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Building a Universal Windows Platform (UWP) Application (Part 3) – Multilingual Support

by **admin** | Oct 26, 2016

I just rolled off a client recently that needed to build a Universal Windows Platform (UWP) application as part of their hardware and software solution. For those who aren't yet familiar with UWP, you can check out this article by Tyler Whitney.

As many of you developers out there are aware, sometimes you have to build or bring with you a number of application infrastructure items before you can even get started with the core application logic. For example, you might need some helpers, services and base classes that make your job easier or allow you to start with your base patterns, such as, MVC, MVVM, etc.

So, I have decided to create a series of posts that build up a bunch of common, important parts of an application that you might want to have in place before you even start developing your core functionality. I have discussed a number of topics in my previous posts:

Building a Universal Windows Platform (UWP) Application (Part 1) – Using Template10

Building a Universal Windows Platform (UWP) Application (Part 2) – T4 and Strings

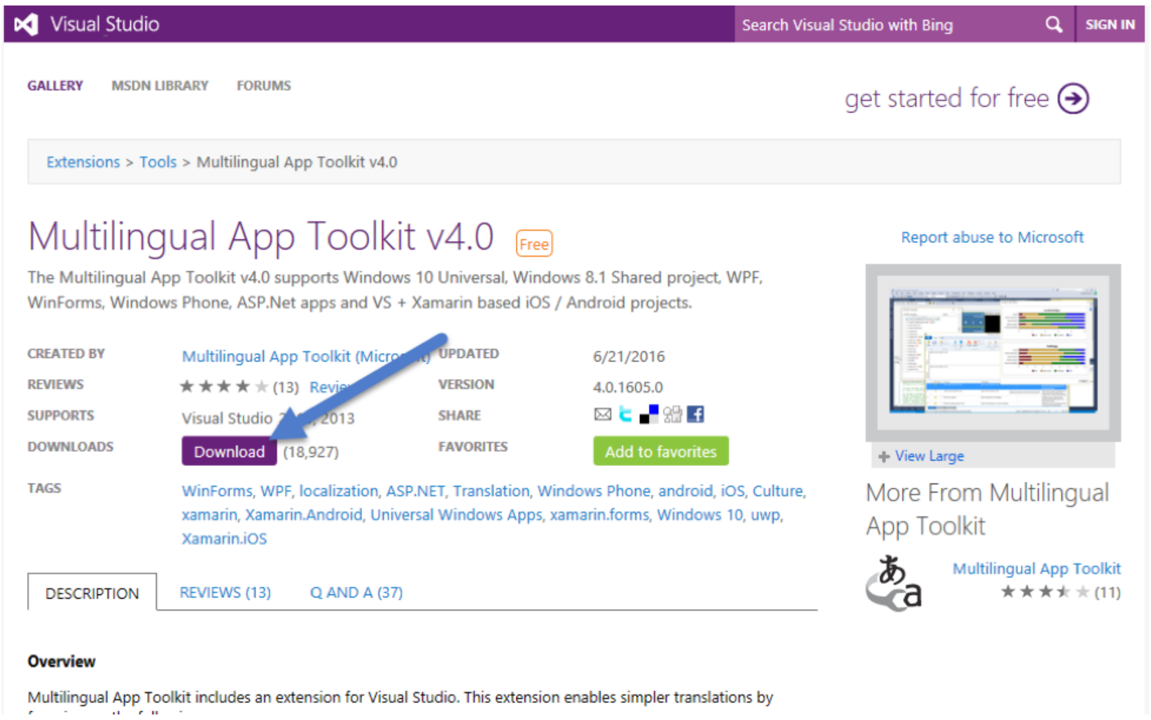
If you haven't already read the previous posts, I recommend you do since they all build on each other.

Today, we are going to discuss how we can add multilingual support to our application.

Add Multilingual App Toolkit

Not all, but a lot of applications not only target one language, but multiple languages. So, let's add support for multiple languages. To do this, we will install the Multilingual App Toolkit created by Microsoft.

Click on the **Download** button.



Visual Studio | Search Visual Studio with Bing | SIGN IN

GALLERY MSDN LIBRARY FORUMS get started for free

Extensions > Tools > Multilingual App Toolkit v4.0

Multilingual App Toolkit v4.0 Free

The Multilingual App Toolkit v4.0 supports Windows 10 Universal, Windows 8.1 Shared project, WPF, WinForms, Windows Phone, ASP.Net apps and VS + Xamarin based iOS / Android projects.

CREATED BY	Multilingual App Toolkit (Micro...	UPDATED	6/21/2016
REVIEWS	★★★★☆ (13) Revie...	VERSION	4.0.1605.0
SUPPORTS	Visual Studio ... 2013	SHARE	
DOWNLOADS	Download (18,927)	FAVORITES	Add to favorites

TAGS WinForms, WPF, localization, ASP.NET, Translation, Windows Phone, android, iOS, Culture, xamarin, Xamarin.Android, Universal Windows Apps, xamarin.forms, Windows 10, uwp, Xamarin.iOS

Report abuse to Microsoft

View Large

More From Multilingual App Toolkit

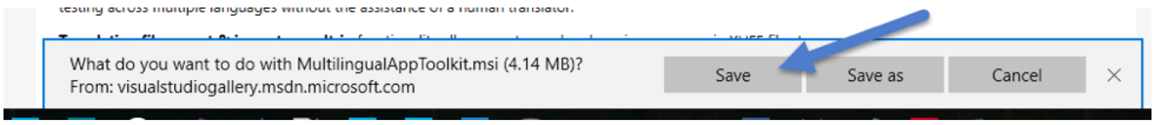
Multilingual App Toolkit ★★★★☆ (11)

DESCRIPTION REVIEWS (13) Q AND A (37)

Overview

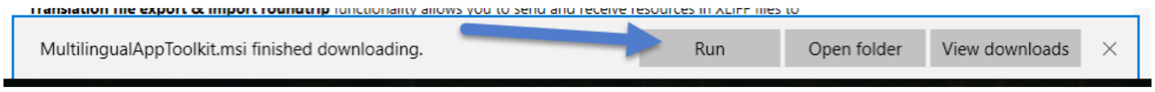
Multilingual App Toolkit includes an extension for Visual Studio. This extension enables simpler translations by

Once you select Download, you will be prompted to save the download. **Select Save**.



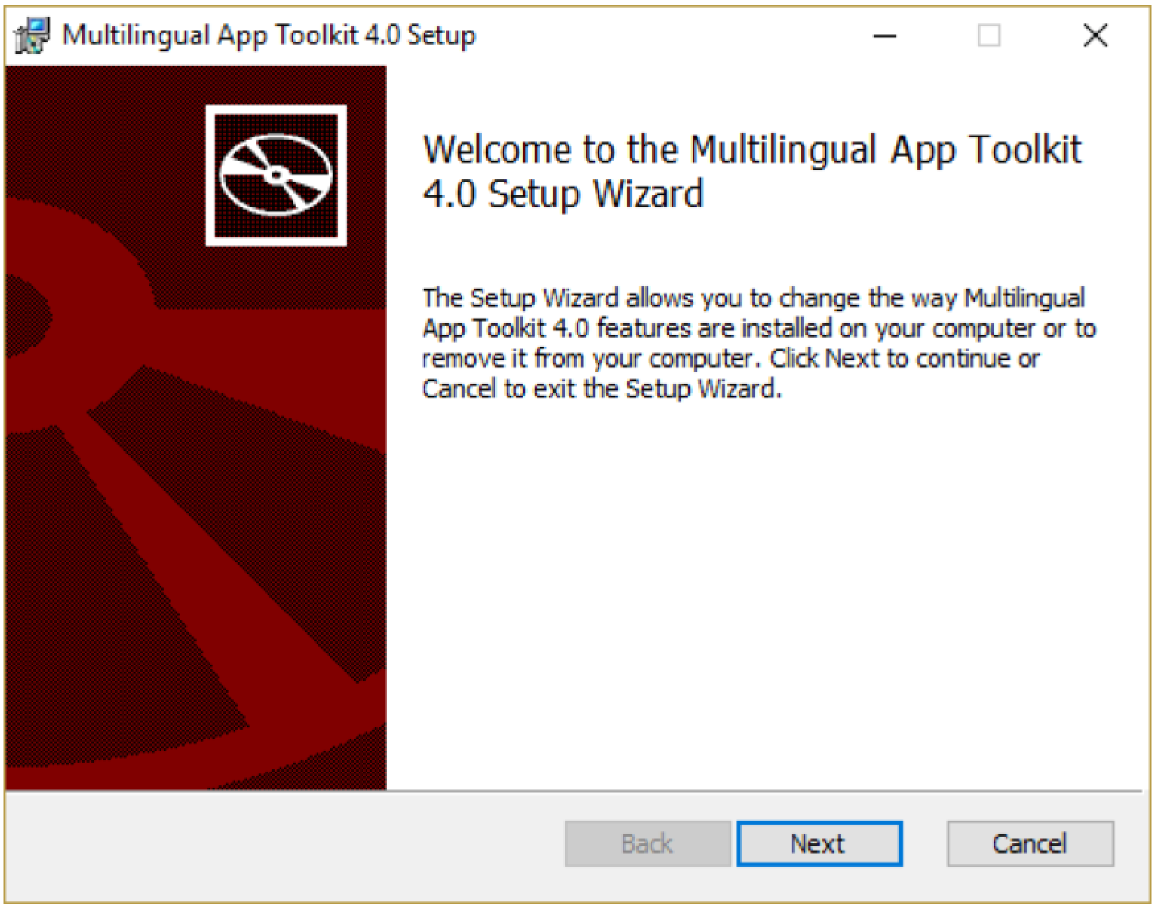
What do you want to do with MultilingualAppToolkit.msi (4.14 MB)?
From: visualstudiogallery.msdn.microsoft.com

Now, you will be prompted to run the install. If you have **Visual Studio** open, you might want to **close it**. Better to be safe than sorry. **Select Run**.



