

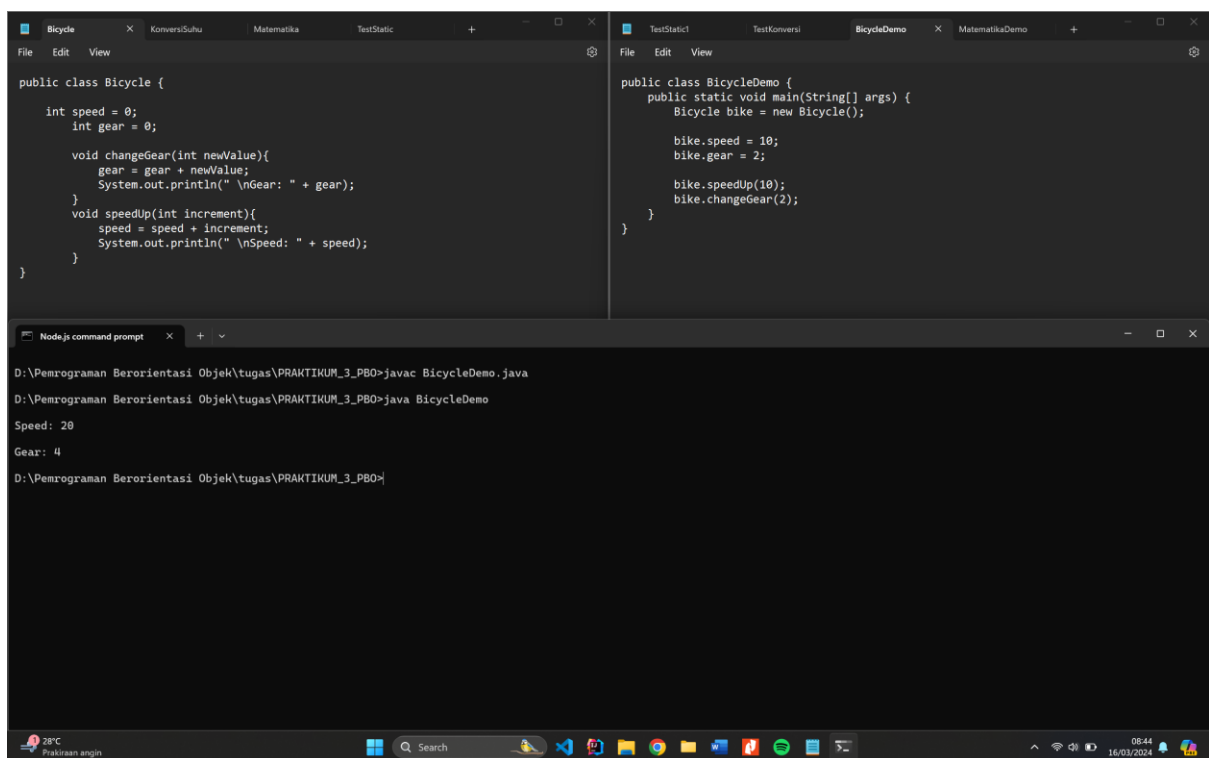
Nama : Restu Lestari Mulianingrum

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:

