PROJECT–P25–AS

Object programming in C#

By Juan Vargas

28/04/2017
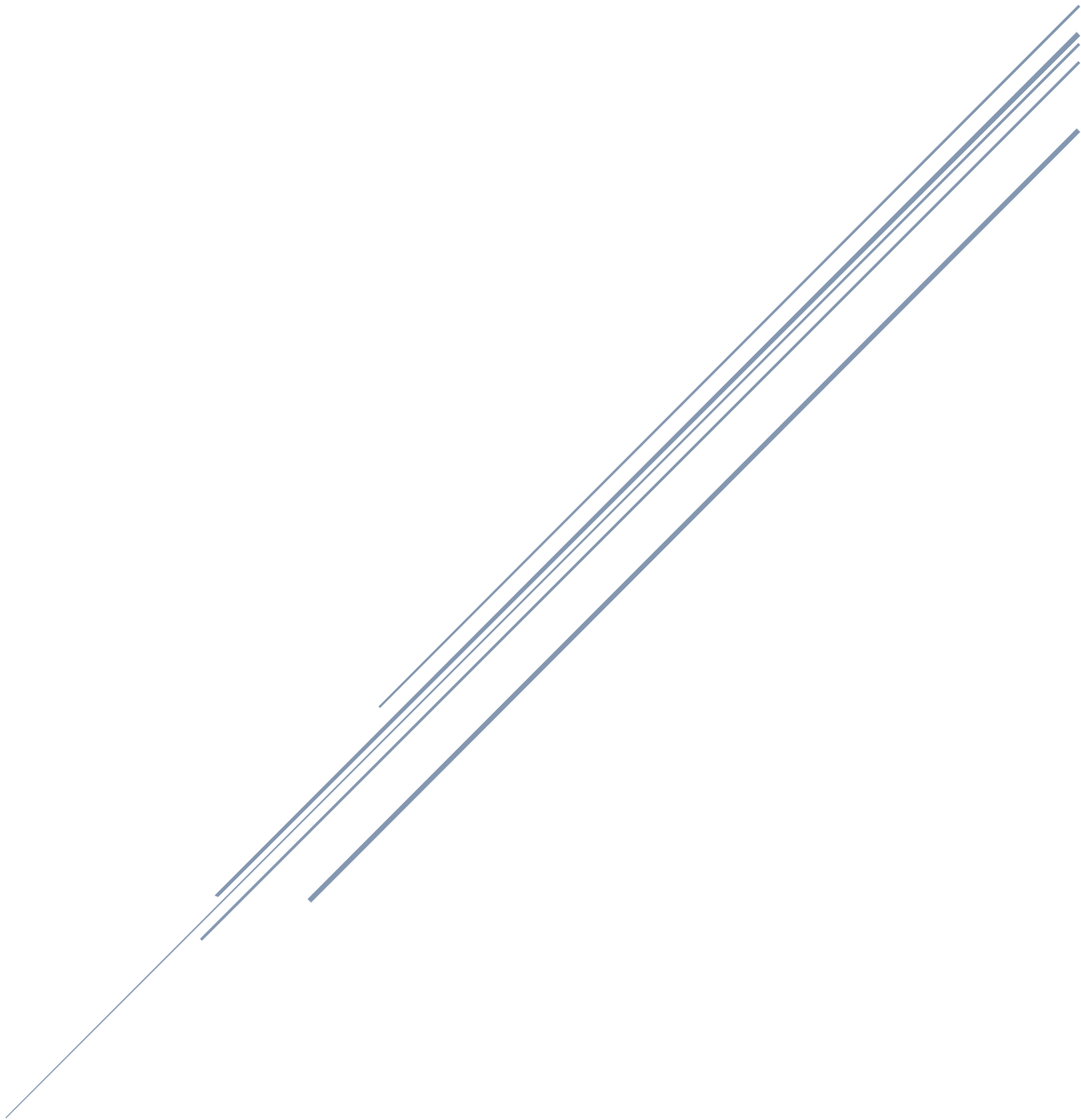
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Contents

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Language and framework implemented

This project was made in C#, in the IDE Visual Studio and it's intended for the .NET framework 3.0 or greater and for windows 7 or 10. In an English(Canada or United States) system machine region.

