

Nama : Ferza Reyaldi  
NIM : 09021281924060  
Kelas : 4 REG A

## LATIHAN 2

### Soal 1

```
package nomor1;

public abstract class Bangun2Dimensi {
    private double keliling;

    protected void setKeliling(double keliling) {
        this.keliling = keliling;
    }

    public double getKeliling() {
        return keliling;
    }

    public abstract void hitungKeliling();
}
```

```
package nomor1;

public class Lingkaran extends Bangun2Dimensi{
    private double jariJari, x;

    public Lingkaran(){
        this.jariJari = 0;
    }

    public void setJariJari(double jariJari) {
        this.jariJari = jariJari;
    }

    public double getJariJari() {
        return jariJari;
    }

    public double getX() {
        return x;
    }

    public void faktorX(double x){
        this.x = x;
        this.jariJari *= this.x;
    }
}
```

```

@Override
public void hitungKeliling() {
    setKeliling(2 * Math.PI * jariJari);
}
}

```

```

package nomor1;

public class PersegiPanjang extends Bangun2Dimensi{
    private double panjang, lebar;
    private boolean bujurSangkar;

    public PersegiPanjang(){
        this.panjang = 0;
        this.lebar = 0;
    }

    public void setPanjang(double panjang) {
        this.panjang = panjang;
    }

    public void setLebar(double lebar) {
        this.lebar = lebar;
    }

    public double getPanjang() {
        return panjang;
    }

    public double getLebar() {
        return lebar;
    }

    public void cekBujurSangkar(){
        bujurSangkar = panjang == lebar;
        if(bujurSangkar)
            System.out.println('Y');
        else
            System.out.println('N');
    }

    @Override
    public void hitungKeliling() {
        setKeliling(2 * (panjang + lebar));
    }
}

```

```

package nomor1;

public class Segitiga extends Bangun2Dimensi{
    private double a, b, c;

    public Segitiga() {
        this.a = 0;
        this.b = 0;
        this.c = 0;
    }

    public void setA(double a) {
        this.a = a;
    }

    public void setB(double b) {
        this.b = b;
    }

    public void setC(double c) {
        this.c = c;
    }

    public double getA() {
        return a;
    }

    public double getB() {
        return b;
    }

    public double getC() {
        return c;
    }

    @Override
    public void hitungKeliling() {
        setKeliling(a + b + c);
    }
}

```

```

import java.util.Scanner;
import nomor1.*;

public class MainNomor1 {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
    }
}

```

```

        System.out.println("Sesi Segitiga");
        Segitiga segitiga = new Segitiga();
        segitiga.setA(scanner.nextDouble());
        segitiga.setB(scanner.nextDouble());
        segitiga.setC(scanner.nextDouble());
        segitiga.hitungKeliling();
        System.out.println(segitiga.getKeliling());

        System.out.println("Sesi Persegi Panjang");
        PersegiPanjang persegiPanjang = new PersegiPanjang();
        persegiPanjang.setPanjang(scanner.nextDouble());
        persegiPanjang.setLebar(scanner.nextDouble());
        persegiPanjang.hitungKeliling();
        System.out.println(persegiPanjang.getKeliling());
        persegiPanjang.cekBujurSangkar();

        System.out.println("Sesi Lingkaran");
        Lingkaran lingkaran = new Lingkaran();
        lingkaran.setJariJari(scanner.nextDouble());
        lingkaran.hitungKeliling();
        System.out.println(lingkaran.getKeliling());
        lingkaran.faktorX(scanner.nextDouble());
        lingkaran.hitungKeliling();
        System.out.println(lingkaran.getKeliling());

        scanner.close();
    }
}

```

## Output:

```

MainNomor1.java - task02 - Visual Studio Code
1: Java Process Console
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS D:\Documents\Universitas Sriwijaya\Semester 4 (24)\OOP\Practice\task02> & "c:\Users\reyal\.vscode\extensions\vscjava.vscode-java-debug-0.32.1\script
s\launcher.bat" "C:\Program Files\Java\jdk-11.0.10\bin\java.exe" "-Dfile.encoding=UTF-8" "-cp" "C:\Users\reyal\AppData\Roaming\Code\User\workspaceStorag
e\7eaf9cfe43bb95e27b09c61b758e33c9\redhat.java\jdt_ws\task02_8aebdb79\bin" "MainNomor1"

Sesi Segitiga
3
6
7
16.0
Sesi Persegi Panjang
19
19
76.0
Y
Sesi Lingkaran
38
238.76104167282426
0.1
23.876104167282428
PS D:\Documents\Universitas Sriwijaya\Semester 4 (24)\OOP\Practice\task02>

