



M3 – Programación

UF1: Programación Estructurada

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Práctica: 19

1-(Goles)Pide el nombre, los puntos, número de goles marcados, número de goles recibidos de N equipos (pide el valor de N).

```
package extra21.pkg02;

import java.util.Scanner;
public class EXTRA2102 {

    static String [] arrayNameTeams;
    static int [] arrayPoints, arrayGoals, arrayGoalsRecib, arrayTeams;
    static int golesMediaMarcados = 0, golesMediaRecib=0, puntosMedia=0, difference=0;
    static Scanner keyboard = new Scanner(System.in);

    public static void main(String[] args) {
        //Declaraciones Globales

        int option = -1;
        do{
            userMenu();
            option = keyboard.nextInt();
            switch(option){//inicio switch
                case 1:
                    System.out.print("How many teams are in the league?: ");
                    int teamsNum = keyboard.nextInt();
                    arrayTeams = new int [teamsNum];
                    arrayNameTeams = new String [teamsNum];
                    arrayGoalsRecib = new int [teamsNum];
                    arrayGoals = new int [teamsNum];
                    arrayPoints = new int [teamsNum];
                    for(int i=0 ; i<arrayTeams.length ; i++){
                        System.out.print("What's the name of your team?: ");
                        arrayNameTeams[i] = keyboard.next();
                        System.out.print("How many goals did the team received?: ");
                        arrayGoalsRecib[i] = keyboard.nextInt();
                        System.out.print("How many goals did your team score?: ");
                        arrayGoals[i] = keyboard.nextInt();
                        System.out.print("How many points does your team have?: ");
                        arrayPoints[i] = keyboard.nextInt();
                        golesMediaMarcados += arrayGoals[i];
                        golesMediaRecib += arrayGoalsRecib[i];
                        puntosMedia += arrayPoints[i];
                    }
                    break;
```

```

private static void userMenu() {
    System.out.println("");
    System.out.println("Author: Daniel Reyes Santiago");
    System.out.println("Opción 1 - (Goles): ");
    System.out.println("Opción 2 - (Campeón): ");
    System.out.println("Opción 3 - (Subcampeón): ");
    System.out.println("Opción 4 - (Mejor equipo defensivo): ");
    System.out.println("Opción 5 - (Mejor equipo ofensivo): ");
    System.out.println("Opción 6 - (Media de goles): ");
    System.out.println("Opción 7 - (Descienden): ");
    System.out.println("Opción 8 - (Visualizar datos): ");
    System.out.println("Opción 9 - (Diferencia de goles): ");
    System.out.println("Opción 10 - (Salir): ");
    System.out.print("\nOpción?: ");
}

```

```

Opción?: 1
How many teams are in the league?: 3
What's the name of your team?: Barcelona
How many goals did the team received?: 5
How many goals did your team score?: 5
How many points does your team have?: 5
What's the name of your team?: Sevilla
How many goals did the team received?: 10
How many goals did your team score?: 10
How many points does your team have?: 10
What's the name of your team?: Madrid
How many goals did the team received?: 15
How many goals did your team score?: 15
How many points does your team have?: 15

```

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2- (Campeón): visualiza los datos del equipo campeón.

```

case 2:
    int maxVal = 0;
    int maxPos = 0;
    for(int i=0 ; i<arrayPoints.length ; i++){
        if(arrayPoints[i]>maxVal){
            maxVal=arrayPoints[i];
            maxPos = i;
        }
    }
    System.out.println(arrayNameTeams[maxPos] + " has scored a total of " +
arrayGoals[maxPos] + " goals");
    System.out.println(arrayNameTeams[maxPos] + " has received a total of " +
arrayGoalsRecib[maxPos] + " goals");
    System.out.println(arrayNameTeams[maxPos] + " has a total of " +
arrayPoints[maxPos] + " points");
    break;

```

```

Opción?: 2
Madrid has scored a total of 15 goals
Madrid has received a total of 15 goals
Madrid has a total of 15 points

```

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3- (Subcampeón): visualiza los datos del equipo subcampeón.

```
case 3:
    maxValue = 0;
    maxPosition = 0;
    for(int i=0 ; i<arrayPoints.length ; i++){
        if(arrayPoints[i]>maxValue){
            maxValue=arrayPoints[i];
            maxPosition = i;
        }
    }
    System.out.println(arrayNameTeams[maxPosition-1] + " has scored a total of " +
arrayGoals[maxPosition-1] + " goals");
    System.out.println(arrayNameTeams[maxPosition-1] + " has received a total of " +
arrayGoalsRecib[maxPosition-1] + " goals");
    System.out.println(arrayNameTeams[maxPosition-1] + " has a total of " +
arrayPoints[maxPosition-1] + " points");
    break;

Opción?: 3
Sevilla has scored a total of 10 goals
Sevilla has received a total of 10 goals
Sevilla has a total of 10 points

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```

4- (Mejor equipo defensivo): visualiza los datos del equipo/s con menor goles recibidos.

