How to Build Notepad++ from Source:
A Beginner's Guide

OPTION A

Current Date: 6/4/2018
Revision: 1

Introduction

Participation in an open source project can be a rewarding and gratifying experience. This is particularly so when engaging software that one both admires and uses regularly, and that is held in the highest esteem by the software community at large (such as Notepad++). It can also be a very challenging experience, especially for those less experienced. This document is designed to provide a step-by-step guide for building a working Notepad++ executable from its source code, as available here: https://github.com/notepad-plus-plus/notepad-plus-plus/. (As such, it chronicles one particular methodology for completing this end, and does not represent an exclusive path for successful compilation. An alternate "OPTION B" is provided in this same repository from which you accessed the current document.)
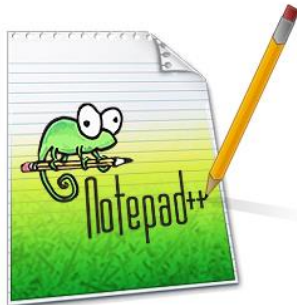
Requirements
- **Visual Studio 2017 (or 2015)**
    - Visual Studio 2015 should work in place of 2017.
        - "Should" because the author did not verify this directly, but is confident it will work.
    - Visual Studio Community 2015 can be downloaded directly from Microsoft and does not require a product key: https://www.visualstudio.com/vs/older-downloads/
        - See here for VS2017 system requirements
        - See here for VS2015 system requirements
- **Git Bash**
    - Or a similar means of downloading the Notepad++ repository from github.
    - Git (which includes Git Bash) can be downloaded here: https://git-scm.com/downloads.
    - If you have a github account, downloading the Notepad++ repository can also be accomplished using github desktop, found here: https://desktop.github.com/.
        - If you don't have a github account, you should probably get one, here: https://github.com/.
- **Notepad++**
    - Install and run the latest version of Notepad++ before attempting these steps, available here: https://notepad-plus-plus.org/download/.

Time Commitment
   a) Approximately 30-60 minutes, depending on proficiency and hardware.

Assumptions

This document assumes that the target audience is at least marginally proficient in the use of Windows, and has at least minimal exposure to basic computer programming fundamentals, C++, and (of course) Notepad++.

Tip: If screenshots appear too small for viewing, using a "zoom" feature such as that offered by Windows or Adobe Acrobat can be helpful!
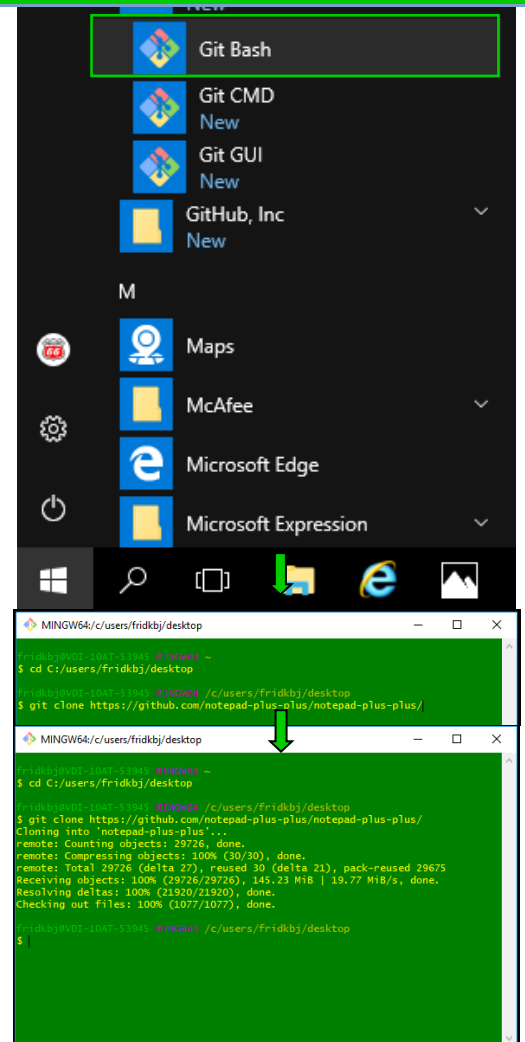
Follow Steps:

1. **GET NOTEPAD++ REPOSITORY**

   a) **Open Git Bash.***

   b) **Change to the directory you wish to save the Notepad++ repository.**
      - **Use the `cd` command to change directory.**
      - **Note Git Bash uses slash (/) rather than backslash (\) for pathways.**

   c) **Type**

   `git clone https://github.com/notepad-plus-plus/notepad-plus-plus/` .