MultilingualAppToolkit.msi finished downloading.

At this point, you will be prompted to install the toolkit.

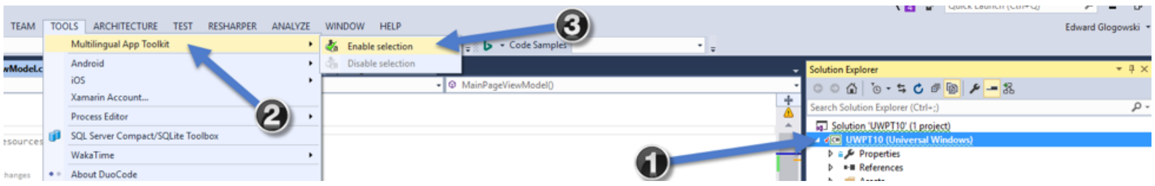


Multilingual App Toolkit 4.0 Setup

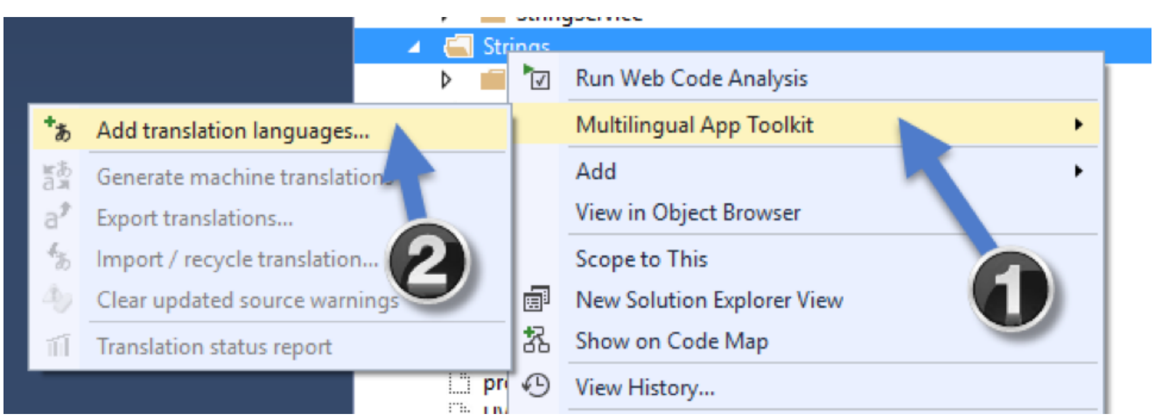
Welcome to the Multilingual App Toolkit 4.0 Setup Wizard

The Setup Wizard allows you to change the way Multilingual App Toolkit 4.0 features are installed on your computer or to remove it from your computer. Click Next to continue or Cancel to exit the Setup Wizard.

Once you have finished installing the toolkit, **open** the **project** again.   First, **select** our **UWPT10 project** in our solution. Second, from the main menu **select Tools**, **Multilingual App Toolkit** and then **Enable selection**.

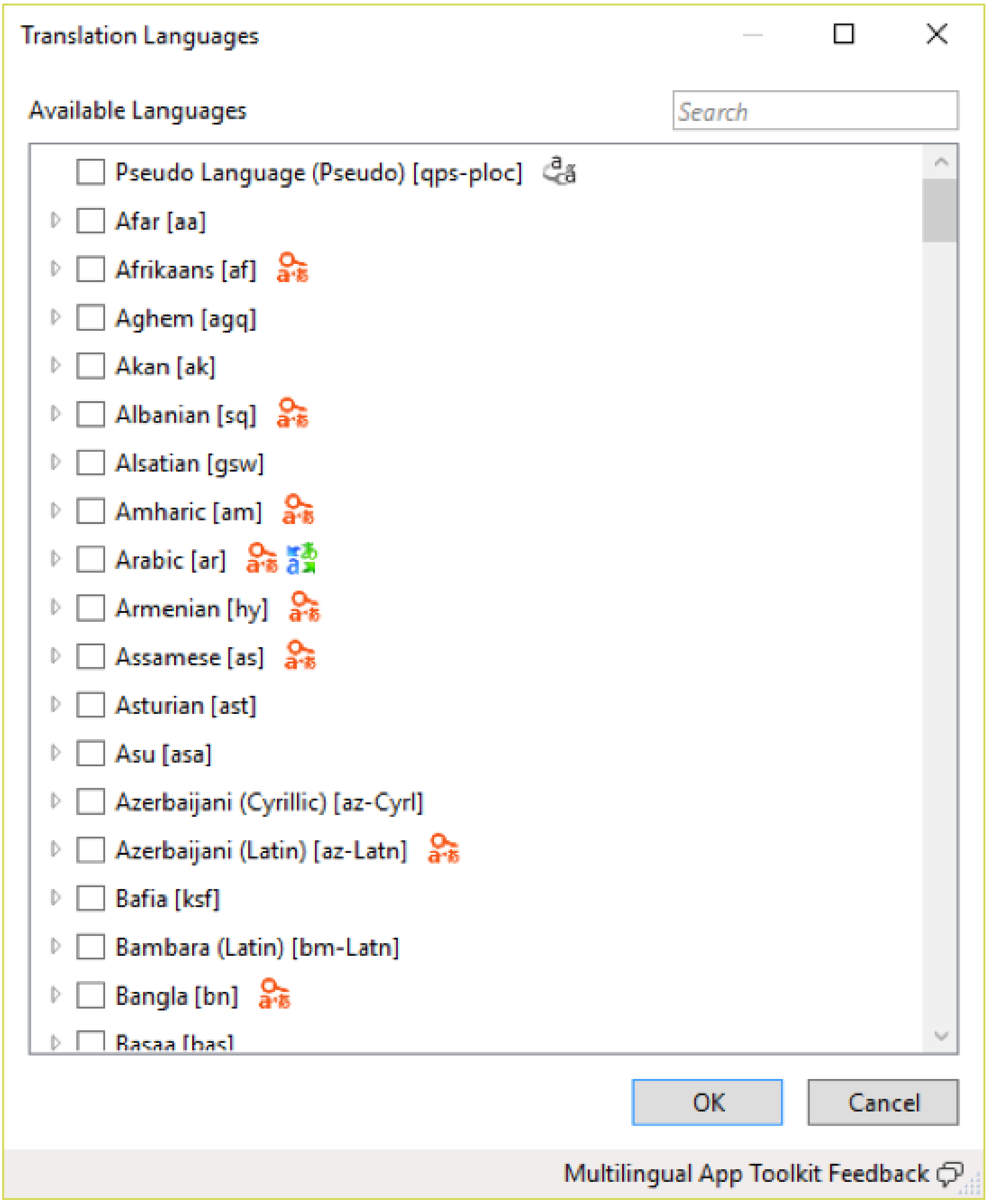


This will enable us to use the Multilingual App Toolkit for this project. Now, right click on the Strings folder, **select Multilingual App Toolkit** then **select** Add translation languages…



