

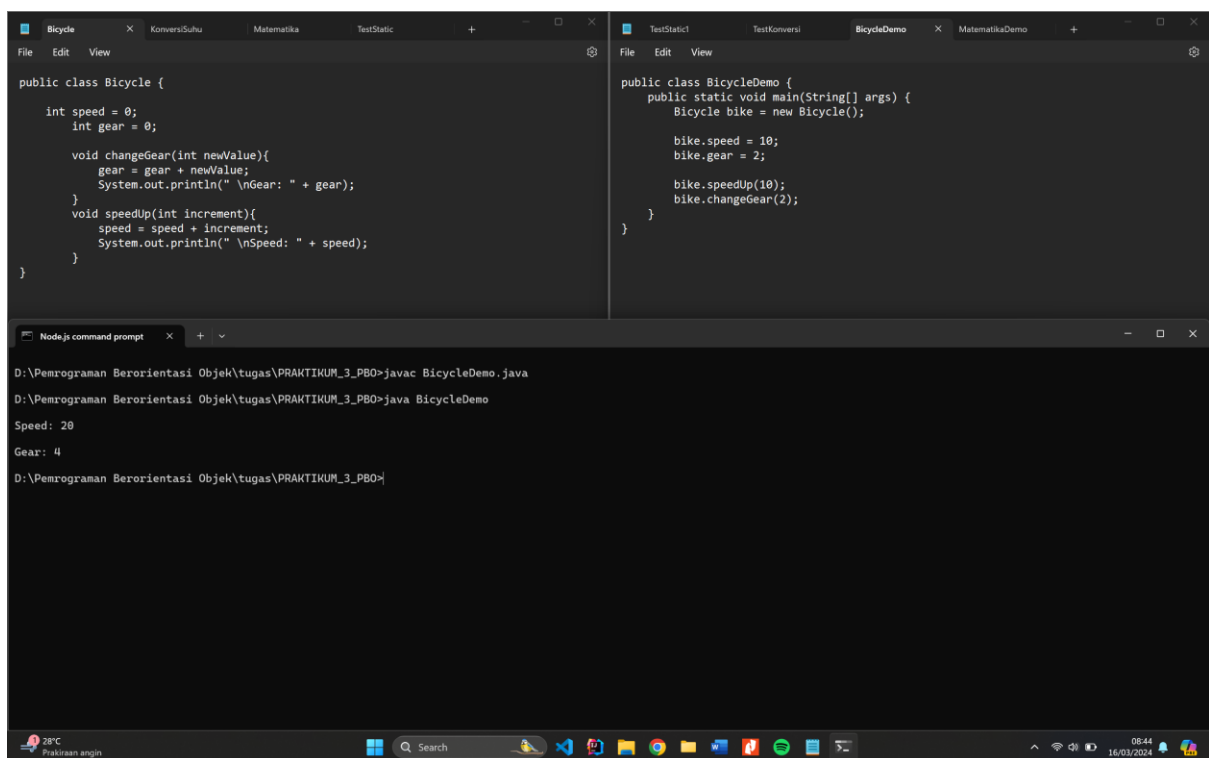
Nama : Restu Lestari Mulianingrum

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;