   Then hit `enter`. Wait for the cloning process to finish.

   *Git Bash may not be available in the Windows start menu as shown in the screenshot, depending on your installation configuration. If it is not shown there, locate it or download it as necessary in order to launch. Note also that this step may be completed using an alternate means, such as Github Desktop, as mentioned in the requirements section above.
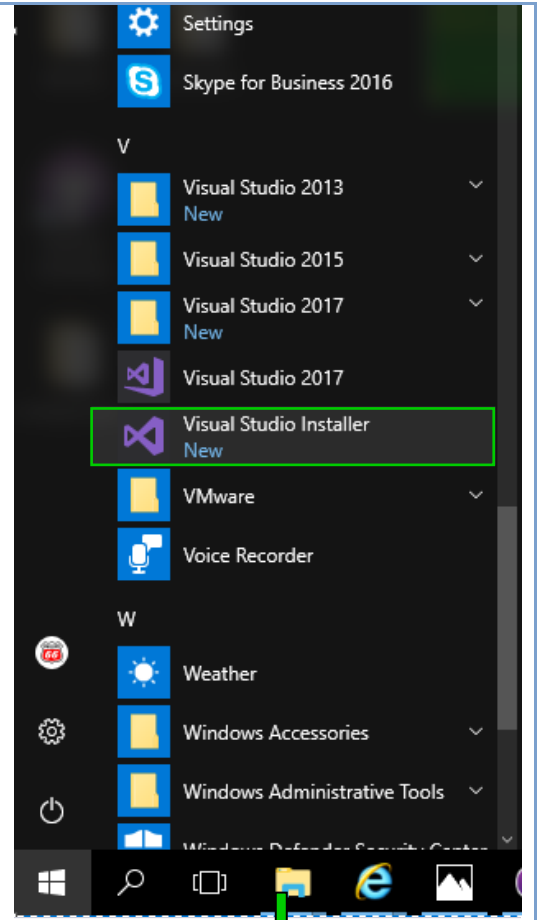
2. ESTABLISH VISUAL STUDIO C++ DEPENDENCIES

a) **Visual Studio 2017 must be installed with C++ compiling tools. Open the installer (available [here](#)) to check if these tools are already installed.**

b) **Once opened, click "Modify" to check the status of installed toolsets. Make sure "Desktop development with C++" is selected, with all default options checked.**

c) **If changes are required, click "Modify" again, and wait for installation to complete.**

*Steps should be similar for VS2015. Screenshots not shown.

Modifying — Visual Studio Community 2017 — 15.7.3   ×

Workloads   Individual components   Language packs   Installation locations

Windows (3)

Universal Windows Platform development ☐ Create applications for the Universal Windows Platform with C#, VB, JavaScript, or optionally C++.	**.NET desktop development** ☐ Build WPF, Windows Forms, and console applications using C#, Visual Basic, and F#.

Desktop development with C++ ☑
Build Windows desktop applications using the Microsoft C++ toolset, ATL, or MFC.

Web & Cloud (7)

ASP.NET and web development ☐ Build web applications using ASP.NET, ASP.NET Core, HTML/JavaScript, and Containers including Docker support.	**Azure development** ☐ Azure SDKs, tools, and projects for developing cloud apps, creating resources, and building Containers including...
Python development ☐ Editing, debugging, interactive development and source control for Python.	**Node.js development** ☐ Build scalable network applications using Node.js, an asynchronous event-driven JavaScript runtime.

