_	Mela t I t I I I O Account
	Abstract data types & Arrays
- har	Anto au Maria de Charles
-	ADTs are the way of classifying data Structures by providing a minimal expected interface and Set of methods
-	by providing a minimal expected interface and
$\dashv$	Set of methodson to nathanian we not
$\dashv$	ADT Minimal required functionality
$\dashv$	to the company of the state of
1	operations
$\dashv$	ARRAYO - A DOTAL WAS WALLE ALL IN WILLIAM ALL IN WI
$\neg$	An onerous ADT holds the Collection of given elements
$\neg$	An array ADT holds the collection of given elements accessible by an index.
	Misimal Cureling the int
	Minimal functionality - get (i) -> get element i floot, austom
	Set (i. num) -> Get element i to num
	Set (i, num) → Set element i to num. representation
	Operations - Max()
	Min ()
	Search (num)
	Insert (i, num)
	Append (x)
4	
4	Static and Dynamic arrays
4	
+	Static arrays -> Size lannot be changed
+	
+	Dynamic arrays -> Size lan be changed
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Quick Quiz: Code the operations mentioned above in Clanguage by creating Array ADT using Structures.
in Clanguage by creating Array ADT using Structures
Structures.
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Memory representation of Arrays
Index + 0 1 2 3 => Acres of Gize +
address + 10 14 18 22 26
Elements in an array are stored in contiguous
elements in an array are stored in contiguous
Element in an action for he are a large H
Elements in an array can be accessed using the base address in constant time -> O(1)
#ADT-High-level description of a data structure that provides a logical representation of how the data structure should behave and what operations can be performed on
it, without specifying the internal workings.
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- (2) prudge
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Static and Synamic actuals  Static analys -> Size lamost be changed  Dynamic arrays -> Size land by changel