

# LAPORAN TUGAS PRAKTIKUM 7

*Resume ini Disusun Untuk Memenuhi Tugas Mata Kuliah PBO-P*



Disusun oleh:

Rheza Panji Prasetya Nugraha 211511056

**PROGRAM STUDI D3 TEKNIK INFORMATIKA JURUSAN  
TEKNIK KOMPUTER DAN INFORMATIKA POLITEKNIK  
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Link Github : <https://github.com/Rhezapanjii/PBO-PRAK-7.git>

## Kasus 1

Commision.java

```
1 public class Commission extends Hourly{
2     double totalSales;
3     double commissionRate;
4
5     public Commission(String eName, String eAddress, String ePhone,
6         String socSecNumber, double rate, double rateEmployee) {
7         super(eName,eAddress,ePhone,socSecNumber,rate);
8         commissionRate = rateEmployee;
9     }
10
11
12     public void addSales(double TotalSales) {
13         totalSales += TotalSales;
14     }
15
16     public double pay() {
17         double payment = commissionRate + totalSales + super.pay();
18         totalSales = 0;
19         return payment;
20     }
21
22     public String toString() {
23         String result = super.toString();
24         result += "\nCurrent Total Sales: " + totalSales;
25         return result;
26     }
27 }
28
29
30
31
```

Saya menambahkan bahwa commission harus extends dengan hourly.java lalu ditambahkan 2 instance variable

```
public class Commission extends Hourly{
    double totalSales;
    double commissionRate;
```

Lalu menambahkan 6 construcyor

```
double commissionRate;

public Commission(String eName, String eAddress, String ePhone,
    String socSecNumber, double rate, double rateEmployee) {
    super(eName,eAddress,ePhone,socSecNumber,rate);
    commissionRate = rateEmployee;
}
```

Dan menambahkan variable penghitung total dari komisi

```
public void addSales(double TotalSales) {
    totalSales += TotalSales;
}

public double pay() {
    double payment = commissionRate + totalSales + super.pay();
    totalSales = 0;
    return payment;
}

public String toString() {
    String result = super.toString();
    result += "\nCurrent Total Sales: " + totalSales;
    return result;
}
```

Lalu dihubungkan dengan dengan class staff juga manambahkan deklarasi dari arraynya dan menambahkan 2 objek commission

```
staffList[6] = new Commission("Reza", "Cimahi",
    "214-421", "012214-421", 6.25, 0.2);

staffList[7] = new Commission("Moan", "cimindi",
    "3321-421", "001-221-332", 9.75, 0.15);
```

Hasil run Program :

```
<terminated> Print java Application C:\Program Files\Java\
Name : Sam
Address : 123 Main Line
Phone : 555-0469

Social Security Number: 123-45-6789
Pain: 2923.07
-----
Name : Carla
Address : 456 Off Line
Phone : 555-0101

Social Security Number: 987-65-4321
Pain: 1246.15
-----
Name : Woody
Address : 789 Off Rocker
Phone : 555-0000

Social Security Number: 010-20-3040
Pain: 1169.23
-----
Name : Diane
Address : 678 Fifth Ave.
Phone : 555-0690

Social Security Number: 958-47-3625
Current hours: 40
Pain: 422.0
-----
Name : Norm
```

```
-----
Name : Norm
Address : 987 Suds Blvd.
Phone : 555-8374

Thanks!
-----
Name : Cliff
Address : 321 Duds Lane
Phone : 555-7282

Thanks!
-----
Name : Reza
Address : Cimahi
Phone : 214-421

Social Security Number: 012214-421
Current hours: 35
Current Total Sales: 400.0
Pain: 618.95
-----
Name : Moan
Address : cimindi
Phone : 3321-421

Social Security Number: 001-221-332
Current hours: 40
Current Total Sales: 950.0
Pain: 1340.15
> <
```

## Kasus 2

Pada kasus ini saya membentuk class dengan penggunaan inherit untuk membentuk kelasnya, diantaranya seperti class Cylinder.java, Paint.java, PaintThings.java, Rectangle.java Shape dan Sphere.java

