

Setting up the Visual Studio Compiler for MapleSim

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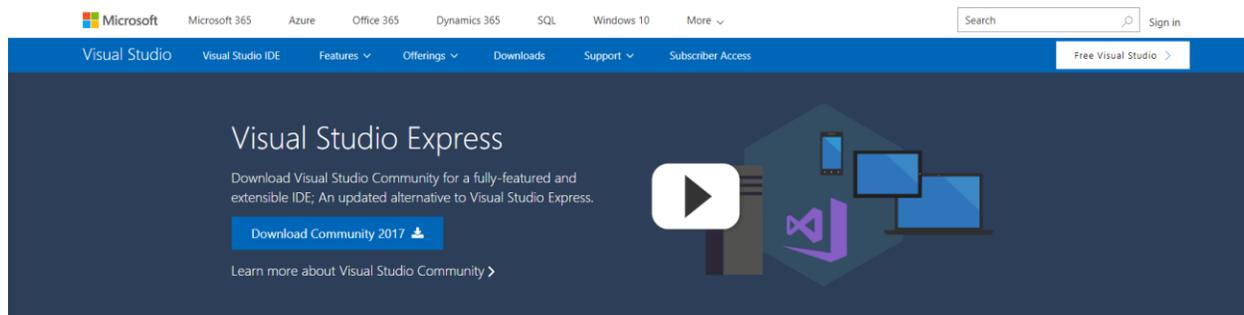
For MapleSim 2018, the Visual Studio C++ Compiler is only required to be installed for FMU Generation, Simulink® Block Generation and to run JMAG models.

If you choose to not install the external compiler, MapleSim has a built-in LLVM compiler that will be used and you will have all of the expected functionality, except for in the special use cases mentioned above.

To install Microsoft Visual Studio Express 2017 for Windows Desktop, please do the following:

- **Note:** This guide assumes that you have already installed Maple and MapleSim. If you are having difficulties with these installations please contact Maplesoft Technical Support (support@maplesoft.com) before continuing.
- **Note:** You need to log into an account with administrative privileges to set up and install the Microsoft Visual C++ compiler.

1. In a web browser window, go to <https://www.visualstudio.com/vs/visual-studio-express/>:



Visual Studio 2017 is now available

Customized installer

Develop for WPF, WinForms, ASP.NET, Universal Windows Platform, Win32, Android, iOS, and many more platforms all from one IDE with everything you need.

2. Scroll down on the page to the **Still want Visual Studio Express?** section:

Still want Visual Studio Express?

[Express 2017 for Windows Desktop](#)

Supports building managed and native desktop applications.*

[Express 2015 for Windows Desktop](#)

Supports the creation of desktop applications for Windows.

[Express 2015 for Web](#)

Create standards-based, responsive websites, web APIs, or real-time online experiences using ASP.NET.

[Express 2015 for Windows 10](#)

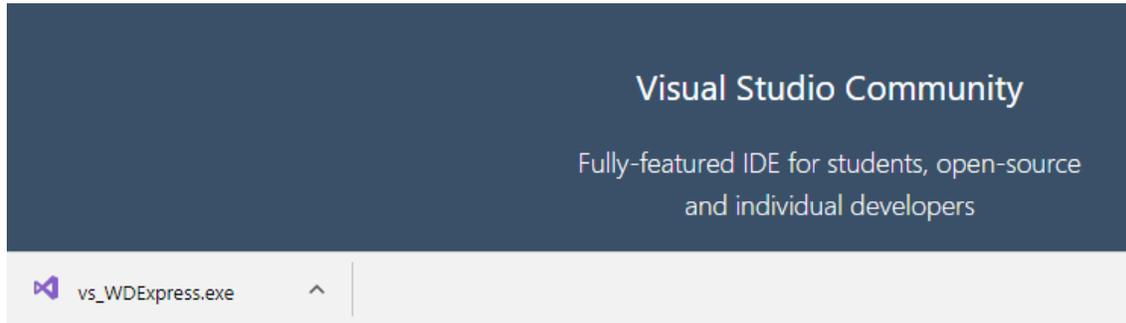
Provides the core tools for building compelling, innovative apps for Universal Windows Platform. Windows is required.

