

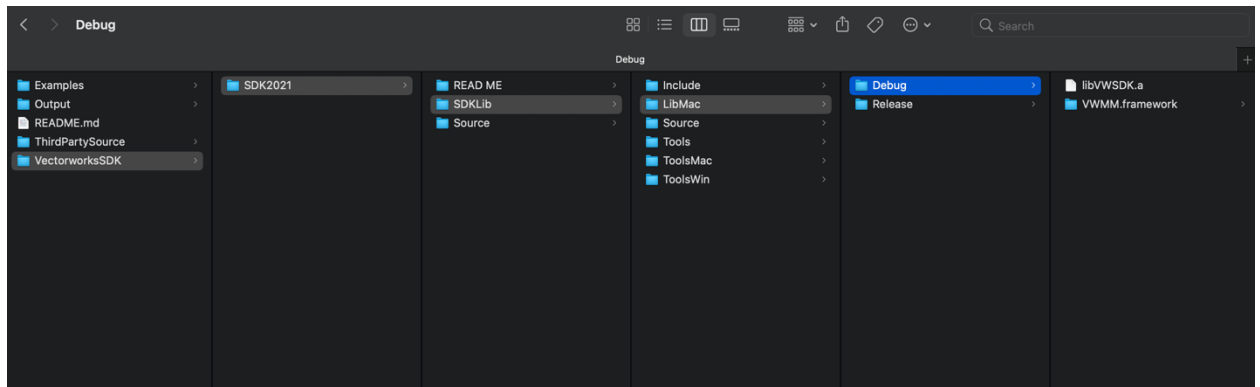
2021 Vectorworks SDK Web Example Installation Walkthrough

Find the Repo here: https://github.com/jacob-ditkoff/VW_2021SDK_Example

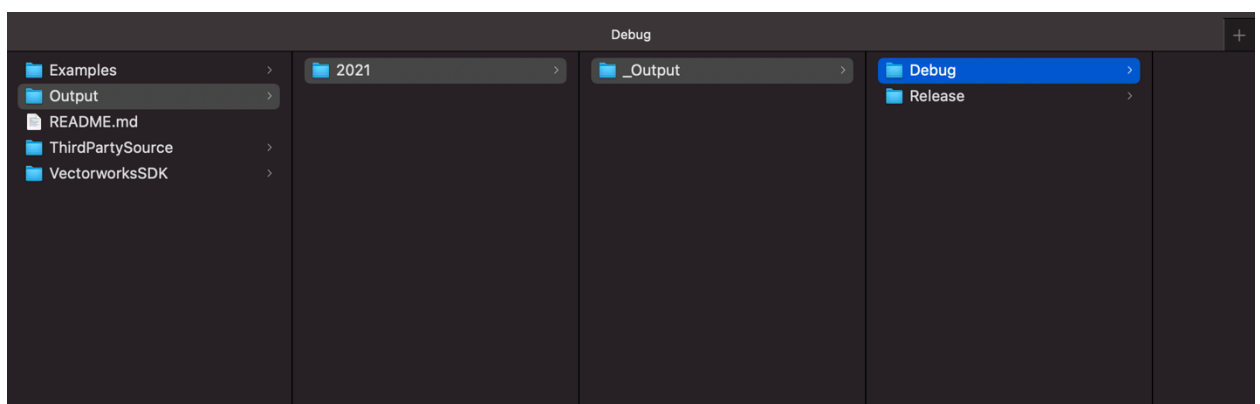
XCode Steps (Mac OS)

NOTE: This walkthrough was done using MacOS Big Sur v. 11.1 with XCode 12.3 and Vectorworks 2021.

- 1) Navigate through the VW_2021SDK_Example-main folder to VectorworksSDK/SDK2021/SDKLib/LibMac/Debug.

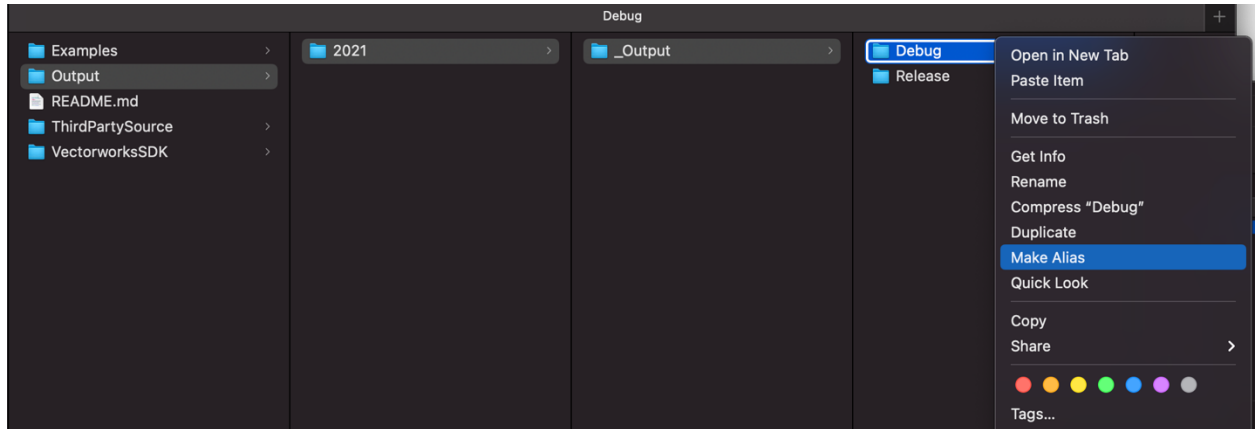


- 2) Unpack libVWSDK.a.zip and delete the .zip file once unzipped.
- 3) From the main directory (VW_2021SDK_Example-main), navigate to Output/2021/_Output/Release OR Debug. This folder will be empty until you compile the project, which will be done in Step 10. There will be either a debug or release folder which will get populated depending on if you're in the Debug scheme or Release scheme.

