**qwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmrtyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmrtyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmrtyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmrtyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmrtyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmrtyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmrtyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnm**

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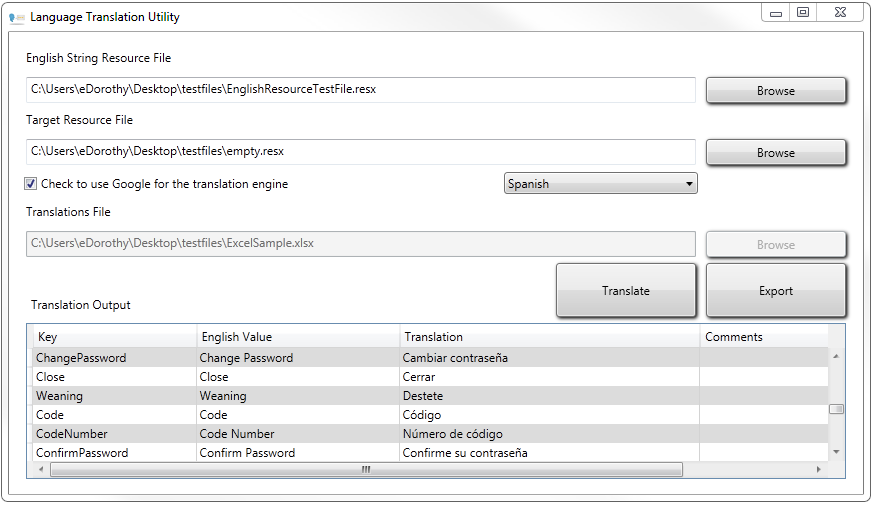
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# Overview



This project has been designed to be used by developers who have a need to globalize their solution through the use of resource files. The central idea for this tool is that English resource file is used as a template to go through and get the individual translations of each word or phrase so that it can be translated into the specified language. With a little modification, this tool could be modified to accept any home language supported by the underlying translation engine. This documentation will take you step by step on how to effectively translate your string values from your source language to the target language.

# Source Resource

The source resource is the English resource file. The .resx resource file format consists of XML entries, which specify objects and strings inside XML tags. One advantage of a .resx file is that when opened with a text editor (such as Notepad or Microsoft® Word (Microsoft Corporation)) it can be written to, parsed, and manipulated. When viewing a .resx file, you can actually see the binary form of an embedded object (a picture for example) when this binary information is a part of the resource manifest.

The resource file should contain the following information when you create a new resource file.

*Microsoft ResX Schema*

*Version 2.0*

*The primary goals of this format is to allow a simple XML format*

*that is mostly human readable. The generation and parsing of the*

*various data types are done through the TypeConverter classes*

*associated with the data types.*

This information is just a comment and can be removed from the software as the software tool does not rely on this information for its processing.

Apart from this binary information, a .resx file is completely readable and maintainable. For the purposes of this utility, all binary information is not translated and its presence in the resource file may actually cause errors in the program. This tool was only designed to translate string resources.

Following the header information, each entry is described as a name/value pair, very similar to the way in which strings are specified in a .txt file. A name/value pair in the .resx format is wrapped in XML code, which describes string or object values. When a string is added to a .resx file, the name of the string is embedded in a <data> tag, and the value is enclosed in a <value> tag, as in the following example.

<data name="string1" xml:space="preserve">

<value>Hello World</value>

</data>

As a developer you can use either Visual Studio 2012™ (Microsoft Corporation) to enter the information or your favorite text editor.

# Target Resource

The target resource file is a file in the same format as the file above either without the data/value pairs or with the incorrect translations in the file. If this is your first time translating the file, to avoid confusion, you can delete all of the data/value pairs in the target resource file. It could be as small as the file example shown below.

<?xml version="1.0" encoding="utf-8"?>

<root>

<!-- Other information in this file has been commented as it is not relevant to the tool -->

<data name="string1" xml:space="preserve">

<value>Hello World</value>

</data>

</root>

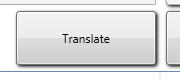
# Select Language



When you perform the translation for the first time, you will want to use the Google® (Google) translation engine. Translation of the string resources is performed by Google Translate, a third party service which this tool has no control over. The service provides automated computer translations that are only an approximation of the strings original content.

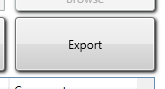
This tool is for your convenience only. The translations should not be considered exact and in some cases may include incorrect or offensive language. This tool and its creator do not warrant the accuracy, reliability or timeliness of any information translated by this system and will not accept liability for loss incurred as a result.

