Data Structure lab

CSE-604

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Basic Introduction of Array

What is array?

An array is a collection of items of the same data type stored at contiguous memory locations.

Example:

Suppose, we have to find the average mark of 100 students. So, we need to declare 100 variable like marks1, marks2, marks3----marksn to store it. That is very time-consuming and also difficult. That’s why we need array to do the work simply.

How to Declare Array?

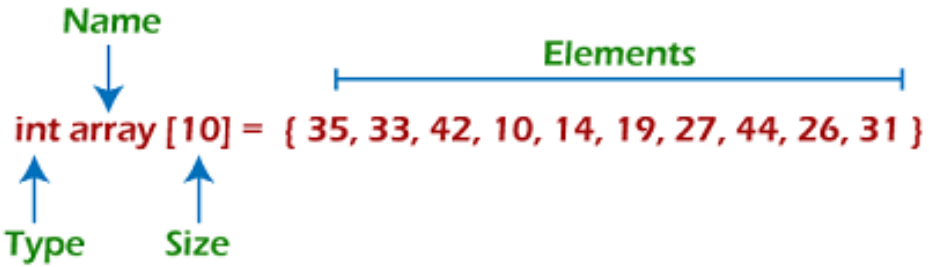
Syntax:

Data type array name [array size];

Ex:

int marks [100];

Representation of an array



As per the above illustration, there are some of the following important points -

- Index starts with 0.
- The array's length is 10, which means we can store 10 elements.
- Each element in the array can be accessed via its index.

Memory allocation of array

Int array [5];

So , the size of array is 5. There will be 5 variable.

Ex: array [0], array [1], array [2], array [3], array [4],

Initialize array with value:

arr [5] = {100, 104, 108, 112, 116}

That means

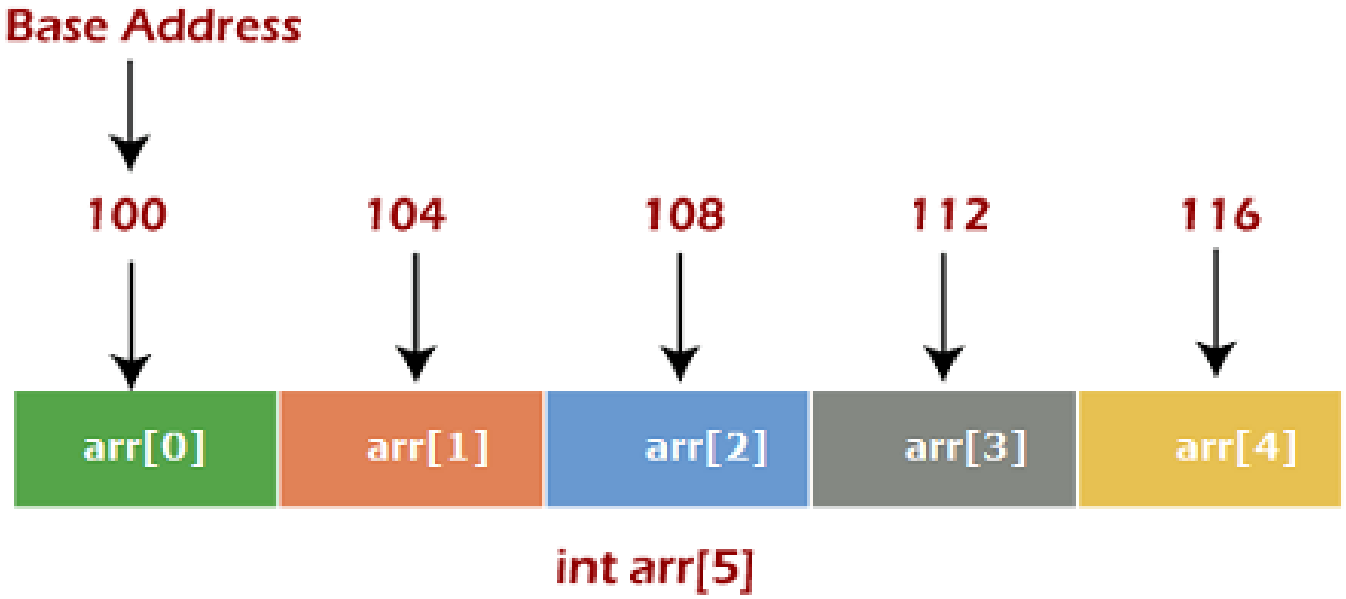
arr [0] =100;

arr [1] = 104

arr [2] = 108

arr[3] = 112

arr[4] = 116


Base Address
100
104
108
112
116
arr[0]
arr[1]
arr[2]
arr[3]
arr[4]
int arr[5]