[Team Foundation Server 2018 Express](#)

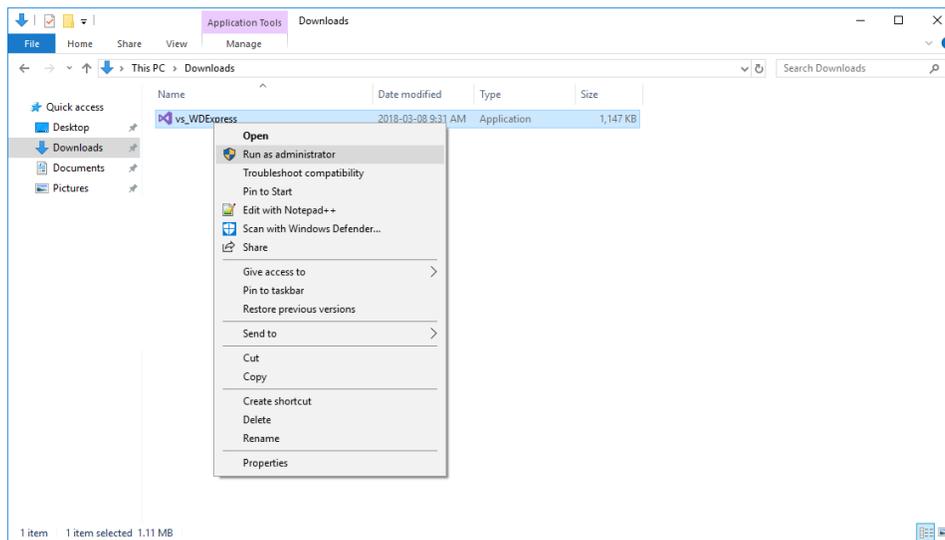
Source-code-control, project management, and team-collaboration platform.

*Visual Studio Express 2017 is available for Windows Desktop developers. This will be the final version of Visual Studio Express, and there will not be a UWP or Web offering of Visual Studio Express 2017. We encourage all users to look at the free development options offered by Microsoft such as Visual Studio Code and Visual Studio Community for future development needs.

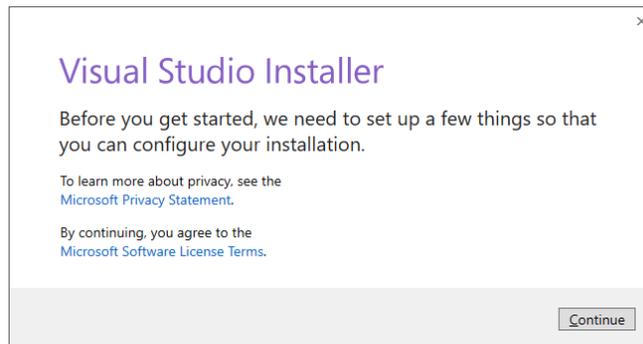
3. Select **Express 2017 for Windows Desktop** and the installer file will download:



