

Array

An Array is a collection of items of the same variable type that are stored at contiguous memory locations. It is one of the most popular and simple data structures used in programming.

Why ~~we~~ do we need Array:

Assume there is a class of five students and if we have to keep records of their marks in examination then we can do this by declaring five variables individually and keeping track of records but what if the number of students become very large. It would be challenging to manage and maintain the data. So we use an array of students.

Basic elements of an array

Array Name: It is a variable

Array size: It is ~~an~~ a positive integer value which shows the number of elements present in array.

datatype: It defines which type of value is stored by the elements of an array.

It may be int, float, char etc.

Declaration of array

An Array can be declared in different way in different language

In C++

```
int student[10];
```

int :- It show the element store only integer values

student :- name of Array

10 :- Size of Array i.e number of element in array.

Note :- in C the subscript start with 0.

An element of array can be called by combination of array name and subscript as.

first element	:	student[0]
second element	:	student[1]
third element	:	student[2]

⋮
 ⋮
 ⋮
 ⋮
 ⋮

last element : student[9]

the subscript of last element is one smaller than the size of Array.