

Assignments Answers

1. What do you mean by an Array

Answer:

- Array is a single variable , holding multiple values or storing multiple values which are generally called elements of Array.
- General definition of Array is " It refers to index collection of fixed no of homogenous data elements. "

2. How to create an Array ?

Answer : 3 – steps we have to follow to create an Array . Those are

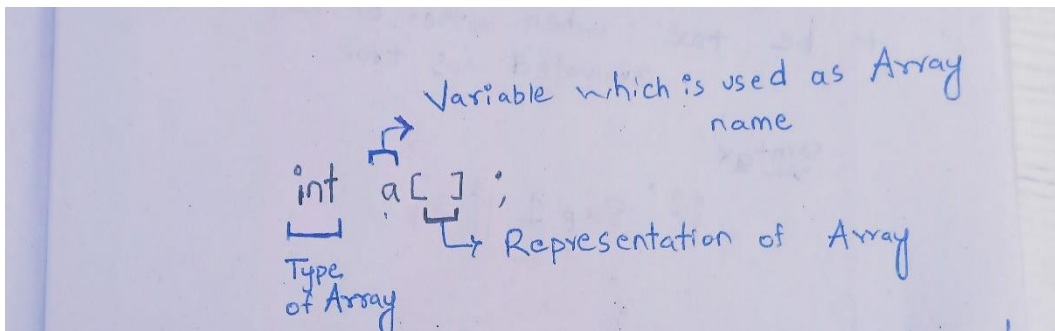
Step 1 : **Declaration**

Step 2 : **Construction**

Step 3 : **Initialization**

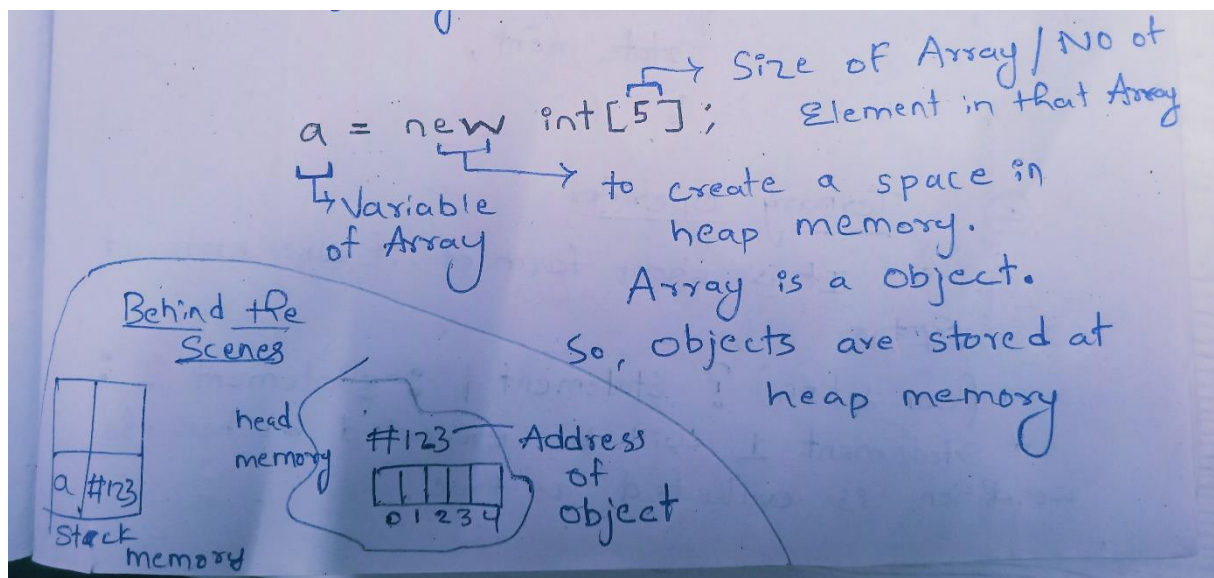
Declaration : Let's take an int type array,

`int a [] ;`



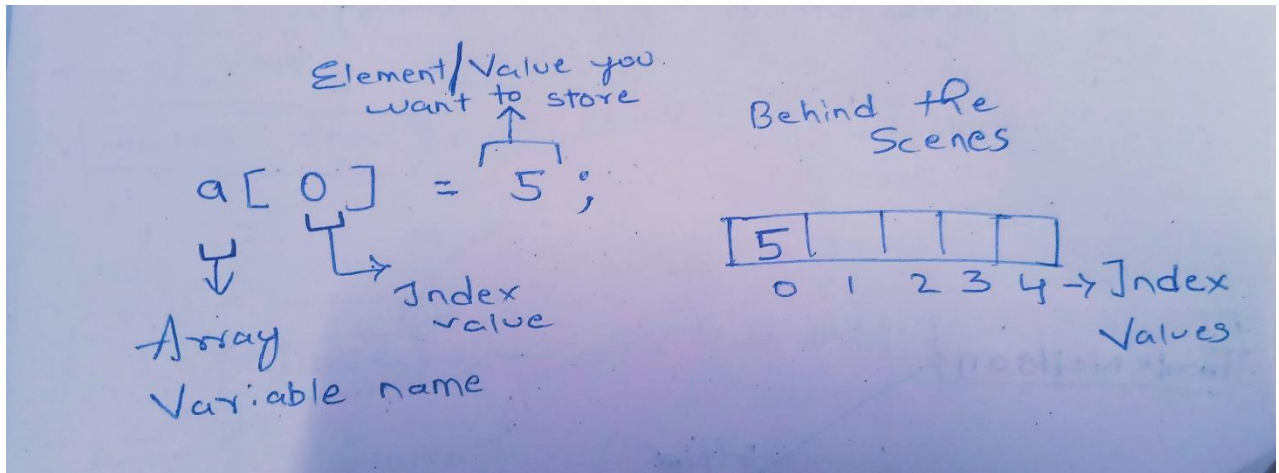
Construction :

