

Java Array

Array is a collection of elements of same type. For example an int array contains integer elements and a String array contains String elements. The elements of Array are stored in contiguous locations in the memory.

This is how an array looks like:

```
int number[] = new int[10]
```

Here `number` is the array name. The type of the array is integer, which means it can store integer values. The size of the array is 10.

Array works on an index-based system. In the above array, `number[0]` represents the first element of the array, `number[1]` represents the second element of the array and so on. The index of array starts from 0 and ends at array_size-1. In the above example, the index of first element is 0 and index of 10th element is 9.

Declaration, Instantiation and Initialization of Array in Java

instantiate and initialize an Single Dimensional Array.

```
int number[]; //array declaration
number[] = new int[10]; //array instantiation
number[0] = 10; //array Initialization
number[1] = 20; //array Initialization
```

We can also declare an array like this: All the **three following syntax** are valid for array declaration.

```
int[] number;
int []number;
```

```
int number[];
```

This is how you can declare a multidimensional array: All the four syntax are valid multidimensional array declaration.

```
int[][] arr;  
int [][]arr;  
int arr[][];  
int []arr[];  
int[][] arr=new int[2][3]; //2 rows and 3 columns
```