Program's description

Program basic structure

This program subdivides in 5 different forms:

- Form 0 (also named FrmMenu) is the Dash board that interconnects all other forms, this is the main form
- Form 1 (also named FrmLotto) is the Form that handles Lotto numbers auto-generated □
    Form 2 (also named FrmCalculator) is a calculator with basic functions.
- Form 3 (also named FrmExchange) is a currency exchange program that changes currencies' values.
- Form 4 (also named FrmTemperature) is a temperature exchange program, that works from Celsius to Fahrenheit and backwards.

All of the forms export a .txt file to the path C: /FinalProject/… depending on the output to be saved. This folder is auto generated by the program, and same for said text files.

It is not recommended to modify these files or the folder while using the application, as such could make some unexpected behavior in the software while running it.

Outputs and screenshots

Dash board

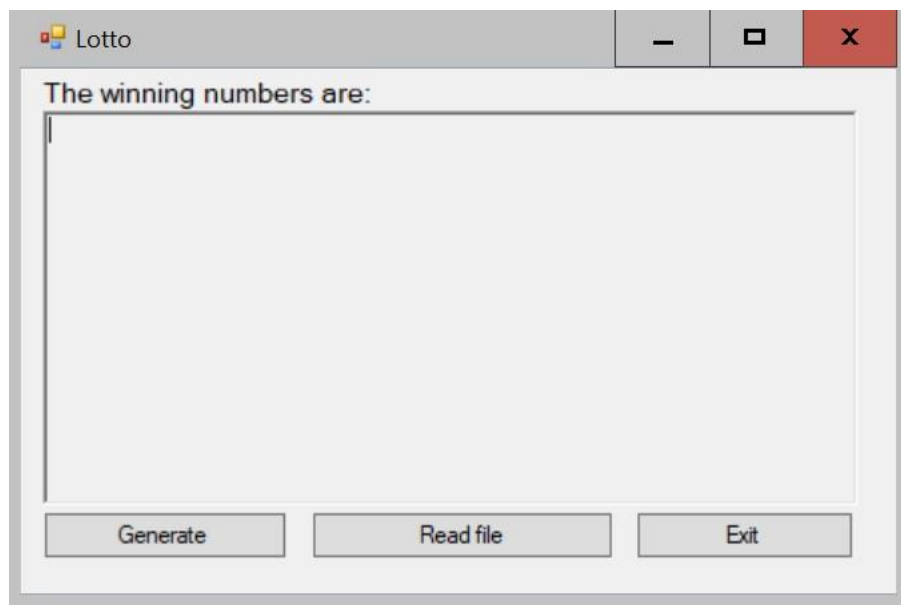This area is intended for the expected behavior to see in the application under usual circumstances.

First it's the usual dash board with the 4 forms accessible when clicking the images corresponding to each form.
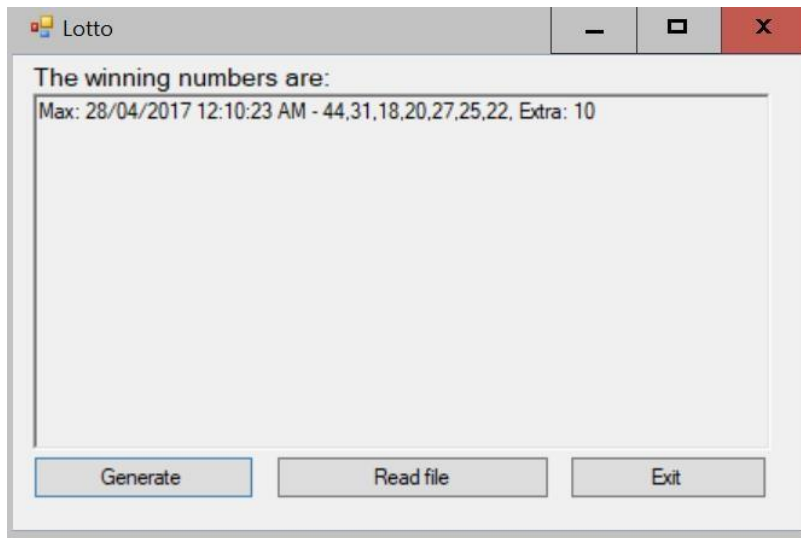
Lotto Generator