Summary

✓ Visual C++ core desktop features

Optional
☑ Just-In-Time debugger
☑ VC++ 2017 version 15.7 v14.14 latest v141 tools
☑ C++ profiling tools
☑ Windows 10 SDK (10.0.17134.0)
☑ Visual C++ tools for CMake
☑ Visual C++ ATL for x86 and x64
☑ Test Adapter for Boost.Test
☑ Test Adapter for Google Test
☐ Windows 8.1 SDK and UCRT SDK
☐ Windows XP support for C++
☐ Visual C++ MFC for x86 and x64
☐ C++/CLI support
☐ Modules for Standard Library (experimental)
☐ IncrediBuild - Build Acceleration
☐ Windows 10 SDK (10.0.16299.0) for Desktop C+...
☐ Windows 10 SDK (10.0.15063.0) for Desktop C+...
☐ Windows 10 SDK (10.0.14393.0)
☐ Windows 10 SDK (10.0.10586.0)
☐ Windows 10 SDK (10.0.10240.0)
☐ VC++ 2015.3 v14.00 (v140) toolset for desktop

▼ Individual components

Location
C:\Program Files (x86)\Microsoft Visual Studio\2017\Community   Change...

By continuing, you agree to the license for the Visual Studio edition you selected. We also offer the ability to download other software with Visual Studio. This software is licensed separately, as set out in the 3rd Party Notices or in its accompanying license. By continuing, you also agree to those licenses.

Total space required   -5.63 GB

Modify

3. INITIAL BUILD PREPARATION

a) **Launch Visual Studio 2017. Open "notepadPlus.vcxproj",
located at** ==\PowerEditor\visual.net== (*within the Notepad++ repository
cloned in step 1*).

**Click "OK" on VS "Source Control-Git" and/or "Security Warning
for notepadPlus" popups as needed.**

b) **(OPTIONAL)
If desired, make a test change so that once the working
executable is created, you can ensure it is from your build. For
instance, you can change the text in the popup that results
from attempting to close an unsaved file (or close the program
with an unsaved file open) by modifying line 1850* of
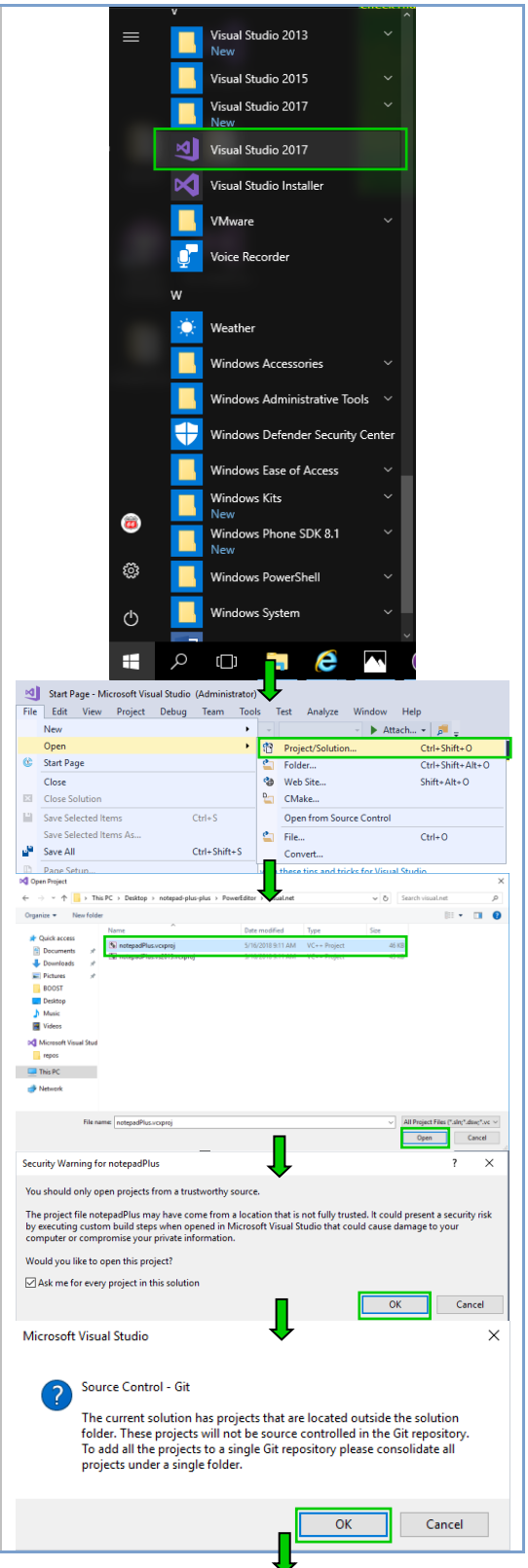Notepad_plus.cpp.**

*Line number is subject to change as new versions of Notepad++ are released.

c) **Right-click on "Notepad++ (Visual Studio 2015 – Windows XP)"
in the Solution Explorer* and select "Properties". Under
"Configuration Properties->General":**
- **Change the "Windows SDK Version" to the latest
available.**
- **Change the "Platform Toolset" to:**

"Visual Studio 2017 (v141)"

Click "OK" when done.