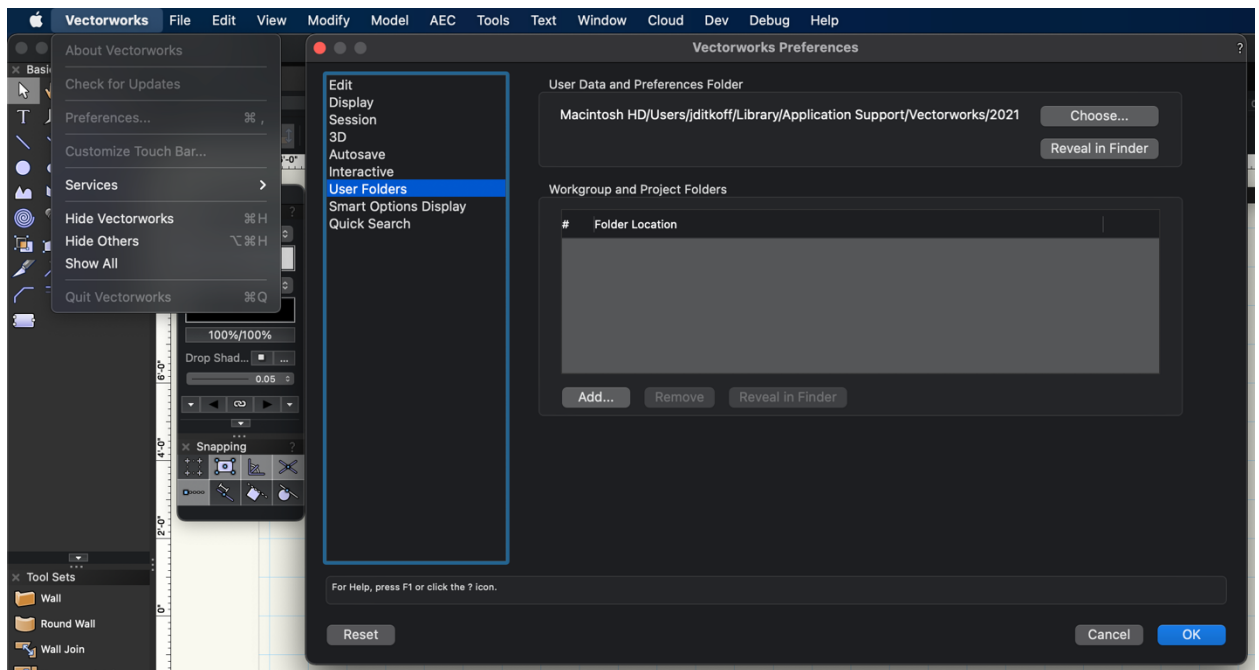


2021 Vectorworks SDK Web Example Installation Walkthrough

- 4) Right click on the Release or Debug folder and click Make Alias. Rename the Alias to WebExample. This is the output location that houses the created plugin once the project is successfully compiled. The alias folder mirrors whatever is in the original folder, so any changes will affect both folders.