### 1 Membuat Abstract Class shape dengan ketentuan

```
1 package kasus2;
2
3 public abstract class Shape {
4     private String shapeName;
5
6     public Shape(String shapename) {
7         this.shapeName = shapename;
8     }
9
10    public abstract double area();
11    public String toString() {
12        String Result = "Shape Name " + this.shapeName;
13        return Result;
14    }
15
16 }
```

### 2. Membuat file sphere.java mengekstend dari induknya shape dengan beberapa ketentuan

Mengoverride method area dengan perhitungan  $4 \times \text{PI} \times \text{radius}^2$

- Membuat file rectangle.java mengekstend dari induknya shape dengan beberapa ketentuan Mengoverride method area dengan perhitungan Panjang\*
- Membuat file Cylinder.java mengekstend dari induknya shape dengan beberapa ketentuan Mengoverride method area dengan perhitungan  $4 \times \text{PI} \times \text{radius}^2 \times \text{tinggi}$

```
1 package kasus2;
2
3 public class Cylinder extends Shape{
4     private double radius;
5     private double height;
6
7     public Cylinder(double r, double h) {
8         super("Cylinder");
9         this.radius = r;
10        this.height = h;
11    }
12
13    @Override
14    public double area() {
15        return Math.PI*radius*radius*height;
16    }
17    public String toString() {
18        return super.toString() + " of radius " + radius + " and of height " + height;
19    }
20
21 }
```

Cylinder.java

## Shape.java

```
1 package kasus2;
2
3 public abstract class Shape {
4     private String shapeName;
5
6     public Shape(String shapename) {
7         this.shapeName = shapename;
8     }
9
10    public abstract double area();
11    public String toString() {
12        String Result = "Shape Name " + this.shapeName;
13        return Result;
14    }
15 }
16 }
```

## Rectagle.java

```
1 package kasus2;
2
3 public class Rectangle extends Shape{
4     private double length;
5     private double width;
6
7     public Rectangle(double l, double w) {
8         super("Rectangle");
9         this.length = l;
10        this.width = w;
11    }
12
13    @Override
14    public double area() {
15        return this.width*this.length;
16    }
17    public String toString() {
18        return super.toString() + " of length " + this.length + " and of width " + this.width;
19    }
20 }
```

## Sphere.java

```
1 package kasus2;
2
3 public class Sphere extends Shape{
4     private double radius;
5
6     public Sphere(double r) {
7         super("Sphere");
8         this.radius = r;
9     }
10
11    @Override
12    public double area() {
13        return 4*Math.PI*radius*radius;
14    }
15    public String toString() {
16        return super.toString() + " of radius " + radius;
17    }
18 }
19 }
```

### 3. membuat Paint.java

Paint.java

```
Cylinder.java Paint.java X PaintThings.java Sphere.java Rectangle.java Shape.java
1 package kasus2;
2
3 public class Paint {
4     private double coverage;
5     public Paint(double c) {
6         this.coverage = c;
7     }
8
9     public double amount(Shape s) {
10         System.out.println("Computing amount for " + s);
11         return s.area();
12     }
13 }
```

### 4. PaintThings.java PaintThings

```
Cylinder.java Paint.java PaintThings.java X Sphere.java Rectangle.java Shape.java
1 package kasus2;
2
3 import java.text.DecimalFormat;
4
5 public class PaintThings {
6
7     public static void main(String[] args) {
8         // TODO Auto-generated method stub
9         final double coverage = 350;
10        Paint paint = new Paint(coverage);
11
12        Rectangle deck = new Rectangle(20,30);
13        Sphere bigBall = new Sphere(15);
14        Cylinder tank = new Cylinder(10,30);
15
16        double deckamt, ballamt, tankamt;
17
18        deckamt = paint.amount(deck);
19        ballamt = paint.amount(bigBall);
20        tankamt = paint.amount(tank);
21
22        DecimalFormat fmt = new DecimalFormat("0.8");
23        System.out.println("Number of gallons of paint needed...");
24        System.out.println("Deck " + fmt.format(deckamt));
25        System.out.println("BigBall " + fmt.format(ballamt));
26        System.out.println("Tank " + fmt.format(tankamt));
27    }
28 }
29 }
```

