IK22

Praktikum Object dan Class Bagian-2

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PROGRAM STUDI PENDIDIKAN ILMU KOMPUTER

FAKULTAS PENDIDIKAN MATEMATIKA DAN ILMU PENGETAHUAN ALAM
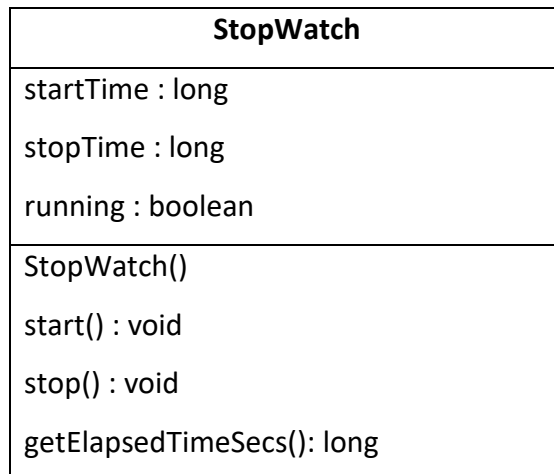
UNIVERSITAS PENDIDIKAN INDONESIA

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Implementasi dan Hasil

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1. Class PersegiPanjang

   - UML Diagram

StopWatch
startTime : long
stopTime : long
running : boolean
StopWatch()
start() : void
stop() : void
getElapsedTimeSecs(): long

   - Sourcecode (Class buatan)

```java
import java.util.Scanner;

public class StopWatch {

    private long startTime = 0;
    private long stopTime = 0;
    private boolean running = false;

    StopWatch(){
    }

    public void start() {
        this.startTime = System.currentTimeMillis();
        this.running = true;
    }


    public void stop() {
        this.stopTime = System.currentTimeMillis();
        this.running = false;
    }

    //elaspsed time in seconds
    public long getElapsedTimeSecs() {
        long elapsed;
        if (running) {
            elapsed = ((System.currentTimeMillis() - startTime) / 1000);
        } else {
            elapsed = ((stopTime - startTime) / 1000);
        }
        return elapsed;
    }
```

- Sourcecode (Class Utama)

```
Run | Debug
public static void main(String[] args) {
  StopWatch SW = new StopWatch();
    Scanner input = new Scanner(System.in);
    String s = input.nextLine();
    int mulai = 1;

    while (mulai == 1) {
        if (s.equals("S")) {
            SW.start();
            String q = input.nextLine();
            if (q.equals("Q")) {
                SW.stop();
                System.out.print(SW.getElapsedTimeSecs() + " detik");
                mulai = 0;
            }
        }
    }
}
```

- Output

```
S
Q
10 detik
```

2. Class LinearEquation

   - UML Diagram

SegitigaSikuSiku
a,b,c,d,e,f : int
LinearEquation()
getA() : int
getB() : int
getC() : int
getD() : int
getE() : int
getF() : int
isSolvable() : boolean
getX : double

getY : double	

- Sourcecode (Class Buatan)

```java
public class Solution {

    public static class LinearEquation{

        private int a,b,c,d,e,f;


        LinearEquation(){

        }

        public LinearEquation(int a, int b, int c, int d, int e, int f) {
            this.a=a;
            this.b=b;
            this.c=c;
            this.d=d;
            this.e=e;
            this.f=f;
        }

        public int getA(){
            return a;
        }
        public int getB(){
            return b;
        }
        public int getC(){
            return c;
        }
        public int getD(){
            return d;
        }
        public int getE(){
            return e;
        }

        public int getF(){
            return f;
        }
        public boolean isSolvable(){
            return (((this.a) * (this.d)) - ((this.b) * (this.c))) != 0;
        }

        public double getX() {
            return ((this.e) * (this.d)) - ((this.b) * (this.f)) / ((this.a) * (this.d) - (this.
        }

        public double getY() {
            return ((this.a) * (this.f)) - ((this.e) * (this.c)) / ((this.a) * (this.d) - (this.
        }
```

- Sourcecode (Class Utama)

```java
public static void main(String[] args) {
    Scanner sc=new Scanner(System.in);
    int a=sc.nextInt();
    int b=sc.nextInt();
    int c=sc.nextInt();
    int d=sc.nextInt();
    int e=sc.nextInt();
    int f=sc.nextInt();

    LinearEquation linearEquation=new LinearEquation(a, b, c, d, e, f);
    if(linearEquation.isSolvable()){
        System.out.println("x="+linearEquation.getX());
        System.out.println("y="+linearEquation.getY());
    }else{
        System.out.println("Persamaan tidak memiliki solusi");
    }
}
```

- Score

Problem	Language	Time	Result	Score
Linear Equation 3	Java 8	a day ago	Accepted ✔	100