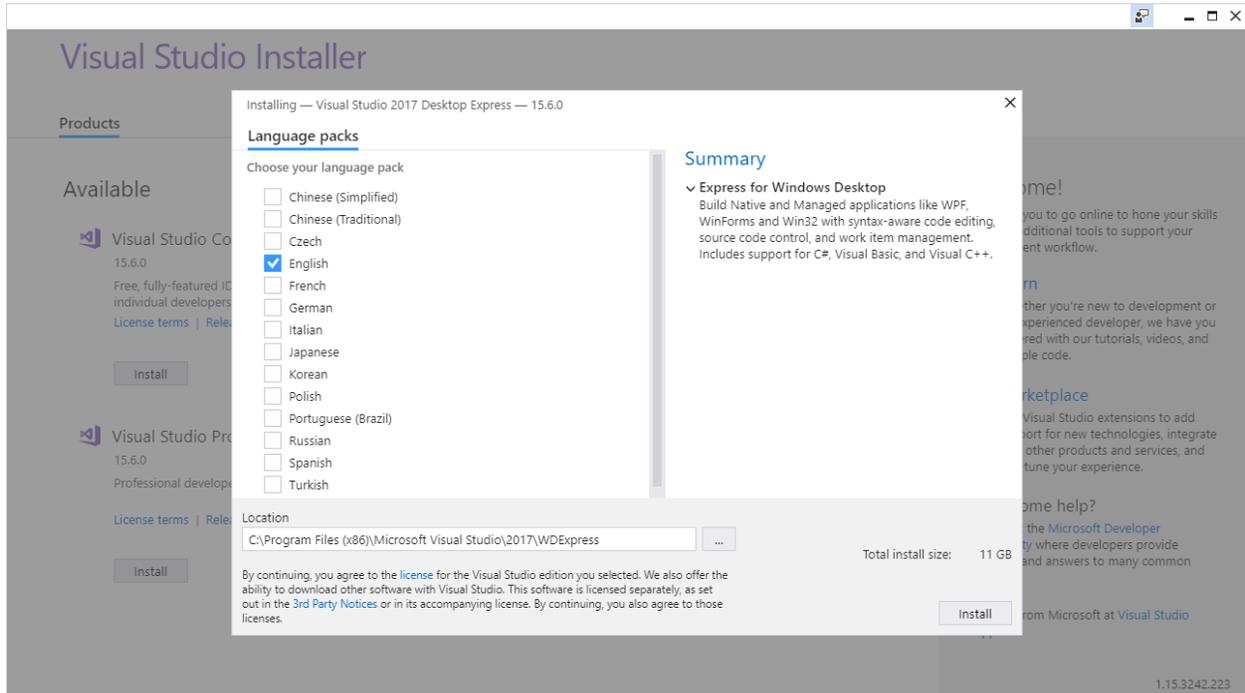
4. Locate the installer file, likely in your **Downloads**. Right-click on the file and **Run as Administrator**:



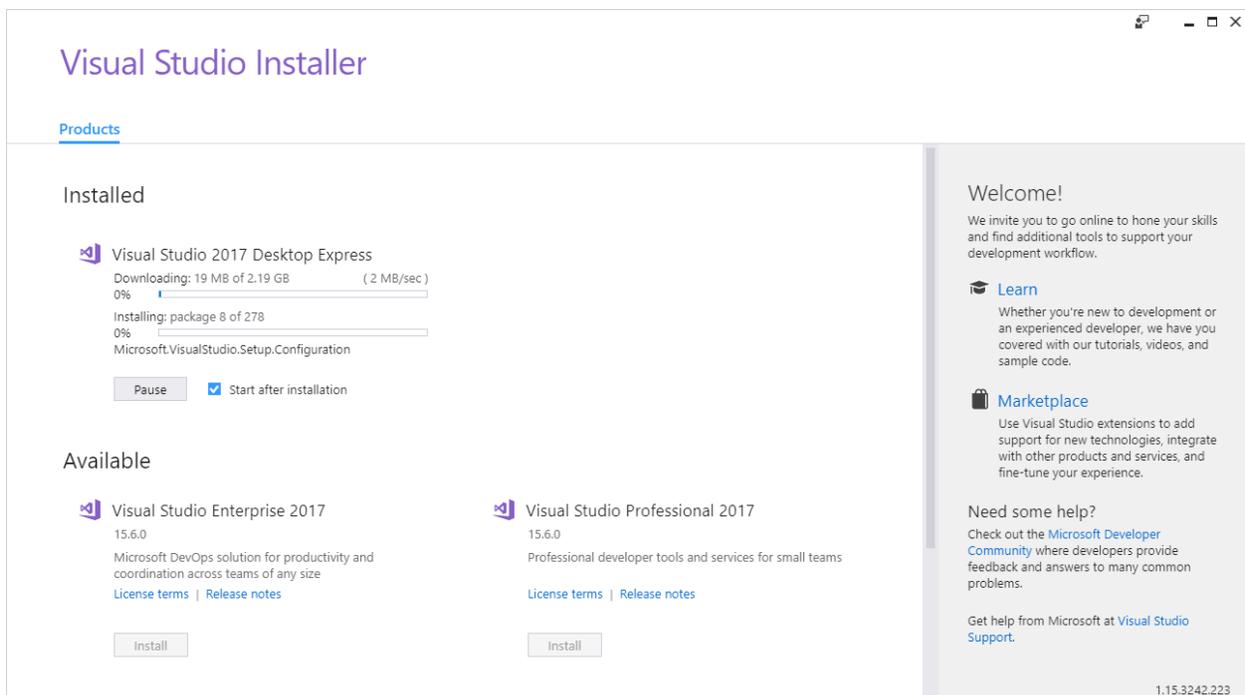
5. The **Visual Studio Installer** will launch:



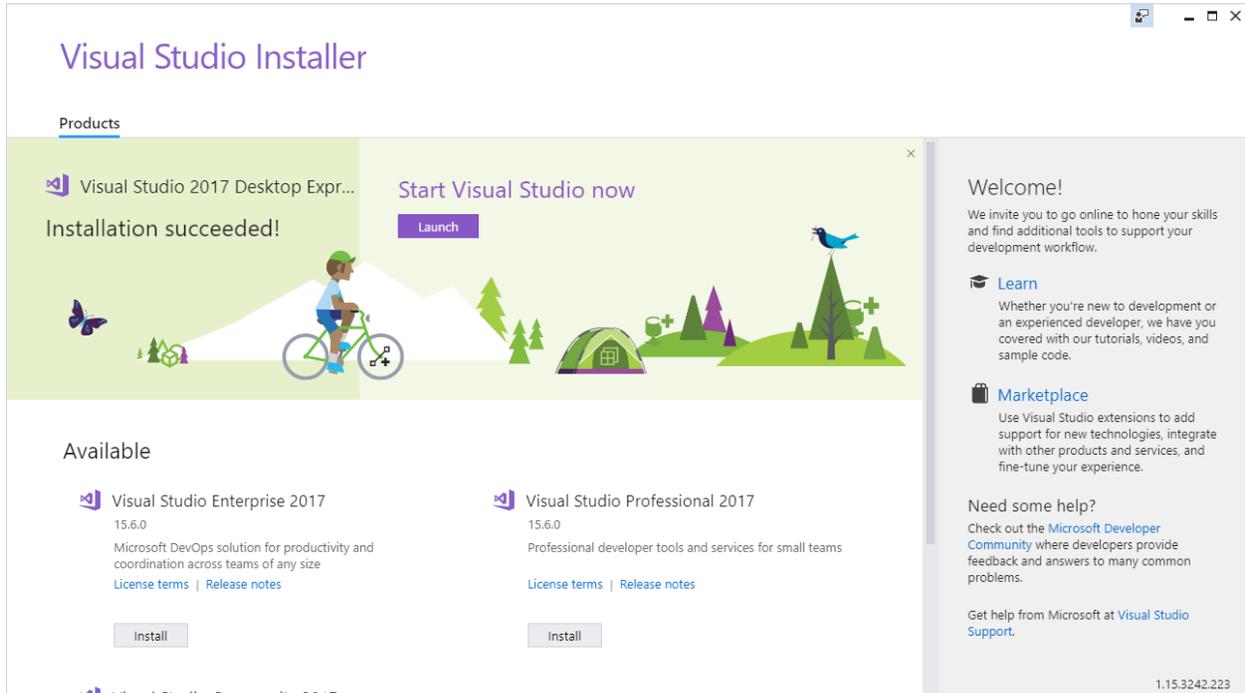
6. Select the **Language** and click **Install**:



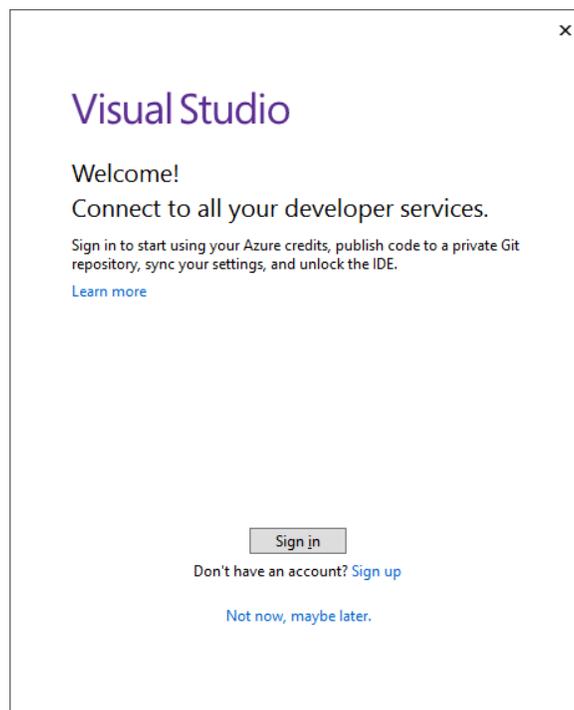
7. Visual Studio 2017 Desktop Express will install. It is rather large and so this may take some time:



8. Once the installation is complete, you will be informed that the **Installation succeeded**.

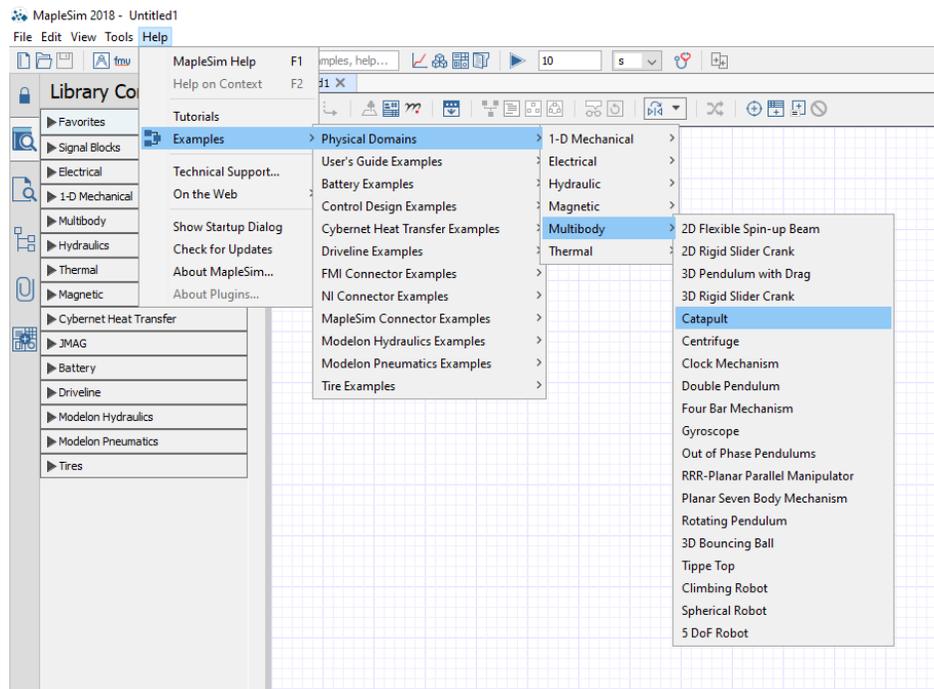


9. You can close this window. You may be prompted to sign in but you can close this dialogue as well:

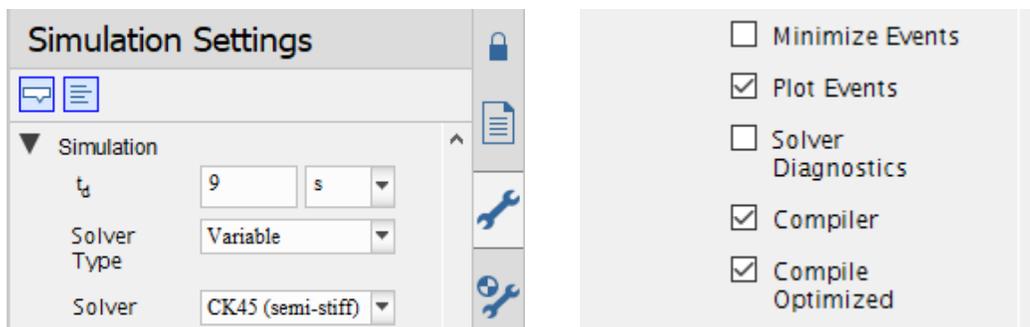


With the Visual Studio installation finished you can confirm if the install was a success by running a sample simulation in MapleSim and verifying that the external compiler is being used.