So on, we'll focus on the first form
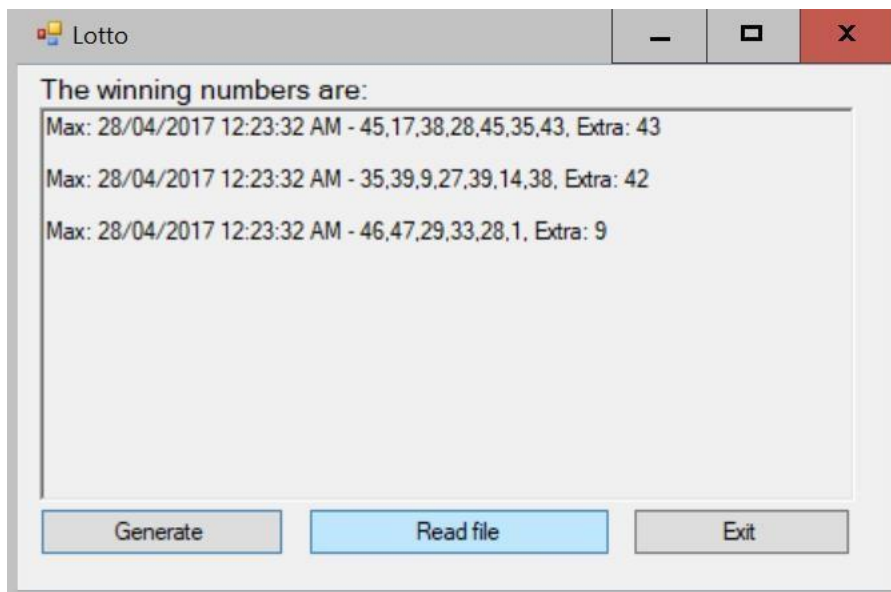

(Form 1 - FrmLotto)

This is the first page that should appear, the next step is to click the "Generate" button,

Now an auto-generated lotto number appears with the date when it was produced. This button can be pressed several times.

A file named LottoNumbers.txt should appear in C:/FinalProject, with the values of the lotto
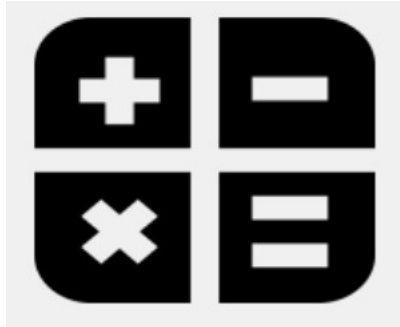

