System.out.println("\n Hasil Pertambahan: " + a + " + " + b + " = " + hasil);  
    }  
  
    void pengurangan() {  
        hasil = a - b;  
        System.out.println("\n Hasil Pengurangan: " + a + " - " + b + " = " + hasil);  
    }  
  
    void perkalian() {  
        hasil = a * b;  
        System.out.println("\n Hasil Perkalian: " + a + " x " + b + " = " + hasil);  
    }  
  
    void pembagian() {  
        hasil = a / b;  
        System.out.println("\n Hasil Pembagian: " + a + " : " + b + " = " + hasil);  
    }  
  
    double pertambahan(double a, double b, double c) {  
        return a + b + c;  
    }  
  
    double perkalian(double a, double b, double c) {  
        return a * b * c;  
    }  
}  
  
public class MatematikaDemo {  
    public static void main(String[] args) {  
        Matematika hitung = new Matematika();  
        double hsl;  
        hitung.a = 99;  
        hitung.b = 7;  
        hitung.pertambahan();  
        hitung.pengurangan();  
        hitung.perkalian();  
        hitung.pembagian();  
  
        hsl = hitung.pertambahan(100, 200, 300);  
        System.out.println("\n Hasil Pertambahan: " + hsl);  
  
        hsl = hitung.perkalian(100, 200, 300);  
        System.out.println("\n Hasil Perkalian: " + hsl);  
    }  
}
```

Output:

```
D:\Pemrograman Berorientasi Objek\tugas\PRAKTIKUM_3_PBO>javac MatematikaDemo.java  
D:\Pemrograman Berorientasi Objek\tugas\PRAKTIKUM_3_PBO>java MatematikaDemo  
  
Hasil Pertambahan: 99.0 + 7.0 = 106.0  
Hasil Pengurangan: 99.0 - 7.0 = 92.0  
Hasil Perkalian: 99.0 x 7.0 = 693.0  
Hasil Pembagian: 99.0 : 7.0 = 14.142858  
Hasil Pertambahan: 600.0  
Hasil Perkalian: 6000000.0  
D:\Pemrograman Berorientasi Objek\tugas\PRAKTIKUM_3_PBO>
```

Code Matematika.java :

```
public class Matematika {  
  
    float hasil;  
    float a, b;  
  
    public Matematika(float a, float b) {  
        this.a = a;  
        this.b = b;  
    }  
  
    public Matematika() {  
    }  
  
    void pertambahan() {  
        hasil = a + b;  
        System.out.println("\n Hasil Pertambahan: " + a + " + " + b + " = " +  
hasil);  
    }  
  
    void pengurangan() {  
        hasil = a - b;  
        System.out.println("\n Hasil Pengurangan: " + a + " - " + b + " = " +  
hasil);  
    }  
}
```

```

    }

    void perkalian() {
        hasil = a * b;
        System.out.println("\n Hasil Perkalian: " + a + " x " + b + " = " +
hasil);
    }

    void pembagian() {
        hasil = a / b;
        System.out.println("\n Hasil Pembagian: " + a + " : " + b + " = " +
hasil);
    }

    double pertambahan(double a, double b, double c) {
        return a + b + c;
    }

    double perkalian(double a, double b, double c) {
        return a * b * c;
    }
}

```

Code MatematikaDemo.java:

```

public class MatematikaDemo {
    public static void main(String[] args) {

        Matematika hitung = new Matematika();
        double hsl;
        hitung.a = 99;
        hitung.b = 7;
        hitung.pertambahan();
        hitung.pengurangan();
        hitung.perkalian();
        hitung.pembagian();

        hsl = hitung.pertambahan(100, 200, 300);
        System.out.println("\n Hasil Pertambahan: " + hsl);

