TECHNO STUDY +

JAVA

Array (1d Array), Array with loop

teach Arrays.toString, for each

ARRAY OF STRINGS

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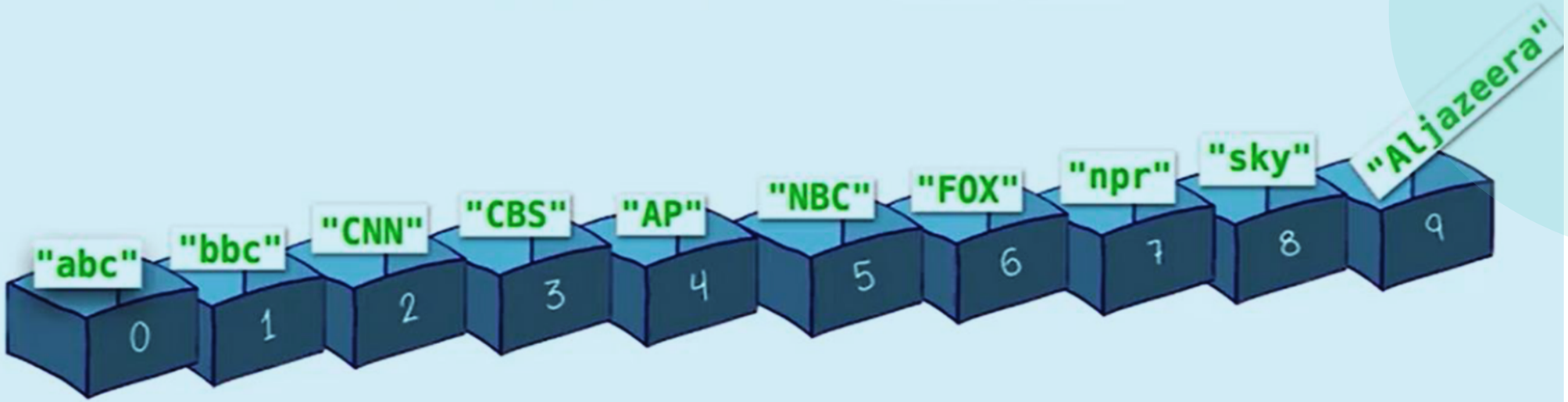


```
newsOutlet

newsOutlet[0]  ⟶  "abc"
newsOutlet[1]  ⟶  "bbc"
newsOutlet[2]  ⟶  "CNN"
```

ARRAY OF INTEGERS

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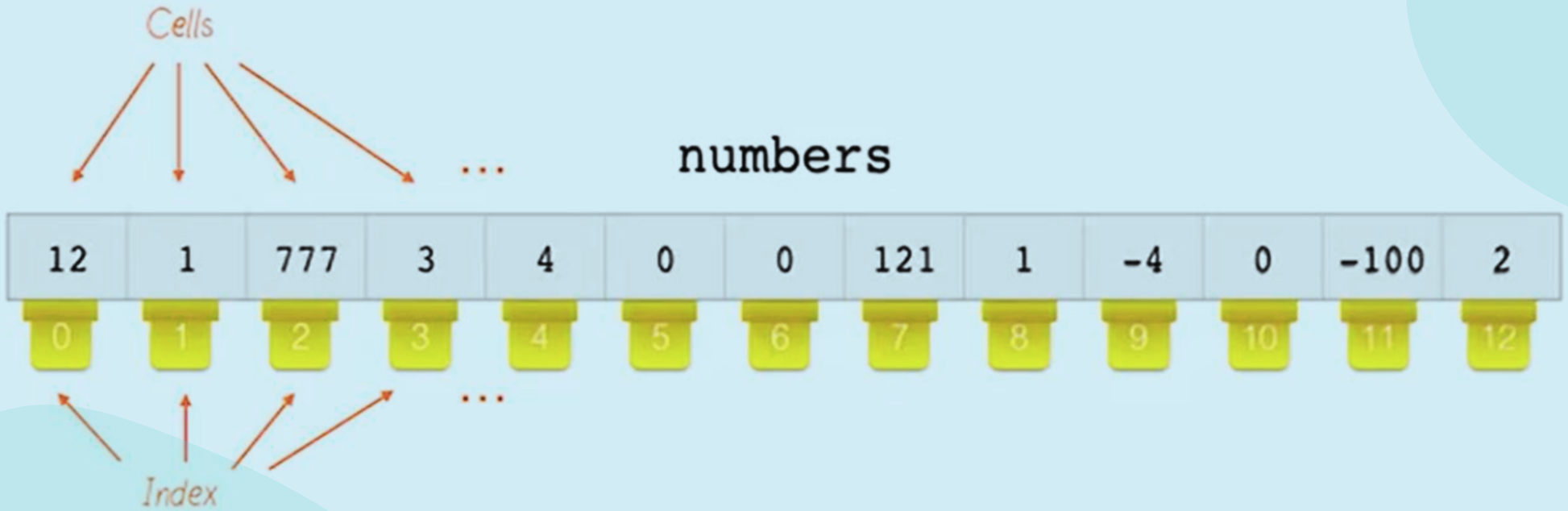



```
int sum = numbers[0]+numbers[3];
```

