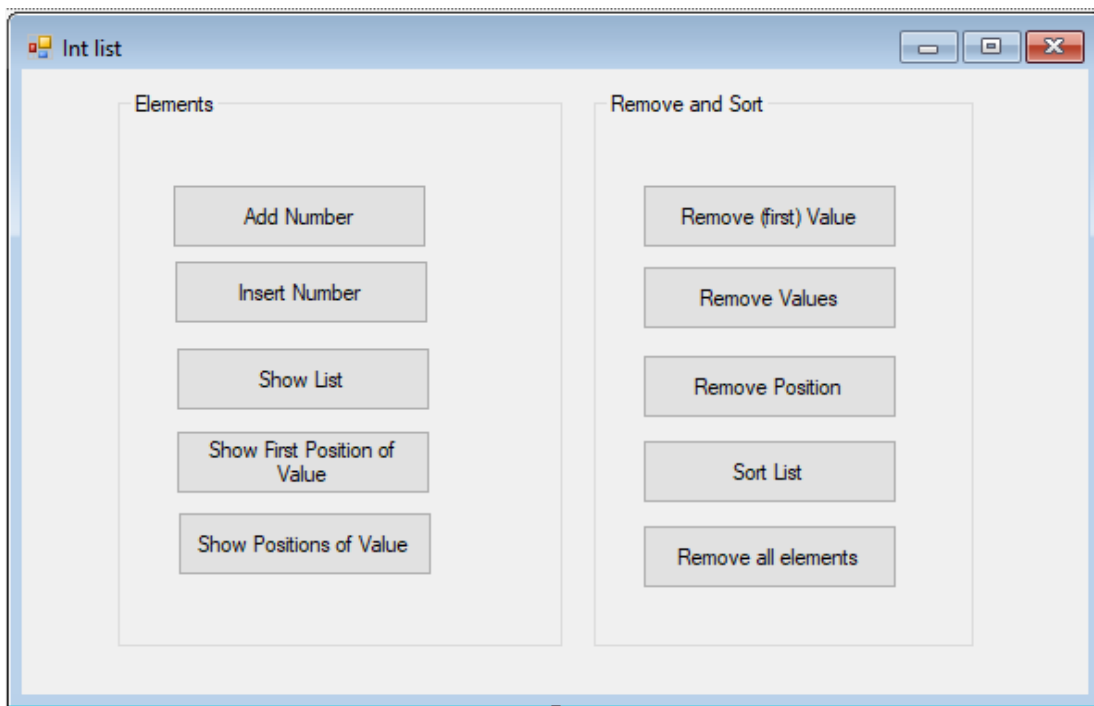


## Exercises

**Important note:** The name of the functions, labels, buttons, variables, constants, messages and comments of the exercises must be written in English.

1. Write a program that works with a list of integer values. Each button will have a functionality and will also display a message indicating whether the operation was successful or not.

We will have the following options in our program:



2. Develop a program that reads a list of integers. We will read numbers and ask the user if he or she wants to enter more numbers. When the user has finished entering the numbers, we will make two subprogrammes:
  - A subprogramme that copies the even numbers of the list in a new list.
  - A subprogramme that will move the even numbers to a new list so that only the odd ones will remain in the first list.
3. Code a program like the previous one. The difference is that what we copy or move to the new list are the prime numbers. I recommend you make a function that returns us if a number is prime or not.

4. Develop a program that reads a list of Base numbers and another list of Exponent numbers. The two lists will be read with exactly 10 numbers. Make a subprogram that gets a list with the element-by-element power of the two above.

5. Develop a program that asks the user for integer numbers. These numbers will be stored in two lists. After that, both lists will be ordered. The program will have two additional buttons:

The first one will create a new list with all the numbers of the two previous lists keeping them ordered.

This can be done iterating through both lists and adding the corresponding number to the third list.

**Example:**

**List 1: (1, 4, 8, 8, 10, 20)**

**List 2: (2, 3, 4, 6, 11, 12, 13)**

**List 3: (1, 2, 3, 4, 4, 6, 8, 8, 10, 11, 12, 13, 20)**

The second button will do the same but removing the elements from the lists, that is, the two initial list will end up empty.

6. Modify the previous exercise so that the third list cannot have repeated numbers. (Remember that List class has a Contains method).

**Example:**

**List 1: (1, 4, 8, 8, 10, 20)**

**List 2: (2, 3, 4, 4, 4, 6, 10, 10, 11, 12, 13)**

**List 3: (1, 2, 3, 4, 6, 8, 10, 11, 12, 13, 20)**

7. Develop a program that asks the user to introduce words. These words will be inserted ordered alphabetically in a list. That is, each time the user writes a word, the program will find in which position should be stored, then the word will be stored in that position using the Insert method.

Remember that String class has a method Compare that allows us to compare two strings alphabetically.

8. Code a program that simulates how the “primitiva” lottery works by using two lists:

The first one will store the winning number which is composed by 6 integer numbers between 1 and 49. These numbers will be generated randomly.

The second one will store the numbers introduced by the user (these numbers represent the lottery number bought by the user). Our program will check if the numbers are between 1 y 49 and that there are not repeated numbers.

Finally, the program will show the quantity of numbers the user has guessed correctly.