

Array.

```
int arr[] = new int[5];
```

object

* Any array in java is an object.
so using 'new' keyword it is declared.

* Any array is the object of object class. object class is the predefined class.

* Array is the object of that class. class Object

* Array occupy memory in Heap area.

*) Array is the collection of Homogeneous (Similar) datatypes.

*) e.g. if we want to store the empid of 100 employees then we have to declare as

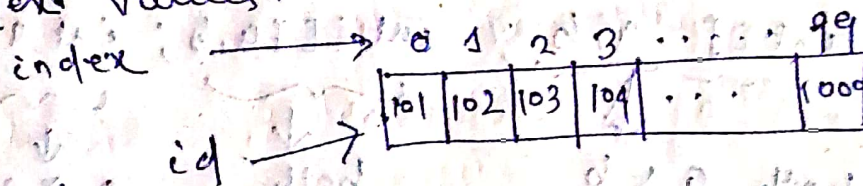
```
int id1 = 101;  
int id2 = 102;  
int id3 = 103;  
...  
int id100 = 1000;
```

} This method of declaration takes enough space & the program will be heavy & execution will be slower.

To avoid this we can use array.

```
int id[] = new int [100];
```

So only one variable is created in memory & store 100 values with their index values.



*) Actually Array in java is an object because it is declared using new keyword.

*) Array is the object of predefined object class. Super class of array is object class.

*) Array ~~occupy~~ occupy memory in Heap area.

*) Array is faster ~~than~~ as compared to primitive datatypes.

*) Dis-advantages is we cannot increase or decrease the size of the array at run time because size is fixed.

* Another disadvantage is, we can store similar data types.

* If one element is deleted then we have to shift all the elements backward one position to the left, which will ^{reduce} ~~lower~~ the performance.

1D Array

* either single row or single column.

Declaration

```
int a[10];  
int [10] a;  
int [10] = a;
```

* What is the difference of

<u>int [10] a, b;</u>	<u>int [10] a, b;</u>	<u>int a[10], b;</u>
↓	↓	↓
both a & b are array	both a & b are array	a is array & b is variable

* Size is not declared at the time of declaration.

Creation

↙ ↘
a = new int[100];

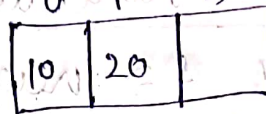
eg int a[10];
a = new int[100];

* At the time of creation size is compulsory.

* By default all the values are zero.. for integer array.

initialization
e.g. null for string "

e.g. `int a[3];`
`a[0] = 10;`
`a[1] = 20;`
`a[2] = 30;`



* we can ~~also~~ insert values to array in this way.

`int a[] = { 10, 20, 30 };`

Retrieve

`int a[] = { 10, 20, 30 };`

`for (int i = 0; i < a.length; i++)`
`{`
`s.o.p(a[i]);`
`}`

for each loop

`for (dataType variableName : array)`
`{`

e.g. `for (int i : a)`
`{`
`s.o.p(i);`
`}`