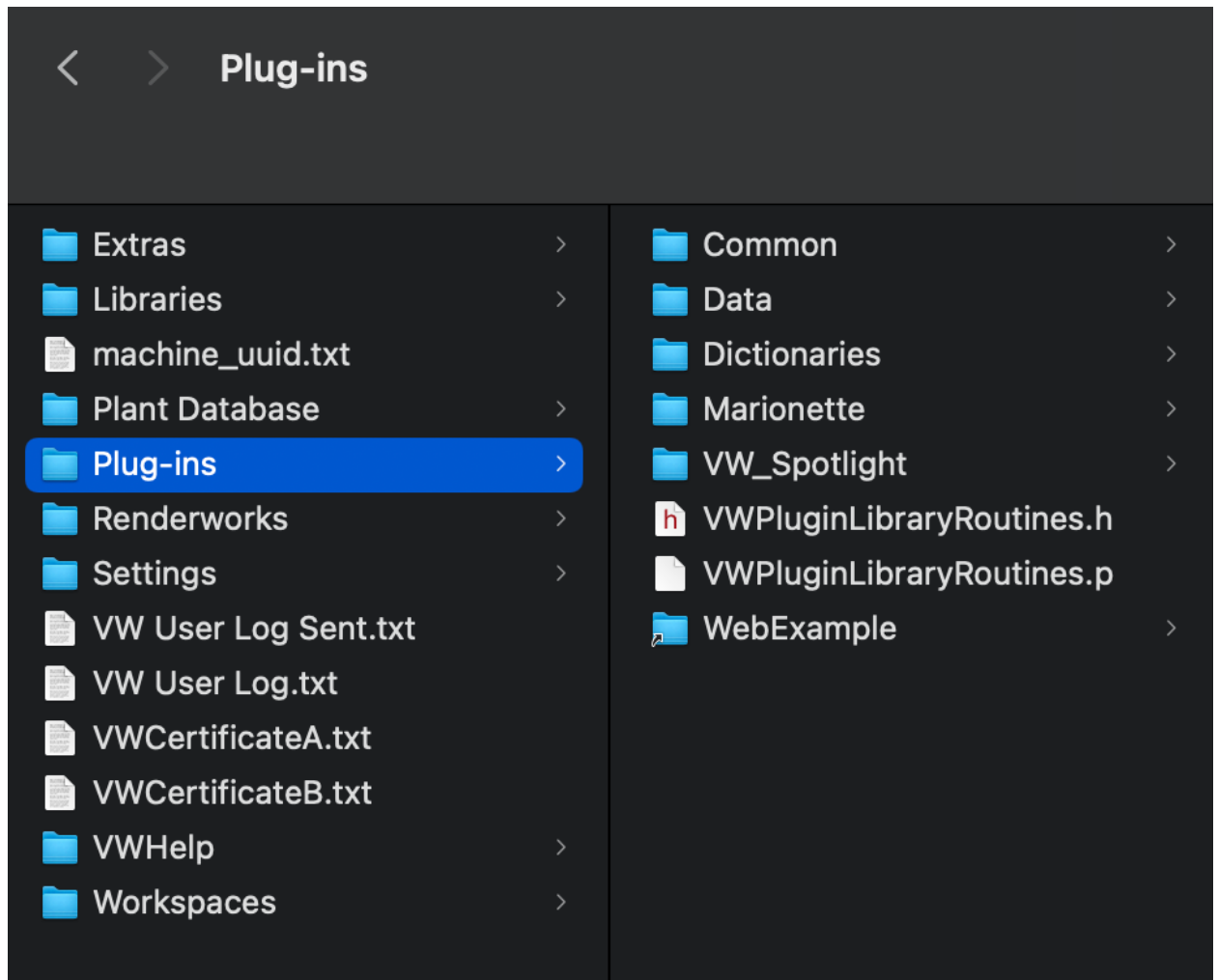


- 5) Next, we need to move the alias folder to the Vectorworks User Plug-in folder. The easiest way to locate this folder is to open up Vectorworks 2021.
- 6) Once open, Click Vectorworks on the Menu bar. Click Preferences, then click on User Folders to the left of the Preferences menu. At the top of the User Folders tab, you will see the path that contains the user's plug-in folder. Press Reveal in Finder. Then open up the Plug-ins Folder.



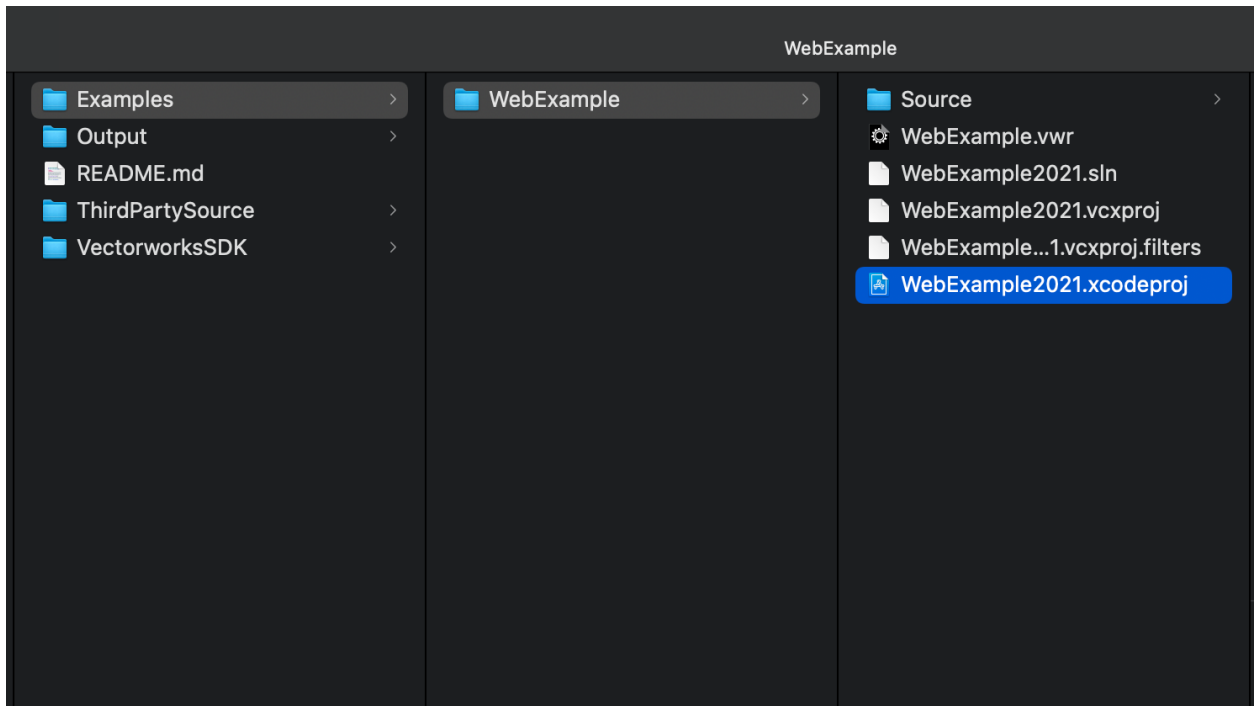
2021 Vectorworks SDK Web Example Installation Walkthrough

- 7) Drag the WebExample alias folder into the Plug-ins folder. When Vectorworks opens up, it will run through its internal plug-in libraries, then through the user's installed plug-ins. It recursively checks all folders in the Plug-ins folders to find all Vectorworks library files.



