Edison Alcocer

Ejercicios Arrays

1-

```java
public static void first(){
    Scanner num = new Scanner(System.in);
    int numeros[] = new int[10];

    System.out.println("Dame 10 números naturales");

    for(int i = 0; i < numeros.length; i++){
        System.out.print("numeros[" + i + "]= ");
        numeros[i]=num.nextInt();
    }

    for(int n = 0; n < numeros.length; n++){
        System.out.print(numeros[n] + ", ");
    }

    wait(2000);
    main(null);
}
```

```
Dame 10 números naturales
numeros[0]= 3
numeros[1]= 6
numeros[2]= 2
numeros[3]= 7
numeros[4]= 9
numeros[5]= 22
numeros[6]= 7
numeros[7]= 3
numeros[8]= 2
numeros[9]= 6
3, 6, 2, 7, 9, 22, 7, 3, 2, 6,
```

2-

```java
public static void second(){
    Scanner num = new Scanner(System.in);
    int[] numeros = new int[10];
    int suma = 0;

    System.out.println("Dame 10 números naturales");

    for(int i = 0; i < numeros.length; i++){
        System.out.print("numeros[" + i + "]= ");
        numeros[i]=num.nextInt();
    }

    for(int n = 0; n < numeros.length; n++){
        System.out.print(numeros[n] + ", ");
    }

    for(int p = 0; p < numeros.length; p++){
        suma += numeros[p];
    }

    System.out.println("\nSuma = " + suma);

    wait(2000);
    main(null);
}
```

```
Dame 10 números naturales
numeros[0]= 5
numeros[1]= 2
numeros[2]= 1
numeros[3]= 6
numeros[4]= 9
numeros[5]= 794
numeros[6]= 24
numeros[7]= 54
numeros[8]= 1
numeros[9]= 24
5, 2, 1, 6, 9, 794, 24, 54, 1, 24,
Suma = 920
```

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3-

```java
public static void third(){
    Scanner num = new Scanner(System.in);
    int[] numeros = new int[10];

    System.out.println("Dame 10 números naturales");

    for(int i = 0; i < numeros.length; i++){
        System.out.print("numeros[" + i + "]= ");
        numeros[i]=num.nextInt();
    }

    for(int n = 0; n < numeros.length; n++){
        System.out.print(numeros[n] + ", ");
    }

    int mayor, menor;
    mayor = menor = numeros [0];

    for (int i = 0; i < numeros.length; i++) {
        if(numeros [i] > mayor) {
            mayor = numeros[i];
        }
        if(numeros[i]<menor) {
            menor = numeros[i];
        }
    }
    System.out.println("\nMayor: "+ mayor);
    System.out.println("Menor: "+ menor);

    wait(2000);
    main(null);
}
```

```
Dame 10 números naturales
numeros[0]= 46
numeros[1]= 6
numeros[2]= 6
numeros[3]= 3
numeros[4]= 2
numeros[5]= 546
numeros[6]= 86
numeros[7]= 96
numeros[8]= 45
numeros[9]= 34
46, 6, 6, 3, 2, 546, 86, 96, 45, 34,
Mayor: 546
Menor: 2
```

4-

```java
public static void forth(){
    Scanner num = new Scanner(System.in);
    int i;
    int[] numeros = new int[20];
    double possuma = 0, negsuma = 0;


    System.out.println("Introduce 20 numeros: ");

    for (i = 0; i < numeros.length; i++) {
        System.out.print("numeros[" + i + "]= ");
        numeros[i]=num.nextInt();
    }

    for (i = 0; i < numeros.length; i++) {

        if (numeros[i] > 0){
            possuma += numeros[i];
        }
        else if (numeros[i] < 0){
            negsuma += numeros[i];
        }

    }

    System.out.println("Suma positivos = " + possuma);
    System.out.println("Suma negativos = " + negsuma);

    wait(2000);
    main(null);
}
```

```
Introduce 20 numeros:
numeros[0]= 543
numeros[1]= 1
numeros[2]= 5342
numeros[3]= -415
numeros[4]= 54
numeros[5]= -614
numeros[6]= 614
numeros[7]= -6417
numeros[8]= -7254
numeros[9]= 52
numeros[10]= 625
numeros[11]= 2456
numeros[12]= 6
numeros[13]= 52
numeros[14]= 2
numeros[15]= 54
numeros[16]= 56
numeros[17]= -63
numeros[18]= -18
numeros[19]= -815
Suma positivos = 9857.0
Suma negativos = -15596.0
```