* Use shortcut ==Ctrl+Alt+L== to make the Solution Explorer visible.

Optional

4. ADD SCINTILLA PROJECT

a) Right-click "Solution 'notepadPlus'" in the Solution Explorer*, then select the menu item "Add->Existing Project…"

Click "OK" on "Security Warning for SciLexer" pop-up if it appears.

* Use shortcut `Ctrl+Alt+L` to make the Solution Explorer visible.

b) Open "SciLexer.vcxproj", located at `\scintilla\win32` (*within the Notepad++ repository cloned in step 1*).

d) Right-click on "SciLexer (Visual Studio 2013 – Windows XP)" in the Solution Explorer* and select "Properties". Under "Configuration Properties->General":
   – Change the "Windows SDK Version" to the latest available.
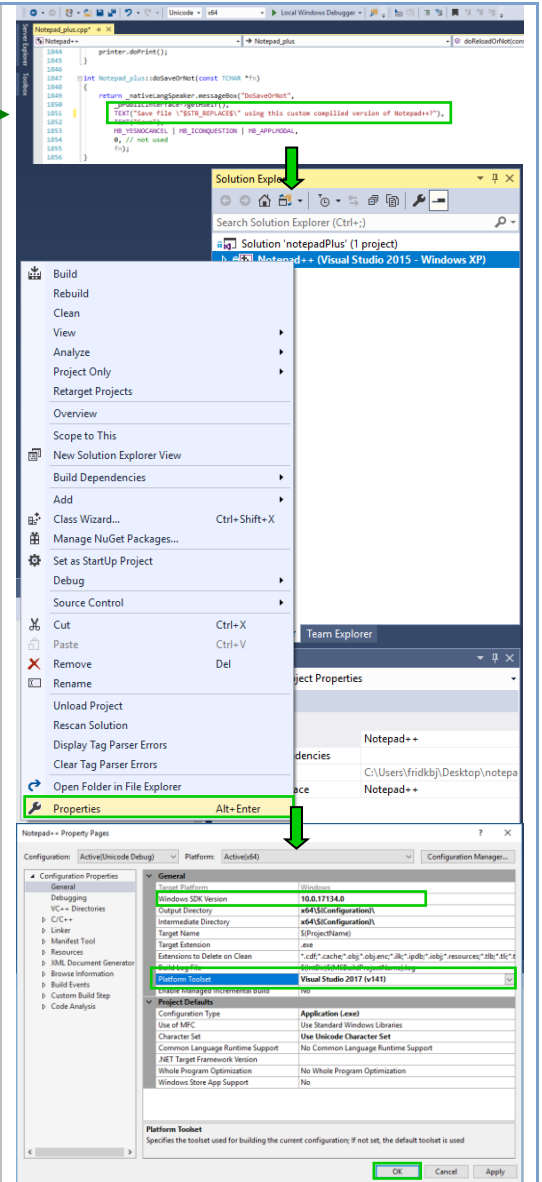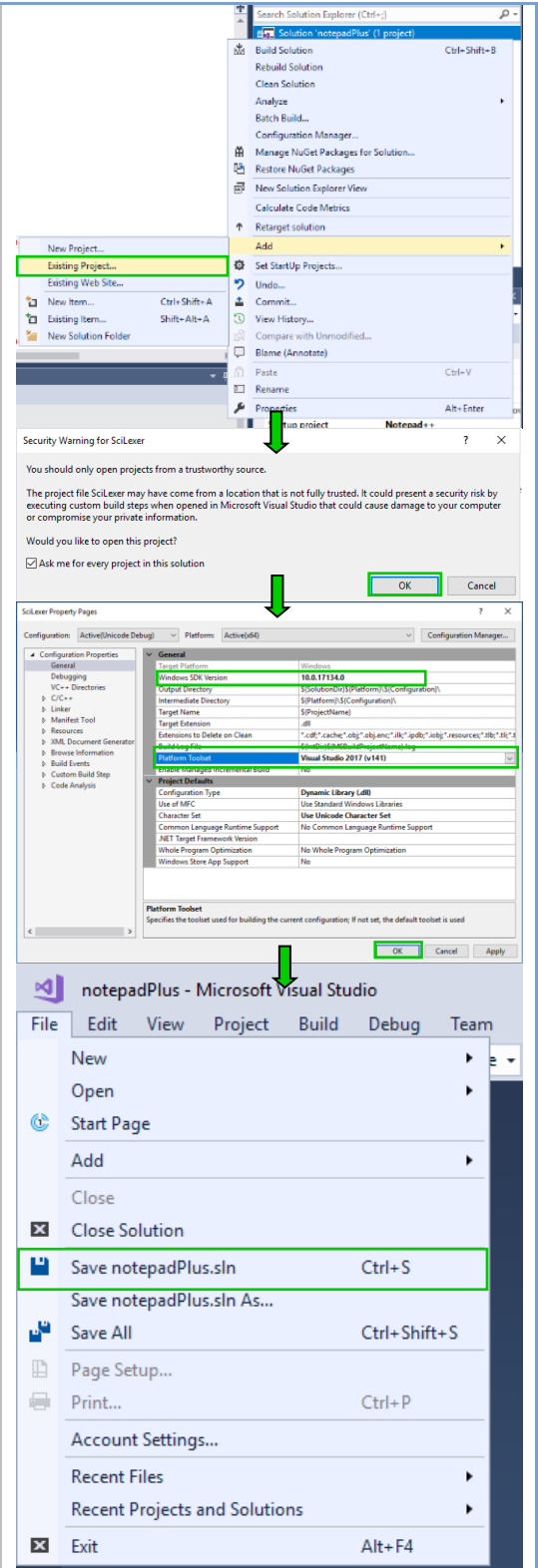   – Change the "Platform Toolset" to:

   "Visual Studio 2017 (v141)"

Click "OK" when done.

* Use shortcut `Ctrl+Alt+L` to make the Solution Explorer visible.

c) Click on "Solution 'notepadPlus'" in the Solution Explorer and save the solution.

5. UPDATE BOOST NUGET PACKAGES

a) Select "Manage NuGet Packages for Solution…" from the top-menu item "Tools->NuGet Package Manager".

b) Under the "Installed" tab, click "boost_regex-vc120". Check all three boxes in the right-hand list ("Project", Notepad++, SciLexer), and then click "Uninstall".

c) Click "OK" on the "Preview Changes" pop-up if necessary.

d) Allow sufficient time for the uninstall to complete. Wait until the

"=============== Finished ================"

notification is displayed in the Output* window.

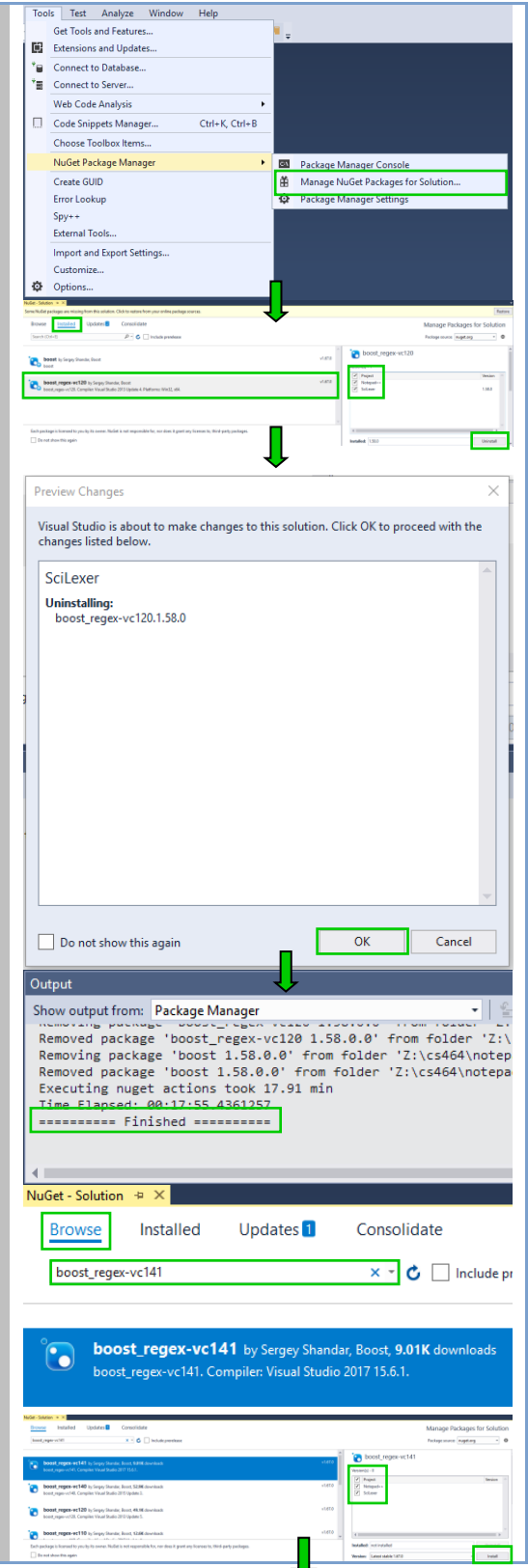*Use the shortcut Ctrl+Alt+O to make the Output window visible.

