

## Summary

An array is a collection of elements with same data type Or with the same name we can store many elements, the first or second or third etc can be distinguished by using the index(subscript). The first element's index is 0, the second elements index is 1, and so on.

### 8.1.1 Declaring arrays

Suppose we want to find the sum of 100 numbers then we have to declare 100 variables to store the values. It is a laborious work. Hence the need for array arises.

Syntax : data\_type array\_name[size];

To store 100 numbers the array declaration is as follows

int n[100]; By this we store 100 numbers. The index of the first element is 0 and the index of last element is 99.

### 8.1.2 Memory allocation for arrays

The amount of memory requirement is directly related to its type and size.

int n[100]; It requires 2Bytes(for each integer)\*100=200 Bytes.

float d[100]; It requires 4Bytes(for each float)\*100=400 Bytes.

### 8.1.3 Array initialization

Array can be initialized in the time of declaration.

Eg. int age[4]={16,17,15,18};

### 8.1.4 Accessing elements of arrays

Normally loops are used to store and access elements in an array.

Eg.

```
int mark[50],i;
for(i=0;i<50;i++)
{
    cout<<"Enter value for mark"<<i+1;
    cin>>mark[i];
}
cout<<"The marks are given below:";
for(i=0;i<50;i++)
    cout<<mark[i];
```

## 8.2 Array operations

8.2.1 Traversal- Accessing all the elements of an array is called traversal.

**Qn. 1**

From the following which is not true for an array

ഒരു array യെ സംബന്ധിച്ച് ശരിയല്ലാത്തത് എതാണ്.

- a) It is easy to represent and manipulate array variable
- b) Array uses a compact memory structure
- c) Readability of program will be increased
- d) Array elements are dissimilar elements

**ANS**

d) Array elements are dissimilar elements

**Qn. 2**

Consider the following declaration.

താഴെ കൊടുത്തിട്ടുള്ള declaration ശ്രദ്ധിക്കുക. ഇത് valid ആണോ? അല്ലെങ്കിൽ ശരിയായ declaration നൽകുക.

int mark (50)

Is it valid? If no give the correct declaration

**ANS**

It is not valid. The correct declaration is as follows.  
int mark[50]. Use square brackets instead of parenthesis

**Qn. 3**

Consider the following declaration.

താഴെ കൊടുത്തിട്ടുള്ള declaration ശ്രദ്ധിക്കുക.

int mark[200]

The index of the last element is ----

അവസാനത്തെ element ന്റെ index എത്രയാണ്.

**ANS**

199

**Qn. 4**

Consider the following declaration

int mark[200]

The index of the first element is ----

ആദ്യത്തെ element ന്റെ index എത്രയാണ്.

**ANS**

0

**Qn. 5**

Consider the following

int age[4]={15,16,17,18};

From the following which type of initialisation is this.

ഇത് ഏത് തരത്തിലുള്ള initialisation ആണ്.

- a) direct assignment
- b) along with variable declaration
- c) multiple assignment
- d) None of these

**ANS**

b) along with variable declaration

**Qn. 6**

From the following which is used to read and display array elements

Array യിൽ elements എടുക്കുന്നതിന് താഴെ കൊടുത്തിരിക്കുന്നതിൽ ഏത് ഉപയോഗിക്കും.

- a) loops
- b) if
- c) switch
- d) if else ladder

**ANS**

a) loops