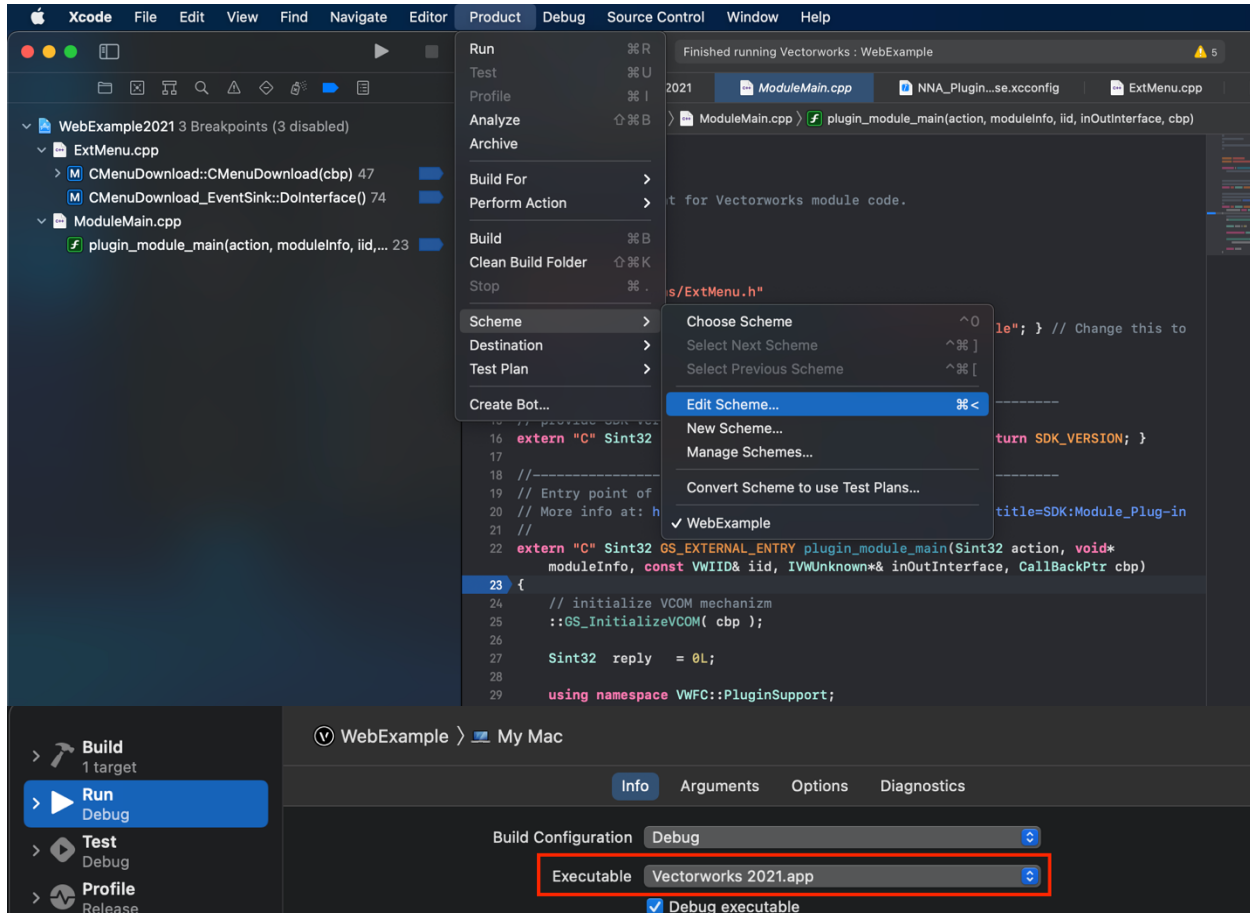
2021 Vectorworks SDK Web Example Installation Walkthrough

- 8) Next, navigate back to VW_2021SDK_Example-main. From the main directory, go to: Examples/WebExample/. This houses the WebExample2021.xcodeproj.