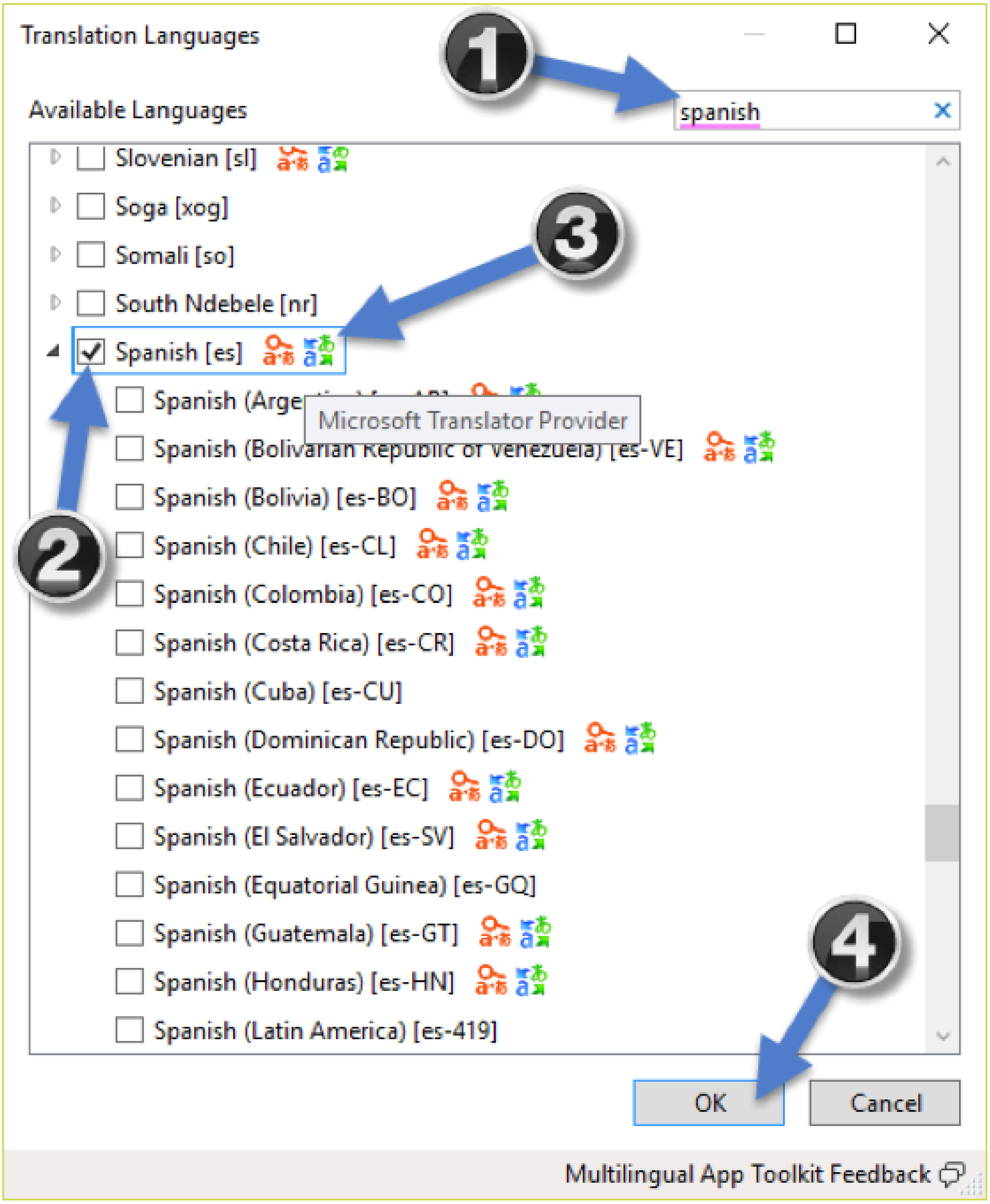
Strings
Run Web Code Analysis
Multilingual App Toolkit
Add
View in Object Browser
Scope to This
New Solution Explorer View
Show on Code Map
View History...
Add translation languages...
Generate machine translations
Export translations...
Import / recycle translation...
Clear updated source warnings
Translation status report
1
2

A dialog will popup prompting you for any languages you would like to support in your application.



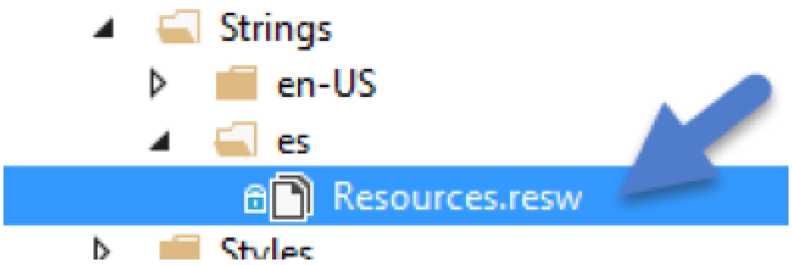
- [ ] Pseudo Language (Pseudo) [qps-ploc]
- [ ] Afar [aa]
- [ ] Afrikaans [af]
- [ ] Aghem [agq]
- [ ] Akan [ak]
- [ ] Albanian [sq]
- [ ] Alsatian [gsw]
- [ ] Amharic [am]
- [ ] Arabic [ar]
- [ ] Armenian [hy]
- [ ] Assamese [as]
- [ ] Asturian [ast]
- [ ] Asu [asa]
- [ ] Azerbaijani (Cyrillic) [az-Cyrl]
- [ ] Azerbaijani (Latin) [az-Latn]
- [ ] Bafia [ksf]
- [ ] Bambara (Latin) [bm-Latn]
- [ ] Bangla [bn]
- [ ] Basaa [bas]

For now, we are going to add support for Spanish. So, in the **search box** on the top right side of the dialog, **type Spanish**. Now, **select Spanish**. Notice the icons next to the language. This signifies that there are two translation providers that can be used to translate your strings. Now **select OK**.

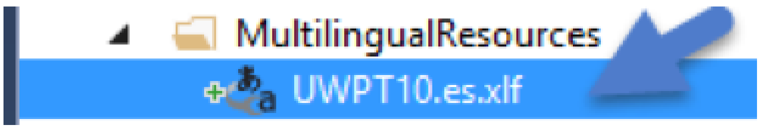

Translation Languages
Available Languages
spanish
1
2
3
4
Slovenian [sl]
Soga [xog]
Somali [so]
South Ndebele [nr]
Spanish [es]
Spanish (Arge
Microsoft Translator Provider
Spanish (Bolivarian Republic of Venezuela) [es-VE]
Spanish (Bolivia) [es-BO]
Spanish (Chile) [es-CL]
Spanish (Colombia) [es-CO]
Spanish (Costa Rica) [es-CR]
Spanish (Cuba) [es-CU]
Spanish (Dominican Republic) [es-DO]
Spanish (Ecuador) [es-EC]
Spanish (El Salvador) [es-SV]
Spanish (Equatorial Guinea) [es-GQ]
Spanish (Guatemala) [es-GT]
Spanish (Honduras) [es-HN]
Spanish (Latin America) [es-419]
OK
Cancel
Multilingual App Toolkit Feedback

Two things happen:

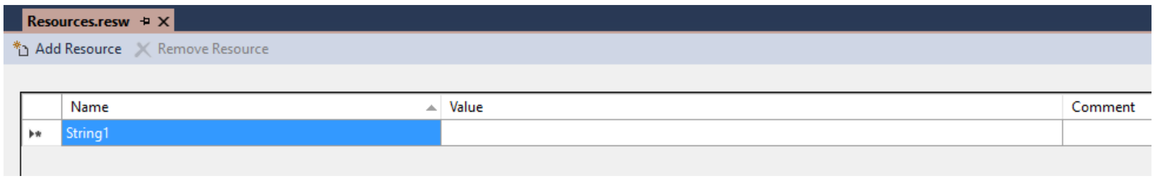
1. A resource file for the language is created. Which is what you would expect.



2. A new folder, MultilingualResources, is created and a file UWPT10.es.xlf file is created and placed in it.



So, if we open the Spanish resource file, what would you expect? Well, open it. Is it what you expected? Probably not. It is empty.



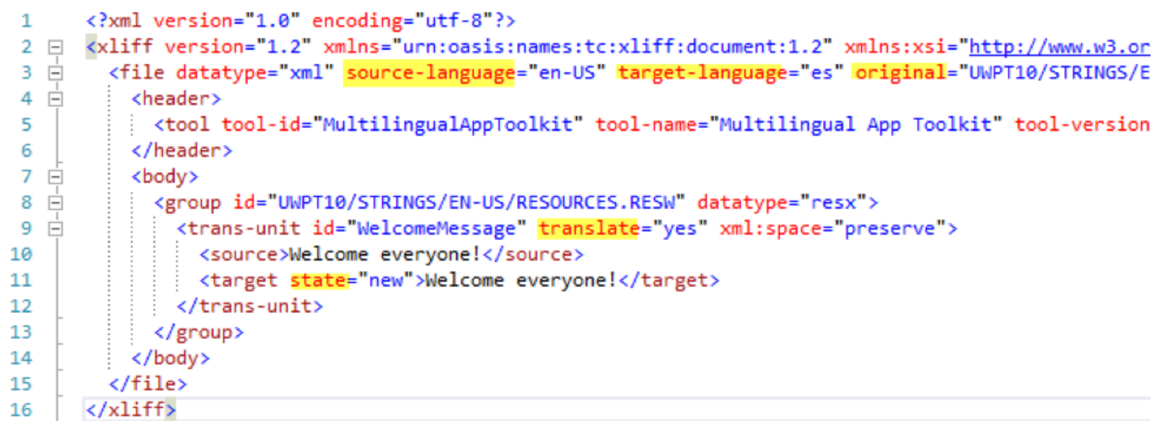
Name	Value	Comment
String1		

Why didn't it fill in? Well, let's put this on hold until I discuss the UWPT10.es.xlf file in more detail.

What Does the UWPT10.es.xlf file do for us?

Well, it is a common document format that translation services use. It basically holds all the status and translation information for a particular translation. For example, if we want to have a service translate our English resources to Spanish, we would create a XLIFF file and have them translate it on their end with a tool. (Actually, in some cases you could just send them the whole resource file and they can probably create a new XLIFF file.)