`a = new int [5] ;` // let's take the size of the array be 5 elements.



Initialization :

`a[0] = 5;` // let's assign value 5 in the array.



Shortcut :

Declaration , Construction and Initialization .

```
Int a [] = { 5 , 0 , 0 , 0 , 0 };
```

3. Can we change the size of an array at run time ?

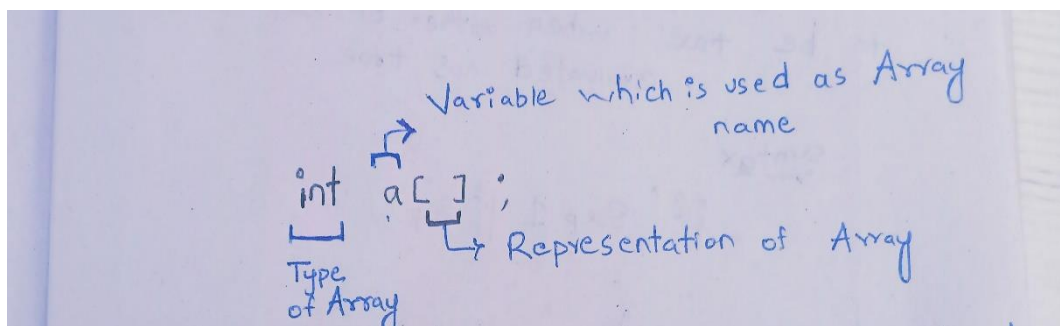
Answer : No , the size of the array is determined at the time of creation of array or initializing its values directly during creating of array . Once created , we can not change the size of that array.

4. Can you declare an array without assigning the size of an array ?

Answer: Yes , We can declare an array without assigning any size to it .

Declaration : `int a [];`

But to use this array , you must and should construct & initialize it



5. What is the default value of Array ?

Answer: Java assigns default values for the Array depending upon what type of array it is . For

➤ `Int type Array = default value : 0`

- String type Array = default value : null
- Boolean type Array = default value : false
- Char type Array = default value : Unicode (\u0000)

6. What is a 1D array with an example ?

Answer: It is simply an array which includes only one row and multiple columns.

By definition : A One-Dimensional Array is “ a group of elements having same data type which are stored in a linear arrangement under a single variable name. ”

Example : `int b[] = { 8,4,3,3,3 };`

It is a int type array with a variable name b , store the elements “ 8,4,3,3,3 ” .

7. Write a program on a 2D array?

Answer: fileName: “ Program2DArray ”

```
class Program2DArray
{
    public static void main(String[] args) {
        // 2-D Array

        // Declaration and Construction

        int a[][] = new int[3][3];

        // Initialization
        a[0][0] = 4 ;
        a[0][1] = 2 ;
        a[0][2] = 8 ;
        a[1][0] = 0 ;
        a[1][1] = 1 ;
        a[1][2] = 4 ;
        a[2][0] = 2 ;
        a[2][1] = 8 ;
        a[2][2] = 9 ;

        // printing of this 2-D Array
        // We have to use Enhanced For Loop

        for(int b[] : a )
        {
            for(int c : b)
            {
                System.out.print(c + " ");
            }
            System.out.println();
        }

        // Shortcut
        /*
```

```
// Declaration , Construction and Initialization

int a[][] = {
    {4,2,8} ,
    {0,1,4} ,
    {2,8,9}
} ;

*/

}
```

Output:

```
▼ TERMINAL

at Microsoft.PowerShell.PSConsoleReadLine.InputLoop()
at Microsoft.PowerShell.PSConsoleReadLine.ReadLine(Runspace runspace,
-----
PS D:\PW Labs\PWAssignments\Feb 1> d:; cd 'd:\PW Labs\PWAssignments\Feb
Messages' '-cp' 'C:\Users\pavan\AppData\Roaming\Code\User\workspaceStorag
2DArray'
4 2 8
0 1 4
2 8 9
PS D:\PW Labs\PWAssignments\Feb 1> 
```