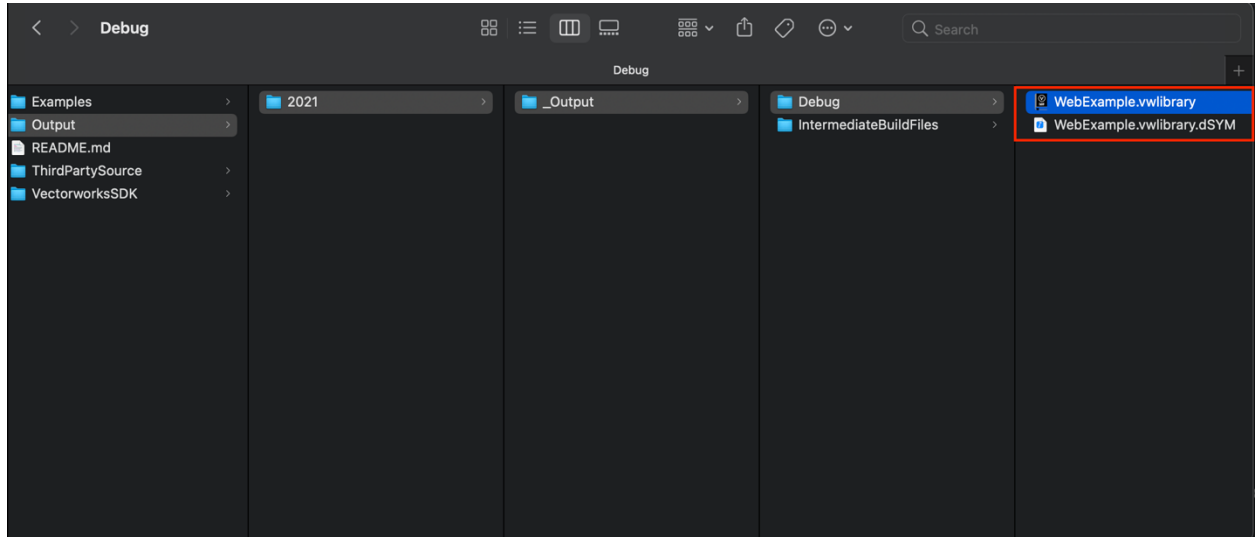
2021 Vectorworks SDK Web Example Installation Walkthrough

- 9) Open up the WebExample2021 project.
 - a. Optionally, if you want Vectorworks 2021 to automatically open up after compiling, you can press Product at the top Menu bar, then press hover over Scheme and press Edit Scheme. Then under the Run tab, you can find and select Vectorworks 2021 as an Executable. This can be very helpful for debugging purposes.



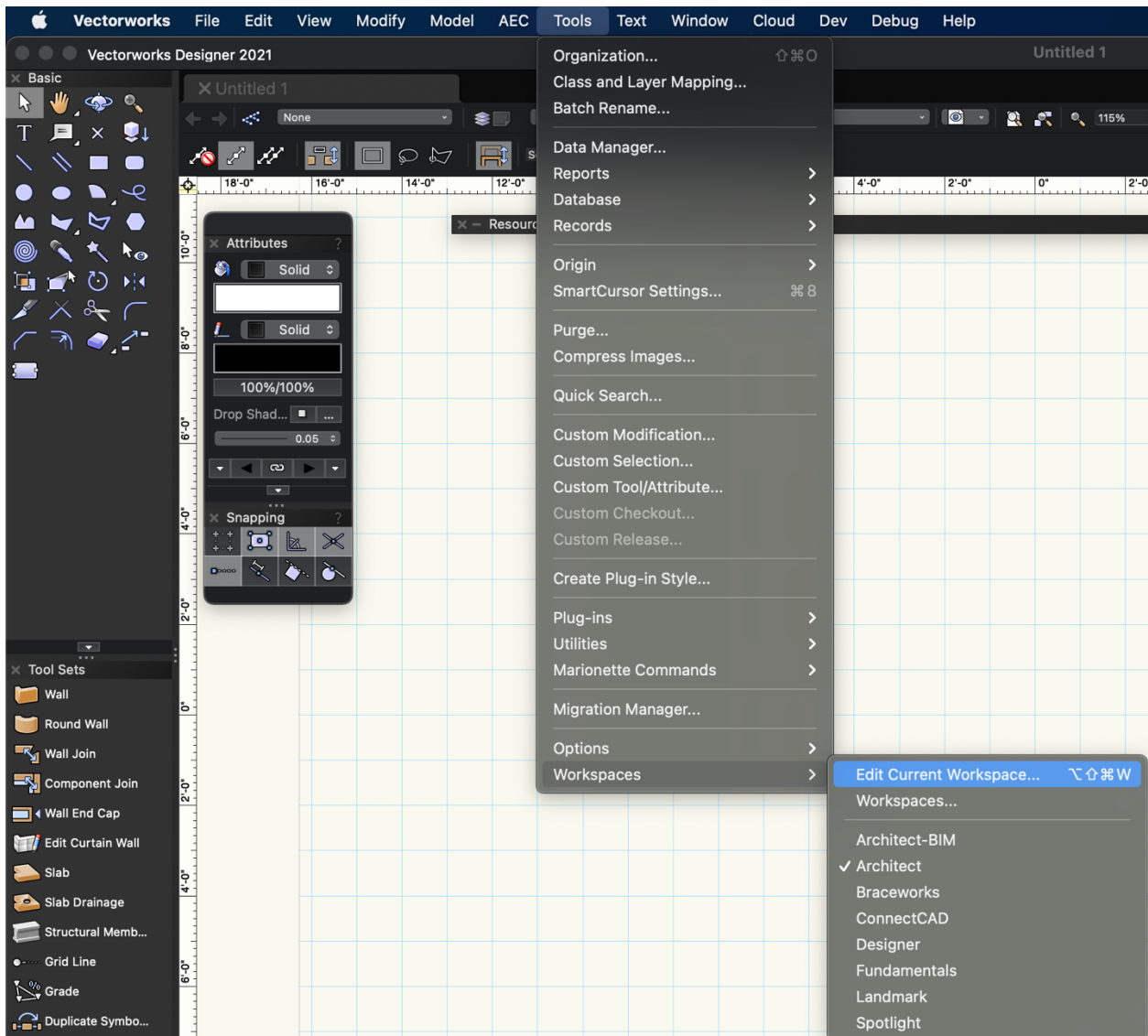
2021 Vectorworks SDK Web Example Installation Walkthrough

- 10) Compile and run the program. **It should compile with no issues.** You'll see the Debug folder from step 3 be populated with two files: WebExample.vwlibrary and WebExample.vwlibrary.dSYM. These files will also be present in the WebExample folder you created in step 4, as that is an alias of this folder.



