Dokumentasi Praktikum PBO 3

Mata Kuliah : PBO - TI - S1

Pertemuan : 3

NIM : A11.2021.13254

Nama : Yohanes Dimas Pratama

Contoh Program Interaksi Objek

Hasil Program:

```
PS C:\Users\LENOVO\OneDrive\Documents\New folder> cd "c:\Users\LENOVO\
OneDrive\Documents\New folder\" ; if ($?) { javac BicycleDemo.java } ;
 if ($?) { java BicycleDemo }
Speed: 20
Gear: 4
```

Code Program:

*Bicycle.java

```
public class Bicycle {
    int speed = 0;
    int gear = 0;

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

*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

Hasil Program:

```
PS C:\Users\LENOVO\OneDrive\Documents\New folder> cd "c:\Users\LENOVO\
OneDrive\Documents\New folder\" ; if ($?) { javac MatematikaDemo.java
} ; if ($?) { java MatematikaDemo }
Hasil tambah: 18
Hasil tambah: 25
Hasil tambah: 4.0
Hasil kurang: 4
Hasil kurang: -3
Hasil kurang: -1.0
Hasil kali: 77
Hasil kali: 539
Hasil kali: 3.75
Hasil bagi: 1
Hasil bagi: 0
Hasil bagi: 0.6
```

Code Program:

*Matematika.java

```
public class Matematika {
    float hasilfloat;
    int hasilint;

    void tambah(int a, int b) {
        hasilint = a + b;
        System.out.println("Hasil tambah: " + hasilint);
    }
    int tambah(int a, int b, int c) {
        hasilint = a + b + c;
        return hasilint;
    }
    float tambah(float a, float b) {
        return a+b;
    }
    float tambah(float a, float b, float c) {
        return a+b+c;
    }

    void kurang(int a, int b) {
        hasilint = a - b;
        System.out.println("Hasil kurang: " + hasilint);
    }
    int kurang(int a, int b, int c) {
        hasilint = a - b - c;
```

```
        return hasilint;
    }
    float kurang(float a, float b) {
        return a-b;
    }
    float kurang(float a, float b, float c) {
        return a-b-c;
    }

    void kali(int a, int b) {
        hasilint = a * b;
        System.out.println("Hasil kali: " + hasilint);
    }
    int kali(int a, int b, int c) {
        hasilint = a * b * c;
        return hasilint;
    }
    float kali(float a, float b) {
        return a*b;
    }
    float kali(float a, float b, float c) {
        return a*b*c;
    }

    void bagi(int a, int b) {
        hasilint = a / b;
        System.out.println("Hasil bagi: " + hasilint);
    }
    int bagi(int a, int b, int c) {
        hasilint = a / b / c;
        return hasilint;
    }
    float bagi(float a, float b) {
        return a/b;
    }
    float bagi(float a, float b, float c) {
        return a/b/c;
    }
}
```

*MatematikaDemo.java

```
public class MatematikaDemo {
    public static void main(String[] args) {
        int angka1 = 11;
        int angka2 = 7;

        Matematika hitung = new Matematika();
```

```
        hitung.tambah(angka1, angka2);
        System.out.println("Hasil tambah: " + hitung.tambah(angka1, angka2,
angka2));
        System.out.println("Hasil tambah: " + hitung.tambah(1.5f, 2.5f));

        hitung.kurang(angka1, angka2);
        System.out.println("Hasil kurang: " + hitung.kurang(angka1, angka2,
angka2));
        System.out.println("Hasil kurang: " + hitung.kurang(1.5f, 2.5f));

        hitung.kali(angka1, angka2);
        System.out.println("Hasil kali: " + hitung.kali(angka1, angka2,
angka2));
        System.out.println("Hasil kali: " + hitung.kali(1.5f, 2.5f));

        hitung.bagi(angka1, angka2);
        System.out.println("Hasil bagi: " + hitung.bagi(angka1, angka2,
angka2));
        System.out.println("Hasil bagi: " + hitung.bagi(1.5f, 2.5f));
    }
}
```

Latihan 2

Hasil Program:

```
PS C:\Users\LENOVO\OneDrive\Documents\New folder> cd "c:\Users\LENOVO\
OneDrive\Documents\New folder\" ; if ($?) { javac SuhuDemo.java } ; if
 ($?) { java SuhuDemo }
Konversi ke kelvin: 373.0
Konversi ke fahrenheit: 212.0
Konversi ke rankie: 671.4
Konversi ke delisle: 0.0
Konversi ke newton: 33.0
Konversi ke reaumur: 80.0
Konversi ke romer: 60.0
```

Code Program:

*Suhu.java

```
public class Suhu {
    float hasil;

    public void kelvin(float celcius) {
        hasil = celcius + 273;
        System.out.println("Konversi ke kelvin: " + hasil);
    }

    public void fahrenheit(float celcius) {
        hasil = (celcius * 9/5) + 32;
```

```
        System.out.println("Konversi ke fahrenheit: " + hasil);
    }

    public void rankine(float celcius) {
        hasil = (celcius + 273) * 9/5;
        System.out.println("Konversi ke rankie: " + hasil);
    }

    public void delisle(float celcius) {
        hasil = (100 - celcius) * 3/2;
        System.out.println("Konversi ke delisle: " + hasil);
    }

    public void newton(float celcius) {
        hasil = celcius * 33/100;
        System.out.println("Konversi ke newton: " + hasil);
    }

    public void reaumur(float celcius) {
        hasil = celcius * 4/5;
        System.out.println("Konversi ke reaumur: " + hasil);
    }

    public void romer(float celcius) {
        hasil = (celcius * 21/40) + 7.5f;
        System.out.println("Konversi ke romer: " + hasil);
    }
}
```

*SuhuDemo.java

```
public class SuhuDemo {
    public static void main(String[] args) {
        Suhu suhu = new Suhu();
        suhu.kelvin(100);
        suhu.fahrenheit(100);
        suhu.rankine(100);
        suhu.delisle(100);
        suhu.newton(100);
        suhu.reaumur(100);
        suhu.romer(100);
    }
}
```

Latihan 3

Hasil Program:

```
PS C:\Users\LENOVO\OneDrive\Documents\New folder> cd "c:\Users\LENOVO\
OneDrive\Documents\New folder\" ; if ($?) { javac TestStaticDemo.java
} ; if ($?) { java TestStaticDemo }
Dua..........b: 10
Satu.........
Satu.........a: 5
Satu.........b: 10
Satu.........c: 15
Satu.........d: 20
Satu.........e: 25
Dua..........b: 10
5
10
15
20
15
```

Code Program:

*TestStatic.java

```
public class TestStatic {
    int a = 5;
    static int b = 10;
    protected int c = 15;
    public int d = 20;
    private int e = 25;

    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() {
        System.out.println("Dua..........b: " + b);

    }
    int getC() {
        return c;
    }
    public static void main(String[] args) {
        dua();
    }
}
```

*SuhuDemo.java

```
public class TestStaticDemo {
```

```
    public static void main(String[] args) {
        TestStatic hasil = new TestStatic();
        hasil.satu();
        hasil.dua();
        System.out.println(hasil.a);
        System.out.println(hasil.b);
        System.out.println(hasil.c);
        System.out.println(hasil.d);
        System.out.println(hasil.getC());
    }
}
```