Array

An array is a finite set of same type of data items. In other words it is a collection of homogeneous data items.

The elements of an array are stored in successive memory locations. Any elements of an array is referred by array name and index number (subscript).

Types of array

1. One dimensional or Linear Array
2. Two dimensional Array

1-D Array:

An array that can be represented by only one dimension such as row or column and that holds finite number of same type of data items is called one dimensional array.

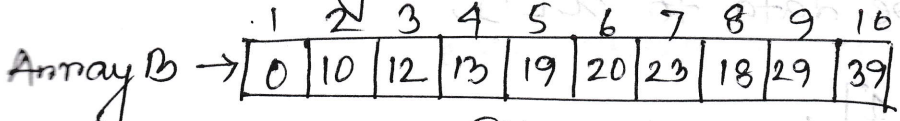

Fig: Graphical Representation of 1-D Array

1, 2, ... 10 index number

0, 10, ... 39 data items on elements of the array.

B the array name

Symbolically the element of the array is expressed as B[] or B[i]. which denotes ith element of the array.

Store/Retrieve an element into/~~am~~ from an array

```
int a[10], i, n;
scanf("%d", &n);
for(i=1; i<=n; i++)
  { printf("%d", &a[i]);
    scanf
  }
for(i=1; i<=n; i++)
  { printf("%d", a[i]);
  }
```

Algorithm to search the largest element of a list

1. Input x[1 ... n];
2. for(i=1; i<=n; i++)
   Store data to x[i];
3. large = x[1];
4. for(i=2; i<=n; i++)
   if (x[i] > large)
   large = x[i]
5. output: the largest number
   (Print the value of large)