So, when we added the new language with the toolkit, it automatically created it for us. However, if you open up the file in the editor, it looks like this…

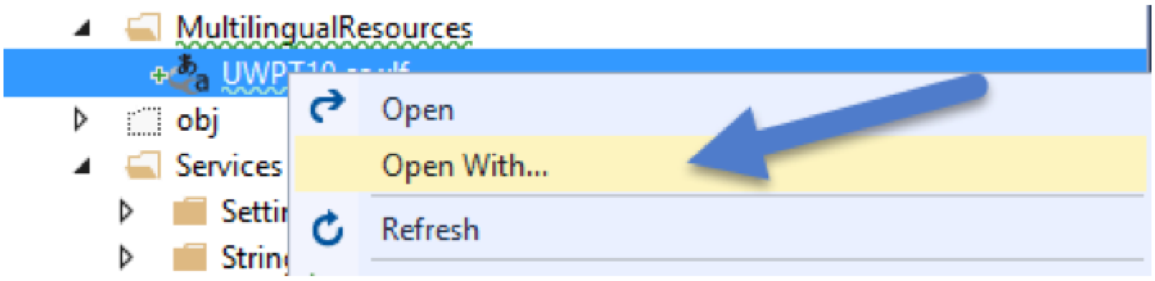


```xml
<?xml version="1.0" encoding="utf-8"?>
<xliff version="1.2" xmlns="urn:oasis:names:tc:xliff:document:1.2" xmlns:xsi="http://www.w3.or
  <file datatype="xml" source-language="en-US" target-language="es" original="UWPT10/STRINGS/E
    <header>
      <tool tool-id="MultilingualAppToolkit" tool-name="Multilingual App Toolkit" tool-version
    </header>
    <body>
      <group id="UWPT10/STRINGS/EN-US/RESOURCES.RESW" datatype="resx">
        <trans-unit id="WelcomeMessage" translate="yes" xml:space="preserve">
          <source>Welcome everyone!</source>
          <target state="new">Welcome everyone!</target>
        </trans-unit>
      </group>
    </body>
  </file>
</xliff>
```

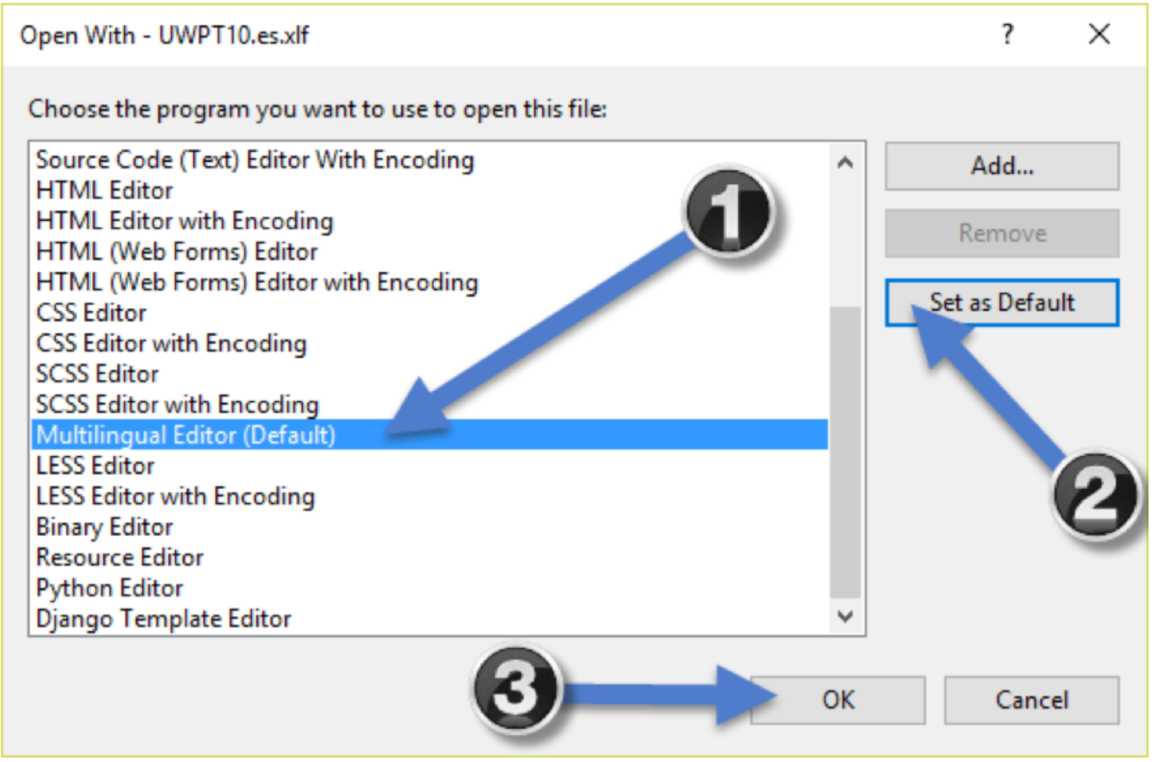
You can see some cool information. Like source and target language, where the original resource file is located, a list of strings to translate, state of each string and if we are supposed to translate it or not. However, as a developer, you don't want to have to learn yet another document format, right? (the answer is no).

So, with the installation of the Multilingual App Toolkit, a XLIFF file editor was included. This is nice, because someone who is translating information for you can just install the toolkit and get the editor for free, do the translation with the too and then send you back the file with the new translations.

What is the this crazy all powerful editor that I speak about? Well, if you **right click** on the **XLIFF** file, and **select Open With…**, you are given a choice of what tool you want to use to open the file.



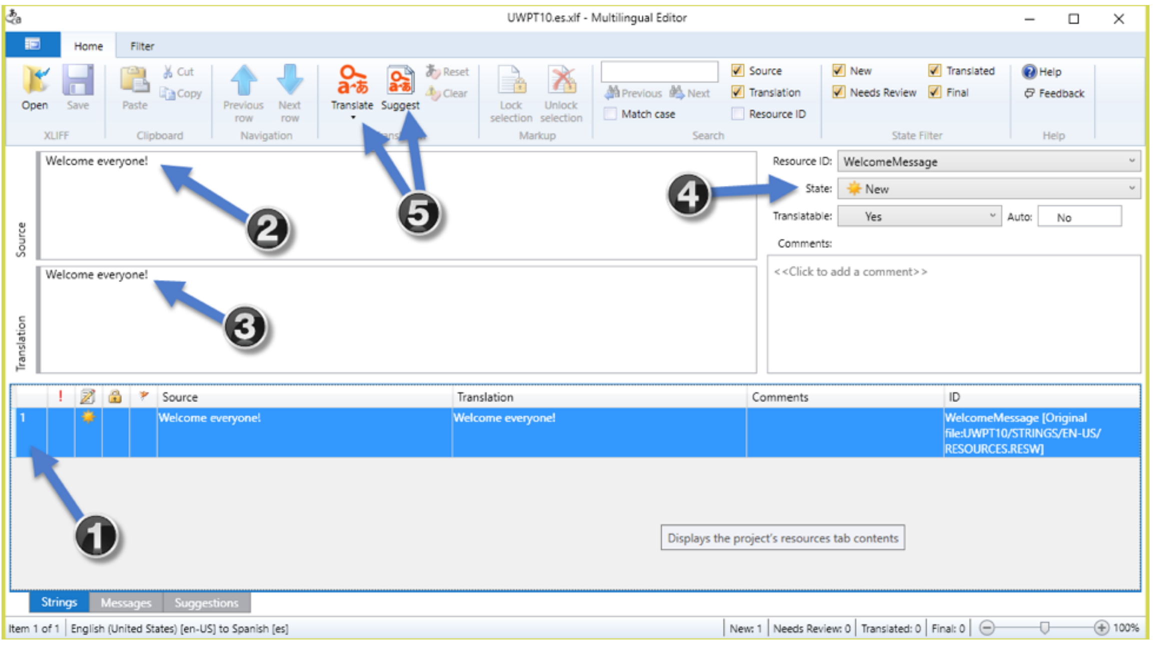
From this dialog, **scroll down to** the **Multilingual Editor** and **select it**. Since you will probably never want to edit the file by hand, **select Set as Default**. Then, **select OK**.



Choose the program you want to use to open this file:

Source Code (Text) Editor With Encoding
HTML Editor
HTML Editor with Encoding
HTML (Web Forms) Editor
HTML (Web Forms) Editor with Encoding
CSS Editor
CSS Editor with Encoding
SCSS Editor
SCSS Editor with Encoding
Multilingual Editor (Default)
LESS Editor
LESS Editor with Encoding
Binary Editor
Resource Editor
Python Editor
Django Template Editor

The Multilingual Editor will open the file and look like this…



Welcome everyone!

Welcome everyone!

