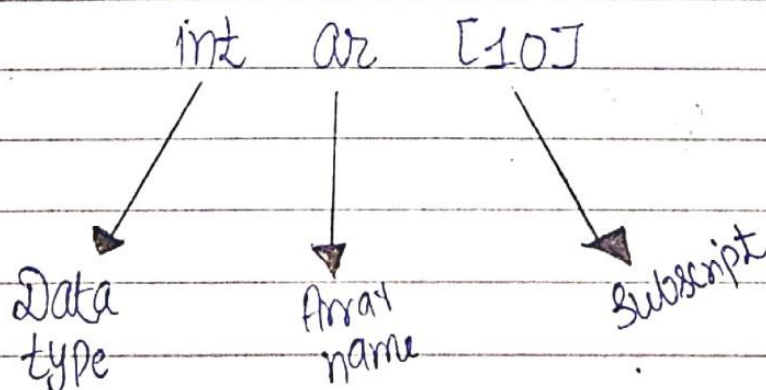


Array Notes

* Definition of an Array :-

- An array is a collection of items stored at contiguous memory locations.
- Array are defined as the collection of similar type of data items.
- Arrays are the derived data type in C Programming language which can store type of data such as int, char, float etc.
- Important Terms to understand the concept of Array:
 - Element:- Each item stored in an array is called an element.
 - Index:- Each location of an element in an array has a numerical index.

→ The subscript or an index is enclosed in brackets array name.



_ / _ / _

→ If one subscript is used, the array is known as one-dimensional array.

→ If two subscripts are used, the array is known as two-dimensional array.

→ The array which have two or more subscripts, are also known as Multidimensional Array.

* Array Declaration:- The elements in an array starts with 0.

→ To declare an array, we must provide following information:-

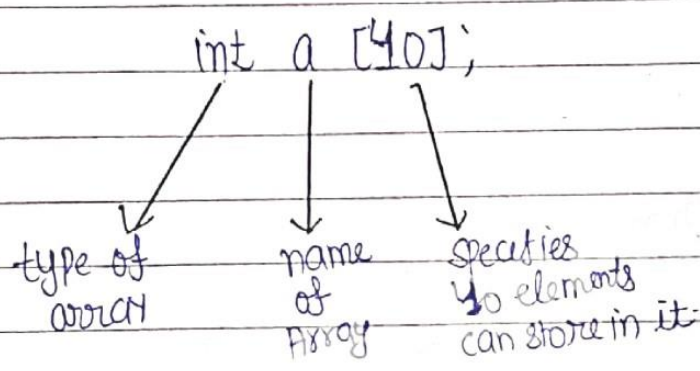
1. Data type of an array.
2. The name of the array.
3. The name of subscripts in an array.
4. The maximum value of subscript.

Syntax of Array:-

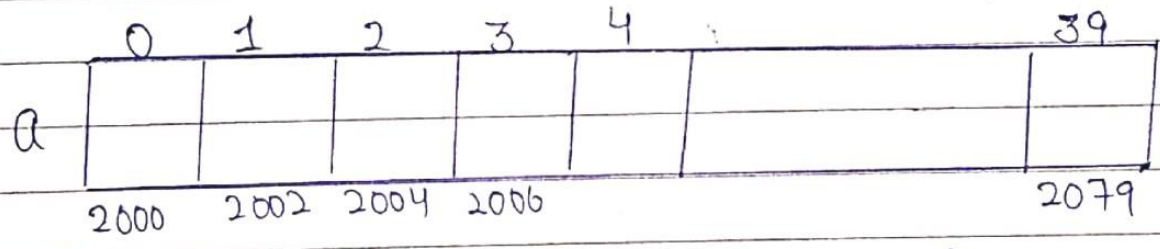
type name [sub1] [sub2] ... ;

- where, "type" :- is the data type (int, char or float)
- "name" :- is the name of the array
- "sub1", sub2 ... :- are the number of subscripts arrays in an array.

Example



* Array representation :- 1. One dimensional Array
int a [40];

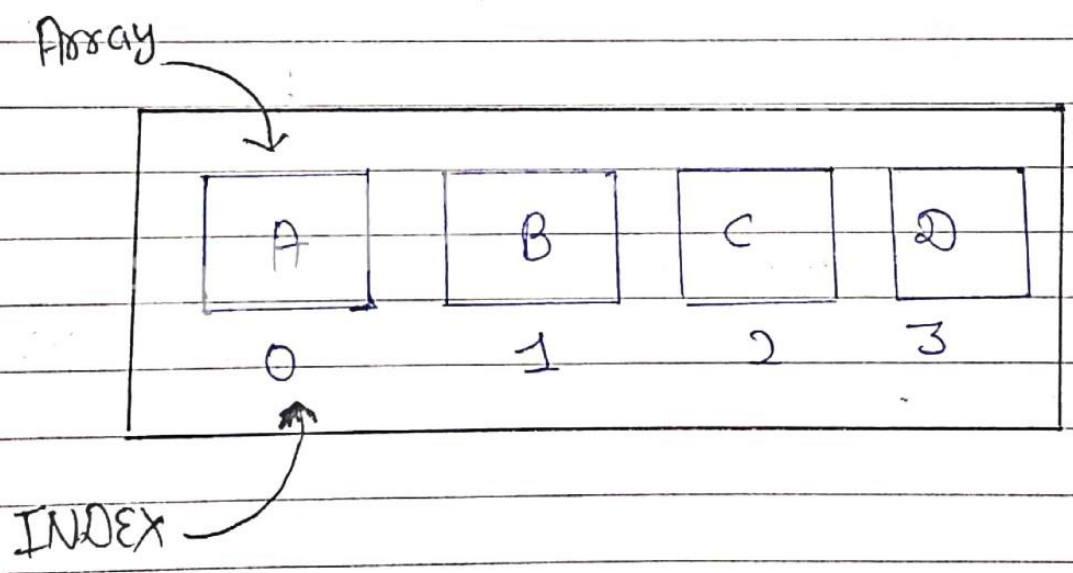


- One integer value requires 2 bytes of memory.
- Array 'a', reserve a contiguous block of 80 bytes in memory.
- 2000, 2002 ... are addresses of memory locate
- It starts from 0 location and ends with one less than value of subscript i.e. 39.

2. `int a[2][3] = { 10, 20, 30, 40, 50, 60 };`

	Col 0	Col 1	Col 2
Row 0	10	20	30
Row 1	40	50	60

* Concept of Array:-



Array length = 4

first Index = 0

last Index = 3