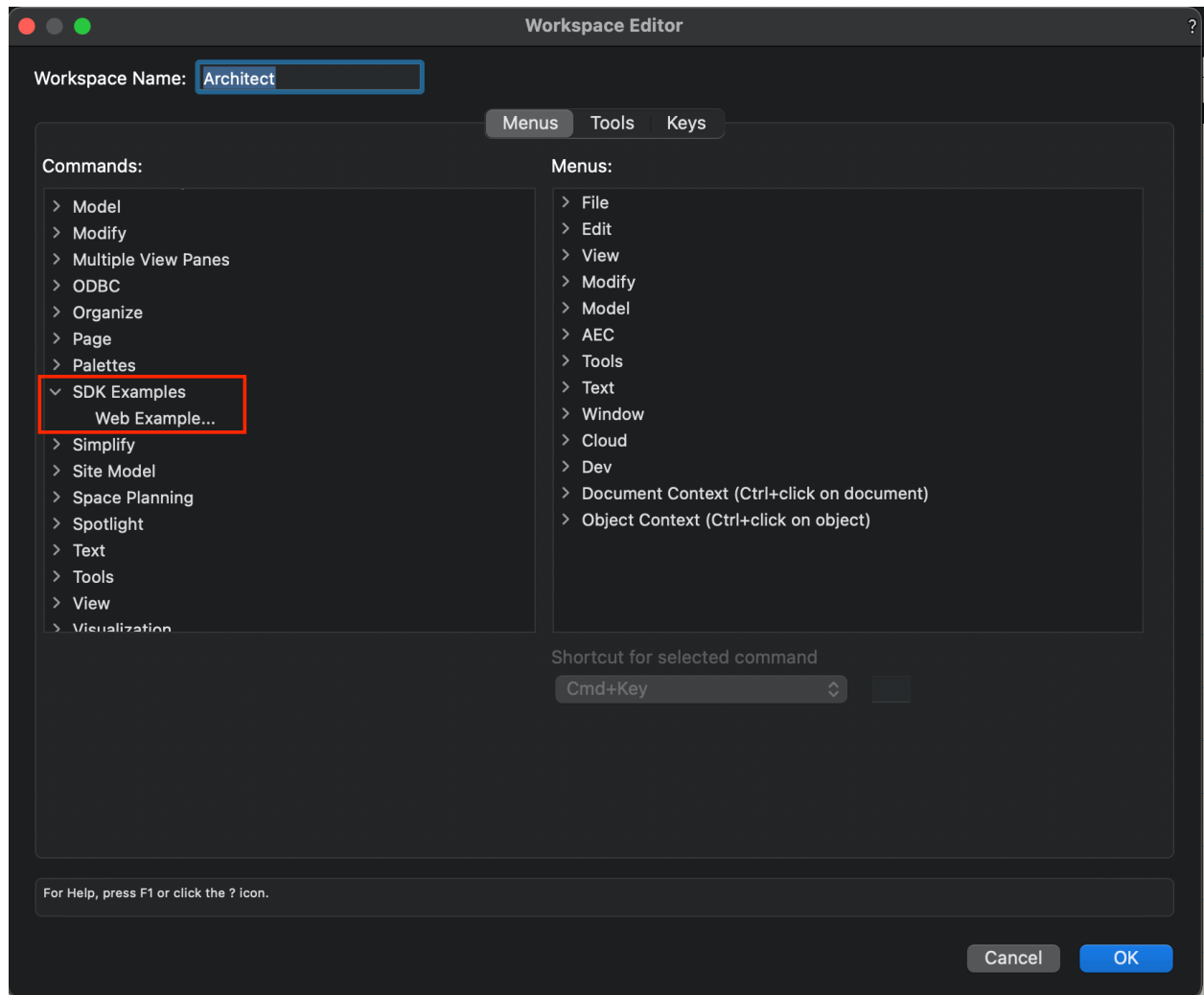
2021 Vectorworks SDK Web Example Installation Walkthrough

- 11) Once you see those files present, you can open up Vectorworks 2021. Once open, navigate to the Tools menu, then hover over Workspaces and click on Edit Current Workspace.