sum ⟶ 15

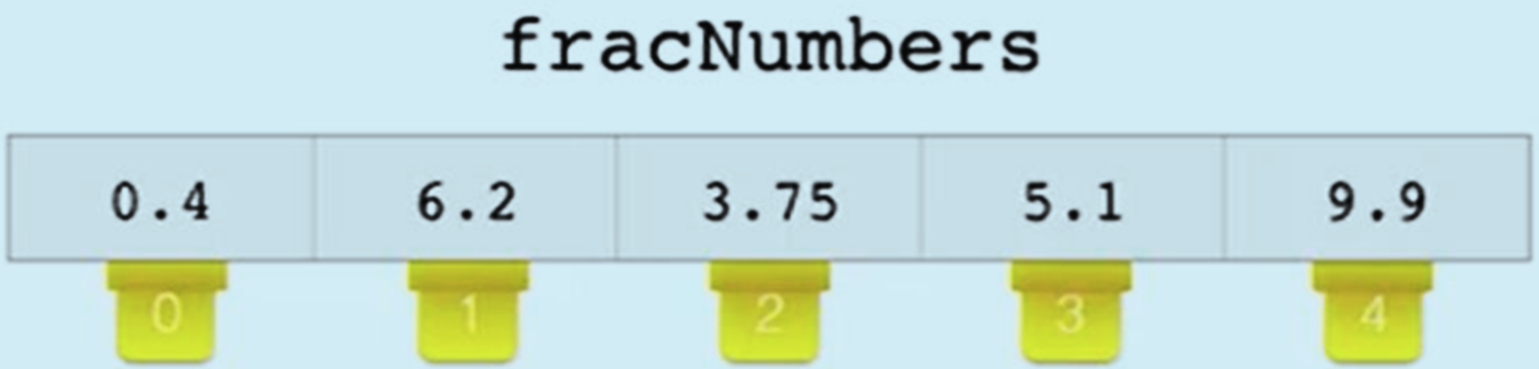
ARRAY OF INTEGERS


```
int [] numbers ={12,1,777,3,4,0,0,121,1,-4,0,-100,2};
System.out.print(numbers[0]);
System.out.print(numbers[9]*numbers[12]);
```

Print output

```
12
-8
```

ARRAY OF DOUBLES




```
double [] fracNumbers = {4.0, 6.2, 3.75, 5.1, 9.99};
```

PRESS CONFERENCE

Pick a random press

newsOutlet

0	"abc"
1	"bbc"
2	"CNN"
3	"CBS"
4	"AP"
5	"NBC"
6	"FOX"
7	"npr"
8	"sky"
9	"Aljazeera"