Resource ID: WelcomeMessage
State: New
Translatable: Yes Auto: No
Comments:
<<Click to add a comment>>

	!				Source	Translation	Comments	ID
1		✹			Welcome everyone!	Welcome everyone!		WelcomeMessage [Original file:UWPT10/STRINGS/EN-US/RESOURCES.RESW]

Displays the project's resources tab contents

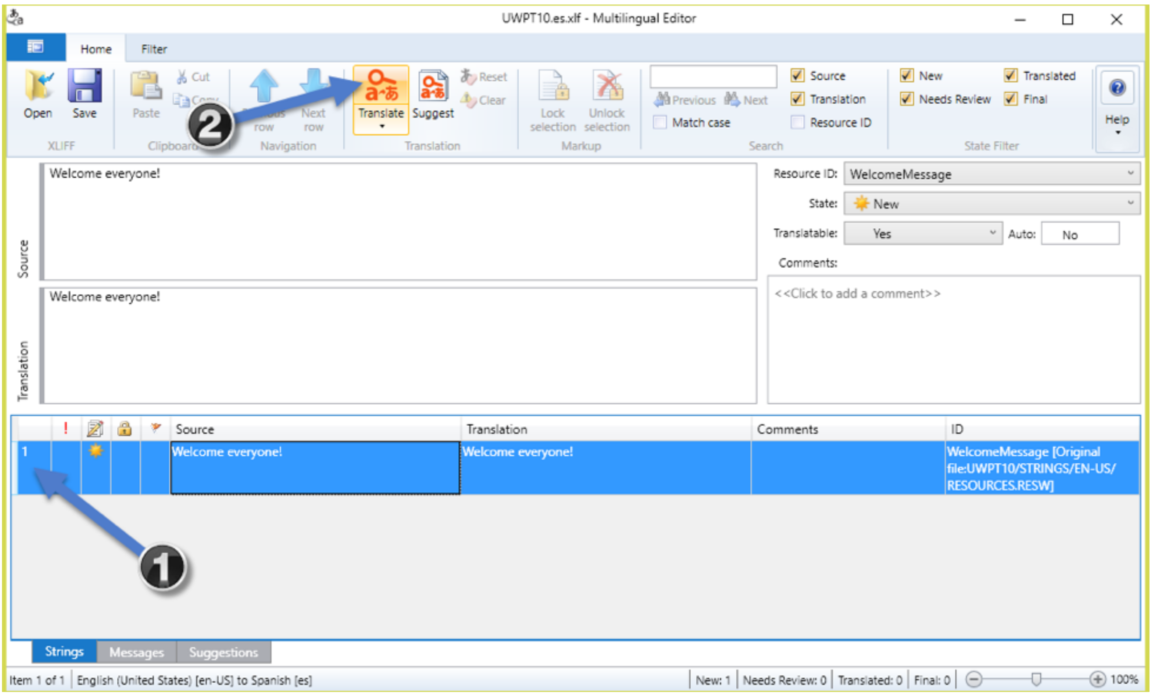
Item 1 of 1 | English (United States) [en-US] to Spanish [es] | New: 1 | Needs Review: 0 | Translated: 0 | Final: 0 | 100%

I won't go too much into all the details of the editor, but there are a few things to note:

1. You can select the resource you want to manage in the list at the bottom.

2. You can see the source string.
3. You can see the target string.
4. You can set the state of the string. This allows you to set the string as New, Needs Review, Translated and Final.
5. The tool also lets you translate the one or all of the strings to the appropriate language using online service providers provided by Microsoft. You can also get suggestions for a specific string and choose from one of them.

So, for our demo, lets convert our “Welcome Everyone!” text to Spanish. First, let’s **open** the **editor**, **select** our **message** in the list and **select Translate**. Remember, this will attempt to translate the string using the Microsoft providers available for this language.



Welcome everyone!

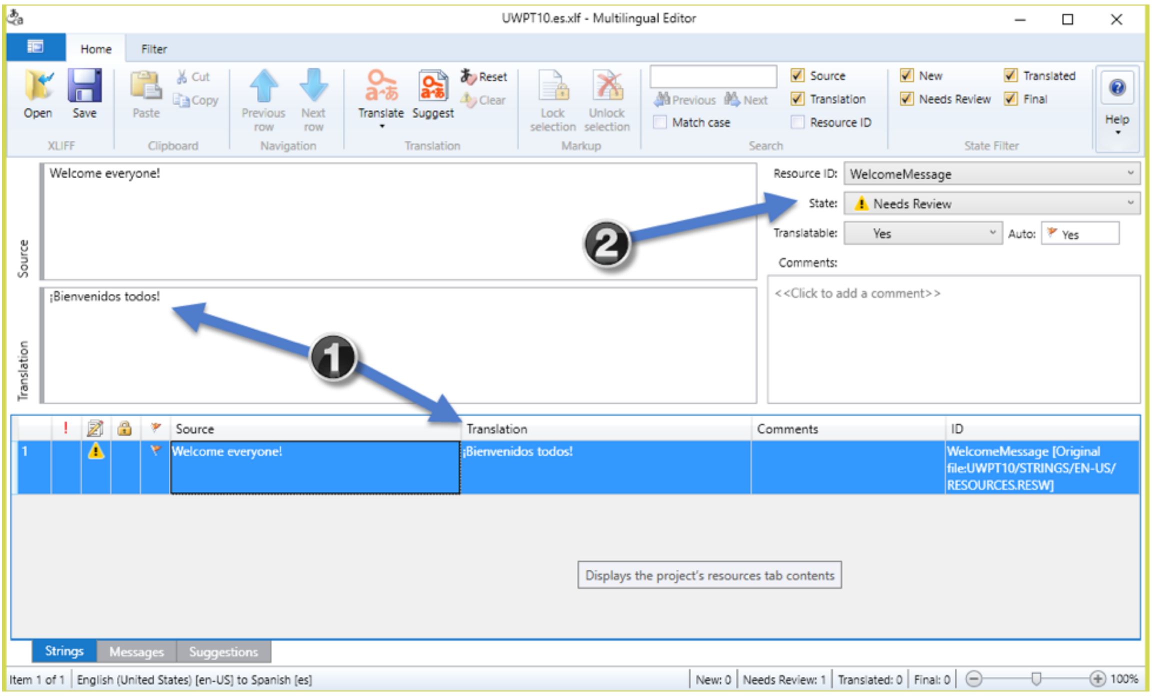
Welcome everyone!

Resource ID: WelcomeMessage
State: New
Translatable: Yes
Auto: No
Comments:
<<Click to add a comment>>

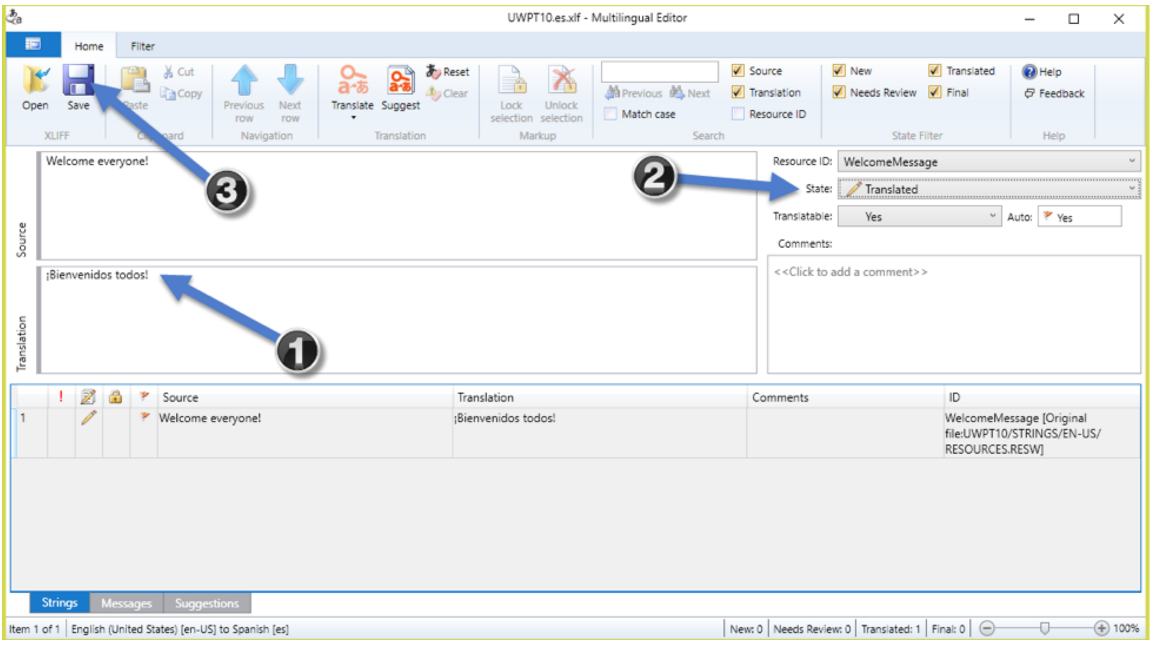
	Source	Translation	Comments	ID
1	Welcome everyone!	Welcome everyone!		WelcomeMessage [Original file:UWPT10/STRINGS/EN-US/RESOURCES.RESW]

Item 1 of 1 | English (United States) [en-US] to Spanish [es] | New: 1 | Needs Review: 0 | Translated: 0 | Final: 0 | 100%

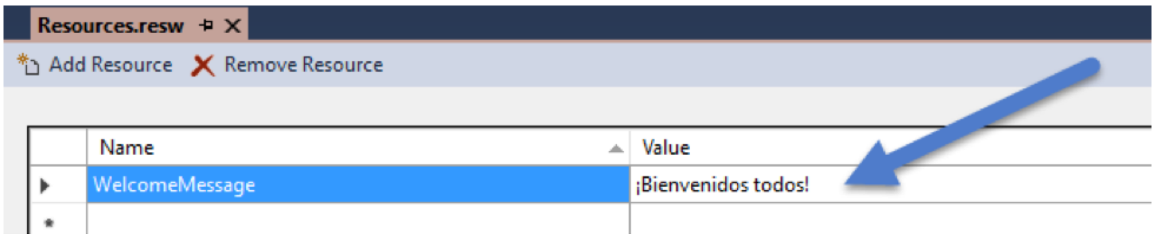
If everything went well, you will now see that the string was translated and the state has been set to Needs Review.