2021 Vectorworks SDK Web Example Installation Walkthrough

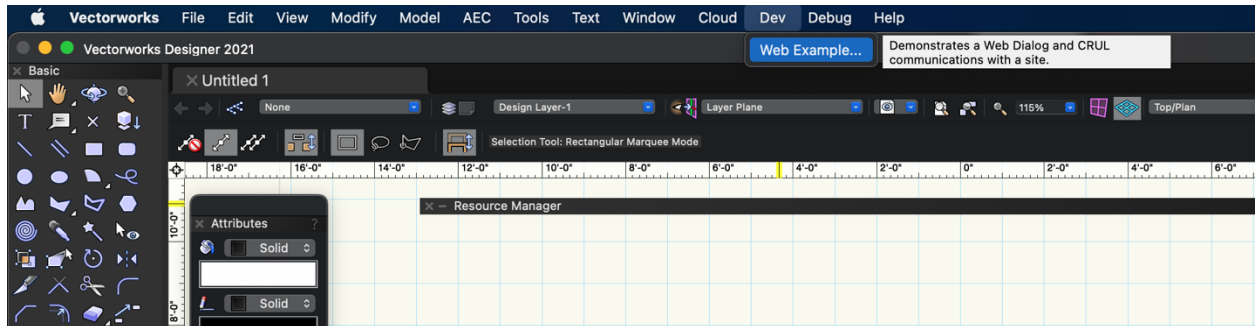
- 12) If you scroll through the Commands box, you'll find an entry titled SDKExample with a drop-down arrow next to it. If you click on that arrow, you'll see the Web Example plug-in. In order to use the plug-in, you'll need to add it to a menu.



- 13) To make a new menu, scroll to the top of the Commands box. You'll see a command labeled "New Menu." Drag the New Menu command into the Menus box. You can then rename it to whatever you'd like. For the purposes of this tutorial, you can name it Dev.
- 14) Next, drag the Web Example plug-in into the new Dev Menu. Once you drop it into the Dev menu, you can press OK to return to Vectorworks.

2021 Vectorworks SDK Web Example Installation Walkthrough

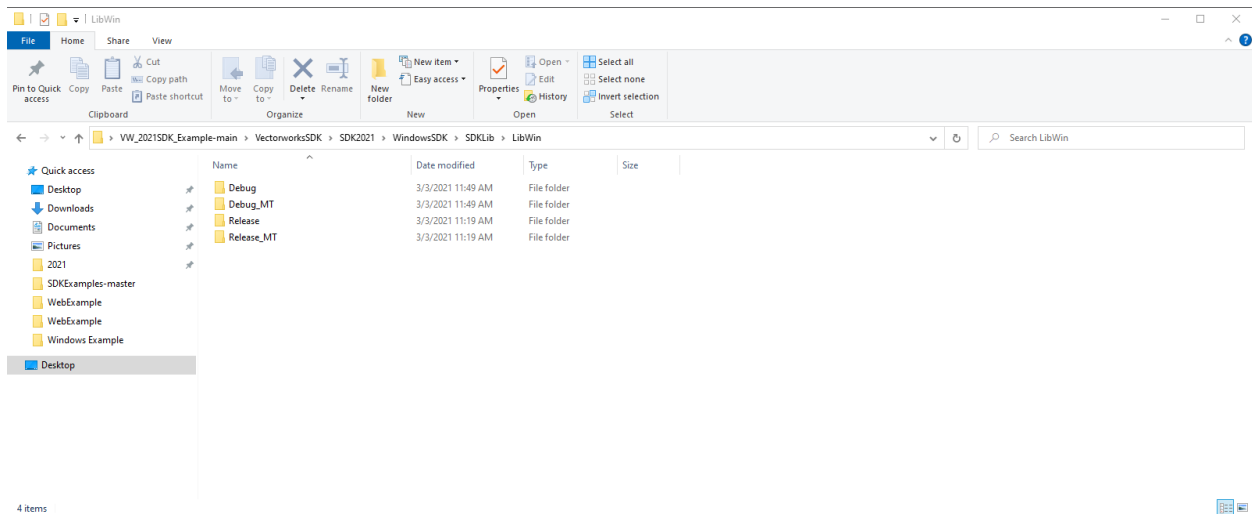
- 15) You will see a new menu option titled Dev on the Vectorworks menu bar. If you click on it, the Web Example plug-in will be there. You can now open it up and see the WebExample plug-in box appear.



2021 Vectorworks SDK Web Example Installation Walkthrough

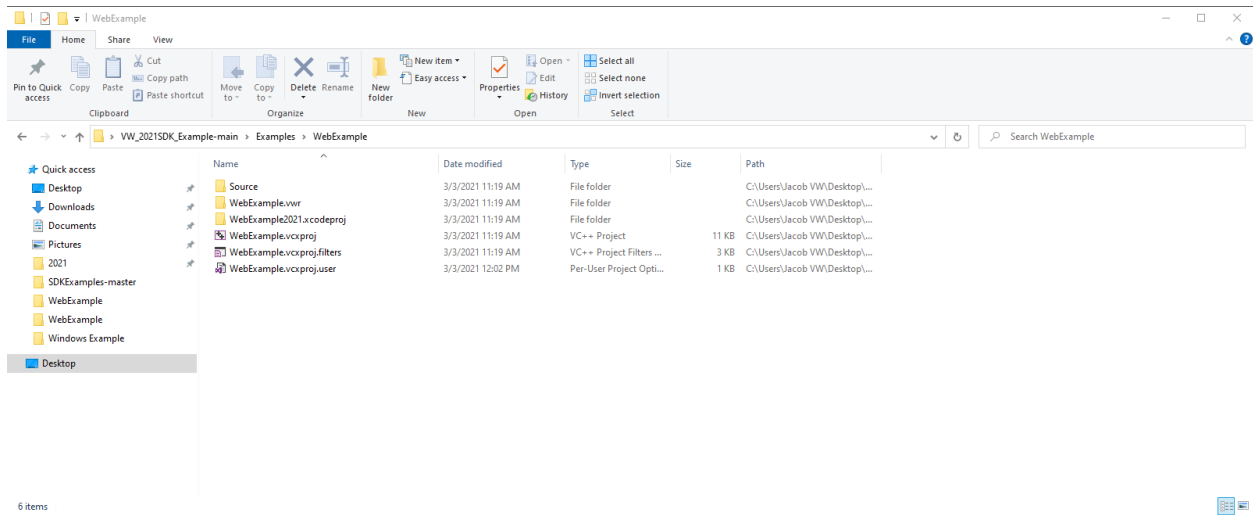
Visual Studio 2017 Steps (Windows 10)