## Output

```
<terminated> PaintThings [Java Application] C:\Program Files\Java\jdk-18.0.2.1\bin\javaw.exe (Nov 4, 2022, 7:
Computing amount for Shape Name Rectangle of length 20.0 and of width 30.0
Computing amount for Shape Name Sphere of radius 15.0
Computing amount for Shape Name Cylinder of radius 10.0 and of height 30.0

Number of gallons of paint needed...
Deck 600
BigBall 2827.4
Tank 9424.8
```

## Kasus 3

Membuat Numbers.java dimana di dalam class tersebut terdapat algoritma selection sort untuk mensort array dan menampilkannya

```
Number.java X Salesperson.java Sorting.java Strings.java weeklySales.java
1 package kasus3;
2 import java.util.Scanner;
3
4 public class Number {
5     public static void main(String[] args) {
6         Integer[] intList;
7         int size;
8
9         Scanner scan = new Scanner(System.in);
10
11         System.out.println("\nHow many integers do want to sort?? ");
12         size = scan.nextInt();
13         intList = new Integer[size];
14
15         System.out.println("\nEnter the number...");
16         for(int i = 0; i < size; i++) {
17             intList[i] = scan.nextInt();
18         }
19
20         Sorting.selectionSort(intList);
21         System.out.println("\nYour number in sorted oerder...");
22         for(int i = 0; i < size; i++) {
23             System.out.println(intList[i] + " ");
24         }
25         System.out.println();
26     }
27 }
```

Output :

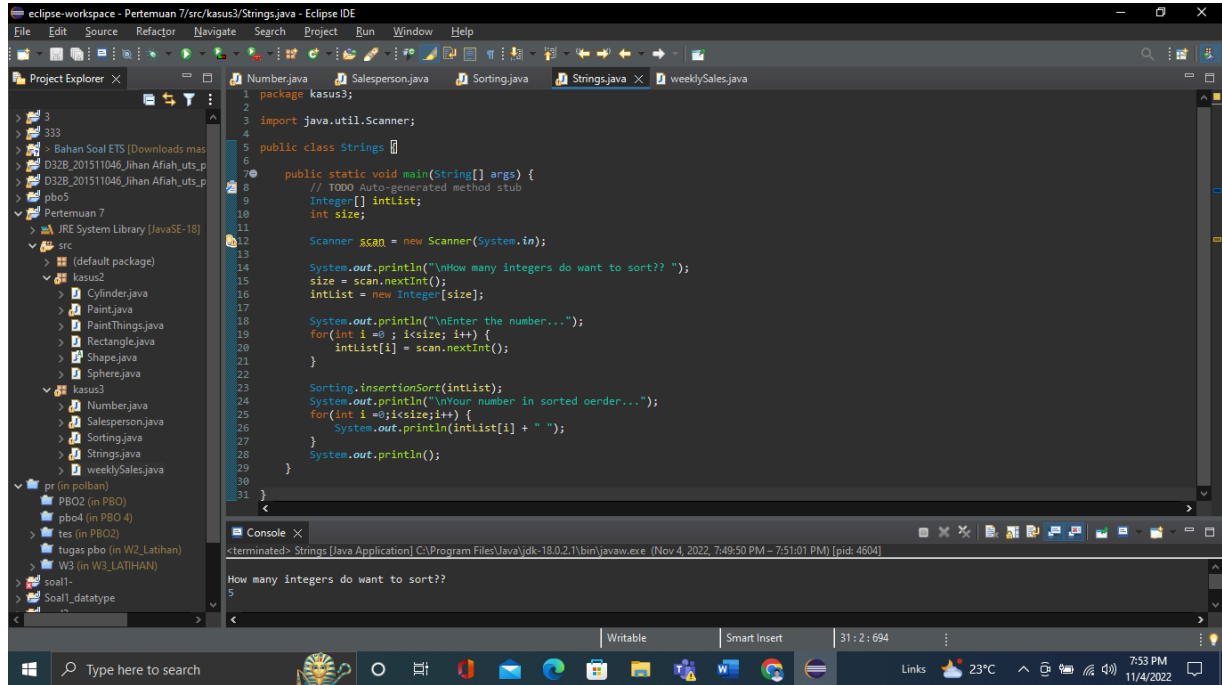
```
How many integers do want to sort??
5

Enter the number...
1 2 3 4 5

Your number in sorted oerder...
5
4
3
2
1
```

