ARRAY

Size is fixed

Primitives and non-primitives

Every element has index numbers

How to declare Array

```
DataType[] variableName
```

int,String,char, double, ...

Instantiating Array

If we do not know the exact data:

```
1. DataType[] variablename= new DataType[length]

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

If we know the exact data:

```
2. DataType[] variablename = {data1, data2, dat3 ...}
```

Arrays Utility Class

`toString(array):` converts the array object (single dimensional) to string, returns string

```
int[] scores = new int[5]; // [0, 0, 0, 0, 0]
scores[1]= 85;
scores[4] = 95;
scores[3] = 75;
scores[0] = 65;
scores[2] = 55;

System.out.println( Arrays.toString(scores));
```

```
Console    [65,85,55,75,95]
```

`sort(array):` sorts the array in ascending order
ascending order: smallest to larger

```
String[] names = {"Gunay", "Anna", "Zuhal" ,"Ahmet", "Maria", "Sinem"};

Arrays.sort(names);

System.out.println( Arrays.toString( names));
```

Must

```
console:    [Ahmet, Anna, Gunay, Maria, Sinem, Zuhal]
```

`equals(array1, array2)`: checks if two arrays are equal, returns boolean

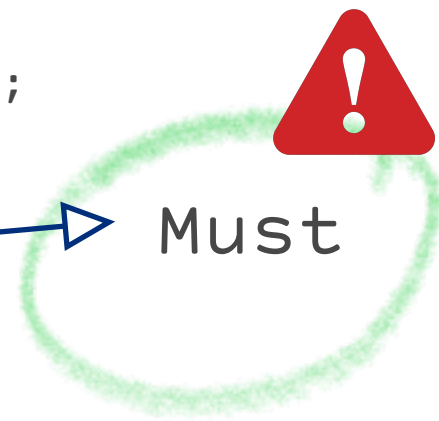
```
int[] arr1 = {1,3,2};
int[] arr2 = {1,2,3};

boolean r1 = Arrays.equals(arr1,arr2);

System.out.println(r1);
```

```
console: False
```

`copyOf(array, newLength)`: copys the elements of the array, starting from first element to given number, returns new array

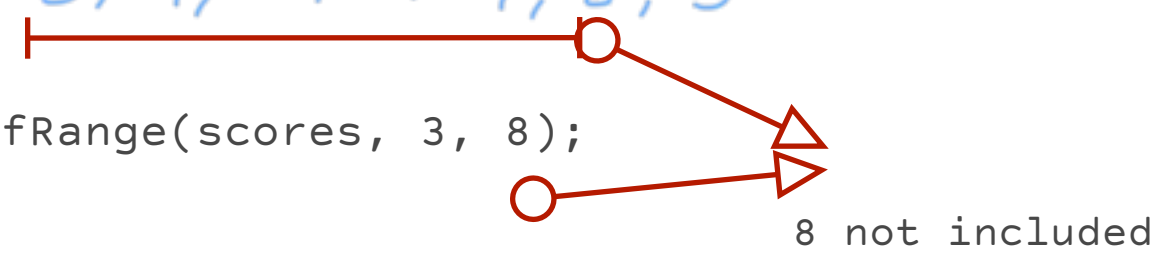
```
String[] students = {"Elif", "Sinem", "Gunay", "Cihad", "David",
"James", "Aaron", "Daniel"};

String[] earlyBirds = Arrays.copyOf(students, 2);

System.out.println(Arrays.toString(earlyBirds));
```

```
console: [Elif, Sinem]
```



`copyOfRange(array, beginningIndex, endingIndex)`: copys the elements of the array, staring from beginning index till the ending index (ending index excluded), returns new array

```
int[] scores = {10, 20, 30, 40, 50, 60, 70, 80, 90, 100};
  index:        0 , 1 , 2 , 3 , 4 , 5 , 6 , 7 , 8 , 9
```



```
int[] result = Arrays.copyOfRange(scores, 3, 8);
```

8 not included

```
System.out.println(Arrays.toString(result));
```

```
[40,50,60,70,80]
```

String method

`toCharArray()`: return a char array

```
"abc".toCharArray() ====> {'a', 'b', 'c'}
```

```
String str1= "acdb";

char[] str1ToCharArray = str1.toCharArray();

System.out.println(Arrays.toString(str1ToCharArray));
```

```
[a, c, d, b]
```

split(value): retruns String array

```
String sentence = "Wooden Spoon";

String[] words =  sentence.split("");
```

```
console: [W, o, o, d, e, n,  , S, p, o, o, n]
```