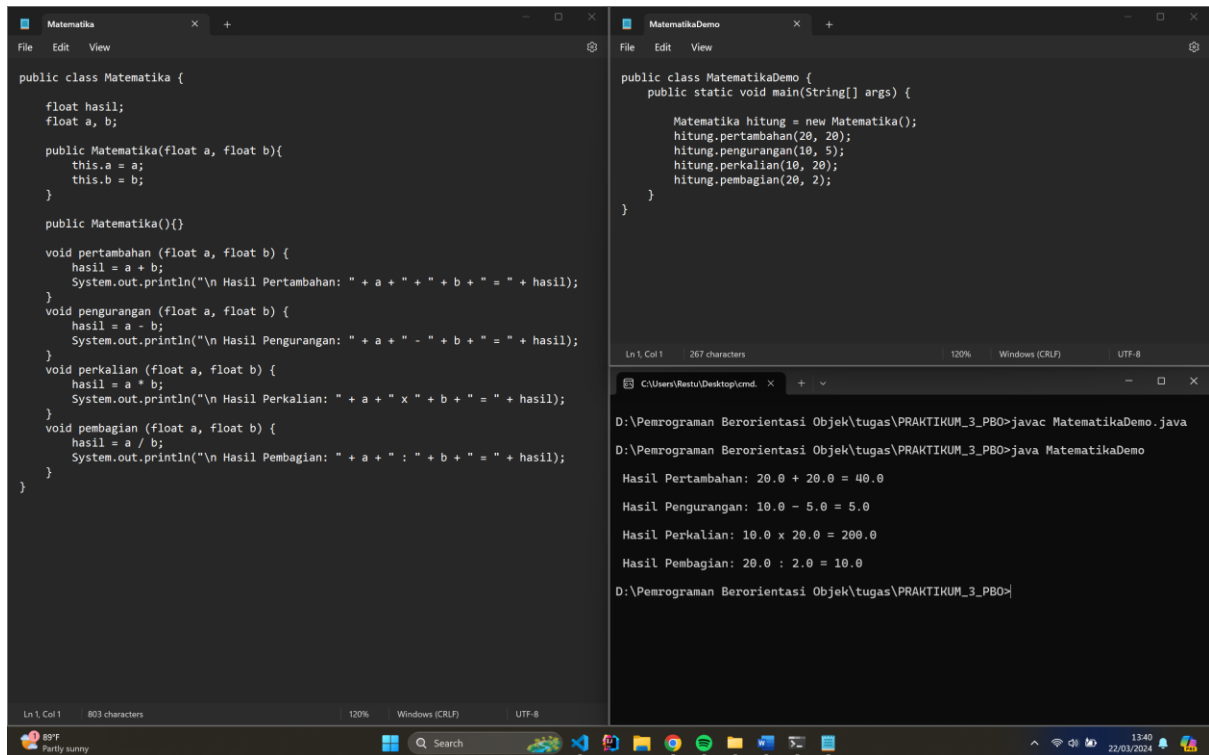
    void changeGear(int newValue){
        gear = gear + newValue;
        System.out.println(" \nGear: " + gear);
    }
    void speedUp(int increment){
        speed = speed + increment;
    }
}
```

```
        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 (float a, float b) {  
        hasil = a + b;  
        System.out.println("\n Hasil Pertambahan: " + a + " + " + b + " = " + hasil);  
    }  
    void pengurangan (float a, float b) {  
        hasil = a - b;  
        System.out.println("\n Hasil Pengurangan: " + a + " - " + b + " = " + hasil);  
    }  
    void perkalian (float a, float b) {  
        hasil = a * b;  
        System.out.println("\n Hasil Perkalian: " + a + " x " + b + " = " + hasil);  
    }  
    void pembagian (float a, float b) {  
        hasil = a / b;  
        System.out.println("\n Hasil Pembagian: " + a + " : " + b + " = " + hasil);  
    }  
}
```

```
public class MatematikaDemo {  
    public static void main(String[] args) {  
  
        Matematika hitung = new Matematika();  
        hitung.pertambahan(20, 20);  
        hitung.pengurangan(10, 5);  
        hitung.perkalian(10, 20);  
        hitung.pembagian(20, 2);  
    }  
}
```

```
D:\Pemrograman Berorientasi Objek\tugas\PRAKTIKUM_3_PBO>javac MatematikaDemo.java  
D:\Pemrograman Berorientasi Objek\tugas\PRAKTIKUM_3_PBO>java MatematikaDemo  
  
Hasil Pertambahan: 20.0 + 20.0 = 40.0  
  
Hasil Pengurangan: 10.0 - 5.0 = 5.0  
  
Hasil Perkalian: 10.0 x 20.0 = 200.0  
  
Hasil Pembagian: 20.0 : 2.0 = 10.0  
  
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 (float a, float b) {  
        hasil = a + b;  
        System.out.println("\n Hasil Pertambahan: " + a + " + " + b + " = " +  
hasil);  
    }  
    void pengurangan (float a, float b) {  
        hasil = a - b;  
        System.out.println("\n Hasil Pengurangan: " + a + " - " + b + " = " +  
hasil);  
    }  
    void perkalian (float a, float b) {
```

```

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

```

Code MatematikaDemo.java:

