# Abstract data types & Arrays

ADTs are the way of classifying data structures by providing a minimal expected interface and list of methods

ADT → Minimal required functionality
ADT → Operations

ARRAY - ADT

An array ADT holds the collection of given elements accessible by an index

elements → Can be int / float, custom

Minimal functionality → get(i) → get element i
Set(i, num) → Set element i to num.

representation

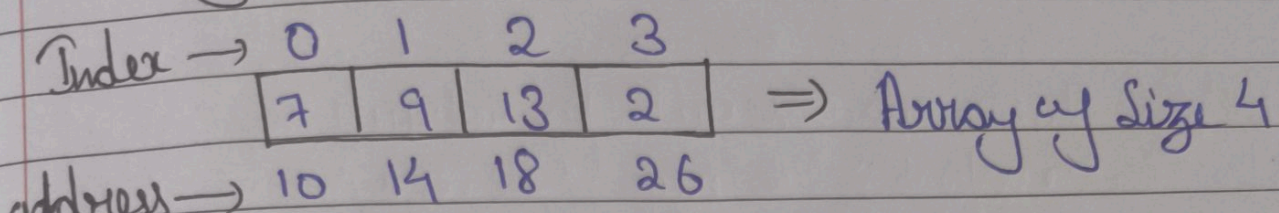
Operations: Max()
Min()
Search(num)
Insert(i, num)
Append(x)

## Static and Dynamic arrays

Static arrays → Size cannot be changed

Dynamic arrays → Size can be changed

# Memory representation of Arrays




Elements in an array are stored in contigous memory locations

Elements in an array can be accessed using the base address in constant time → O(1)