LAPORAN PRAKTIKUM

STRUKTUR DATA LINIER

MODUL VII

Dosen Pengampu

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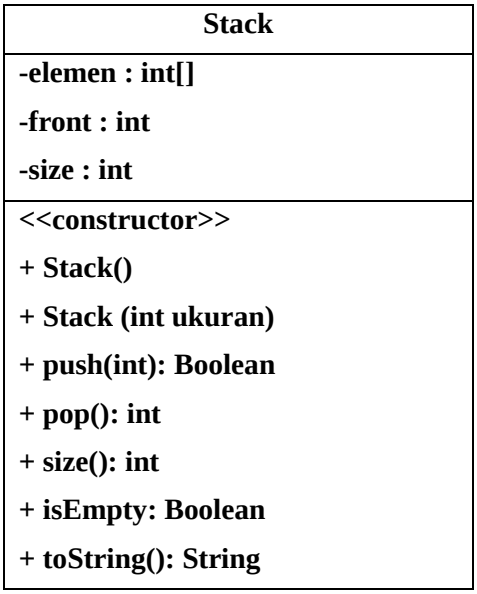
A. TUJUAN PRAKTIKUM

- Mahasiswa mampu membuat program struktur data stack, dengan struktur data statis

B. DIAGRAM UML



C. SOURCE CODE

Class mainnya

```java
package vscode.Modul7;

public class Main {
    Run | Debug
    public static void main(String[] args) {
        Stack Stack = new Stack();//1

        Stack.push(x:23);//2
        Stack.push(x:45);//3
        Stack.push(x:56);//4
        System.out.println("Ukuran : "+Stack.size()+ " => "+ Stack.toString());//5


        if (Stack.isEmpty()) //6
            System.out.println(x:"data sudah habis");
        else
            System.out.println("Ukuran : "+Stack.size()+ " => "+Stack.toString());


        int e = Stack.pop(); //7
        System.out.println("Data yang di pop : " + e);
        if (Stack.isEmpty())
            System.out.println(x:"data sudah habis");
        else
            System.out.println("Ukuran : "+Stack.size()+ " => "+Stack.toString());


         Stack.push(x:56); //8
        if (Stack.isEmpty())
            System.out.println(x:"data sudah habis");
        else
            System.out.println("Ukuran : "+Stack.size()+ " => "+Stack.toString());

        if (Stack.isEmpty()) //9
            System.out.println(x:"data sudah habis");
        else
            System.out.println("Ukuran : "+Stack.size()+ " => "+Stack.toString());
    }
}
```

Classnya

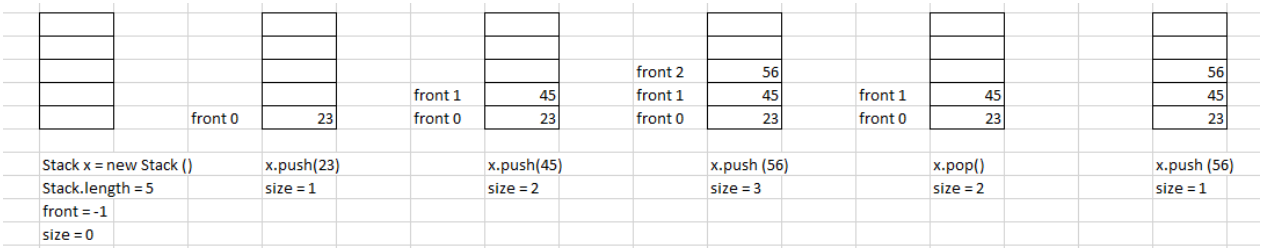
```java
package vscode.Modul7;



public class Stack {
    private int[] elemen;
    private int front, size ;


    public Stack() {
        this.elemen = new int[10];
        this.front = -1;
        this.size = 0;
    }
    public boolean push(int x){
        if (size < elemen.length) {
            size = size++;
            front++;
            elemen[front]= x;
            System.out.println("Data : " + x + " Dipush ke stack");
            return true;
        }else{
            return false;
        }
    }
    public int size(){
        return front +1;
    }
    public boolean isEmpty(){
        return front == -1;
    }
    public int pop(){
        int pop = elemen[front];
        front--;
        size--;
        return pop;

    }
    public String toString(){
        String x = " ";
        for (int i = 0; i < size; i++) {
            x += elemen[i] + " ";

        }
        return x;
    }
```

D. OUTPUT

```
Data : 23 Dipush ke stack
Data : 45 Dipush ke stack
Data : 56 Dipush ke stack
Ukuran : 3 => [23, 45, 56]
Ukuran : 3 => [23, 45, 56]
Data 56 dipop dari stack
Data yang di pop : 56
Ukuran : 2 => [23, 45]
Data : 56 Dipush ke stack
Ukuran : 3 => [23, 45, 56]
Ukuran : 3 => [23, 45, 56]
```

E. ANALISIS

Stack



Kesimpulan

Ini menunjukan operasi dasar stack, yaitu push, pop, dll. Stack merupakan struktur data yang punya guna untuk manejemen memori, tracking.