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5-

```java
public static void fifth(){
    Scanner num = new Scanner(System.in);
    int i;
    int pos = 0, neg = 0;
    int[] numeros = new int[20];
    double possuma = 0, negsuma = 0;

    System.out.println("Introduce 20 numeros: ");
    for (i = 0; i < numeros.length; i++) {
        System.out.print("numeros[" + i + "]= ");
        numeros[i]=num.nextInt();
    }

    for (i = 0; i < numeros.length; i++) {

        if (numeros[i] > 0){
            possuma += numeros[i];
            pos++;
        }
        else if (numeros[i] < 0){
            negsuma += numeros[i];
            neg++;
        }

    }

    if (pos != 0) {
        System.out.println("Media positivos: " + possuma / pos);
    }
    else {
        System.out.println("No has introducido positivos");
    }

    if (neg != 0) {
        System.out.println("Media negativos: " + negsuma / neg);
    }
    else {
        System.out.println("No has introducido negativos");
    }

    wait(2000);
    main(null);
}
```

```
Introduce 20 numeros:
numeros[0]= -53
numeros[1]= -465
numeros[2]= -64
numeros[3]= 46
numeros[4]= 84
numeros[5]= 651
numeros[6]= 615
numeros[7]= -684
numeros[8]= 64
numeros[9]= -684666
numeros[10]= 64568
numeros[11]= 153
numeros[12]= 153
numeros[13]= 486
numeros[14]= 266
numeros[15]= -561
numeros[16]= -64
numeros[17]= -4584
numeros[18]= 486
numeros[19]= 48
Media positivos: 5635.0
Media negativos: -86392.625
```

6-

```java
public static void sixth(){
    Scanner num = new Scanner(System.in);

    System.out.print("Dame el tamaño del array: ");
    int n = num.nextInt();

    int primero[] = new int[n];

    System.out.print("Dame un valor 'M': ");
    int m = num.nextInt();

    for(int p = 0; p < primero.length; p++){
        primero[p] = m;
        System.out.println("Array[" + p + "] = " + primero[p]);
    }      You, 2 days ago • Actualizacion Clases

    wait(2000);
    main(null);
}
```

```
Dame el tamaño del array: 13
Dame un valor 'M': 97
Array[0] = 97
Array[1] = 97
Array[2] = 97
Array[3] = 97
Array[4] = 97
Array[5] = 97
Array[6] = 97
Array[7] = 97
Array[8] = 97
Array[9] = 97
Array[10] = 97
Array[11] = 97
Array[12] = 97
```

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7-

```java
public static void seventh(){
    Scanner num = new Scanner(System.in);
    int l = 0;

    System.out.print("Dame un valor para 'P': ");
    int p = num.nextInt();

    System.out.print("Dame un valor para 'Q': ");
    int q = num.nextInt();

    l = q - p + 1;

    int array[] = new int[l];

    for(int i = 0; i < array.length; i++){
        array[i] = p;

        System.out.println("Array[" + i + "] = " + array[i]);

        p++;
    }

    wait(2000);
    main(null);
}
```

```
Dame un valor para 'P': 3
Dame un valor para 'Q': 10
Array[0] = 3
Array[1] = 4
Array[2] = 5
Array[3] = 6
Array[4] = 7
Array[5] = 8
Array[6] = 9
Array[7] = 10
```