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PRESS CONFERENCE

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```
String [] newsOutlet = {"abc","bbc","CNN","CBS","AP","NBC","FOX","npr","sky","Aljazeera"};

double lucky = Math.random();

//Multiply by 10 to get a fractional number between 0 - 10
lucky *= 10;

//cast to integer to get an integer number between 0 - 9
int luckyIndex = (int) lucky;

System.out.print(newsOutlet[luckyIndex]);
```

lucky	lucky*10	luckyIndex	Print output
0.423	4.23	4	"AP"
0.987	9.87	9	"Aljazeera"
0.611	6.11	6	"FOX"

Arrays and Loops

```
int size = temperatures.length;
double total = 0;
for(int i=0; i<size; i++){
    total += temperatures[i];
}
double average = total/size;
return average;
```

Number of items in the array

loop counter: (0, 1, 2 ...)

Arrays and Loops

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{75,73,72,80}

```
int size = temperatures.length;
double total = 0;
for(int i=0; i<size; i++){
    total += temperatures[i];
}
double average = total/size;
return average;
```

size ← 4

300 / 4 = 75

i	temperatures[i]	total
0	75	75
1	73	148
2	72	220
3	80	300
4		

Array bounds

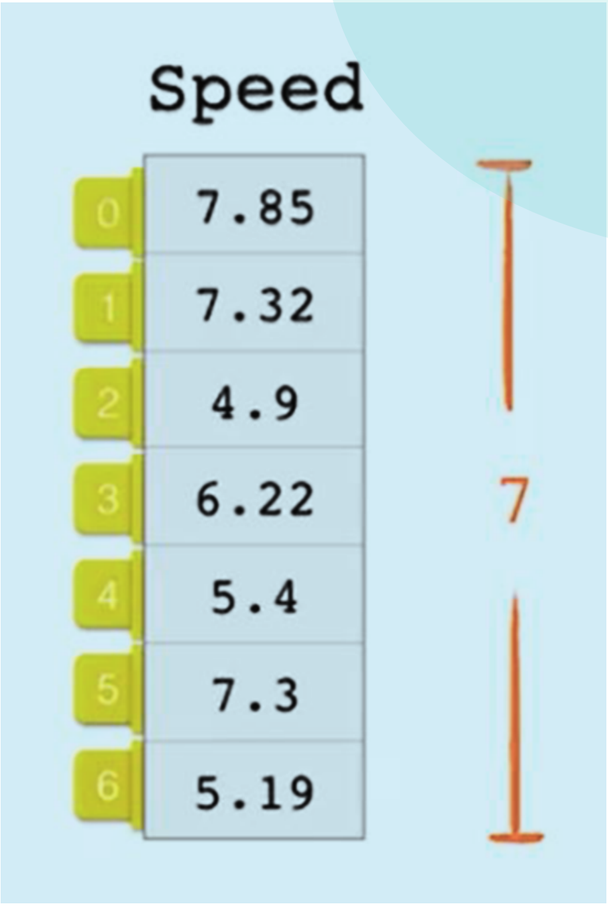

```
int size = temperatures.length;
```
← 4

```
System.out.println(temperatures[10]);
```
Error!

ArrayIndexOutOfBoundsException

ARRAY SEARCH