```

## Soal 2

```
package nomor2;

public class Rumah {
    private double panjang;
    private double lebar;
    private double luas;
    private final KamarMandi kamarMandi1;
    private final KamarMandi kamarMandi2;
    private final Taman taman;
    private final Dapur dapur;
    private final RuangCuciJemur ruangCuciJemur;
    private final RuangBersama ruangBersama;
    private final KamarTidur kamarTidur1;
    private final KamarTidur kamarTidur2;
    private final KamarTidur kamarTidurUtama;

    public Rumah(double panjang, double lebar) {
        this.panjang = panjang;
        this.lebar = lebar;
        this.kamarMandi1 = new KamarMandi(1.43);
        this.kamarMandi2 = new KamarMandi(2.11);
        this.taman = new Taman(4.29);
        this.dapur = new Dapur(6.10);
        this.ruangCuciJemur = new RuangCuciJemur(3.68);
        this.ruangBersama = new RuangBersama(13.73);
        this.kamarTidur1 = new KamarTidur(7.36);
        this.kamarTidur2 = new KamarTidur(8.77);
        this.kamarTidurUtama = new KamarTidur(8.97);
    }

    public double getPanjang() {
        return panjang;
    }

    public void setPanjang(double panjang) {
        this.panjang = panjang;
    }

    public double getLebar() {
        return lebar;
    }

    public void setLebar(double lebar) {
        this.lebar = lebar;
    }

    public double getLuas() {
```

```

        return luas;
    }

    public void setLuas(double luas) {
        this.luas = luas;
    }

    public double hitungLuas(){
        luas = panjang * lebar;
        return luas;
    }

    public double luasTerpakai(){
        return kamarMandi1.getLuas() + kamarMandi2.getLuas() + taman.getLuas()
+ dapur.getLuas() + ruangCuciJemur.getLuas() + ruangBersama.getLuas() + kamar
Tidur1.getLuas() + kamarTidur2.getLuas() + kamarTidurUtama.getLuas();
    }
}

```

```

package nomor2;

public class Taman {
    private double luas;

    public Taman(double luas) {
        this.luas = luas;
    }

    public double getLuas() {
        return luas;
    }

    public void setLuas(double luas) {
        this.luas = luas;
    }
}

```

```

package nomor2;

public class Dapur {
    private double luas;

    public Dapur(double luas) {
        this.luas = luas;
    }
}

```

```
    public double getLuas() {  
        return luas;  
    }  
  
    public void setLuas(double luas) {  
        this.luas = luas;  
    }  
}
```

```
package nomor2;  
  
public class KamarMandi {  
    private double luas;  
  
    public KamarMandi(double luas) {  
        this.luas = luas;  
    }  
  
    public double getLuas() {  
        return luas;  
    }  
  
    public void setLuas(double luas) {  
        this.luas = luas;  
    }  
}
```

```
package nomor2;  
  
public class KamarTidur {  
    private double luas;  
  
    public KamarTidur(double luas) {  
        this.luas = luas;  
    }  
  
    public double getLuas() {  
        return luas;  
    }  
  
    public void setLuas(double luas) {  
        this.luas = luas;  
    }  
}
```

```
package nomor2;

public class RuangBersama {
    private double luas;

    public RuangBersama(double luas) {
        this.luas = luas;
    }

    public double getLuas() {
        return luas;
    }

    public void setLuas(double luas) {
        this.luas = luas;
    }
}
```

```
package nomor2;

public class RuangCuciJemur {
    private double luas;

    public RuangCuciJemur(double luas) {
        this.luas = luas;
    }

    public double getLuas() {
        return luas;
    }

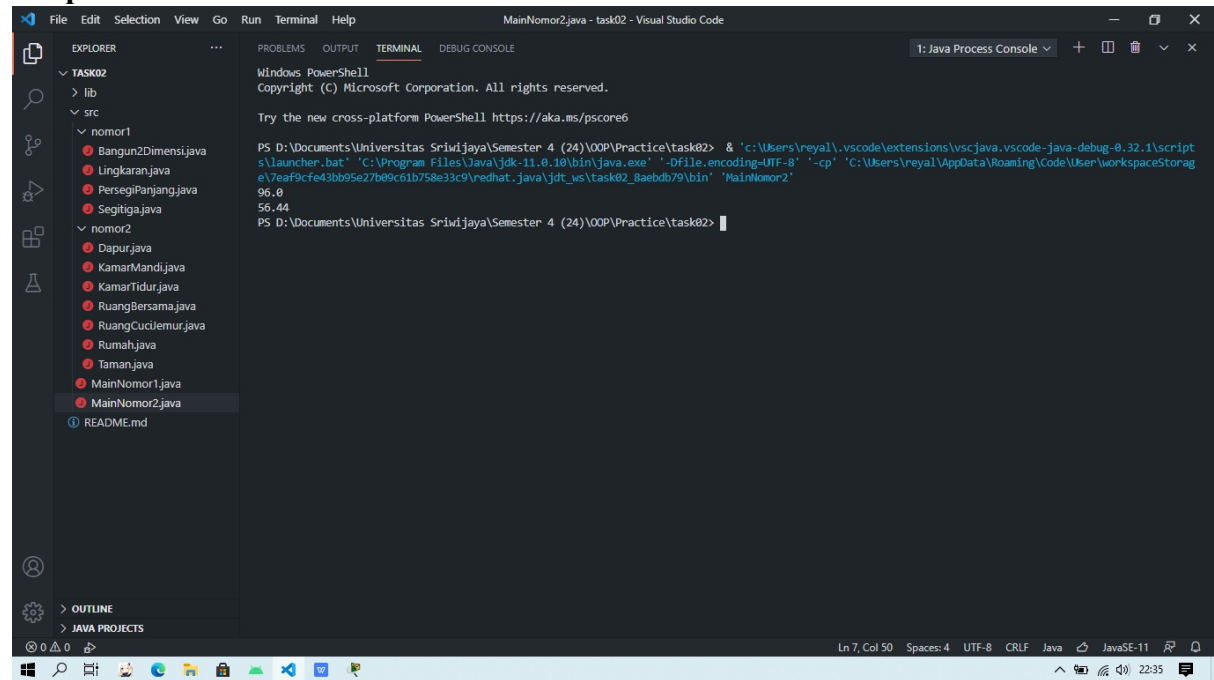
    public void setLuas(double luas) {
        this.luas = luas;
    }
}
```

```
import nomor2.*;

public class MainNomor2 {
    public static void main(String[] args) {
        Rumah rumah = new Rumah(12, 8);
        System.out.println(rumah.hitungLuas());
        System.out.println(rumah.luasTerpakai());
    }
}
```



