SESSION 4: VECTORS (ONE-DIMENSIONAL ARRAYS)

GOAL:

- Practice with vectors (one-dimensional arrays).

EXERCISE:

Rework the code of assignment 3, so that the numbers that form the correct sequence are stored in a vector as they are read. At the end of the program, the vector will be traversed to show the sequence obtained. The program will also show the number of errors made when reading the sequence. Also, at the end of the program, and once the vector has been obtained, the program will traverse it to obtain the sum of the even numbers and the sum of the odd numbers to finally display the result of both.

Version 2 of the program:
Generate two vectors, one with even numbers and one with odd numbers. Start from the original vector which includes the alternating odd and even numbers. Once they have been created, display the content of the two new vectors.

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.

EXAMPLE OF EXECUTION (FOR VERSION 1):

```
How many integers do you want the sequence to have (it must be greater than
or equal to 2)?... 5
Introduce the first integer 5
   Introduce an even integer 5
        You must introduce an even integer 6
   Introduce an odd integer 7
   Introduce an even integer 8
   Introduce an odd integer 9
The vector obtained is: [5, 6, 7, 8, 9]
The number of errors when reading the values is: 1
The sum of even numbers is: 14
The sum of odd numbers is: 21

End of the program...
```

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 5
   Introduce an even integer 5
        You must introduce an even integer 6
   Introduce an odd integer 7
   Introduce an even integer 8
   Introduce an odd integer 9
The vector obtained is: [5, 6, 7, 8, 9]
The number of errors when reading the values is: 1
The sum of even numbers is: 14
The sum of odd numbers is: 21
The vector of odd numbers is:
5 7 9
the vector of even numbers is:
6 8
End of the program...
```