



# Array (Dua Dimensi)

Pemrograman 3



# Array

- Array pada java adalah objek yang dapat digunakan untuk menyimpan sejumlah data.
- Jenis :
  1. Array satu dimensi
  2. Array multidimensi

# Deklarasi Array Dua Dimensi

- Cara 1 :

```
Tipe_data nama_array [][] = new tipe_data[baris][kolom];
```

Contoh :

```
int abc [][] =new int [2][2];  
abc [0][0]=1;  
abc [0][1]=2;  
abc [1][0]=3;  
abc [1][1]=4;
```

# Deklarasi Array Dua Dimensi

- Cara 2 :

```
Tipe_data nama_array [] [] = { {n00,n01,n02,.....},  
                                {n10,.....},  
                                {.....}  
                                };
```

Contoh :

```
String data[][] = {"123","Diana","Jakarta"},  
                  {"234","Sari","Bandung"},  
                  {"456","Riani","Semarang"}  
                  };
```

# Contoh Program

```
class array2D{
    public static void main (String [] args){
        int abc[][]=new int[2][2];
        abc[0][0]=1;
        abc[0][1]=2;
        abc[1][0]=3;
        abc[1][1]=4;

        int i,j;
        for (i=0;i<2;i++){
            for (j=0;j<2;j++){
                System.out.print(abc[i][j]+" ");
            }
            System.out.println();
        }

        System.out.println();

        String data[][]={
            {"123","Diana","Jakarta"},
            {"234","Sari","Bandung"},
            {"456","Riani","Semarang"}
        };

        for (i=0;i<3;i++){
            for (j=0;j<3;j++){
                System.out.print(data[i][j]+"\\t");
            }
            System.out.println();
        }
    }
}
```

# Contoh Program

```
import java.util.Scanner;
class DataArr2D{
    public static void main (String [] args){
        Scanner fa=new Scanner(System.in);

        System.out.print("Jumlah Data : "); int jdata=fa.nextInt();

        String data[][]=new String[jdata][3];

        for (int i=0;i<jdata;i++){
            System.out.print("NPM      : ");   data[i][0]=fa.next();
            System.out.print("Nama      : ");   data[i][1]=fa.next();
            System.out.print("Alamat   : ");   data[i][2]=fa.next();
            System.out.println();
        }

        System.out.println("-----");
        System.out.println("NPM\tNama\tAlamat");
        System.out.println("-----");
        for (int i=0;i<jdata;i++){
            System.out.print(data[i][0]+\t"+data[i][1]+\t"+data[i][2]);
            System.out.println();
        }
    }
}
```

# Output

```
Jumlah Data : 2  
NPM       : 111  
Nama      : Aji  
Alamat    : Jkt
```

```
NPM       : 112  
Nama      : Ari  
Alamat    : Bgr
```

```
-----  
NPM      Nama      Alamat  
-----  
111      Aji        Jkt  
112      Ari        Bgr
```

# TUGAS

- Buat program menggunakan array dua dimensi untuk menghasilkan ouput sebagai berikut :

```
Jumlah Data : 3
-----
Mata Kuliah      : P3
Nilai Teori      : 60
Nilai Praktikum : 90

Mata Kuliah      : P2
Nilai Teori      : 70
Nilai Praktikum : 80

Mata Kuliah      : P1
Nilai Teori      : 80
Nilai Praktikum : 80
-----
Mata Kuliah      Teori    Praktikum    Rata-rata
-----
P3                60      90           75.0
P2                70      80           75.0
P1                80      80           80.0
```