If you are happy with the translation, you can now **set** the **State** to **Translated**. Now **select Save**.



Go ahead and close the Multilingual editor. Now, do a build and open Resources.resw from our Spanish folder. It should now look like this …

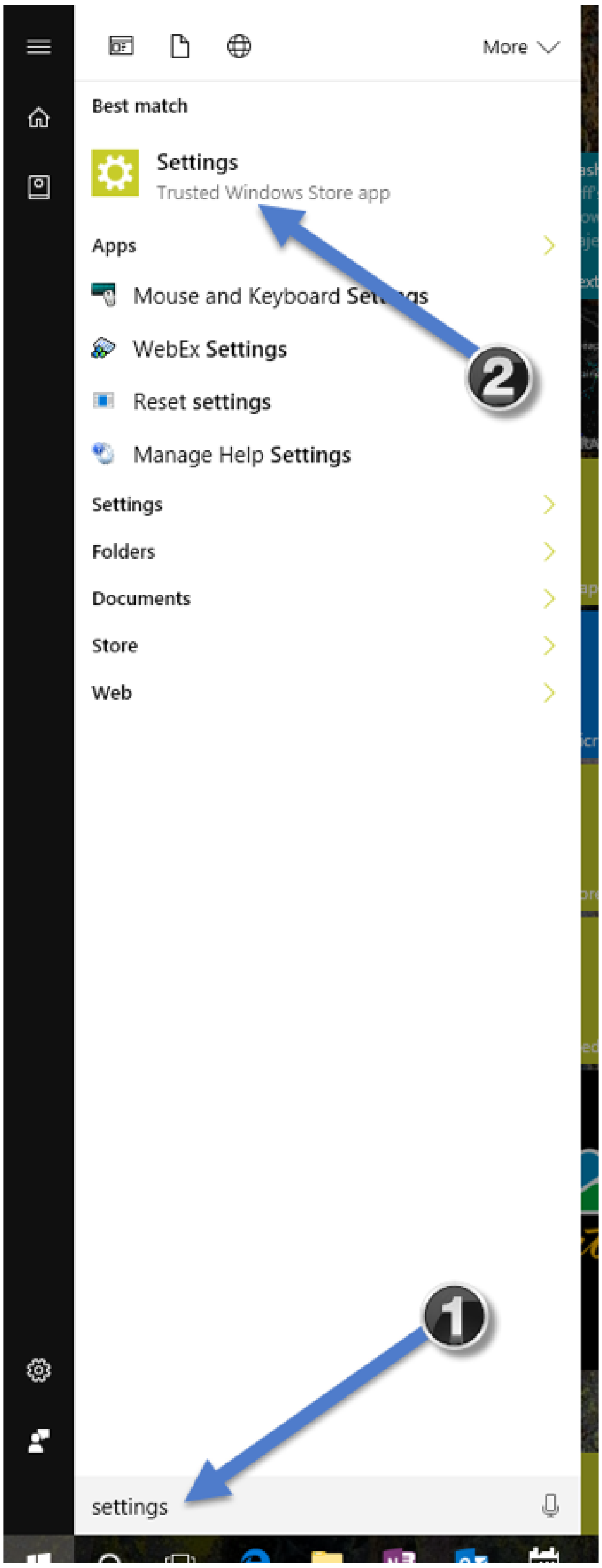


Name	Value
WelcomeMessage	¡Bienvenidos todos!

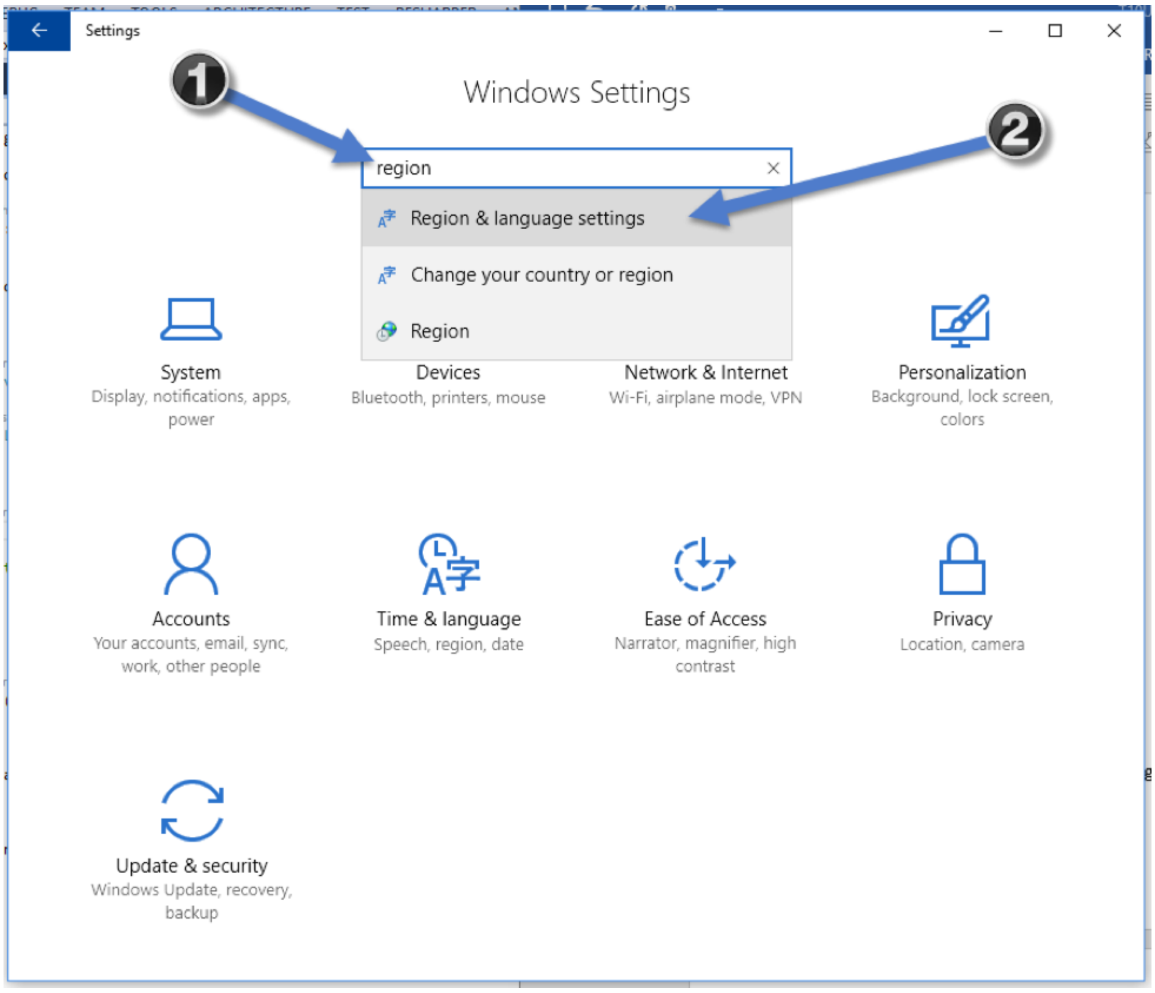
Nice! Now you are an expert translator right? Well, not really, but this will surely get you started.

Okay, now that we can translate our strings, let's see them in action. First thing we will want to do is make sure that the Spanish language pack is installed on your machine.

