**What is an Array?**

An array is a collection of items of same data type stored at contiguous memory locations. For simplicity, we can think of an array as a flight of stairs where on each step is placed a value. There we can see the array elements and array indexes.

**Declaring Array**

**data\_type** that must be common to all elements and **SIZE** is a constant value that defines array maximum capacity.

**Initializing Array**

Initialization of an array either one by one or using a single statement as follows –

**Address of the Array elements**

Here we can see the formula to calculate the address of the array elements. We also see an example of the formula

**Multi-Dimensional Arrays**

If we consider the multi-dimensional array, we also have to consider the row and column for that. Here We also see an example of the formula.

**Time for Common Operations**

Here, we consider a simple array and want to remove an element at the end of the array. Then, the time complexity will be Big O (1). In addition, if we want to add an element at the end of the array, the time complexity will also be Big O (1). As for adding and removing from the beginning and middle of the array, the time complexity will be Big O(n) in both cases.