

#11

ARRAYS



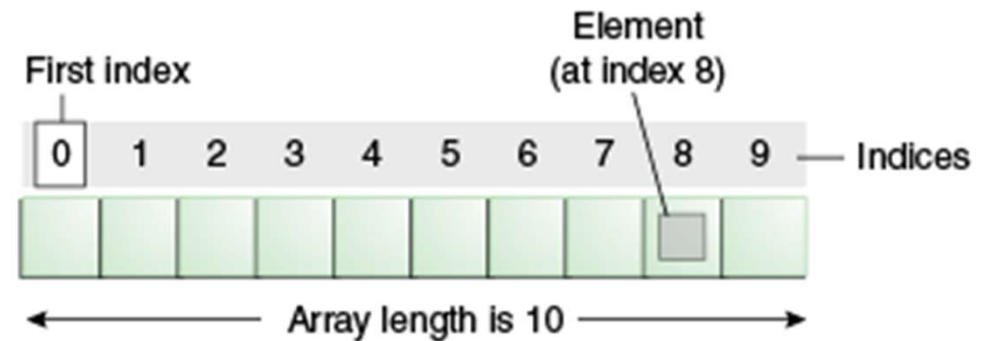
ZOOMING

youtube: Zooming | <https://github.com/Soba-Arjun/>



Arrays

- It is an object which contains elements of a similar data type.
- The elements of an array are stored in a contiguous memory location.
- Types of array in java
 1. Single Dimensional Array
 2. Multidimensional Array



Single Dimensional Array

//syntax

```
Datatype[] variable_name = new datatype[size];
```

```
Datatype []variable_name = new datatype[size];
```

```
Datatype variable_name[] = new datatype[size];
```

```
int a[]=new int[3];//declaration and instantiation
```

```
a[0]=10;//initialization
```

```
a[1]=7;
```

```
a[2]=35;
```



Single Dimensional Array

Declaration, Installation, Initialization

```
int a[]={33,3,4,5}; //declaration, instantiation and initialization
```

```
class Testarray1{  
    public static void main(String args[])  
    {  
        int a[]={33,3,4,5};  
        for(int i=0;i<a.length;i++)  
            System.out.println(a[i]);  
    }  
}
```



Single Dimensional Array

Passing array to a method

```
class Testarray2{  
    static void min(int arr[]){  
        int min=arr[0];  
        for(int i=1;i<arr.length;i++)  
            if(min>arr[i])  
                min=arr[i];  
        System.out.println(min);  
    }  
    public static void main(String args[]){  
        int a[]={33,3,4,5};  
        min(a);//passing array to method  
    }  
}
```



Single Dimensional Array

Return array from a method

```
class Testarray2{
    static int[] show()
    {
        return new int[]{10,20,30};
    }
    public static void main(String args[])
    {
        int arr[]=show();
        for(int i=0;i<arr.length;i++)
            System.out.println(arr[i]);
    }
}
```



Multi Dimensional Array

//syntax

```
Datatype[][] variable_name = new datatype[size] [size];
```

```
Datatype [][]variable_name = new datatype[size] [size];
```

```
Datatype variable_name[][] = new datatype[size] [size];
```

```
int[][] arr=new int[3][3];//3 row and 3 column
```

```
arr[0][0]=1;  
arr[0][1]=2;  
arr[0][2]=3;  
arr[1][0]=4;  
arr[1][1]=5;  
arr[1][2]=6;  
arr[2][0]=7;  
arr[2][1]=8;  
arr[2][2]=9;
```



Multi Dimensional Array

```
class Testarray3{
    public static void main(String args[]){
        //declaring and initializing 2D array
        int arr[][]={{1,2,3},{2,4,5},{4,4,5}};
        //printing 2D array
        for(int i=0;i<3;i++){
            for(int j=0;j<3;j++){
                System.out.print(arr[i][j]+" ");
            }
            System.out.println();
        }
    }
}
```

```
1 2 3
2 4 5
4 4 5
```

