## How to Install TraceLab and Build your first Component in Visual Studios

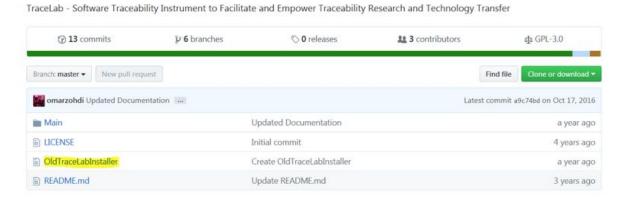
**Prerequisite:** Have a Windows Operating System. If your computer is not already in Windows, this can be done a couple of ways.

- 1. VirtualBox <a href="https://www.virtualbox.org/">https://www.virtualbox.org/</a> (free)
- 2. Bootcamp <a href="https://support.apple.com/boot-camp">https://support.apple.com/boot-camp</a> (free)
- 3. Parallels https://www.parallels.com/ (\$79.99)

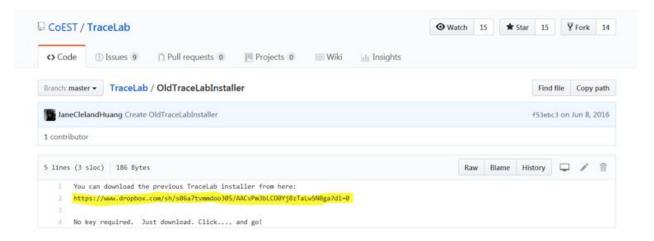
## Part 1: Installing TraceLab

Step 1: Go to https://github.com/CoEST/TraceLab or Google 'GitHub TraceLab'

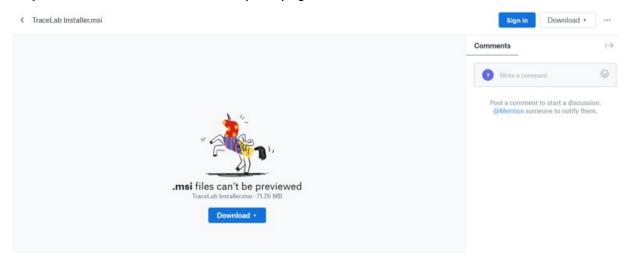
Step 2: Scroll down to the files and select "OldTraceLabInstaller" (in yellow)



Step 3: Open up the link located on the second line (in yellow)



Step 4: Click on download in the Dropbox page, and wait for the file to be downloaded



Step 5: After it is done, open up the download wizard and follow the instructions

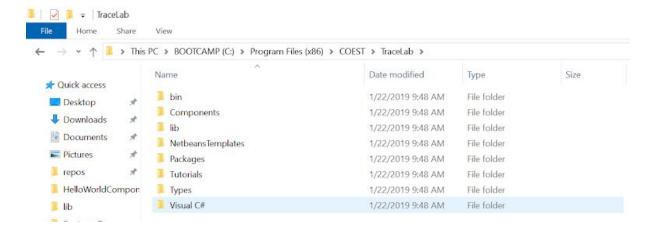
TraceLab is now installed!



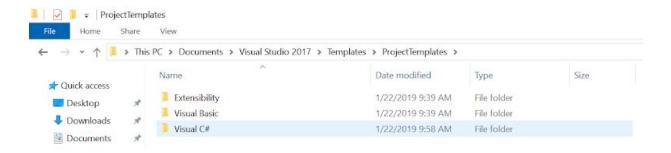
## **Part 2: Building a Component**

**Prerequisite:** Install Visual Studio IDE <a href="https://visualstudio.microsoft.com/vs/">https://visualstudio.microsoft.com/vs/</a> (Community 2017 is the free tier)

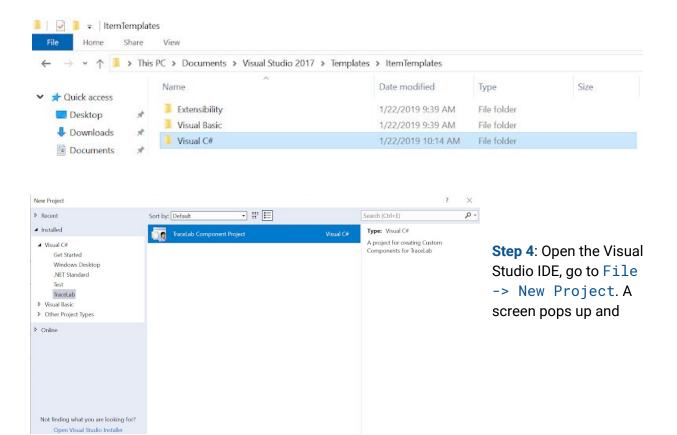
**Step 1:** Once Visual Studio is installed we need to rearrange some files, the location may vary depending on where it was installed but you'll need to COPY the entire folder .../COEST/TraceLab/Visual C# (highlighted in blue)



**Step 2:** Now navigate in your files to ...\Visual Studio 2017\Templates\ProjectTemplates and PASTE the Visual C# folder here.



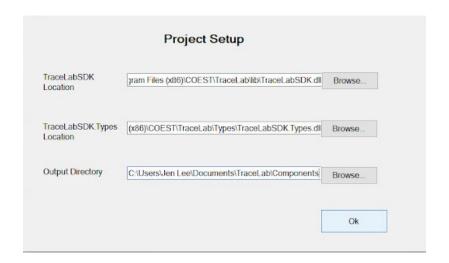
**Step 3:** Now navigate to ...\Visual Studio 2017\Templates\ItemTemplates and PASTE the same Visual C# folder here.