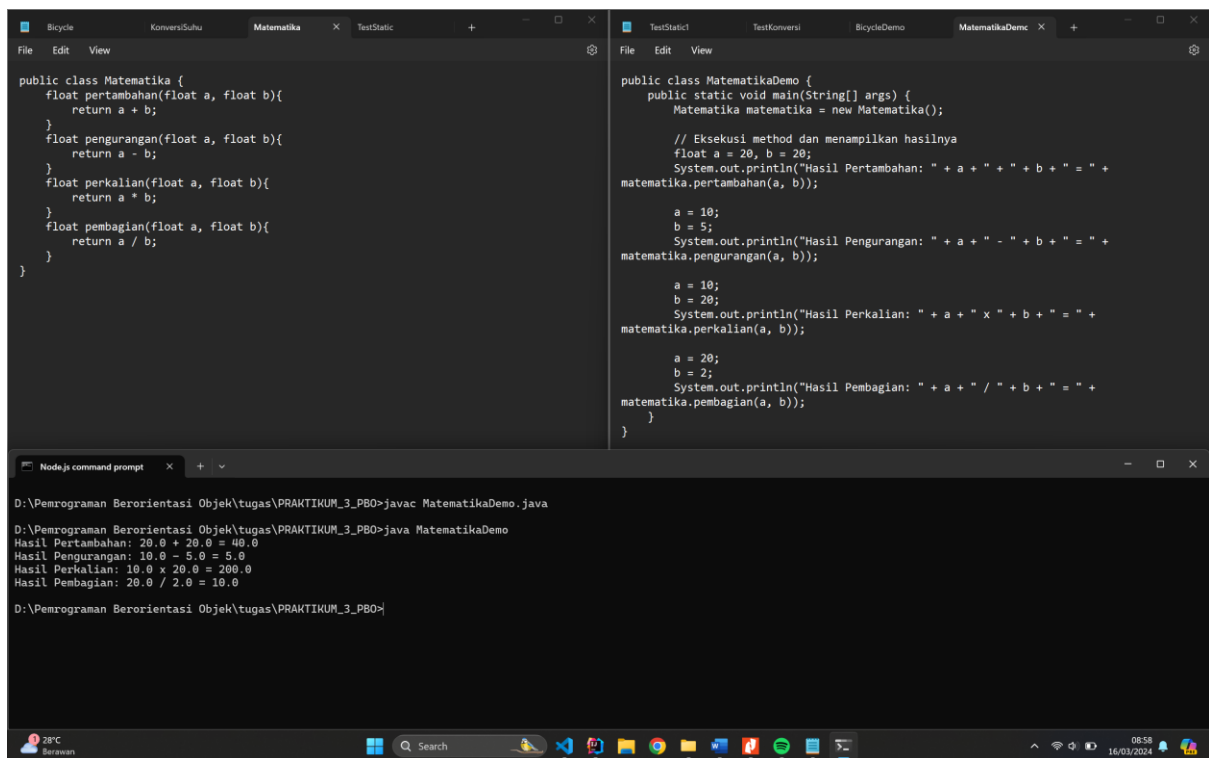
```
public class Bicycle {  
  
    int speed = 0;  
    int gear = 0;  
  
    void changeGear(int newValue){  
        gear = gear + newValue;  
        System.out.println(" \nGear: " + gear);  
    }  
    void speedUp(int increment){  
        speed = speed + increment;  
    }  
}
```

```
        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



The screenshot shows an IDE with two tabs: 'Matematika' and 'MatematikaDemo'. The 'Matematika' tab contains the following code:

```
public class Matematika {
    float pertambahan(float a, float b){
        return a + b;
    }
    float pengurangan(float a, float b){
        return a - b;
    }
    float perkalian(float a, float b){
        return a * b;
    }
    float pembagian(float a, float b){
        return a / b;
    }
}
```

The 'MatematikaDemo' tab contains the following code:

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

        // Eksekusi method dan menampilkan hasilnya
        float a = 20, b = 20;
        System.out.println("Hasil Pertambahan: " + a + " + " + b + " = " +
            matematika.pertambahan(a, b));

        a = 10;
        b = 5;
        System.out.println("Hasil Pengurangan: " + a + " - " + b + " = " +
            matematika.pengurangan(a, b));

        a = 10;
        b = 20;
        System.out.println("Hasil Perkalian: " + a + " x " + b + " = " +
            matematika.perkalian(a, b));

        a = 20;
        b = 2;
        System.out.println("Hasil Pembagian: " + a + " / " + b + " = " +
            matematika.pembagian(a, b));
    }
}
```

The terminal window shows the execution results:

```
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 pertambahan(float a, float b){
        return a + b;
    }
    float pengurangan(float a, float b){
        return a - b;
    }
    float perkalian(float a, float b){
        return a * b;
    }
    float pembagian(float a, float b){
        return a / b;
    }
}
```