8-

```java
public static void eigth(){
    Scanner num = new Scanner(System.in);
    float r;
    float array[] = new float[100];
    int cont = 0;

    System.out.print("Valores 'random' generados:\n");
    for(int i = 0; i < array.length; i++){

        array[i] = (float) Math.random();

        System.out.println("Array[" + i + "]= " + array[i]);

    }

    System.out.print("\nDame un valor entre 0.0 y 1.0: ");
    r = num.nextFloat();      You, seconds ago • Uncommitted changes

    for(int n = 0; n < array.length; n++){

        if(array[n] >= r){
            cont++;
        }

    }

    System.out.println("Hay " + cont + " valores del array que son iguales o superiores a " + r);

    wait(2000);
    main(null);

}
```

```
Array[80]= 0.006404597
Array[81]= 0.19311622
Array[82]= 0.12271586
Array[83]= 0.17924668
Array[84]= 0.39388788
Array[85]= 0.42297578
Array[86]= 0.4174285
Array[87]= 0.47755578
Array[88]= 0.44759578
Array[89]= 0.13382073
Array[90]= 0.36353472
Array[91]= 0.0021090503
Array[92]= 0.7880547
Array[93]= 0.021305108
Array[94]= 0.19721755
Array[95]= 0.44589484
Array[96]= 0.65584534
Array[97]= 0.37955797
Array[98]= 0.29192263
Array[99]= 0.4295453

Dame un valor entre 0.0 y 1.0: 0.674
Hay 31 valores del array que son iguales o superiores a 0.674
```

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9-

```java
public static void ninth(){
    Scanner num = new Scanner(System.in);
    int array[] = new int[100];
    int n;

    System.out.print("Dame un valor N (entre 1 y 10): ");
    n = num.nextInt();

    for(int i = 0; i < array.length; i ++){

        array[i] = (int)(1 + Math.random() * 10);

        if(array[i] == n){
            System.out.print("\nPosicion = " + i);
        }
    }

    wait(2000);
    main(null);
}
```

```
Dame un valor N (entre 1 y 10): 3

Posicion = 19
Posicion = 27
Posicion = 32
Posicion = 33
Posicion = 35
Posicion = 58
Posicion = 61
Posicion = 82
```

10-

```java
public static void tenth(){
    Scanner num = new Scanner(System.in);
    double suma = 0, media = 0, mayor = 0, menor = 30;
    int contMay = 0, contMen = 0;

    System.out.print("Dame el tamaño del array: ");
    int n = num.nextInt();

    double array[] = new double[n];

    for(int i = 0; i < array.length; i++){

        System.out.print("\nAltura " + (i + 1) + ": ");
        double alt = num.nextDouble();

        array[i] = alt;

    }

    // Suma de todos los arrays
    for(int i = 0; i < array.length; i++){
        suma += array[i];
    }

    // Calcular la media
    media = suma/n;

    // Encontrar el mayor, el menor y las personas por encime y por debajo de la media
    for(int i = 0; i < array.length; i++){
        if(array[i] > mayor){
            mayor = array[i];
        }
        if(array[i] < menor){
            menor = array[i];
        }

        if(array[i] < media){
            contMen++;
        }
        if (array[i] > media){
            contMay++;
        }
    }

    System.out.println("\nMedia: " + media);
    System.out.println("\nAltura maxima: " + mayor + "\nAltura minima: " + menor);
    System.out.println("\nPersonas por encima de la media = " + contMay + "\nPersonas por debajo de la media = " + contMen);
```

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```
Dame el tamaño del array: 7

Altura 1: 1.68

Altura 2: 1.87

Altura 3: 1.99

Altura 4: 1.63

Altura 5: 1.56

Altura 6: 1.81

Altura 7: 1.75

Media: 1.7557142857142858

Altura maxima: 1.99
Altura minima: 1.56

Personas por encima de la media = 3
Personas por debajo de la media = 4
```

11-

```java
public static void eleventh(){
    int primray[] = new int[100];
    int segray[] = new int[100];
    int cont = 99;

    for(int i = 0; i < primray.length; i ++){
        primray[i] = (i + 1);
    }
    for(int i = 0; i < segray.length; i++){
        segray[i] = primray[cont];
        cont--;
    }

    System.out.println("Primer array: ");
    for(int i = 0; i < primray.length; i++){
        System.out.print(primray[i] + ", ");
    }

    System.out.println("\nSegundo array: ");
    for(int i = 0; i < primray.length; i++){
        System.out.print(segray[i] + ", ");
    }
    You, seconds ago • Uncommitted changes
    wait(2000);
    main(null);
}
```

```
Primer array:
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40,
 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 7
8, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100,
Segundo array:
100, 99, 98, 97, 96, 95, 94, 93, 92, 91, 90, 89, 88, 87, 86, 85, 84, 83, 82, 81, 80, 79, 78, 77, 76, 75, 74, 73, 72, 71, 70, 69, 68, 67, 66, 65, 64, 6
3, 62, 61, 60, 59, 58, 57, 56, 55, 54, 53, 52, 51, 50, 49, 48, 47, 46, 45, 44, 43, 42, 41, 40, 39, 38, 37, 36, 35, 34, 33, 32, 31, 30, 29, 28, 27, 26,
 25, 24, 23, 22, 21, 20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1,
```

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12-