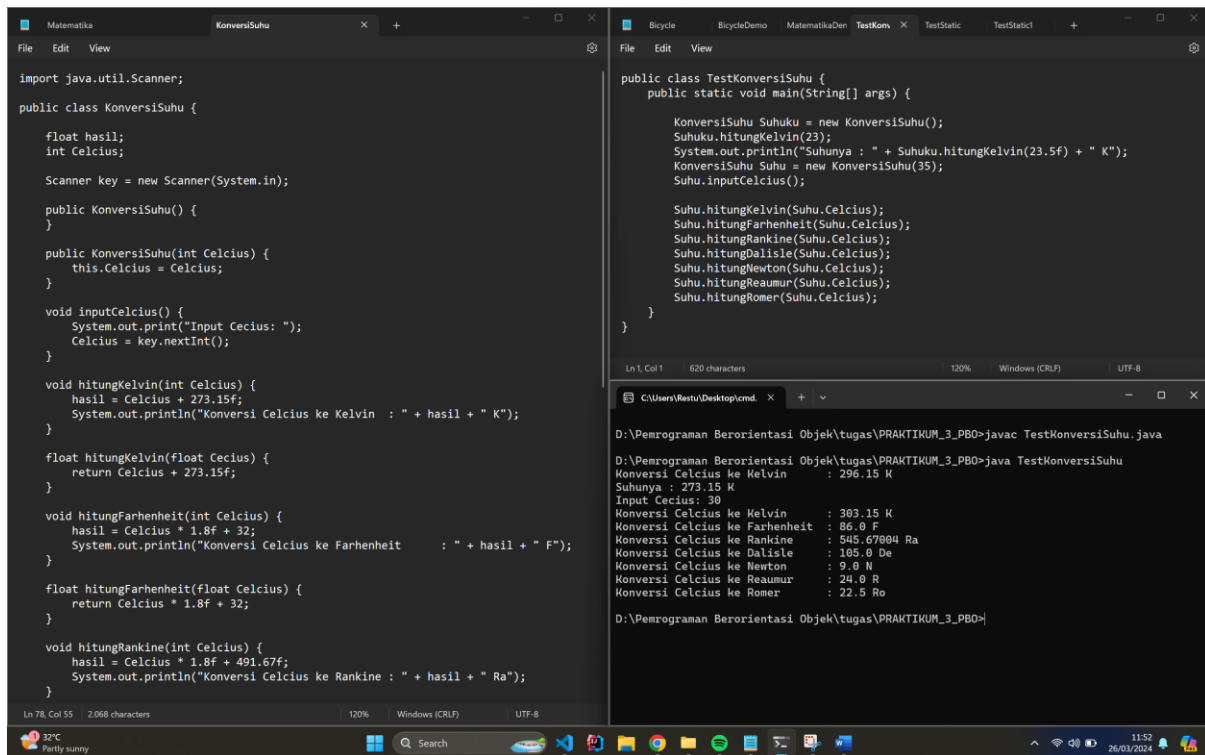
        hsl = hitung.perkalian(100, 200, 300);
        System.out.println("\n Hasil Perkalian: " + hsl);

    }
}

```

Latihan 2

Program konversi suhu dari Celcius



```
import java.util.Scanner;

public class KonversiSuhu {

    float hasil;
    int Celcius;

    Scanner key = new Scanner(System.in);

    public KonversiSuhu() {
    }

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

    void inputCelcius() {
        System.out.print("Input Cecius: ");
        Celcius = key.nextInt();
    }

    void hitungKelvin(int Celcius) {
        hasil = Celcius + 273.15f;
        System.out.println("Konversi Celcius ke Kelvin : " + hasil + " K");
    }

    float hitungKelvin(float Celcius) {
        return Celcius + 273.15f;
    }

    void hitungFarhenheit(int Celcius) {
        hasil = Celcius * 1.8f + 32;
        System.out.println("Konversi Celcius ke Farhenheit : " + hasil + " F");
    }

    float hitungFarhenheit(float Celcius) {
        return Celcius * 1.8f + 32;
    }

    void hitungRankine(int Celcius) {
        hasil = Celcius * 1.8f + 491.67f;
        System.out.println("Konversi Celcius ke Rankine : " + hasil + " Ra");
    }

