SESSION 3: CONTROL STRUCTURES. ITERATION (LOOPS)

GOAL:

- Practice with the different iteration control structures.
- Understand the differences among them and their intended uses.

EXERCISE:

Write a Java program that helps the user to obtain a sequence of n integers (with n being greater than or equal to 2) in which even numbers are alternated with odd numbers. To do this, the integer values will be read from the keyboard, and when the rule above is not fulfilled, the program will ask for another value repeatedly until the number read fulfils it. The correct sequence will be printed on the screen as it is entered. At the end, the program will show how many wrong numbers have been read in the sequence. The sequence of numbers may start with an odd or even number, depending on the value of the first number entered by the user.

Version 2 of the program:
The program will calculate the sum of the even numbers of the correct sequence and the sum of the odd numbers and will print both on the screen after all the numbers of the sequence have been read.

In addition, the program must be properly documented, including representative names for the defined variables, and the interaction with the user must be properly explained.

MILESTONE 1: SUBMISSION OF ASSIGNMENTS 1, 2 AND 3: 6 November

EXAMPLE OF EXECUTION (FOR VERSION 2):

```
How many integers do you want the sequence to have (it must be greater than
or equal to 2)?... 5
Introduce the first integer 3
The integer #1 in the sequence is: 3
   Introduce an even integer 5
        You must introduce an even integer 4
The integer #2 in the sequence is: 4
   Introduce an odd integer 2
        You must introduce an odd integer 7
The integer #3 in the sequence is: 7
   Introduce an even integer 6
The integer #4 in the sequence is: 6
   Introduce an odd integer 9
The integer #5 in the sequence is: 9
The number of errors when reading the values is: 2
The sum of even numbers is 10 and the sum of odd numbers is 19

End of the program...
```