```java
public static void twelveth(){
    Scanner let = new Scanner(System.in);
    char choose = 'd';
    int array[] = new int[10];

    while(choose != 'c'){

        for(int i = 0; i < array.length; i++){
            array[i] = (int)(1 + Math.random() * 10);
        }

        System.out.println("\na.Mostrar valores" + "\nb.Introducir valor" + "\nc.Salir");
        choose = let.next().charAt(0);

        if(choose == 'a'){
            for(int i = 0; i < array.length; i++){
                System.out.println("Array[" + i + "]= " + array[i]);
            }
        }
        else if(choose == 'b'){
            System.out.print("Introduce un valor: ");
            int v = let.nextInt();

            System.out.print("\nAhora introduce la posicion en el array: ");
            int p = let.nextInt();

            for(int i = 0; i < array.length; i++){
                if(i == p){
                    array[i] = v;
                    System.out.print("Array[" + p + "]= " + v);      You, seconds ago • Un
                }
            }
        }

        wait(2000);
    }

    main(null);
}
```

```
a.Mostrar valores
b.Introducir valor
c.Salir
a
Array[0]= 1
Array[1]= 7
Array[2]= 10
Array[3]= 1
Array[4]= 10
Array[5]= 1
Array[6]= 6
Array[7]= 7
Array[8]= 9
Array[9]= 6

a.Mostrar valores
b.Introducir valor
c.Salir
b
Introduce un valor: 4

Ahora introduce la posicion en el array: 7
Array[7]= 4
a.Mostrar valores
b.Introducir valor
c.Salir
c
```

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13-

```java
public static void thirteen(){
    Scanner num = new Scanner(System.in);
    int v, i, n;

    System.out.println("Sequencia aritmetica\nDame el valor inicial: ");
    v = num.nextInt();

    System.out.println("Dame el incremento: ");
    i = num.nextInt();

    System.out.println("Dame el numero de valores a crear: ");
    n = num.nextInt();

    int array[] = new int[n];

    array[0] = v;

    System.out.println("Array[0] = " + v);

    for(int q = 0; q < (array.length - 1); q++){

        array[q] = v + i;

        v = v + i;

        System.out.println("Array[" + (q + 1) + "] = " + array[q]);

    }

    wait(2000);
    main(null);
}
```

```
Sequencia aritmetica
Dame el valor inicial:
2
Dame el incremento:
3
Dame el numero de valores a crear:
14
Array[0] = 2
Array[1] = 5
Array[2] = 8
Array[3] = 11
Array[4] = 14
Array[5] = 17
Array[6] = 20
Array[7] = 23
Array[8] = 26
Array[9] = 29
Array[10] = 32
Array[11] = 35
Array[12] = 38
Array[13] = 41
```

14-

```java
public static void fourteenth(){
    Scanner num = new Scanner(System.in);
    int array[] = new int [55];
    int cont = 0;

    for(int i = 1; i <= 10; i++){
        for(int e = 0; e < i; e++){
            array[cont] = i;
            cont++;
        }
    }

    for(int a = 0; a < array.length; a++){
        System.out.print(array[a] + " ");
    }

    wait(2000);
    main(null);
}
```

```
1 2 2 3 3 3 4 4 4 4 5 5 5 5 5 6 6 6 6 6 6 7 7 7 7 7 7 7 8 8 8 8 8 8 8 8 9 9 9 9 9 9 9 9 9 10 10 10 10 10 10 10 10 10 10
```

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15-

```java
public static void fifteenth(){
    Scanner num = new Scanner(System.in);


    System.out.print("Tamaño del array: ");
    int n = num.nextInt();

    int array[] = new int[n];

    System.out.print("Valor: ");
    int m = num.nextInt();

    for(int i = 0; i < array.length; i++){
        array[i] = m;

        System.out.println("Array[" + i + "]= " + array[i]);
    }

    wait(2000);
    main(null);      You, seconds ago • Uncommitted changes
}
```

```
Tamaño del array: 9
Valor: 2
Array[0]= 2
Array[1]= 2
Array[2]= 2
Array[3]= 2
Array[4]= 2
Array[5]= 2
Array[6]= 2
Array[7]= 2
Array[8]= 2
```

16-