Code MatematikaDemo.java:

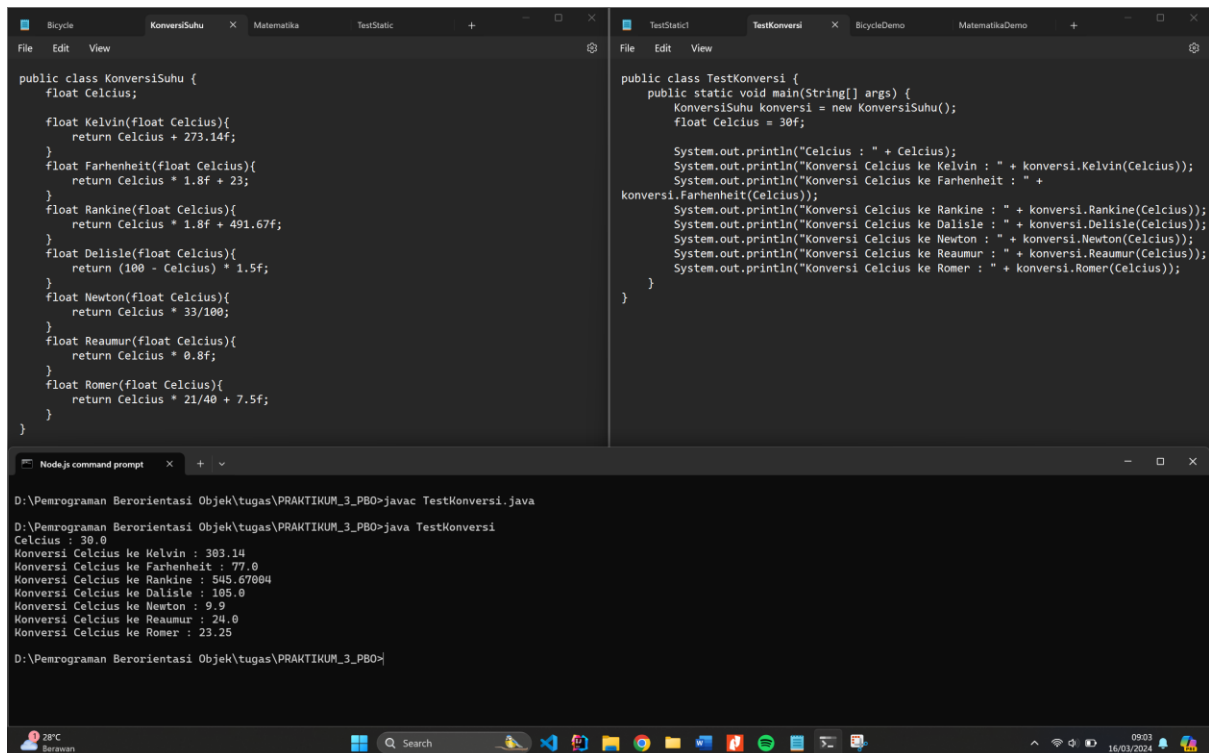
```
public class MatematikaDemo {
    public static void main(String[] args) {
        Matematika matematika = new Matematika();

        // Eksekusi method dan menampilkan hasilnya
        float a = 20, b = 20;
```

```
        System.out.println("Hasil Pertambahan: " + a + " + " + b + " = " +  
matematika.pertambahan(a, b));  
  
        a = 10;  
        b = 5;  
        System.out.println("Hasil Pengurangan: " + a + " - " + b + " = " +  
matematika.pengurangan(a, b));  
  
        a = 10;  
        b = 20;  
        System.out.println("Hasil Perkalian: " + a + " x " + b + " = " +  
matematika.perkalian(a, b));  
  
        a = 20;  
        b = 2;  
        System.out.println("Hasil Pembagian: " + a + " / " + b + " = " +  
matematika.pembagian(a, b));  
    }  
}
```

