

Mentari Putri M.

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2C

## Algoritma dan Struktur data 2

### 1. Nested loop

```
package Nested-looping;  
public class No2 {  
    public static void main (String[] args) {  
        int x, y;  
        for (x = 0; x <= 4; x++) {  
            for (y = 0; y < x; y++) {  
                System.out.print(x);  
            }  
            System.out.println ( );  
        }  
    }  
}
```

### 2. Array menggunakan looping

```
public class arrayPerulangan_3 {  
    public static void main (String args []) {  
        String [] siswa = {"Perran", "Odera", "Geonno"}; //panjang array 3  
        for (int i = 0; i < siswa.length; i++) {  
            System.out.println ("Index ke " + i + " = " + mahasiswa[i]);  
        }  
    }  
}
```

Soal!

Kode	Nested looping	Array
Deklarasi package	package Nested-looping	-
Import library	-	-
Begin class	public class No2	public class arrayPerulangan_3
method main	public static void main (String [] args) {	public static void main (String args []) {
Documentation section	-	//panjang array 3



b. Jalannya kode program

No.	Penjelasan nested looping	Output
1.	$x = 0$ ; $0 \leq 4 \rightarrow \text{True}$ ; Lanjut ke looping dalam	
2.	$y = 0$ ; $0 < 0 \rightarrow \text{false}$ ; Stop	enter baris
3.	print()	
4.	$x++$ ; $x = 0 + 1 = 1$ ; $1 \leq 4 \rightarrow \text{True}$ ; lanjut	1
5.	$y = 0$ ; $0 < 1 \rightarrow \text{True}$ ; print 1	
6.	$y++$ ; $y = 0 + 1 = 1$ ; $1 < 1 \rightarrow \text{false}$ ; stop	enter baris
7.	print()	
8.	$x++$ ; $x = 1 + 1 = 2$ ; $2 \leq 4 \rightarrow \text{True}$ ; lanjut	2
9.	$y = 0$ ; $0 < 2 \rightarrow \text{True}$ ; print 2	22
10.	$y++$ ; $y = 0 + 1 = 1$ ; $1 < 2 \rightarrow \text{True}$ ; print 2	
11.	$y++$ ; $y = 1 + 1 = 2$ ; $2 < 2 \rightarrow \text{false}$ ; stop	
12.	print()	enter baris
13.	$x++$ ; $x = 2 + 1 = 3$ ; $3 \leq 4 \rightarrow \text{True}$ ; lanjut	3
14.	$y = 0$ ; $0 < 3 \rightarrow \text{True}$ ; print 3	33
15.	$y++$ ; $y = 0 + 1 = 1$ ; $1 < 3 \rightarrow \text{True}$ ; print 3	333
16.	$y++$ ; $y = 1 + 1 = 2$ ; $2 < 3 \rightarrow \text{True}$ ; print 3	
17.	$y++$ ; $y = 2 + 1 = 3$ ; $3 < 3 \rightarrow \text{false}$ ; stop	
18.	print()	enter baris
19.	$x++$ ; $x = 3 + 1 = 4$ ; $4 \leq 4 \rightarrow \text{True}$ ; lanjut	4
20.	$y = 0$ ; $0 < 4 \rightarrow \text{True}$ ; print 4	44
21.	$y++$ ; $y = 0 + 1 = 1$ ; $1 < 4 \rightarrow \text{True}$ ; print 4	444
22.	$y++$ ; $y = 1 + 1 = 2$ ; $2 < 4 \rightarrow \text{True}$ ; print 4	4444
23.	$y++$ ; $y = 2 + 1 = 3$ ; $3 < 4 \rightarrow \text{True}$ ; print 4	
24.	$y++$ ; $y = 3 + 1 = 4$ ; $4 < 4 \rightarrow \text{false}$ ; stop	

No.	Penjelasan array	Output
1.	$i = 0$ ; $0 < 3 \rightarrow \text{True}$ ; print mahasiswa[0]	Indeks ke 0 = Reihan
2.	$i++$ ; $i = 0 + 1 = 1$ ; $1 < 3 \rightarrow \text{True}$ ; print siswa[1]	Indeks ke 1 = Odera
3.	$i++$ ; $i = 1 + 1 = 2$ ; $2 < 3 \rightarrow \text{True}$ ; print siswa[2]	Indeks ke 2 = Geanno
4.	$i++$ ; $i = 2 + 1 = 3$ ; $3 < 3 \rightarrow \text{false}$ ; stop	

