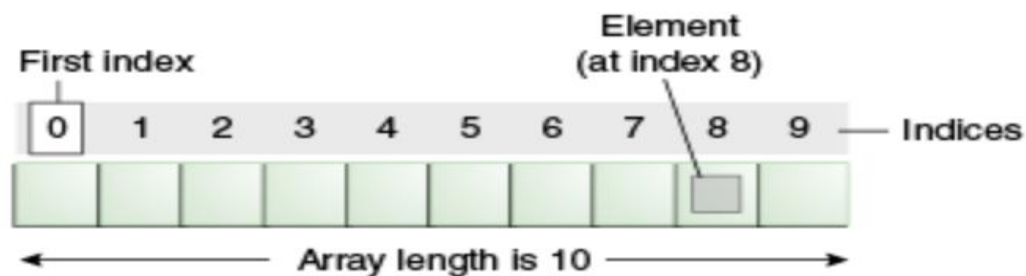


Arrays

An *array* is a container object that holds a fixed number of values of a single type. Array in Java is index-based, the first element of the array is stored at the 0th index, 2nd element is stored on 1st index and so on.

Declarations:

```
byte [] arrayOfBytes;  
short [] arrayOfShorts;  
long [] arrayOfLongs;  
float [] arrayOfFloats;  
double [] arrayOfDoubles;  
boolean [] arrayOfBooleans;  
char [] arrayOfChars;  
String [] arrayOfStrings;
```



An array of 10 elements.

Arrays has some advantages and disadvantages:

- We can retrieve or sort the data efficiently
- We can get any data at the index position

The disadvantage is such that the array can store fixed size of elements.

There are two types of arrays

- Single Dimensional {dataType [] arrayname}
- MultiDimensional {dataType [][] arrayname}

Arrays of Objects in Java

```
Student[] arr = new Student[5]; //student is a user-defined class
```

ArrayIndexOutOfBoundsException

The Java Virtual Machine (JVM) throws an `ArrayIndexOutOfBoundsException` if length of the array is negative, equal to the array size or greater than the array size while traversing the array.