**Dynamic Array :** In computer science, a dynamic array, growable array, resizable array, dynamic table, mutable array, or array list is a random access, variable-size list data structure that allows elements to be added or removed. It is supplied with standard libraries in many modern mainstream programming languages. Dynamic arrays overcome a limit of static arrays, which have a fixed capacity that needs to be specified at allocation.

How Dynamic Array Works: A Dynamic array (vector in C++, ArrayList in Java) automatically grows when we try to make an insertion and there is no more space left for the new item. Usually the area doubles in size.

A simple dynamic array can be constructed by allocating an array of fixed-size, typically larger than the number of elements immediately required. The elements of the dynamic array are stored contiguously at the start of the underlying array, and the remaining positions towards the end of the underlying array are reserved, or unused. Elements can be added at the end of a dynamic array in constant time by using the reserved space until this space is completely consumed.

When all space is consumed, and an additional element is to be added, the underlying fixed-sized array needs to be increased in size. Typically resizing is expensive because you have to allocate a bigger array and copy over all of the elements from the array you have overgrown before we can finally append our item.

When we enter an element in array but array is full then you create a function, this function creates a new array double size or as you wish and copy all element from the previous array to a new array and return this new array. Also, we can reduce the size of the array. And add an element at a given position, remove the element at the end default and at the position also.