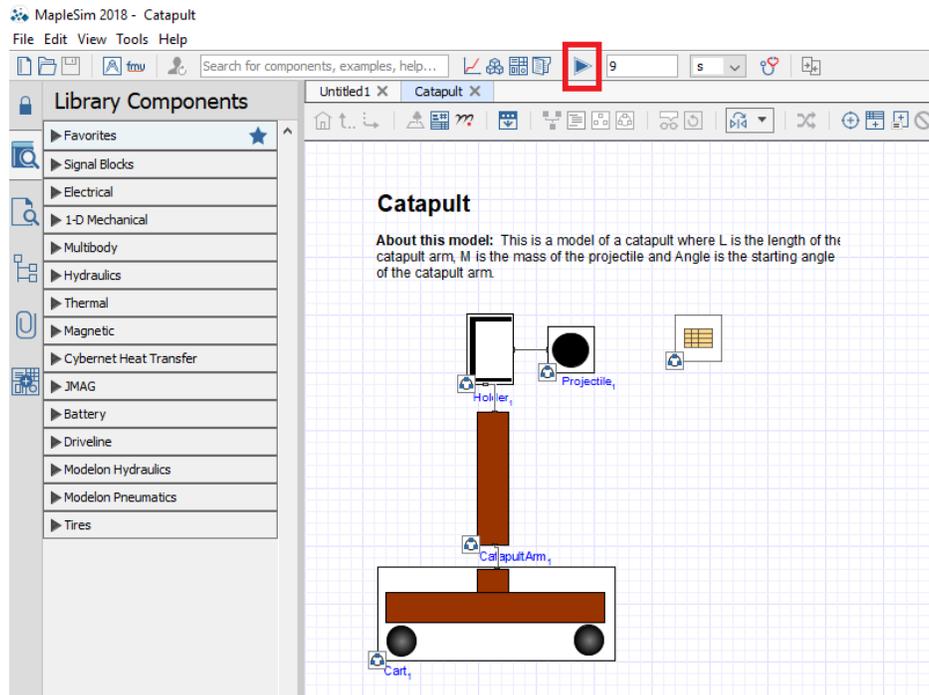
1. Open MapleSim and choose a sample model like **Help > Examples > Physical Domains > Multibody > Catapult**



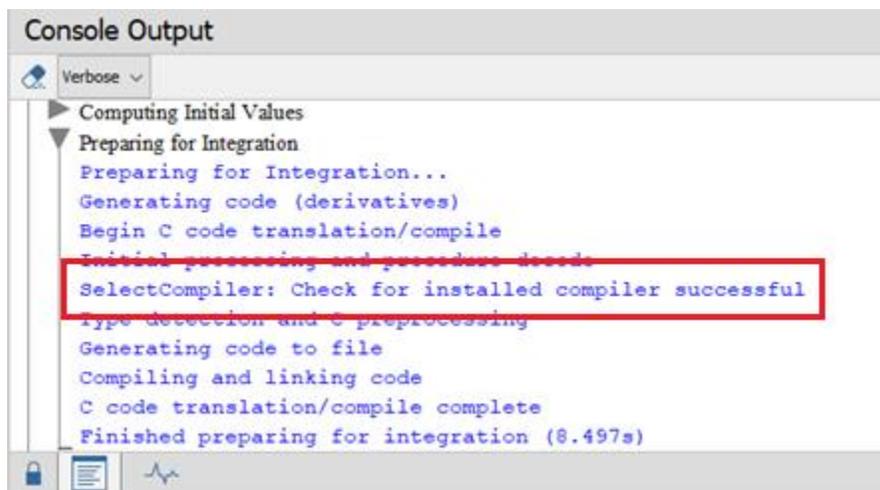
2. In **Simulation Settings**, ensure that the option for **Compiler** is **checked** so that the external compiler will be used in simulation:



3. Click the **Run Simulation** button to perform the test.



4. In the **Console Output** (bottom palette), open up the **Preparing for Integration** branch:



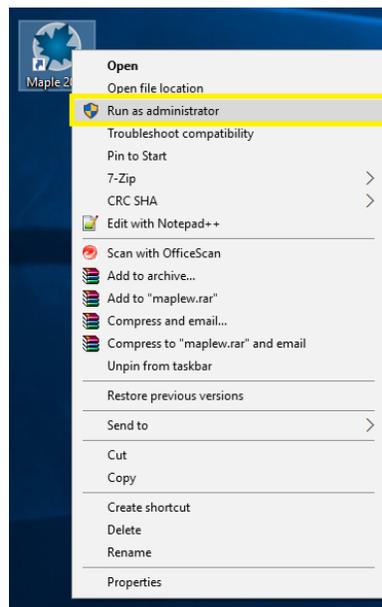
5. Verify that you see **SelectCompiler: Check for installed compiler successful**.