}
```

```
public class TestKonversiSuhu {
    public static void main(String[] args) {

        KonversiSuhu Suhuku = new KonversiSuhu();
        Suhuku.hitungKelvin(23);
        System.out.println("Suhunya : " + Suhuku.hitungKelvin(23.5f) + " K");
        KonversiSuhu Suhu = new KonversiSuhu(35);
        Suhu.inputCelcius();

        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);
    }
}
```

```
D:\Pemrograman Berorientasi Objek\tugas\PRAKTIKUM_3_PBO>javac TestKonversiSuhu.java
D:\Pemrograman Berorientasi Objek\tugas\PRAKTIKUM_3_PBO>java TestKonversiSuhu
Konversi Celcius ke Kelvin : 296.15 K
Suhunya : 273.15 K
Input Cecius: 30
Konversi Celcius ke Kelvin : 303.15 K
Konversi Celcius ke Farhenheit : 86.0 F
Konversi Celcius ke Rankine : 545.67004 Ra
Konversi Celcius ke Dalisle : 185.0 De
Konversi Celcius ke Newton : 9.0 N
Konversi Celcius ke Reaumur : 24.0 R
Konversi Celcius ke Romer : 22.5 Ro
D:\Pemrograman Berorientasi Objek\tugas\PRAKTIKUM_3_PBO>
```

Code KonversiSuhu.java

```
import java.util.Scanner;

public class KonversiSuhu {

    float hasil;
    int Celcius;

    Scanner key = new Scanner(System.in);

    public KonversiSuhu() {
    }

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

    void inputCelcius() {
        System.out.print("Input Cecius: ");
        Celcius = key.nextInt();
    }

}
```

```

void hitungKelvin(int Celcius) {
    hasil = Celcius + 273.15f;
    System.out.println("Konversi Celcius ke Kelvin : " + hasil + " K");
}

float hitungKelvin(float Celcius) {
    return Celcius + 273.15f;
}

void hitungFarhenheit(int Celcius) {
    hasil = Celcius * 1.8f + 32;
    System.out.println("Konversi Celcius ke Farhenheit : " + hasil + "
F");
}

float hitungFarhenheit(float Celcius) {
    return Celcius * 1.8f + 32;
}

void hitungRankine(int Celcius) {
    hasil = Celcius * 1.8f + 491.67f;
    System.out.println("Konversi Celcius ke Rankine : " + hasil + " Ra");
}

float hitungRankine(float Celcius) {
    return Celcius * 1.8f + 491.67f;
}

void hitungDalisle(int Celcius) {
    hasil = (100 - Celcius) * 1.5f;
    System.out.println("Konversi Celcius ke Dalisle : " + hasil + " De");
}

float hitungDalisle(float Celcius) {
    return (100 - Celcius) * 1.5f;
}

void hitungNewton(int Celcius) {
    hasil = Celcius * 33 / 100;
    System.out.println("Konversi Celcius ke Newton : " + hasil + " N");
}

float hitungNewton(float Celcius) {
    return Celcius * 33 / 100;
}

void hitungReaumur(int Celcius) {
    hasil = Celcius * 0.8f;
}

```

```

        System.out.println("Konversi Celcius ke Reaumur : " + hasil + " R");
    }

    float hitungReaumur(float Celcius) {
        return Celcius * 0.8f;
    }

    void hitungRomer(int Celcius) {
        hasil = Celcius * 21 / 40 + 7.5f;
        System.out.println("Konversi Celcius ke Romer : " + hasil + " Ro");
    }

    float hitungRomer(float Celcius) {
        return Celcius * 21 / 40 + 7.5f;
    }
}

```

Code TestKonversiSuhu.java