## Case 2

Membuat String.java sama seperti number.java membuat algoritma sort tetapi dengan selection sort dan menampilkannya secara ascending



The screenshot shows the Eclipse IDE with the 'Strings.java' file open. The code implements a selection sort algorithm. The console output shows the program running and displaying the sorted numbers in ascending order.

```
package kasus3;

import java.util.Scanner;

public class Strings {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Integer[] intList;
        int size;

        Scanner scan = new Scanner(System.in);

        System.out.println("How many integers do want to sort?? ");
        size = scan.nextInt();
        intList = new Integer[size];

        System.out.println("Enter the number...");
        for(int i = 0; i < size; i++) {
            intList[i] = scan.nextInt();
        }

        Sorting.insertionSort(intList);
        System.out.println("Your number in sorted oerder...");
        for(int i = 0; i < size; i++) {
            System.out.println(intList[i] + " ");
        }
        System.out.println();
    }
}
```

Console Output:

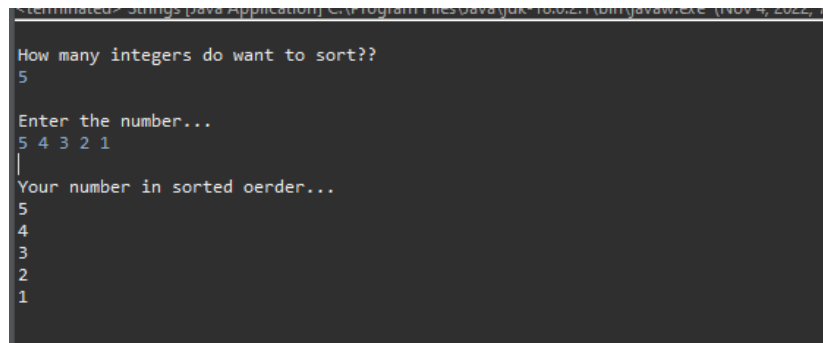
```
<terminated> Strings [Java Application] C:\Program Files\Java\jdk-18.0.2\bin\javaw.exe (Nov 4, 2022, 7:49:50 PM - 7:51:01 PM) [pid: 4604]

How many integers do want to sort??
5

Enter the number...
5 4 3 2 1

Your number in sorted oerder...
5
4
3
2
1
```

Output::



The screenshot shows the console output of the program, displaying the sorted numbers in ascending order.

```
<terminated> Strings [Java Application] C:\Program Files\Java\jdk-18.0.2\bin\javaw.exe (Nov 4, 2022, 7:53 PM) [pid: 4604]

How many integers do want to sort??
5

Enter the number...
5 4 3 2 1

Your number in sorted oerder...
5
4
3
2
1
```



### Case 3

Membuat salesperson,java

```
2
3 public class weeklySales {
4     public static void main(String[] args)
5     {
6         Salesperson [] salesStaff = new Salesperson [4];
7         salesStaff[0] = new Salesperson ("Rheza", "Panji", 3000);
8         salesStaff[1] = new Salesperson ("Annisa", "Salsa", 4000);
9         salesStaff[2] = new Salesperson ("Koli", "Nuwo", 3000);
10        salesStaff[3] = new Salesperson ("Narma", "Dana", 2800);
11        Sorting.selectionSort(salesStaff);
12        System.out.println("\nRanking of Sales for the week\n");
13        for(Salesperson s : salesStaff)
14            System.out.println(s);
15    }
16}
```

Console X

terminated> Strings [Java Application] C:\Program Files\Java\jdk-18.0.2\bin\javaw.exe (Nov 4, 2022, 7:53:37 PM - 7:53:49 PM) [pid: 12220]

How many integers do want to sort??

Enter the number...

4 3 2 1

Your number in sorted order...

Output :

```
Ranking of Sales for the week

Dana, Narma:      2800
Panji, Rheza:    3000
Nuwo, Koli:      3000
Salsa, Annisa:   4000
```