If you do not see the message above but instead see **SelectCompiler: Check for installed compiler failed, using built-in**, please proceed to **Troubleshooting** to configure the compiler within Maple.

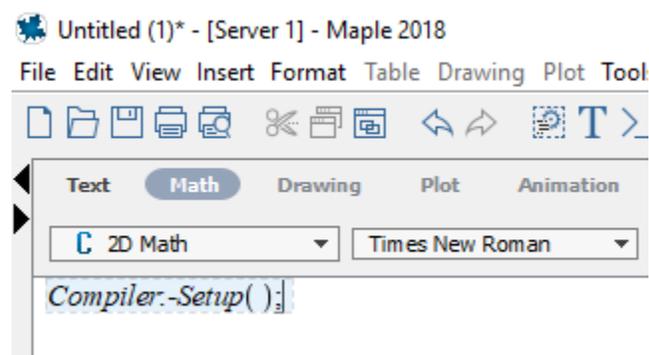
Troubleshooting:

If your test of the MSVC++ compiler in MapleSim fails, you may need to manually point Maple to the new compiler's location to complete the installation.

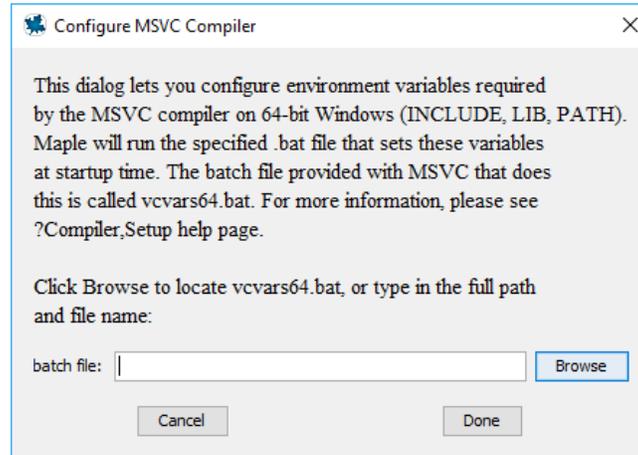
1. Open Maple by right-clicking the shortcut and choosing **Run as Administrator**.



2. Once Maple has started, click the **New Document** button on the Maple Start screen.
3. At the Maple prompt, type **Compiler:-Setup()** ; and press **Enter**:



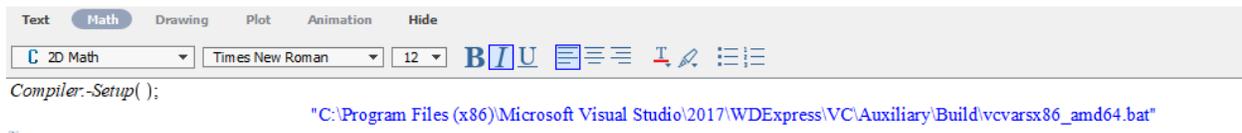
- In the dialogue box, click **Browse** to locate the **vcvarsx86_amd64.bat** file.



- If you did not change the installation location, you will find the file along the following path:

This PC > Local Disk (C:) > Program Files (x86) > Microsoft Visual Studio > 2017 > WExpress > VC > Auxiliary > Build > **vcvarsx86_amd64.bat**

- Click **Done** to complete the configuration.
- Maple will output the file path to reflect a successfully configured path:



If it does not echo back the file path, please run the command again and double check that you have selected the correct file. An error will also occur if you did not open Maple with administrative privileges.

- Close **Maple** and launch **MapleSim** to confirm that the compiler is being used in simulations.

