

Koding Studi Kasus Bangun Datar Luas dan Keliling

1.Koding Class Interface Bangun Datar

```
package BangunDatar;

/**
 *
 * @author Risa_ajeng
 */
public interface BangunDatar {

    public double luas(int s1, int s2);

    public double keliling(int s1, int s2);

}
```

2. Koding Class Persegi Panjang

```
package BangunDatar;

/**
 *
 * @author Risa_ajeng
 */
public class PersegiPanjang implements BangunDatar{

    @Override
    public double luas(int s1, int s2) {
        return (s1*s2);
    }

    @Override
    public double keliling(int s1, int s2) {
        return (2*(s1+s2));
    }

}
```

3. Koding Class Segitiga Siku

```
package BangunDatar;

/**
 *
 * @author Risa_ajeng
 */
public class SegitigaSiku implements BangunDatar{

    @Override
    public double luas(int s1, int s2) {
        return (0.5 * s1 * s2);
    }

    @Override
    public double keliling(int s1, int s2) {
        return (s1 + s2 + Math.sqrt((s1 * s1) +(s2 * s2)));
    }
}
```

4. Koding Class Lingkaran

```
package BangunDatar;

/**
 *
 * @author Risa_ajeng
 */
public class Lingkaran implements BangunDatar{

    private double pi = 3.1415;

    Lingkaran() {
    }

    @Override
    public double luas(int s1, int s2) {
        return 0;
    }

    @Override
    public double keliling(int s1, int s2) {
        return 0;
    }

    public double luas(int r) {
        //methode overload
        return (pi * r * r);
    }

    public double keliling(int r) {
        //methode overload
        return (2 * pi * r);
    }
}
```

5. Koding Class Main

```
package BangunDatar;

import java.util.Scanner;

/**
 *
 * @author Multikom
 */

public class Main {

    private static char pilihan;

    private static Scanner scanner = new Scanner(System.in);

    public static void main(String[] args) {
        /*Kamus*/

        PersegiPanjang opersegi;
        SegitigaSiku osegitiga;
        Lingkaran olingkaran;
        int s1, s2, r;

        opersegi = new PersegiPanjang();
        osegitiga = new SegitigaSiku();
        olingkaran = new Lingkaran();

        /*Program*/

        //panggil metode
        mainMenu();

        //kondisional untuk pilihan menu yang dimasukkan
        switch(pilihan){
```

```

case '1':{

    System.out.print("Masukan panjang persegi: ");

    s1 = scanner.nextInt();

    System.out.print("Masukan lebar persegi: ");

    s2 = scanner.nextInt();

    System.out.println("Luas persegi panjang: " + opersegi.luas(s1,s2));

    System.out.println("Keliling persegi panjang: " + opersegi.keliling(s1,s2));

    break;

}

case '2':{

    System.out.print("Masukan alas segitiga siku: ");

    s1 = scanner.nextInt();

    System.out.print("Masukan tinggi segitiga siku: ");

    s2 = scanner.nextInt();

    System.out.println("Luas segitiga: " + osegitiga.luas(s1,s2));

    System.out.println("Keliling segitiga: " + osegitiga.keliling(s1,s2));

    break;

}

case '3':{

    System.out.print("Masukan jari-jari lingkaran: ");

    r = scanner.nextInt();

    System.out.println("Luas lingkaran: " + olingkaran.luas(
r));

    System.out.println("Keliling lingkaran: " + olingkaran.keliling(r));

    break;

}

default :{

    System.out.println("tidak ada pilihan");

    break;
}

```

```
}
```

```
}
```

```
}
```

```
private static void mainMenu() {
```

```
    //pilihan menu
```

```
    System.out.println("=====");
```

```
    System.out.println("Hitung Luas dan Keliling :");
```

```
    System.out.println("1. Persegi Panjang");
```

```
    System.out.println("2. Segitiga Siku");
```

```
    System.out.println("3. Lingkaran");
```

```
    System.out.print("Masukan Menu : ");
```

```
    pilihan = scanner.next().charAt(0);
```

```
}
```

```
}
```