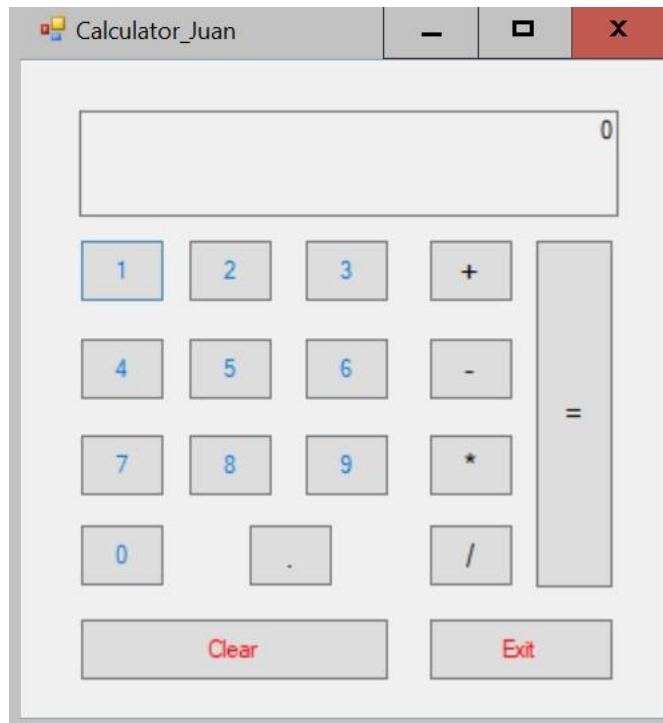Next step is to press Read File, which should read the text file and put the numbers saved in it.
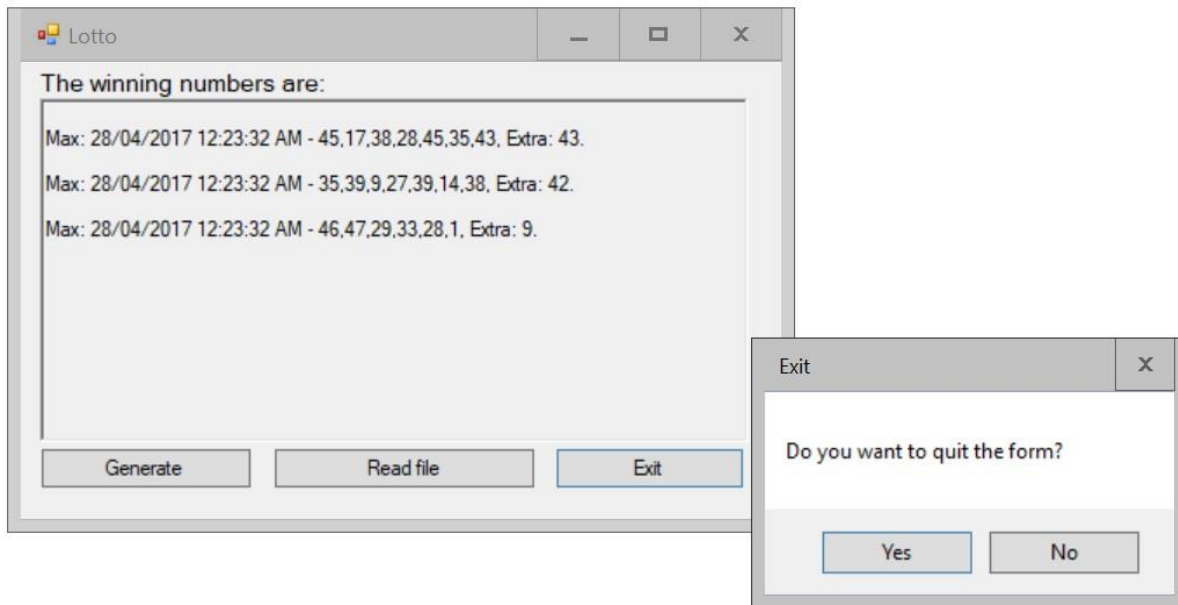
An exit screen is shown asking if you want to quit the form, if yes the program will return to the dashboard.

Calculator

Next is the calculator

(Form 2 – FrmCalculator)

The functions of the calculator should be self-explanatory,

1. You select the first number you want to calculate
2. You select the type of operation to be done 3. You select the second number to be calculated
4. You press = in order to see your result.

Clear will clean the display and the values being hold, note that this cleans not only the display but all the values last hold.