Latihan 2

Program konversi suhu, dari Celcius



```
public class KonversiSuhu {
    float Celcius;

    float Kelvin(float Celcius){
        return Celcius + 273.14f;
    }
    float Farhenheit(float Celcius){
        return Celcius * 1.8f + 23;
    }
    float Rankine(float Celcius){
        return Celcius * 1.8f + 491.67f;
    }
    float Delisle(float Celcius){
        return (100 - Celcius) * 1.5f;
    }
    float Newton(float Celcius){
        return Celcius * 33/100;
    }
    float Reaumur(float Celcius){
        return Celcius * 0.8f;
    }
    float Romer(float Celcius){
        return Celcius * 21/40 + 7.5f;
    }
}

public class TestKonversi {
    public static void main(String[] args) {
        KonversiSuhu konversi = new KonversiSuhu();
        float Celcius = 30f;

        System.out.println("Celcius : " + Celcius);
        System.out.println("Konversi Celcius ke Kelvin : " + konversi.Kelvin(Celcius));
        System.out.println("Konversi Celcius ke Farhenheit : " +
            konversi.Farhenheit(Celcius));
        System.out.println("Konversi Celcius ke Rankine : " + konversi.Rankine(Celcius));
        System.out.println("Konversi Celcius ke Delisle : " + konversi.Delisle(Celcius));
        System.out.println("Konversi Celcius ke Newton : " + konversi.Newton(Celcius));
        System.out.println("Konversi Celcius ke Reaumur : " + konversi.Reaumur(Celcius));
        System.out.println("Konversi Celcius ke Romer : " + konversi.Romer(Celcius));
    }
}
```

```
D:\Pemrograman Berorientasi Objek\tugas\PRAKTIKUM_3_PBO>javac TestKonversi.java
D:\Pemrograman Berorientasi Objek\tugas\PRAKTIKUM_3_PBO>java TestKonversi
Celcius : 30.0
Konversi Celcius ke Kelvin : 303.14
Konversi Celcius ke Farhenheit : 77.0
Konversi Celcius ke Rankine : 545.67084
Konversi Celcius ke Delisle : 105.0
Konversi Celcius ke Newton : 9.9
Konversi Celcius ke Reaumur : 24.0
Konversi Celcius ke Romer : 23.25
D:\Pemrograman Berorientasi Objek\tugas\PRAKTIKUM_3_PBO>
```

Code KonversiSuhu.java

```
public class KonversiSuhu {
    float Celcius;

    float Kelvin(float Celcius){
        return Celcius + 273.14f;
    }
    float Farhenheit(float Celcius){
        return Celcius * 1.8f + 23;
    }
    float Rankine(float Celcius){
        return Celcius * 1.8f + 491.67f;
    }
    float Delisle(float Celcius){
        return (100 - Celcius) * 1.5f;
    }
    float Newton(float Celcius){
        return Celcius * 33/100;
    }
    float Reaumur(float Celcius){
        return Celcius * 0.8f;
    }
    float Romer(float Celcius){
```