e) Select the "Browse" tab and search "boost_regex-vc141". Click the first available result, and with all checkboxes selected in the right-hand list ("Project", Notepad++, SciLexer), click "Install".

f) Click "OK" on the "Preview Changes" pop-up if necessary.

g) Allow sufficient time* for the install to complete. Wait until the

"=============== Finished ================"

notification is displayed in the Output** window.

*May require 30-45+ minutes.

**Use the shortcut Ctrl+Alt+O to make the Output window visible.

Preview Changes

Visual Studio is about to make changes to this solution. Click OK to proceed with the changes listed below.

SciLexer

Updates:
    boost.1.58.0 -> boost.1.67.0

Installing:
    boost_regex-vc141.1.67.0

Notepad++

Installing:
    boost.1.67.0
    boost_regex-vc141.1.67.0

☐ Do not show this again   OK   Cancel

Output

Show output from: Package Manager

Added package 'boost.1.67.0' to folder 'C:\Users\fridkbj\Desktop\notep
Added package 'boost.1.67.0' to 'packages.config'
Successfully installed 'boost 1.67.0' to SciLexer
Adding package 'boost_regex-vc141.1.67.0' to folder 'C:\Users\fridkbj\
Added package 'boost_regex-vc141.1.67.0' to folder 'C:\Users\fridkbj\D
Added package 'boost_regex-vc141.1.67.0' to 'packages.config'
Successfully installed 'boost_regex-vc141 1.67.0' to SciLexer
Removing package 'boost.1.58.0' from folder 'C:\Users\fridkbj\Desktop\
Removed package 'boost.1.58.0' from folder 'C:\Users\fridkbj\Desktop\r
Executing nuget actions took 40.81 min
Found package 'boost 1.67.0' in 'C:\Users\fridkbj\Desktop\notepad-plus
Found package 'boost_regex-vc141 1.67.0' in 'C:\Users\fridkbj\Desktop\