Although these steps are easy to follow there are measures counter taken in the case of an error, or a wrong type of number inputed, such as trying to calculate a double period number.
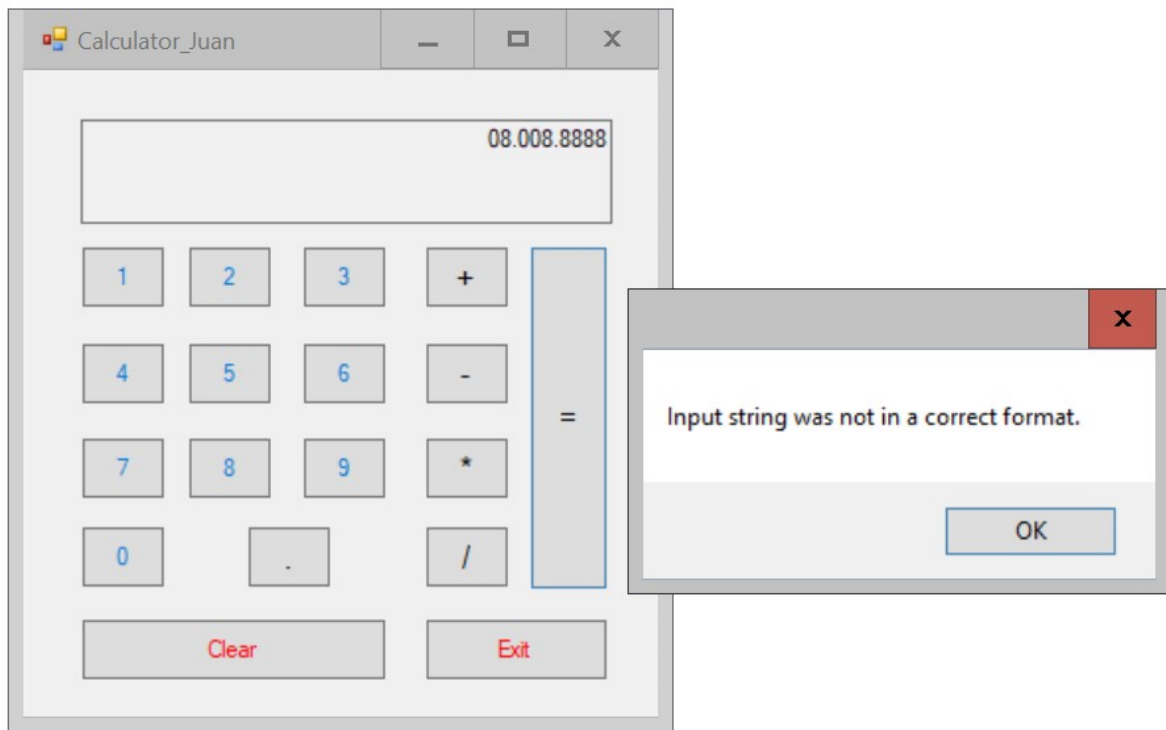
A message as such should appear handling the event. Be warned, once a handling error appears, the whole operation done before and numbers held will be cleared, as if the function clear is recalled cleaning whatever unhandled event might appear

