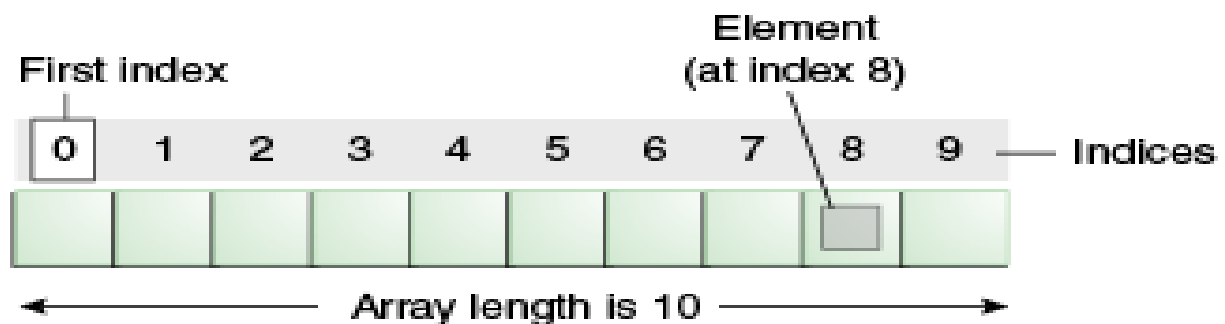


Java array

Java array is an object which contains elements of a similar data type. Additionally, The elements of an array are stored in a contiguous memory location. It is a data structure where we store similar elements. We can store only a fixed set of elements in a Java array.

Array in Java is index-based, the first element of the array is stored at the 0th index, 2nd element is stored on 1st index and so on.



Types of Array in java

There are two types of array.

- Single Dimensional Array
- Multidimensional Array

Single Dimensional Array in Java

Syntax to Declare an Array in Java

1. `dataType[] arr;` (or)
2. `dataType []arr;` (or)
3. `dataType arr[];`

Instantiation of an Array in Java

1. arrayRefVar=**new** datatype[size];

Example of Java Array

Let's see the simple example of java array, where we are going to declare instantiate, initialize and traverse an array.

1. //Java Program to illustrate how to declare, instantiate, initialize
2. //and traverse the Java array.
3. **class** Testarray{
4. **public static void** main(String args[]){
5. **int** a[]=**new int**[5];//declaration and instantiation
6. a[0]=10;//initialization
7. a[1]=20;
8. a[2]=70;
9. a[3]=40;
10. a[4]=50;
11. //traversing array
12. **for**(**int** i=0;i<a.length;i+)//length is the property of array
13. System.out.println(a[i]);
14. }}

Output:

```
10
20
70
40
50
```

Multidimensional Array in Java

In such case, data is stored in row and column based index (also known as matrix form).

Example of Multidimensional Java Array

Let's see the simple example to declare, instantiate, initialize and print the 2Dimensional array.

1. //Java Program to illustrate the use of multidimensional array
2. **class** Testarray3{
3. **public static void** main(String args[]){
4. //declaring and initializing 2D array
5. **int** arr[][]={{1,2,3},{2,4,5},{4,4,5}};
6. //printing 2D array
7. **for(int** i=0;i<3;i++){
8. **for(int** j=0;j<3;j++){
9. System.out.print(arr[i][j]+" ");
10. }
11. System.out.println();
12. }
13. }}

Test it Now

Output:

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