COLLECTION

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→ An array is an indexed collection of fixed no. of Homogenious data elements.

→ The main advantage of arrays is we can represent multiple values by using single variable. so that, readability of the code will be improved.

⇒ Limitations of Arrays:-

i) Arrays are fixed in size. i.e. once we creates an array, there is no chance of increasing or decreasing the size based on our requirement. Due to this, to use arrays concept, compulsary we should know, the size of the array. in advanced. which may not possible always.

ii) Array can hold only Homogenious data types elements. e.g.

```
Student[] s = new Student[10000];
a[0] = new Student();   → valid
a[1] = new Customer();  → invalid
```

CE :- incompatible types found : Customer
required : Student.

We can solve the above problem by using

iii) Object type arrays.

```
Object[] a = new Object[10000];
a[0] = new Student();   ✓ Valid
a[1] = new Customer();  ✓ Valid
```

iv) ~~There is no underlined data structure.~~

iii) Arrays concept is not implemented based on some standard data structure. and Hence, readymade method support is not available. For every requirement we have to write the code explicitly which increases complexity of programming.

→ To overcome above problems of arrays, we should go for collections concepts

→ Collections are growable in nature. i.e. Based on our requirement, we can increase or decrease the size.

→ Collections can hold both Homogenious and Hetrogenious elements.

→ Every collection class is implemented based on some standard data structure. Hence, for every requirement, ready made method support is available. Being a programmer, we are responsible to use those methods and we are not responsible to implemented those methods.

⇒ Differences b/w Arrays and collections :→

	Arrays	Collections
(i)	Fixed in Size	(i) Growable
(ii)	Not Recommandate w.r.t Memory	(ii) Recommandate w.r.t Memory
(iii)	Performance ✓	(iii) X
(iv)	only Homogenious	(iv) Both Homogenious & Hetrogenious
(v)	No underline Data Structure	(vi) ✓
(vi)	Primitive and objects Hold	(vii) only object holds.