If a division by 0 is done a different message should appear.
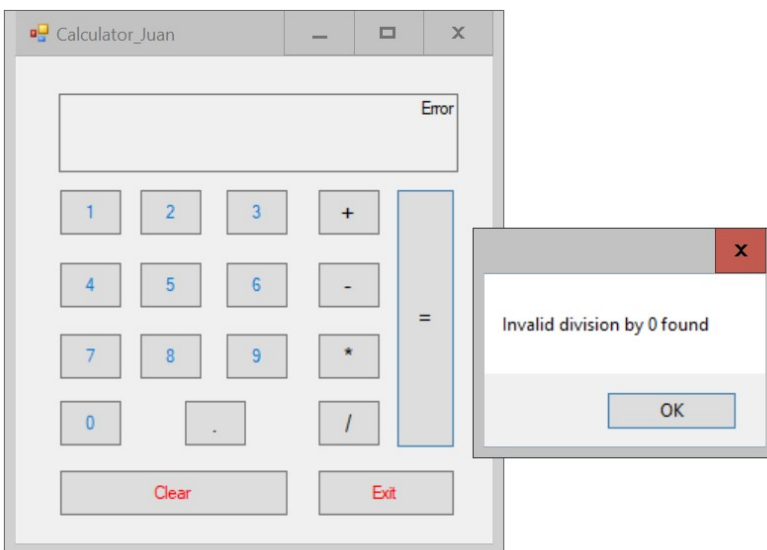
Notice that this time, the problem is handled and the output screen shows a different value than a number denominated "Error". This type of situations should only happen if there's a division by 0 being handled.
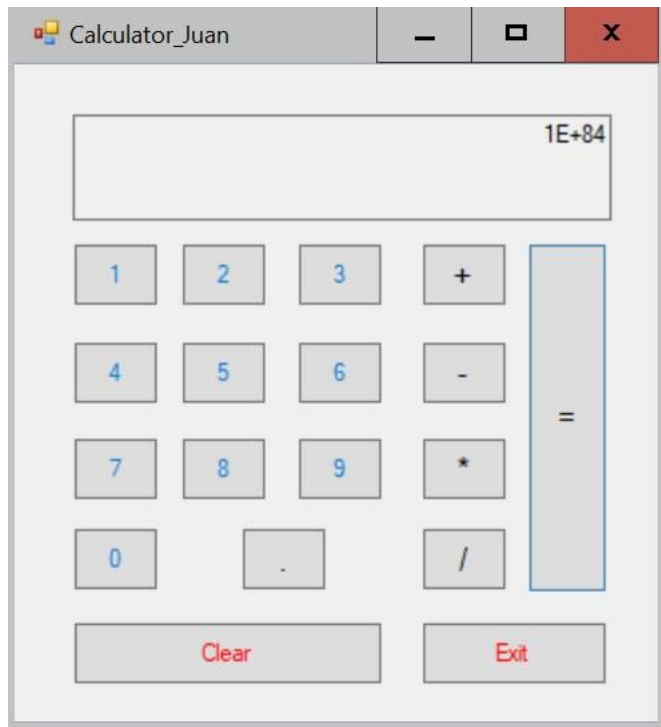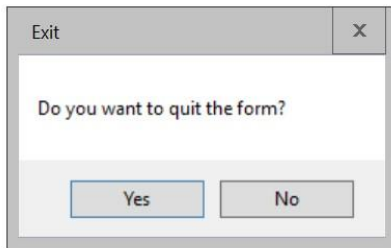

If the answer for a number is too big, the framework will take care of it automatically and make it into a scientific notation that should be calculable for further procedure.

All of the procedures are saved in the folder C:/FinalProject in the file Math.txt

If exit is selected:

An exit screen is shown asking if you want to quit the form will appear, if yes the program will return to the dashboard.

Currency Exchange

Next is the currency exchange program.

(Form 3 – FrmExchange)