```
case 4:
    int minValue = 0;
    int minPosition = 0;
    for(int i=0 ; i<arrayGoalsRecib.length ; i++){
        if(arrayGoalsRecib[i]<minValue){
            minValue=arrayGoalsRecib[i];
            minPosition = i;
        }
    }
    System.out.println(arrayNameTeams[minPosition] + " has scored a total of " +
arrayGoals[minPosition] + " goals");
    System.out.println(arrayNameTeams[minPosition] + " has received a total of " +
arrayGoalsRecib[minPosition] + " goals");
    System.out.println(arrayNameTeams[minPosition] + " has a total of " +
arrayPoints[minPosition] + " points");
    break;

Opción?: 4
Barcelona has scored a total of 5 goals
Barcelona has received a total of 5 goals
Barcelona has a total of 5 points

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```

5- (Mejor equipo ofensivo): visualiza los datos del equipo/s con mayores goles marcados.

```
case 5:
    int maxGoals = 0;
    maxPosition = 0;
    for(int i=0 ; i<arrayGoals.length ; i++){
        if(arrayGoals[i]>maxGoals){
            maxGoals=arrayGoals[i];
            maxPosition = i;
        }
    }
    System.out.println(arrayNameTeams[maxPosition] + " has scored a total of " +
arrayGoals[maxPosition] + " goals");
    System.out.println(arrayNameTeams[maxPosition] + " has received a total of " +
arrayGoalsRecib[maxPosition] + " goals");
    System.out.println(arrayNameTeams[maxPosition] + " has a total of " +
arrayPoints[maxPosition] + " points");
    break;

Opción?: 5
Madrid has scored a total of 15 goals
Madrid has received a total of 15 goals
Madrid has a total of 15 points

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```

6-(Media de goles): visualiza la media de goles marcados, recibidos de la liga.

```
case 6:
    golesMediaMarcados = golesMediaMarcados/arrayTeams.length;
    golesMediaRecib = golesMediaRecib/arrayTeams.length;
    System.out.println("The total average of scored goals of all teams are " +
golesMediaMarcados);
    System.out.println("The total average of received goals of all teams are " +
golesMediaRecib);
    break;

Opción?: 6
The total average of scored goals of all teams are 10
The total average of received goals of all teams are 10

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```

7-(Descienden): Pregunta el nombre de un equipo y di si este equipo desciende o no.

case 7:

```
int minPoints = 0;
minPosition = 0;
for(int i=0 ; i<arrayPoints.length ; i++){
    if(arrayPoints[i]<minPoints){
        minPoints=arrayPoints[i];
        minPosition = i;
    }
}
System.out.println("The team who is descending is " + arrayNameTeams[minPosition] + "
with a total of " + arrayPoints[minPosition] + " points");
break;
```

Opción?: 7

The team who is descending is Barcelona with a total of 5 points

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8-(visualizar datos): visualiza los datos de los equipos según un criterio lógico.

```
case 8:
for(int i=0 ; i<arrayTeams.length ; i++){
    System.out.println(arrayNameTeams[i] + " has scored a total of " + arrayGoals[i] + "
goals");
    System.out.println(arrayNameTeams[i] + " has received a total of " + arrayGoalsRecib[i]
+ " goals");
    System.out.println(arrayNameTeams[i] + " has a total of " + arrayPoints[i] + " points");
}
break;
```

Opción?: 8

Barcelona has scored a total of 5 goals
Barcelona has received a total of 5 goals
Barcelona has a total of 5 points
Sevilla has scored a total of 10 goals
Sevilla has received a total of 10 goals
Sevilla has a total of 10 points
Madrid has scored a total of 15 goals
Madrid has received a total of 15 goals
Madrid has a total of 15 points

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9-(diferencia de goles): visualiza la diferencia de goles de todos los equipos.

```
case 9:
    for(int i=0 ; i<arrayTeams.length ; i++){
        difference=arrayGoals[i] - arrayGoalsRecib[i];
        System.out.println(arrayNameTeams[i] + " has a difference of " + difference + " goals");
    }
    break;
case 10: p10();
    break;
default: System.out.println("Opción no valida");
} //Fin de switch
} while(option !=10); //Fin de while
} //FIN DE MAIN
```

```
Opción?: 9
Barcelona has a difference of 0 goals
Sevilla has a difference of 0 goals
Madrid has a difference of 0 goals
```

```
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```

10-salir.

```
private static void p10 (){
    System.out.print("Are you sure you want to exit?(Yes/No): ");
    String answer = keyboard.next();
    if(answer.equals("Yes")){
        System.out.println("Thanks for using this programm. Goodbye!");
    }
}
}
```

```
Opción?: 10
Are you sure you want to exit?(Yes/No): Yes
Thanks for using this programm. Goodbye!
BUILD SUCCESSFUL (total time: 1 minute 4 seconds)
```