```

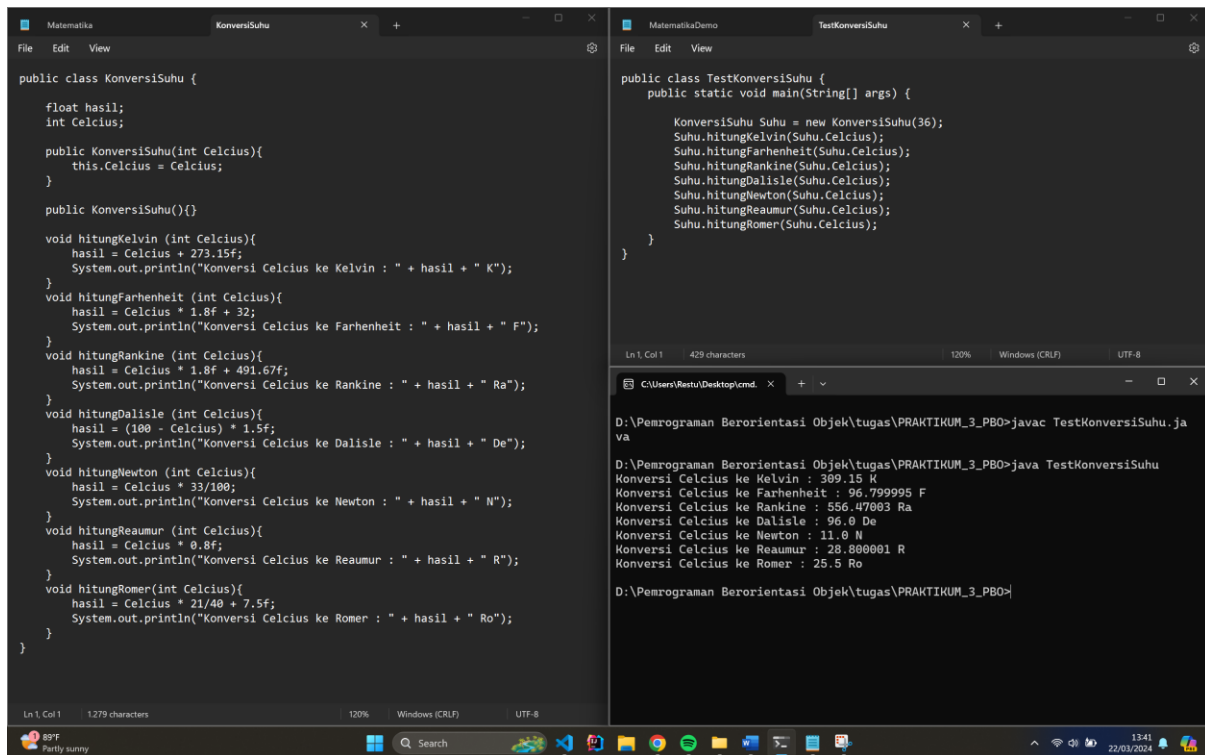
public class MatematikaDemo {
    public static void main(String[] args) {

        Matematika hitung = new Matematika();
        hitung.pertambahan(20, 20);
        hitung.pengurangan(10, 5);
        hitung.perkalian(10, 20);
        hitung.pembagian(20, 2);
    }
}

```

Latihan 2

Program konversi suhu, dari Celcius



```
public class KonversiSuhu {  
    float hasil;  
    int Celcius;  
  
    public KonversiSuhu(int Celcius){  
        this.Celcius = Celcius;  
    }  
  
    public KonversiSuhu(){  
    }  
  
    void hitungKelvin (int Celcius){  
        hasil = Celcius + 273.15f;  
        System.out.println("Konversi Celcius ke Kelvin : " + hasil + " K");  
    }  
    void hitungFarhenheit (int Celcius){  
        hasil = Celcius * 1.8f + 32;  
        System.out.println("Konversi Celcius ke Farhenheit : " + hasil + " F");  
    }  
    void hitungRankine (int Celcius){  
        hasil = Celcius * 1.8f + 491.67f;  
        System.out.println("Konversi Celcius ke Rankine : " + hasil + " Ra");  
    }  
    void hitungDalisle (int Celcius){  
        hasil = (100 - Celcius) * 1.5f;  
        System.out.println("Konversi Celcius ke Dalisle : " + hasil + " De");  
    }  
    void hitungNewton (int Celcius){  
        hasil = Celcius * 33/100;  
        System.out.println("Konversi Celcius ke Newton : " + hasil + " N");  
    }  
    void hitungReaumur (int Celcius){  
        hasil = Celcius * 0.8f;  
        System.out.println("Konversi Celcius ke Reaumur : " + hasil + " R");  
    }  
    void hitungRomer (int Celcius){  
        hasil = Celcius * 21/40 + 7.5f;  
        System.out.println("Konversi Celcius ke Romer : " + hasil + " Ro");  
    }  
}
```