```
int size = speed.length;
double min = speed[0];
for(int i=1 ; i<size ; i++){
    if(speed[i]<min){
        min = speed[i];
    }
}
return min;
```



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STRING ARRAY SEARCH

Write a function that searches an array of Strings and finds the longest string

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STRING ARRAY SEARCH

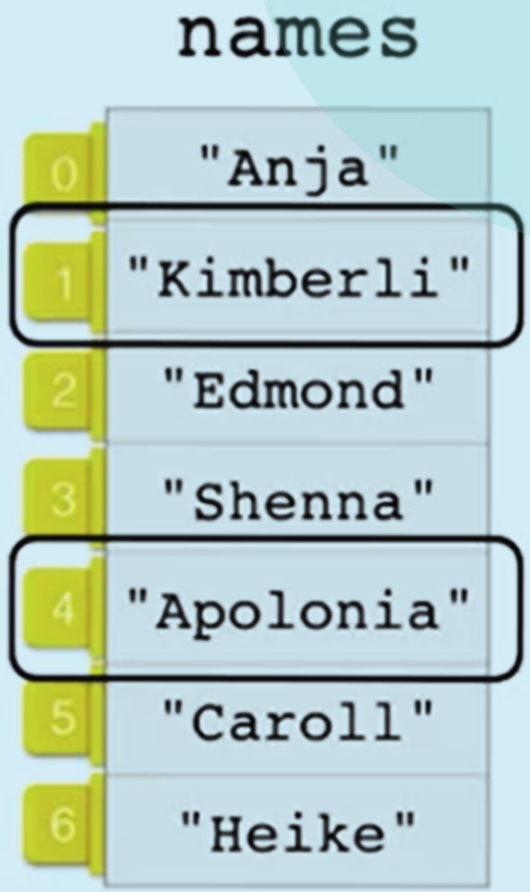
```
int size = names.length;
String longestName = names[0];
for(int i=1; i<size; i++){
  if(names[i].length() > longestName.length()){
      longestName = names[i];
  }
}
return longestName;
```

TIE BREAKERS ?

```
int size = names.length;
String longestName = names[0];
for(int i=1; i<size; i++){
    if(names[i].length() > longestName.length()){
        longestName = names[i];
    }
}
return longestName;
```

longestName ?

- "Kimberli"
- "Apolonia"
- Both of them
- None of them



Java for-each loop

```
class ForLoop {
    public static void main(String[] args) {

        char[] vowels = {'a', 'e', 'i', 'o', 'u'};

        for (int i = 0; i < vowels.length; ++ i) {
            System.out.println(vowels[i]);
        }
    }
}
```

Output:

```
a
e
i
o
u
```

```
class AssignmentOperator {
   public static void main(String[] args) {

      char[] vowels = {'a', 'e', 'i', 'o', 'u'};
      // foreach loop
      for (char item: vowels) {
         System.out.println(item);
      }
   }
}
```

Output:

```
a
e
i
o
u
```

Let's first look at the syntax of for each loop:

```
for(data_type item : collections) {
    ...
}
```

Here,

- **collection** - a collection or array that you have to loop through.
- **item** - a single item from the collections.

ARRAYS.TOSTRİNG(ARRAY)

```
// Let us create different types of arrays and
// print their contents using Arrays.toString()
boolean[] boolArr  = new boolean[] { true, true, false, true };
char[] charArr = new char[] { 'g', 'e', 'e', 'k', 's' };
double[] dblArr = new double[] { 1, 2, 3, 4 };
int[] intArr = new int[] { 1, 2, 3, 4 };
Object[] objArr = new Object[] { 1, 2, 3, 4 };

System.out.println( "Boolean Array: " + Arrays.toString(boolArr));
System.out.println( "Character Array: " + Arrays.toString(charArr));
System.out.println( "Double Array: " + Arrays.toString(dblArr));
System.out.println( "Integer Array: " + Arrays.toString(intArr));
System.out.println( "Object Array: "  + Arrays.toString(objArr));
```

```
Boolean Array: [true, true, false, true]
Character Array: [g, e, e, k, s]
Double Array: [1.0, 2.0, 3.0, 4.0]
Integer Array: [1, 2, 3, 4]
Object Array: [1, 2, 3, 4]
```

STRİNG SPLİT METHOS

```
public String[] split(String regex, int limit)
public String[] split(String regex)
```

```
String s = "Welcome to Baeldung";

String[] expected1=s.split(" ");
String[] expected2=s.split(" ", 2);

String[] expected1 = new String[] { "Welcome", "to", "Baeldung" };
String[] expected2 = new String[] { "Welcome", "to Baeldung" };
```