

Arrays :

=====

-> generally in 'C' programming language we learned that array is collection of homogeneous/same type of elements which is holding contiguous memory location.

-> but in java array is collection of homogeneous/hetrogeneouse type of elements which is holding contiguous memory location.

-> The main advantage of the array is random access

-> the drawback of array is, the array is fixed in size, if once we create array then we can not modified array size.(Solved in java Collection Framwork)

-> in java we can create primitive type array as well as non-primitive type of array.

For Example :

A) Primitive Type Array :

- 1) int a[]; // used to store integer type values
- 2) float f[]; // used to store floating type vlaues
- 3) double d[]; // used to store double type values
- 4) char c[]; // used to store character type values
- 5) boolean b[]; // used to store double values(TRUE/FALSE)
- 6) byte b[]; // used to store byte values
- 7) short b[]; // used to store short values
- 8) long l[]; // used to store long values

B) Non-Primitive Type / Object Type / Class Type :

- 1) Object type array :-> Object obj[]; // Object type array is used to store all types of values.
- 2) Class Type array :-> Student s[]; OR Employee e[]; OR NareshIt n[]; so on. // used to store perticular class type object only.
- 3) Abstract Class Type of array : -> // used to store child-class objects (will discuss in Oop's)
- 4) Interface Type Array :-> // used to store implementation class objects (will discuss in Oop's)

NOTE : USING OBJECT TYPE ARRAY WE CAN STORE HOMOGENEOUS / HETROGENEOUS TYPES OF ELEMENTS INTO THE ARRAY.

Example : Object obj[] = {123,"java",10.0,'A',true};

Types Of Array :

=====

There are mainly three types of the array we have

- 1) One Dimensional (1D) Array
- 2) Two Dimension (2D) Array
- 3) Multidimensional Array / Jagged Array

1) One Dimensional Array :

- > It is a list of the variable of similar data types.
- > It allows random access and all the elements can be accessed with the help of their index.
- > The size of the array is fixed.
- > Example : int arr[]={1,2,3,4,5,...} ;

2) Two Dimensional Array / Multidimensional Array / Jagged Array :

- > It is a list of lists of the variable of the same data type.
- > It also allows random access and all the elements can be accessed with the help of their index.
- > It can also be seen as a collection of 1D arrays. It is also known as the Matrix.
- > Its dimension can be increased from 2 to 3 and 4 so on.
- > They all are referred to as a multi-dimension array.
- > The most common multidimensional array is a 2D array.
- > Example 1 : int arr[][] = {{1,2},{3,4}}; // example of 2D array OR Multidimensional Array. (2*2 matrix)
- > Example 2 : int a[][] = {{1,2,3},{2},{3},{5,6,7,3,8}}; // example Multidimensional array / jagged array. (???)