**MCA371-DATA STRUCTURES IN C**

**Assessment - CAC 1**

**2147255\_Nithya. S**

**3 MCA B**

**Provide a comparative study on DS Applications and Algorithm efficiency, and present your conclusion.**

Describe common applications for arrays, linked structures, stacks, and queues.

**Arrays**

Arrays are one of the ways to store same type of data continuously in the data structure. It has a fixed size. An index value helps in accessing the array elements. Elements can’t be different types and the index value can’t be a string. The user can implement an array in the following cases:

* Need access to the elements using the index.
* Know the size of the array before defining the memory.
* Speed when iterating through all the elements in a sequence.
* Array takes less memory compare than a linked list.

Example: The variables are stored in a continuous manner. Create an array of int type named ‘a’ of size 6. The memory location also would be in a sequence.