This is the first page that should appear, the next step is to click the "Convert" button after filling all the data to be calculated,
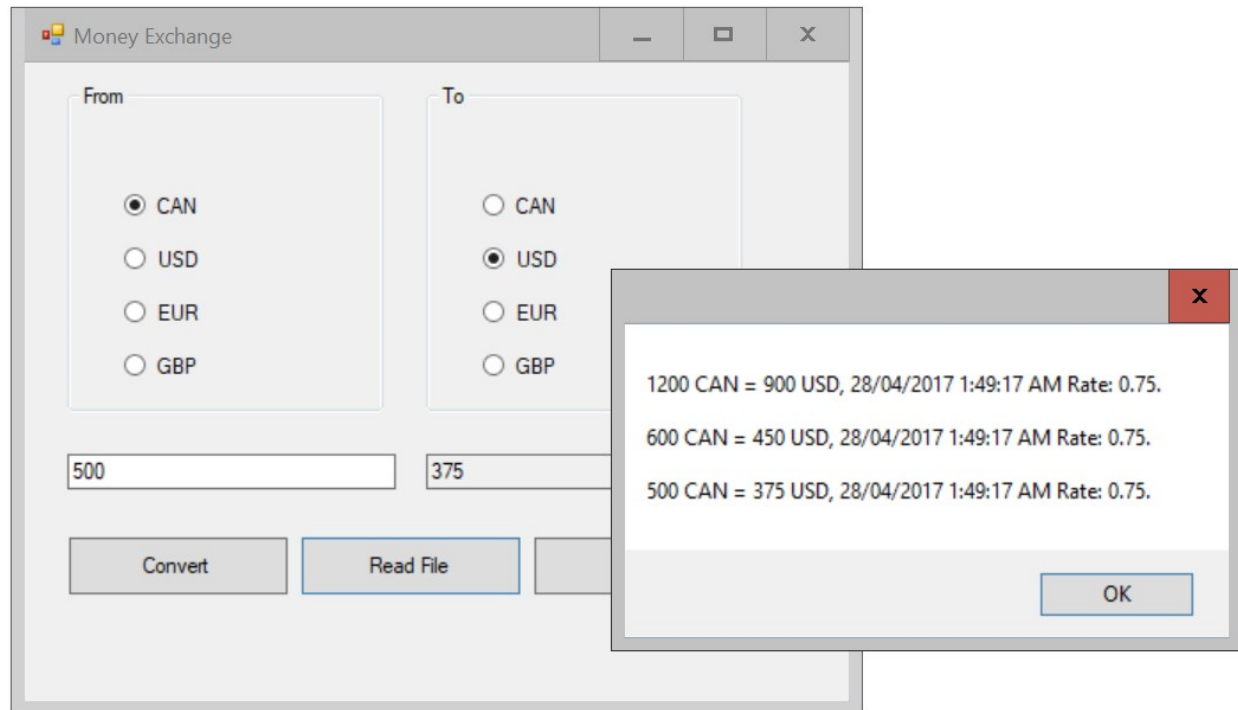
Once the information is computed and the correct procedure is done, the procedure done should be saved in the folder C:/FinalProject, in the text file Exchange.txt.
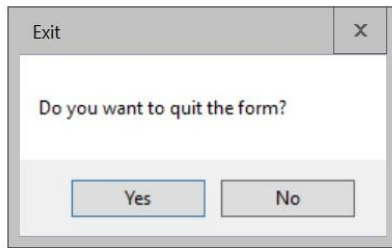

The next section is the read file button, once pressed it should pop out a message box with the values last inputted, this information read from the text file.