The use of the Google translation engine is **ONLY** to provide you a base line translation. Do not put any translation derived from the use of this engine into production without further examination from a human being fluent in the target language and context.

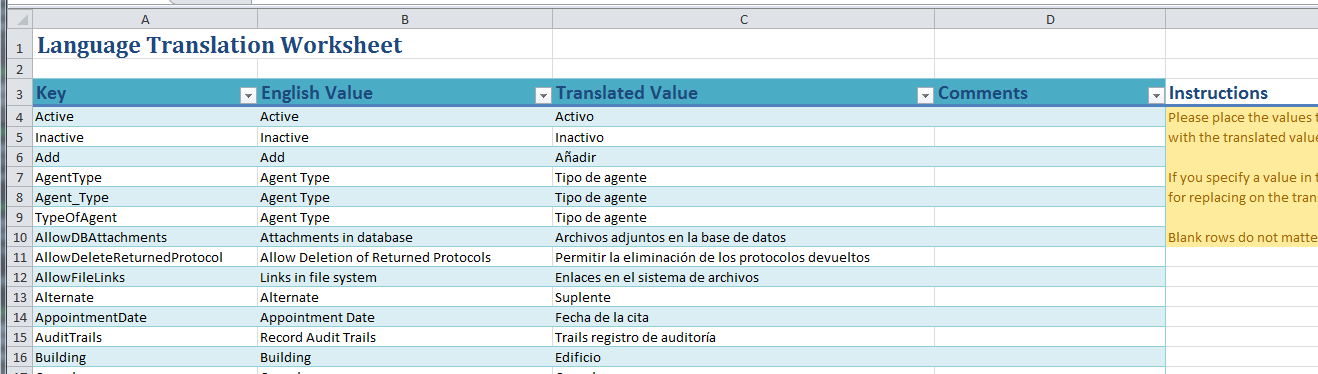


Click the “Translate Button” to ask the tool to go out to Google and perform the translations, placing them in the target file.

# Export



Once you are done with the baseline translation, you can click the “Export” button and the software will export the results into a Microsoft Excel® (Microsoft Corporation) spreadsheet. This process can take a few moments depending on the amount of data that you have translated. It will only provide you values that exist in both the source and the target files. Once the export operation is complete it will open an Excel spreadsheet that looks like the following.



This file can be zipped up and sent to a human who is fluent in both the language and the context of the program for evaluation and cleanup. Once the translated values have been corrected, then the file is ready to be imported into the target file again.

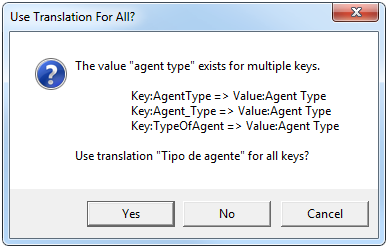
# Translations File

Once you receive the corrected values in the Language Translation Worksheet, you are ready to update the target string resource with these values.



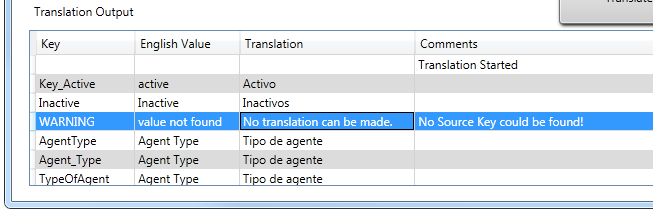
To perform this operation; you simply “Browse” to the Language Translation Worksheet and then click the “Translate” button. This will cause the Language Translation Utility to read the corrected values from the Excel spreadsheet and write them to the target string resource.

When performing the translation, if the utility comes across a value in the translation worksheet that does not have a key, it will attempt to look up the key in source translation file. In some cases the translation may exist in the source file for multiple keys. If this occurs the utility will present you with the following dialog box.



In the above situation the value “Agent Type” has be specified more than once in the source string resource using different keys. The utility is asking you if you want to use the translated value to update **all** of the keys at once. If you say “No” at this point, you will be asked for each key one at a time.

Once the translation operation is complete; please examine the translation output for warning messages. This will occur when the value cannot be found in the source resource and no key has been specified in the Language Translation Worksheet.



If you find any of these warnings, you may have to correct them manually or fix the worksheet and perform the operation again.

# Summary

This concludes the step by step operation of this utility. As this is an automated tool, the output should be examined at every step for correctness.

## Source Code

The source code for this project is maintained on Github at <https://github.com/Dacke/Language-Translation>.

# Works Cited

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