Package 'boost.1.67.0' already exists in folder 'C:\Users\fridkbj\Desk
Added package 'boost.1.67.0' to 'packages.config'
Successfully installed 'boost 1.67.0' to Notepad++
Package 'boost_regex-vc141.1.67.0' already exists in folder 'C:\Users\
Added package 'boost_regex-vc141.1.67.0' to 'packages.config'
Successfully installed 'boost_regex-vc141 1.67.0' to Notepad++
Executing nuget actions took 4.93 sec
Time Elapsed: 00:40:54.6316959
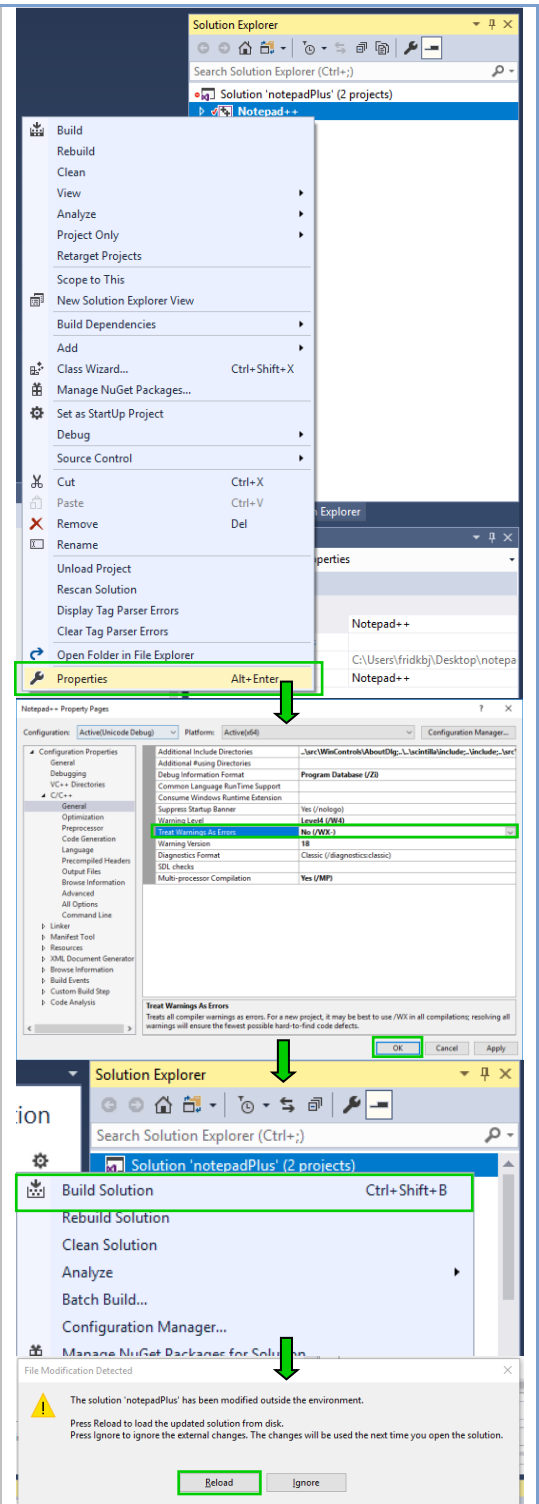========== Finished ==========

6. Build Notepad++.exe

a) Right-click "Solution 'notepadPlus'" in the Solution Explorer, and select "Retarget solution". Click "OK" on "Review Solution Actions" pop-up.

b) Right-click "Notepad++" in the Solution Explorer and select "Properties". On the "Configuration Properties->C/C++->General" properties page, set "Treat Warnings As Errors" to "No (/WX-)". Click "OK" to close the window.

c) Build the solution.

Three ways to build:
- Right-click on "Solution 'notepadPlus'" in the Solution Explorer and select "Build Solution".
- Under the "Build" top-menu options, select "Build Solution".
- **Use shortcut** Ctrl + Shift + B

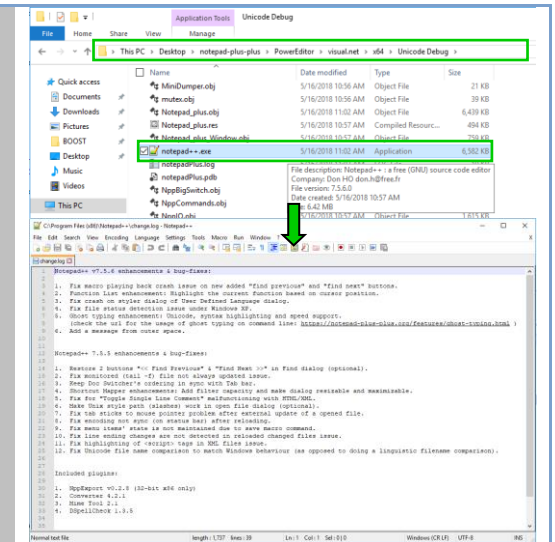b) Click "Reload" on "File Modification Detected" pop-up.

7. LAUNCH

Once completed, launch your own build of notepad++.exe!

- **The VS build of notepad++.exe is also found in:**

  \PowerEditor\visual.net\x64\Unicode Debug

- **If you move notepad++.exe to a different directory, you must move SciLexer.dll with it.**

Special thanks to ClaudiaFrank (github), without whose guidance this document would not have been possible.