## Output:



The screenshot shows the Visual Studio Code interface with the 'MainNomor2.java - task02' window. The Explorer sidebar on the left shows a project structure with folders 'TASK02', 'lib', and 'src'. Under 'src', there are subfolders 'nomor1' and 'nomor2'. The 'nomor1' folder contains files: 'Bangun2Dimensi.java', 'Lingkaran.java', 'PersegiPanjang.java', 'Segitiga.java', and 'nomor2'. The 'nomor2' folder contains files: 'Dapur.java', 'KamarMandi.java', 'KamarTidur.java', 'RuangBersama.java', 'RuangCuciMurni.java', 'Rumah.java', 'Taman.java', 'MainNomor1.java', 'MainNomor2.java', and 'README.md'. The 'MainNomor2.java' file is selected. The Terminal panel on the right shows the output of a Java program. The output starts with 'Windows PowerShell' and 'Copyright (c) Microsoft Corporation. All rights reserved.' followed by a message about PowerShell. Then, it shows the command: `PS D:\Documents\Universitas Sriwijaya\Semester 4 (24)\OOP\Practice\task02> & 'c:\Users\reyal\.vscode\extensions\vscjava.vscode-java-debug-0.32.1\scripts\launcher.bat' 'c:\Program Files\Java\jdk-11.0.10\bin\java.exe' '-bfile.encoding=UTF-8' '-cp' 'C:\Users\reyal\AppData\Roaming\Code\User\workspaceStorage\7a5af9cfe430b95e27b69c61b758e33c9\redhat.java\jdk_ws\task02_8aebd79\bin' 'MainNomor2'`. The output then shows the number '96.0' and the time '56.44'. Finally, it shows the command prompt 'PS D:\Documents\Universitas Sriwijaya\Semester 4 (24)\OOP\Practice\task02>'.

```
Windows PowerShell
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PS D:\Documents\Universitas Sriwijaya\Semester 4 (24)\OOP\Practice\task02> & 'c:\Users\reyal\.vscode\extensions\vscjava.vscode-java-debug-0.32.1\scripts\launcher.bat' 'c:\Program Files\Java\jdk-11.0.10\bin\java.exe' '-bfile.encoding=UTF-8' '-cp' 'C:\Users\reyal\AppData\Roaming\Code\User\workspaceStorage\7a5af9cfe430b95e27b69c61b758e33c9\redhat.java\jdk_ws\task02_8aebd79\bin' 'MainNomor2'
96.0
56.44
PS D:\Documents\Universitas Sriwijaya\Semester 4 (24)\OOP\Practice\task02>
```