```

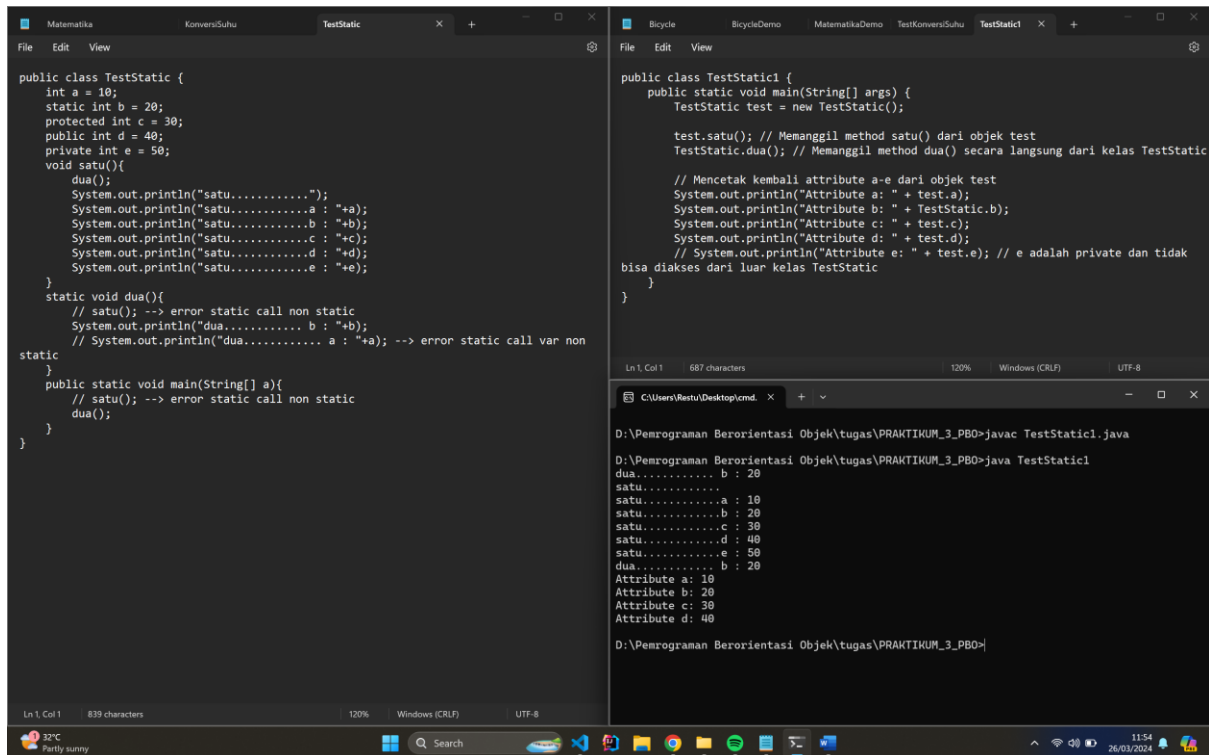
public class TestKonversiSuhu {
    public static void main(String[] args) {

        KonversiSuhu Suhuku = new KonversiSuhu();
        Suhuku.hitungKelvin(23);
        System.out.println("Suhunya : " + Suhuku.hitungKelvin(23.5f) + " K");
        KonversiSuhu Suhu = new KonversiSuhu(35);
        Suhu.inputCelcius();

        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);
    }
}

```

Latihan 3



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

```
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 dan tidak
        // bisa diakses dari luar kelas TestStatic
    }
}
```

Ln 1, Col 1 687 characters 120% Windows (CRLF) UTF-8

C:\Users\Restu\Desktop\cmd. x + -

D:\Pemrograman Berorientasi Objek\tugas\PRAKTIKUM_3_PBO>javac TestStatic1.java

D:\Pemrograman Berorientasi Objek\tugas\PRAKTIKUM_3_PBO>java TestStatic1

dua..... b : 20

satu.....

satu.....a : 10

satu.....b : 20

satu.....c : 30

satu.....d : 40

satu.....e : 50

dua..... b : 20

Attribute a: 10

Attribute b: 20

Attribute c: 30

Attribute d: 40

D:\Pemrograman Berorientasi Objek\tugas\PRAKTIKUM_3_PBO>

Ln 1, Col 1 839 characters 120% Windows (CRLF) UTF-8

32°C Partly sunny

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



```
        dua();  
    }  
}
```

Code 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  
dan tidak bisa diakses dari luar kelas TestStatic  
    }  
}
```