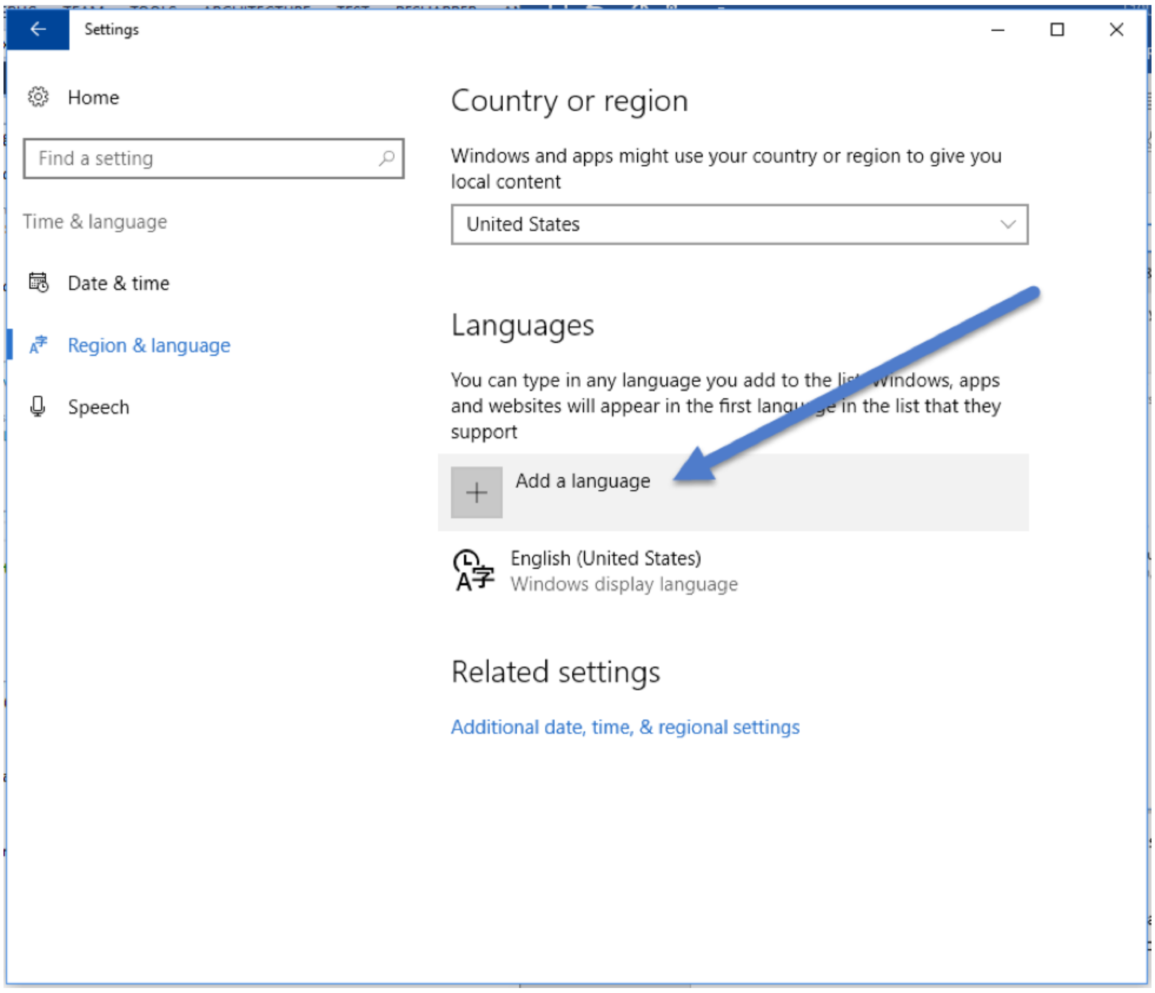
To do this, open Settings by **hitting** your **Windows key** and **typing Settings**. **Select Settings** from the result list.



Now **search** for **region** and **select Region & language settings**.


Settings
1
2
Windows Settings
region
Region & language settings
Change your country or region
Region
System
Display, notifications, apps, power
Devices
Bluetooth, printers, mouse
Network & Internet
Wi-Fi, airplane mode, VPN
Personalization
Background, lock screen, colors
Accounts
Your accounts, email, sync, work, other people
Time & language
Speech, region, date
Ease of Access
Narrator, magnifier, high contrast
Privacy
Location, camera
Update & security
Windows Update, recovery, backup

Once you have selected Region & language settings. If you don't already have the Spanish language pack installed, you need to add our Spanish Language pack by **selecting** the **Add a Language option**.



Country or region

Windows and apps might use your country or region to give you local content

United States

Languages

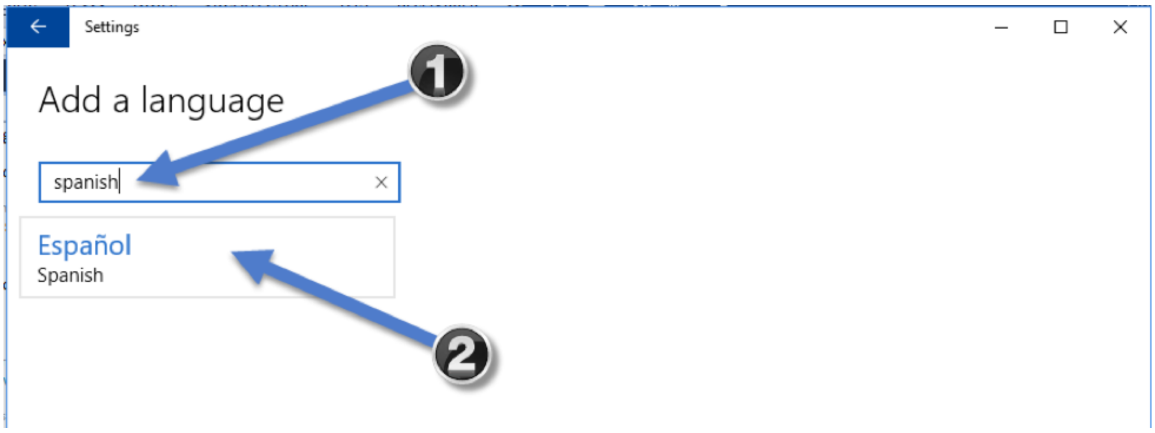
You can type in any language you add to the list. Windows, apps and websites will appear in the first language in the list that they support

English (United States)
Windows display language

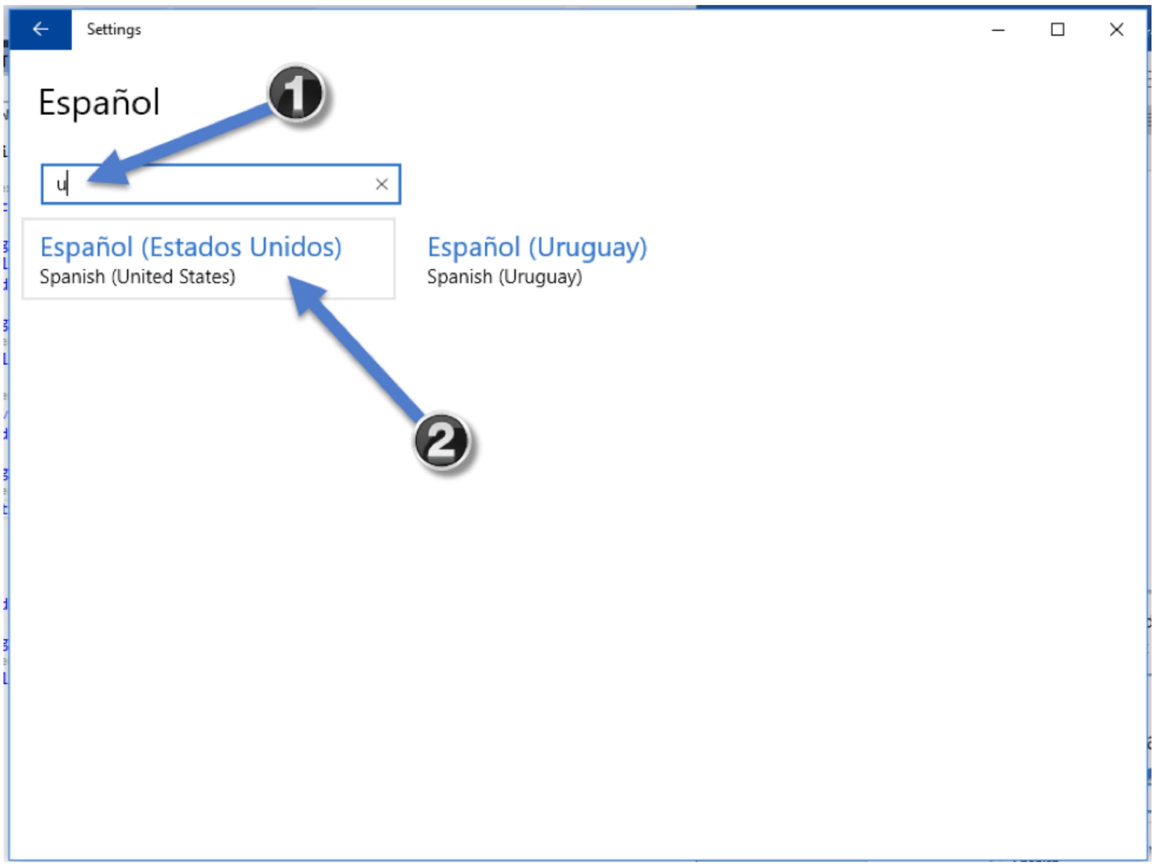
Related settings

Additional date, time, & regional settings

The Add a language dialog will be displayed with a list of languages. To save time, in the search box, **type** Spanish. **Select** the **Español** option.