If there's no file in the directory, the program will show the following error
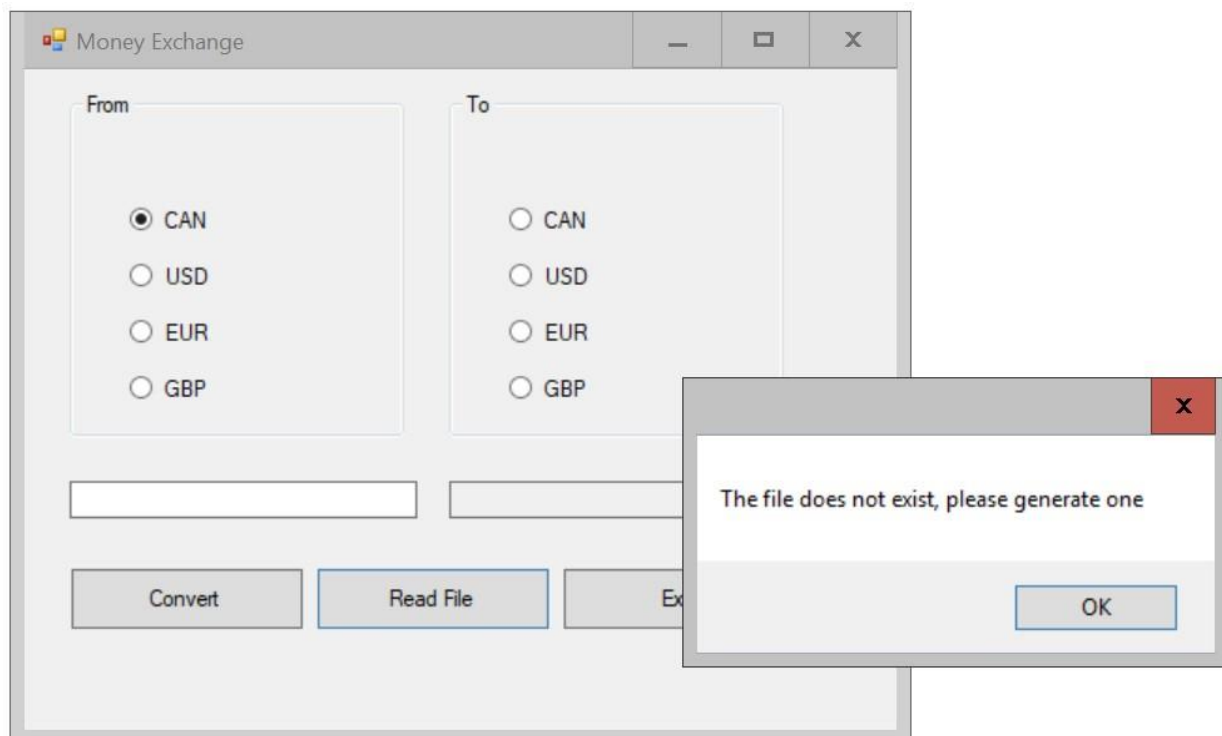
If exit is selected:

An exit screen is shown asking if you want to quit the form will appear, if yes the program will return to the dashboard.

Temperature convertor

Next is the temperature conversor program.

(Form 4 – FrmTemperature)

This is the last form, the Temperature convertor from Celsius to Fahrenheit and backwards.

This is the first page that should appear, with some text regarding the project and its version.

The user must select one of the options in these radial buttons.

○ From C to F

○ From F to C

Once selected depending on the option, the exchange should change accordingly, making the other box
Read-only and emptying whatever has been inputted in the box.

[ ] to [ ]

C **F**

[ ] to [ ]

C **F**

Once the value has been inputted, the answer should show as the following

Certain messages appear for certain values depending on the value inputted,

Otherwise no message should appear.

°C	°F	Description
100	**212**	Water boils
40	**104**	Hot Bath
37	98.6	Body temperature
30	**86**	Beach weather
21	70	Room temperature
10	**50**	Cool Day
0	**32**	Freezing point of water
−18	0	Very Cold Day
−40	**−40**	Extremely Cold Day (and the same number!)
		(bold are exact)

This is the list of values and their respective message.

Once the numbers are converted properly, a text file should be made in the C:/FinalProject folder named TempConversions.txt

C:\FinalProject				
	Name	Date modified	Type	Size
	TempConversions	28/04/2017 02:35	Text Document	1 KB

When the button Read file is pressed, it should read the text file and place it in the output box, showing all of the values done so far. Please note that this action will overwrite whatever is being done in the message box, but since the conversion button automatically saves everything being done, there should be no problem, but if the file is being modified from a third source, or is erased there should be an unexpected behavior. This is one of the many reasons why it is recommended not to change any files while the program runs.

If exit is selected:

An exit screen is shown asking if you want to quit the form will appear, if yes the program will return to the dashboard.