

ARRAY

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HOMOGENEOUS: Similar type of data..

HETROGENEOUS: different type of data..

Length:

it is predefine variable, for finding the array length, basically it determine how many elements present in the array...

length():

It is method, for finding String length, basically it determine how many character present in the String...

ARRAY:

Array is a continuous block of memory which is used to store multiple homogeneous values/datas....

Characteristics of an Array

- The size of an array must be defined at the time of instantiation(object creation)...
- Once array is created the size of array can't be modified..
- Hence array is known as fixed size..
- In an array we can access the elements with the help of an index. Index is an integer number that starts from 0 and ends at (length of the array -1).
- In an array we can store only homogeneous collection of an object ...

Note: in java array is an object..

Syntax to create or declare an array

Datatype [] variable;

Or

Datatype[] variable;

Or

Datatype []variable;

Or

Datatype variable[];

Declaring, instantiating, initializing an array in a single line

We can also declare, instantiating, and initialize an array in a single line..

Syntax:

Datatype [] arr_ref_variable = { element 1, element 2, element 3 etc.....};

Ex:

Int [] y = {4,3,5,2,5};

Length variable in array

Length:

In java, the number of elements of an array can hold or the size of the array is known as length...

You can use the length variable to find the size of an array by using the dot operator with the array name...

Example:

```
Int[] x=new int[5];

System.out.println(length); //5
```

Access the array elements by loop

By using the loop you can access the array elements in forward direction...

Example:

```
Int[] x = {6,3,5,2,3};
For (int l =0; l<x.length; l++) {
    System.out.print( x[l] +" "); //6,7,8,9,
}
```

Access the array elements by loop in backward direction

By using the loop you can access the array elements..

Example:

```
Int[] x = {4,5,2,2,};
For (int i=x.length-1; i>=0; i--) {
    System.out.print(x[i] +" "); // 9 8 7 6
}
```

Access the array elements by for each loop

- By using the for each loop you can access the array elements only in the forward direction...
- It is introduced from jdk 1.5....
- No condition is required for this loop..

Syntax:

```
For(datatype_of_array_created var: array variable)
{
    //stmt//System.out.println(var);
}
```

Example:

```
Int[] x= {6,7,8,9};
For ( int l : x )
{
    System.out.print(l+" "); //6 7 8 9
}
```

Accessing elements from an array

We can access an element from an array with the help of array reference variable and index..

Syntax:

```
Array_ref_Variable [ index ];
```

Example:

```
System.out.println(x[0]); //4  
System.out.println(x[1]); //5  
System.out.println(x[2]); //6  
System.out.println(x[3]); //ArrayIndexOutOfBoundsException
```

Access the array elements by loop

By using the loop you can access the array elements in forward direction...

Example:

```
int [] x = {6,7,8,9};  
for ( int i = 0 ; i < x.length ; i++ )  
{  
    System.out.print( x[i] + " "); //6,7,8,9  
}
```