```java
public static void sixteenth(){
    int cont=0, othercont=1;
    int array[] = new int [55];

    for (int i=1; i <= 10; i++){
        for (int a = 0; a < i; a++){
            Arrays.fill(array,cont,othercont,i);
            cont++;
            othercont++;
        }
    }

    for (int i = 0; i < array.length; i++){
            System.out.print(array[i] + " ");
    }

    wait(2000);
    main(null);
}
```

```
1 2 2 3 3 3 4 4 4 4 5 5 5 5 5 6 6 6 6 6 6 7 7 7 7 7 7 8 8 8 8 8 8 8 9 9 9 9 9 9 9 9 10 10 10 10 10 10 10 10 10 10
```

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17-

```java
public static void seventeenth(){
    Scanner num = new Scanner(System.in);
    int array1[] = new int [10];
    int array2[] = new int [10];
    int cont=0;

    System.out.println("Dime 20 numeros: ");

    for (int i = 0; i < array1.length; i++){
        System.out.print("- ");
        int v = num.nextInt();

        array1[i]=v;
    }

    for (int i = 0; i < array2.length; i++){
        System.out.print("- ");
        int v2 = num.nextInt();

        array1[i]=v2;
    }

    for (int a = 0; a < array1.length; a++){
        if (array2[a] == array1[a]){
            cont++;
        }
    }

    if(cont > 0){
        System.out.println("Son iguales");
    }
    else{
        System.out.println("No son iguales");
    }

    wait(2000);
    main(null);      You, seconds ago • Uncomm
}
```

```
Dime 20 numeros:
- 16
- 48
- 12
- 85
- 38
- 84
- 41
- 53
- 8
- 68
- 1
- 86
- 186
- 68
- 59
- 5
- 9
- 647
- 65
- 156
No son iguales
```

18-

```java
public static void eighteenth(){
    int array[] = new int [30];

    for (int i = 0; i < array.length; i++){
        int aleatorio = (int) (Math.random() * 10);
        array[i] = aleatorio;
    }

    Arrays.sort(array);

    for (int a = 0; a < array.length; a++){
        System.out.print(array[a] + " ");
    }

    System.out.println();

    wait(2000);
    main(null);

}
```

```
1 1 1 2 2 2 2 3 3 3 3 3 3 3 4 4 4 4 5 5 6 6 6 7 8 8 8 8 9 9
```

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19-

```java
public static void nineteenth(){
    Scanner num = new Scanner (System.in);
    int array[] = new int [8];
    int valor=0;

    for (int i = 0; i < array.length; i++){
        System.out.print("Dame las 8 puntuaciones (1000 - 2800): ");
        valor=num.nextInt();

        array[i]=valor;
    }

    Arrays.sort(array);

    for (int a = 7; a >= 0; a--){
        System.out.print(array[a]+ " ");
    }

    System.out.println();

    wait(2000);
    main(null);
}
```

```
Dame las 8 puntuaciones (1000 - 2800): 1354
Dame las 8 puntuaciones (1000 - 2800): 2015
Dame las 8 puntuaciones (1000 - 2800): 1984
Dame las 8 puntuaciones (1000 - 2800): 1546
Dame las 8 puntuaciones (1000 - 2800): 2516
Dame las 8 puntuaciones (1000 - 2800): 1765
Dame las 8 puntuaciones (1000 - 2800): 2768
Dame las 8 puntuaciones (1000 - 2800): 1654
2768 2516 2015 1984 1765 1654 1546 1354
```

20-

```java
public static void twenty(){
    Scanner num = new Scanner (System.in);
    int array[] = new int [1000];
    int repe=0;

    for (int i = 0; i < array.length; i++){
        int cont = (int) (Math.random() * 99);
        array[i] = cont;
    }

    System.out.print("Dame el valor: ");
    int n = num.nextInt();

    for (int a = 0; a < array.length; a++){
        if(n == array[a]){
            repe++;
        }
    }

    System.out.println(n + " se repite "+ repe + " veces");

    wait(2000);
    main(null);
}
```

```
Dame el valor: 13
13 se repite 11 veces
```