```
public class TestKonversiSuhu {  
    public static void main(String[] args) {  
        KonversiSuhu Suhu = new KonversiSuhu(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);  
    }  
}
```

Output:

```
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 : 309.15 K  
Konversi Celcius ke Farhenheit : 96.799995 F  
Konversi Celcius ke Rankine : 556.47803 Ra  
Konversi Celcius ke Dalisle : 96.9 De  
Konversi Celcius ke Newton : 11.8 N  
Konversi Celcius ke Reaumur : 28.800001 R  
Konversi Celcius ke Romer : 25.5 Ro
```

Code KonversiSuhu.java

```
public class KonversiSuhu {  
  
    float hasil;  
    int Celcius;  
  
    public KonversiSuhu(int Celcius){  
        this.Celcius = Celcius;  
    }  
  
    public KonversiSuhu(){  
    }  
  
    void hitungKelvin (int Celcius){  
        hasil = Celcius + 273.15f;  
        System.out.println("Konversi Celcius ke Kelvin : " + hasil + " K");  
    }  
    void hitungFarhenheit (int Celcius){  
        hasil = Celcius * 1.8f + 32;  
        System.out.println("Konversi Celcius ke Farhenheit : " + hasil + " F");  
    }  
    void hitungRankine (int Celcius){
```

```

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

```

Code TestKonversi.java

```

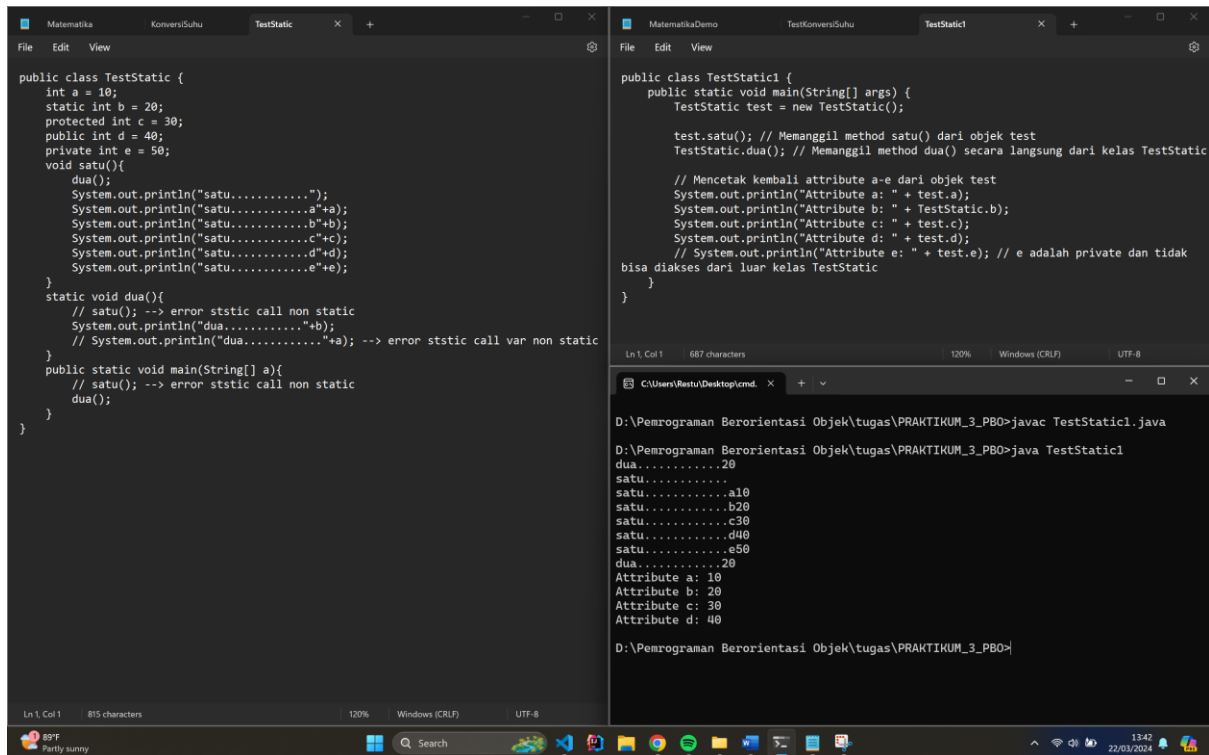
public class TestKonversiSuhu {
    public static void main(String[] args) {

        KonversiSuhu Suhu = new KonversiSuhu(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);

    }
}

```

Latihan 3



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 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();  
    }  
}
```

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  
    }  
}
```