**Documentation of the measurement conversion application**

For the realization of this program, I set up the possibility for the user to choose the type of measurement value. Then he will no longer have to put an input value and choose his unit as well as the output unit. Finally, he can click on the Convert button to convert.

By allowing the user to choose the type of measure, I create two class: ConvertionType and Unit.

In ConvertionType I have the Name property as well as the LstUnit property which contains the list of units related to this type of measurement. I also created the method that will perform the convertion calculation.

In the Unit class I have the Name and Puissance properties. The Puissance property is useful for the conversion calculation because they are puissance of 10.

To define the values ​​of the powers it's simple, I take as a basis the unit to the power of 0 for example put (m), liter (l), gram (g) and I add 1 if I go to the unit lower and I subtract 1 if I go to the upper unit.

to do the calculation later (in the Convertion method) I subtract the puissance of the input value from the puissance of the output value. The result allows me to put it as a power for the convertion.

Example :

m -> puissance : 0

km -> puissance 4

0 - 4 = -4 so 1m = 1\*10-4 km = 0.0001 km

Possible improvement :

* You can use the Json for the data library.
* Meet in place a correct MVC structure, the data processing must be in the model and not in the controller like in my application.
* Added the possibility of making non-linear conversions, for example going from the unit Celcius to the unit Fahrenhiet. The calculation is more complicated to know which puissance to use (surely to use the log) but it’s possible with my code structure. Add a boolean property to indicate that it is not a linear convertion and then in the Convertion method perform the correct calculation for non-linear convertions.
* Add a Clear button which will set the input value and the output value to 0.
* When changing the type of measurement, set the values ​​to 0.
* When changing the unit of measurement, set the output value to 0.