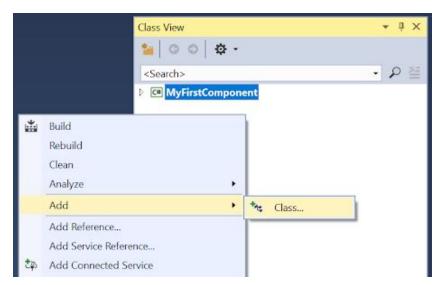


under Visual C# there should now be a TraceLab option under C#. Select TraceLab Component Project, name your component, and click 0K.

**Step 5:** The next step will have to be done **every time** you're creating a new component.

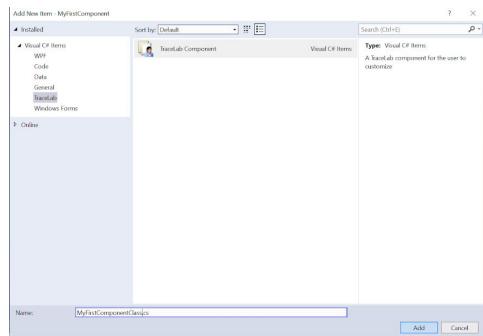
- a) Locate your TraceLabSDK location, this should be under ...\COEST\TraceLab\lib\TraceLabSDK.dll
- b) Locate your TraceLabSDK.Types location, this should be under ...\C0EST\TraceLab\Types\TraceLabSDK.Types.dll
- c) Set your Output Directory to be wherever on your computer ...\TraceLab\Components is, this will have to be typed or pasted and will not show up under Browse

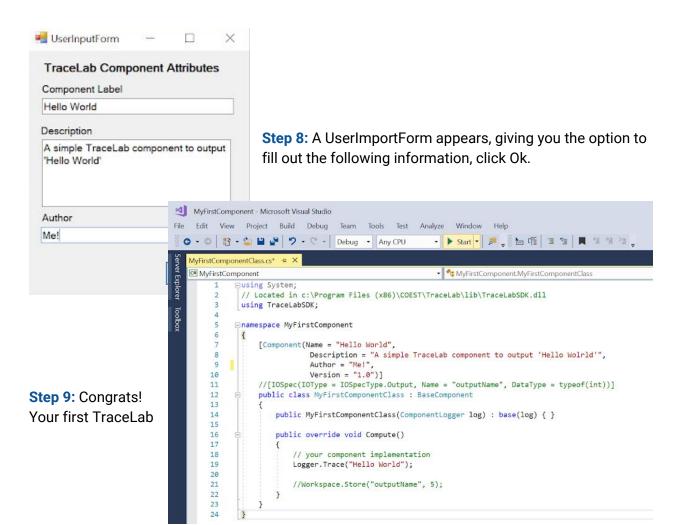




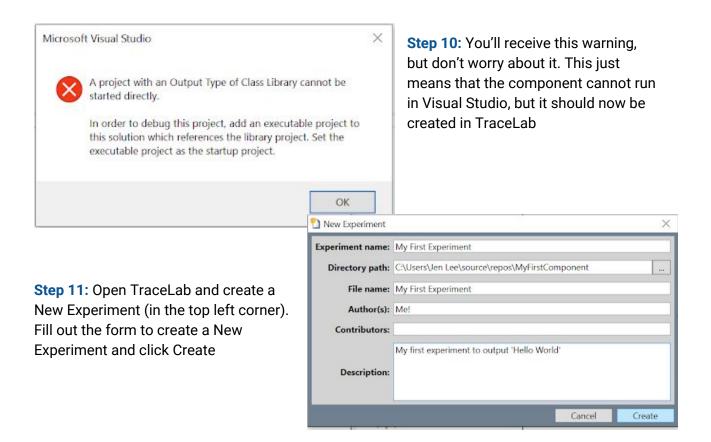
Step 6: A loading screen will appear while your component is being created. Once it is made, go over to Class View, right click on MyFirstComponent, go down to Add, and click Class

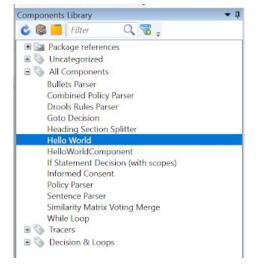
Step 7: A new
window appears,
under Visual C#
Items, select
TraceLab, click
TraceLab
Component, name
your Class, then click
Add.





Component is created! Just a few more steps. Click the green start arrow in the menu bar.





**Step 12:** Our new component should appear in the Components Library It will have the same name as the Component Label you chose in Step 8. If not, take the following steps:

- a) Click the blue refresh arrow
- b) If it still isn't there, your component was not saved to correct Output Directory in Step 5. Search in your files for MyFirstComponent.dll and move it into
- ...\TraceLab\Components

## c) Click the blue refresh arrow again

**Step 13:** Drag your new component into the experiment window on the right. Drag the arrow from Start to your component and the arrow from your component to End before clicking the green Run arrow.

**Congrats!** You should now see a new message saying 'Hello World' in the Output window and have successfully created your first experiment!

