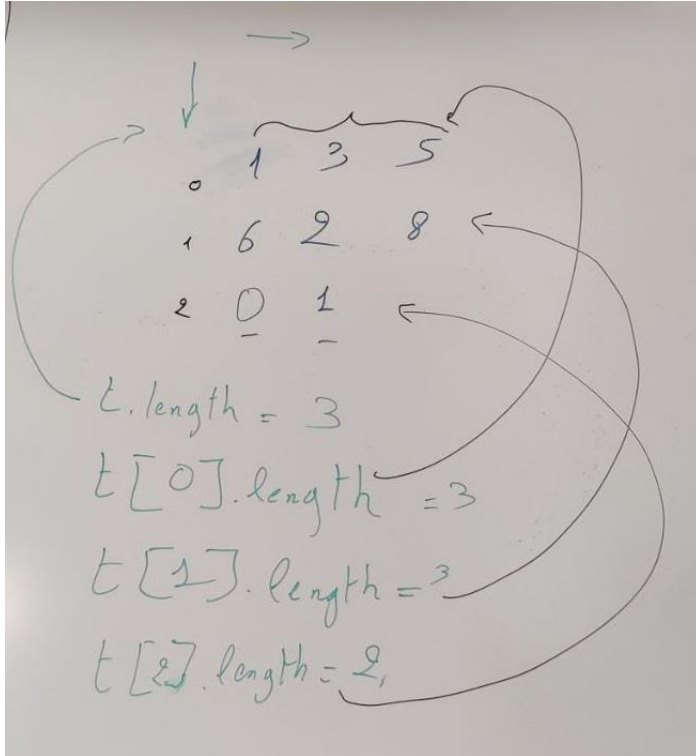


Correction TD8 – Groupe 1

Exercise 1:

An example of a 2-dimensional array:



a-

```
static int max (int[][] t) {  
    int vmax = 0;  
    for (int i = 0; i < t.length; i++) { // rows  
        for (int j = 0; j < t[i].length; j++) { // columns  
            if (vmax < t[i][j]) {  
                vmax = t[i][j];  
            }  
        }  
    }  
    return vmax;  
}
```

b-

```
static boolean diagIdentiques(int [][] t){  
    int i=1;  
    while (i < t.length && t[0][0] == t[i][i]){  
        i++;  
    }  
    if (i < t.length)  
        return false;  
    else  
        return true;  
}
```

Test if diagonal elements == t[0][0]

Exercise 2:

1-

```
static void affiche (boolean [][] t) {
    for (int i=0; i < t.length; i++) {
        for (int j=0; j < t[i].length; j++) {
            if (t[i][j]) {
                Sop("0");
            } else {
                Sop(".");
            }
        }
        System.out.println();
    }
}
```

2-

```
static int nbDoubles (boolean [][] t) {
    int total=0;
    for (int i=0; i < t.length; i++) {
        for (int j=0; j < t[i].length-1; j++) {
            if (t[i][j] && t[i][j+1]) {
                total++;
            }
        }
    }
    return total;
}
```

Annotations:

- For the inner loop condition $j < t[i].length - 1$, an arrow points to $j = 1$ with the text "We compare with the next one".
- For the condition $t[i][j] \&\& t[i][j+1]$, an arrow points to $t[i][j+1]$ with the text "We compare with the previous one".