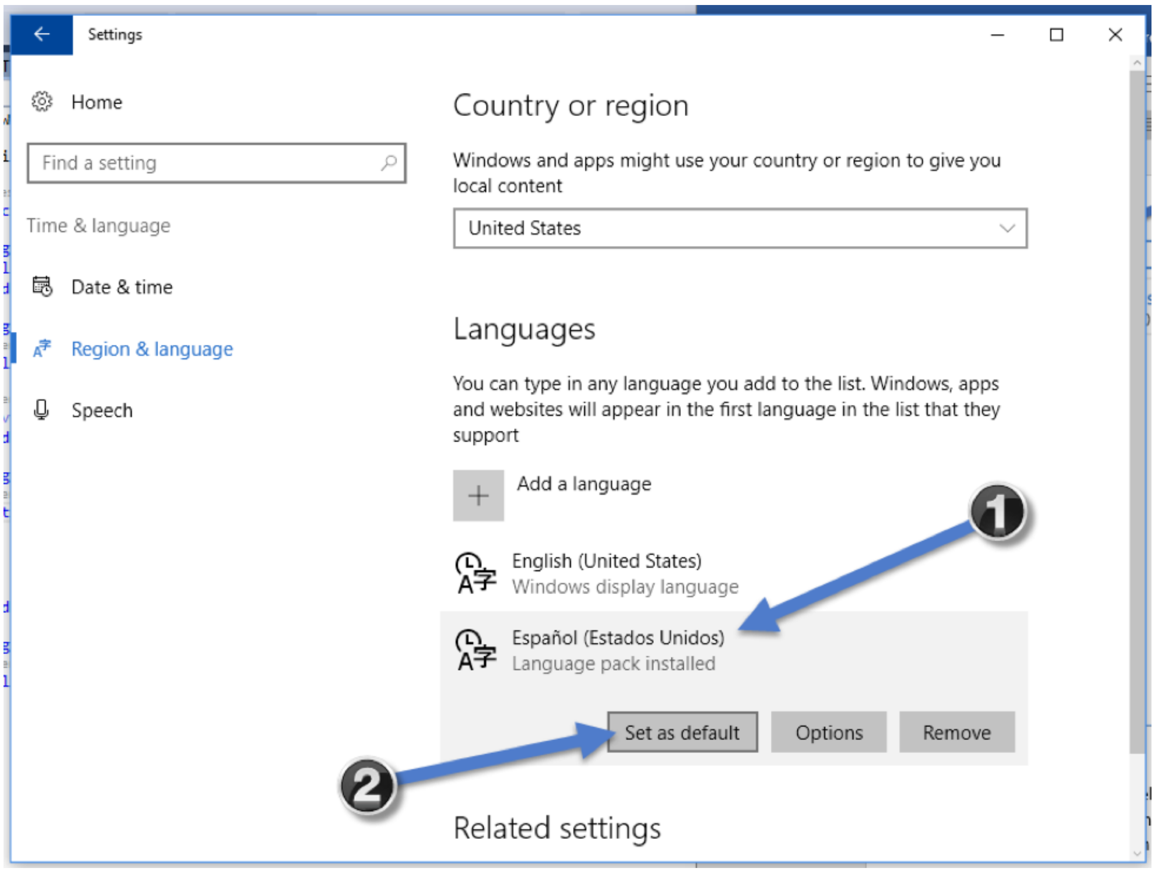


At this point, you will be selected to choose from a subset of Spanish dialects from various countries. **Type u** into the **search** box and then **select** the **United States version** of Spanish.

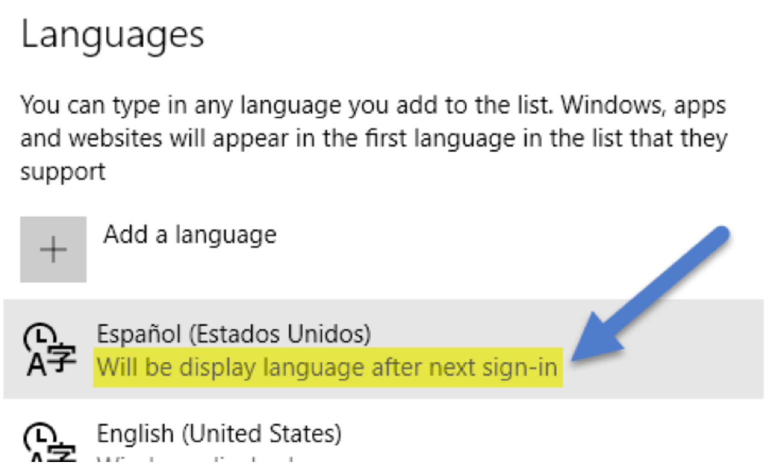


At this point, you should see the new Spanish pack in your list.

Okay, we are almost there. Now, we can finally test our application with the new language. Note, if you were to run the application now, you would still only see the English version of our strings. Whatever the language is set as default, will be displayed if we have a resource for it. So, in order to test he Spanish language pack, we simply **select Español**, then **select Set as Default**.



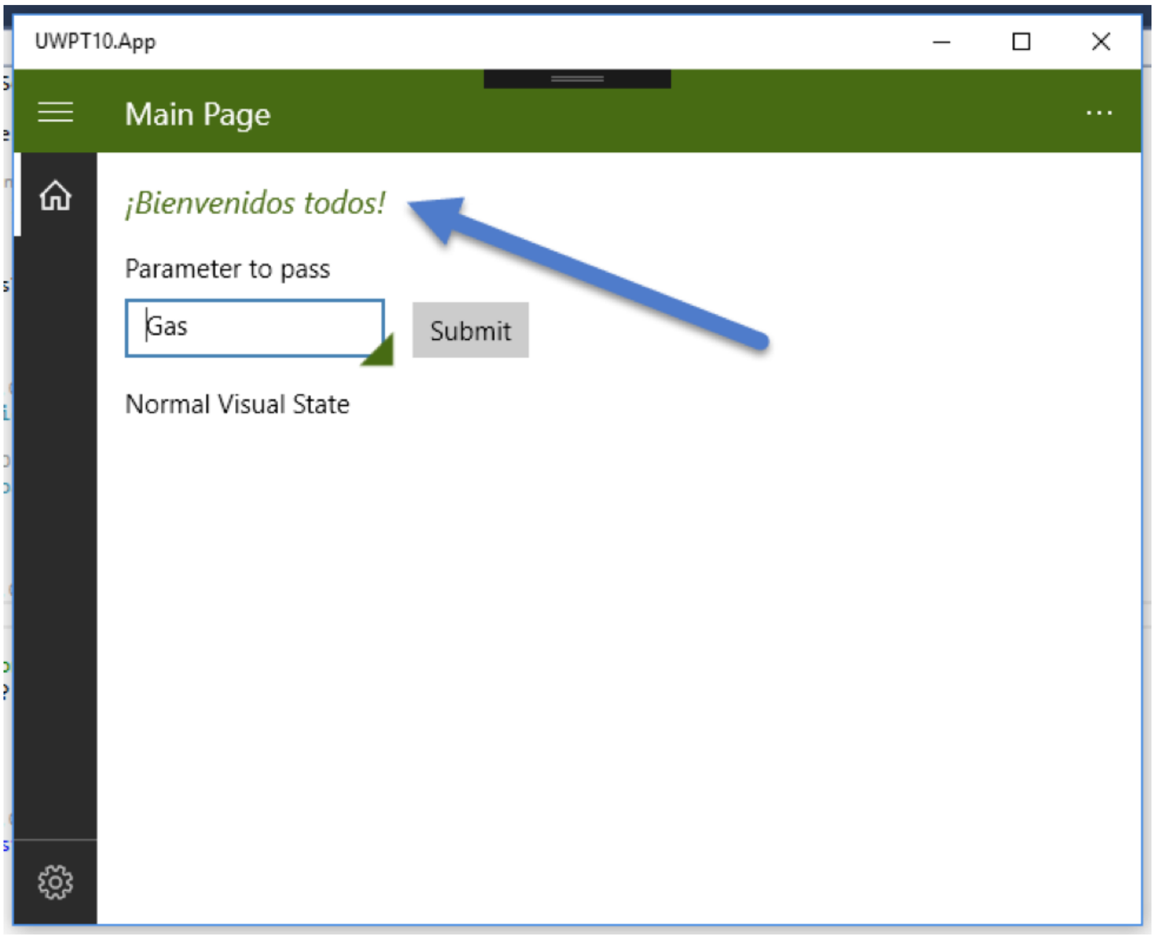
You should have noticed that the Spanish pack we chose now moved to the top of the list and has a message: "*Will be display language after next sign-in*."



Languages

You can type in any language you add to the list. Windows, apps and websites will appear in the first language in the list that they support

Since we don't really need the whole Windows UI to change, we don't need to sign-in. All we have to do is run our application.



Bueno, si? There you have it.

(**NOTE**: Don't forget to change your default language back to English or you will be surprised the next time you sign-in to Windows.)

What We Accomplished In Part 3 Of Building A Universal Windows Platform Application

So, to summarize what we accomplished in this blog post:

- Added the Multilingual App toolkit to the project, created new Spanish translations using the Microsoft Translation provider and tested out our application with another language.
- How we can change our language quickly to test the changes in our application without restarting Windows.

I know, the blog post got pretty long. However, having the ability to add new strings, get them translated and use them in code this early in the software development lifecycle is pretty nice.

In Part 4 of our Building a Universal Windows Platform Application series, I thought it might be a good idea to implement a logging service so that we can log issues to a local file. This can be very useful when trying to analyze issues with the software.

I hope you enjoyed this post. If so, please share it with others.

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