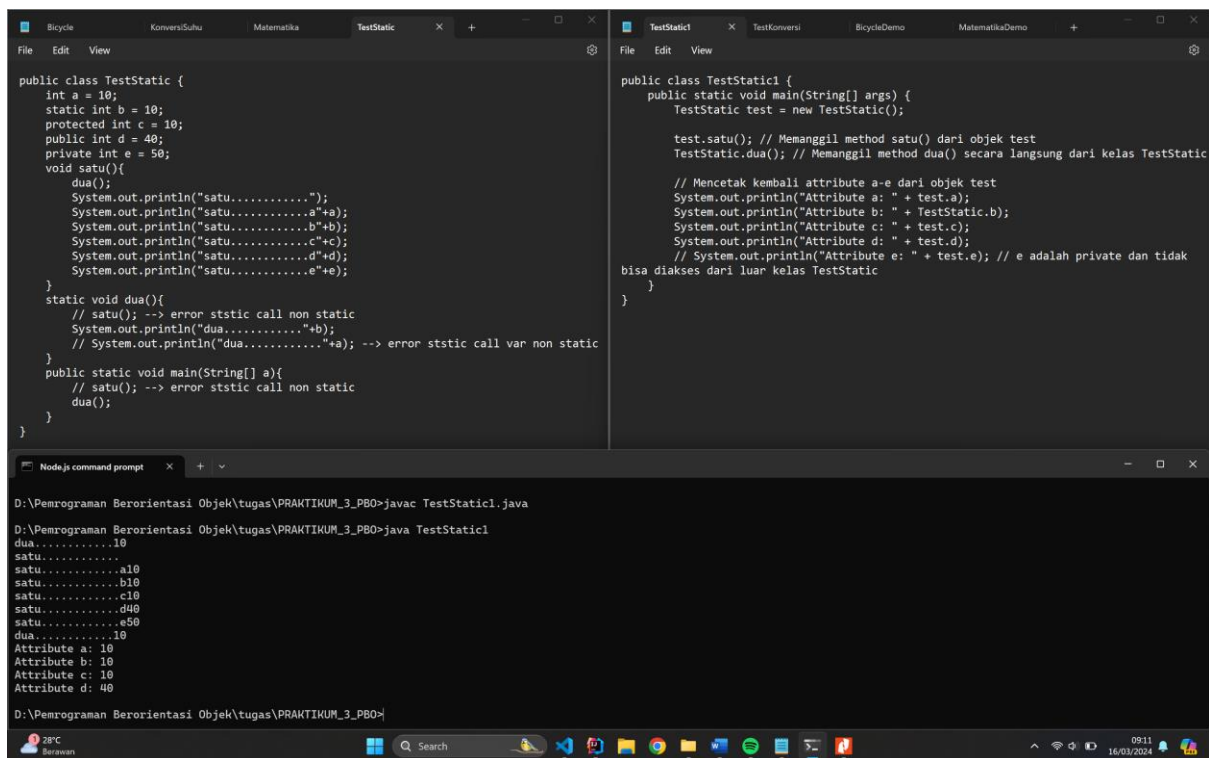
```
        return Celcius * 21/40 + 7.5f;
    }
}
```

Code TestKonversi.java

```
public class TestKonversi {
    public static void main(String[] args) {
        KonversiSuhu konversi = new KonversiSuhu();
        float Celcius = 30f;

        System.out.println("Celcius : " + Celcius);
        System.out.println("Konversi Celcius ke Kelvin : " +
konversi.Kelvin(Celcius));
        System.out.println("Konversi Celcius ke Farhenheit : " +
konversi.Farhenheit(Celcius));
        System.out.println("Konversi Celcius ke Rankine : " +
konversi.Rankine(Celcius));
        System.out.println("Konversi Celcius ke Dalisle : " +
konversi.Delisle(Celcius));
        System.out.println("Konversi Celcius ke Newton : " +
konversi.Newton(Celcius));
        System.out.println("Konversi Celcius ke Reaumur : " +
konversi.Reaumur(Celcius));
        System.out.println("Konversi Celcius ke Romer : " +
konversi.Romer(Celcius));
    }
}
```

Latihan 3



The screenshot shows an IDE with two tabs: `TestStatic` and `TestStatic1`. The `TestStatic` tab contains the following code:

```
public class TestStatic {
    int a = 10;
    static int b = 10;
    protected int c = 10;
    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();
    }
}
```

The `TestStatic1` tab contains the following code:

```
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
    }
}
```

The terminal window shows the execution of `TestStatic1.java`:

```
D:\Pemrograman Berorientasi Objek\tugas\PRAKTIKUM_3_PBO>javac TestStatic1.java
D:\Pemrograman Berorientasi Objek\tugas\PRAKTIKUM_3_PBO>java TestStatic1
dua.....10
satu.....
satu.....a10
satu.....b10
satu.....c10
satu.....d40
satu.....e50
dua.....10
Attribute a: 10
Attribute b: 10
Attribute c: 10
Attribute d: 40
```

Code TestStatic.java

```
public class TestStatic {
    int a = 10;
    static int b = 10;
    protected int c = 10;
    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  
    }  
}
```