- 1) Navigate through the Repo folder to:
'\VectorworksSDK\SDK2021\WindowsSDK\SDKLib\LibWin\''. Inside of this folder, you should see 4 folders. We need to unzip 2 zipped files within Debug and Debug_MT.
 - a. First, open up the Debug folder and unzip VWSDK.lib. Once unzipped, feel free to delete the .zip file!
 - b. Next, open up the Debug_MT folder and unzip VWSDK_MT.lib. Once unzipped, feel free to delete the .zip file!



2021 Vectorworks SDK Web Example Installation Walkthrough

2) Next, return to the root folder and navigate to: '\\Examples\\WebExample\\'



2021 Vectorworks SDK Web Example Installation Walkthrough

- 3) Open 'WebExample.vcxproj'
- 4) At this point, you can build the project. Be mindful that you may get an error box which pops up, as seen to the right. This is because there is no executable being targeted by the project after the build is completed. Despite this error, the project has successfully been built and the plug-in can now be found, which will be discussed in Step 5.

- a. Optionally, if you want to make this error go away, you will need to navigate to the Project Property Pane. This can be done by clicking on the Project menu, then clicking Properties.

Next, select the Configuration Properties drop-down menu, then select Debugging. Click on the Command box, then click the down-down arrow to the right of the box. Select Browse, then navigate to where you have Vectorworks 2021 stored. Once you select Vectorworks, this error will disappear and Vectorworks will automatically open upon the project being successfully built.

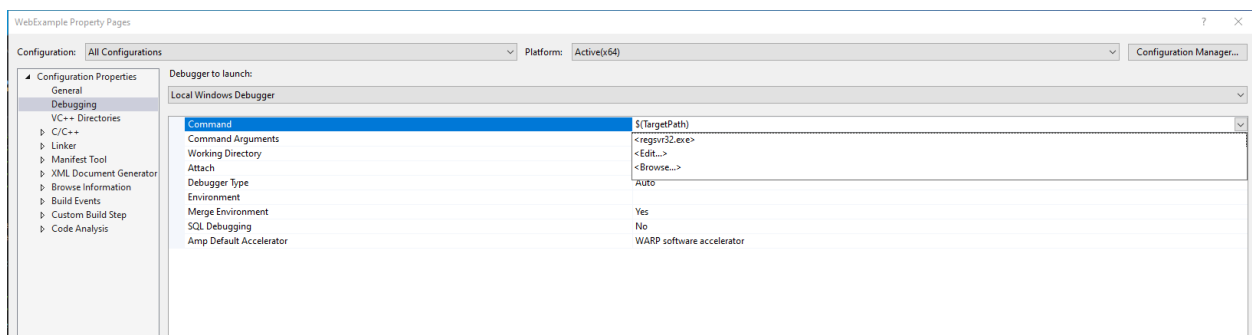
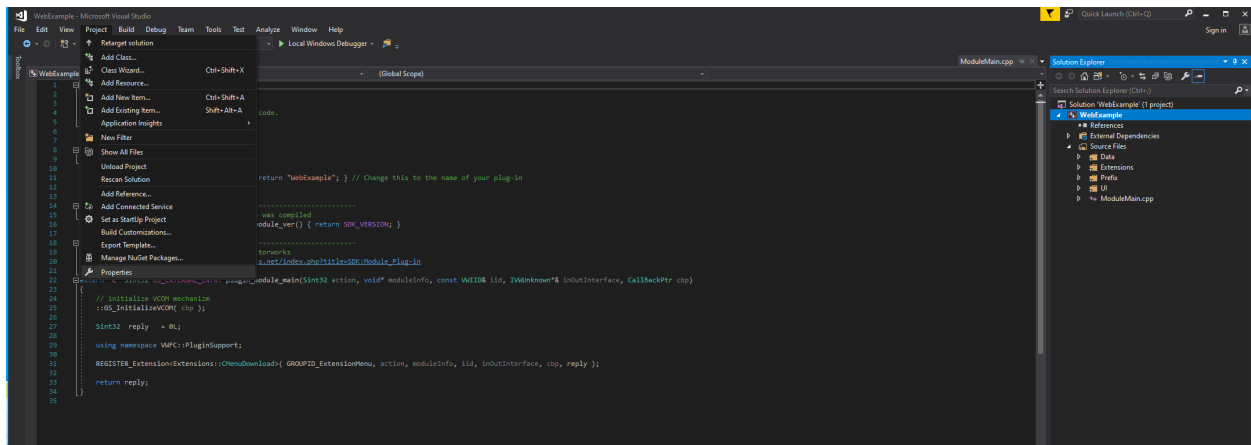
Microsoft Visual Studio



Unable to start program 'C:\Users\Jacob VW\Desktop\VW_2021SDK_Example-main\Examples\WebExample\..\..\Output\2021\Output\Debug\WebExample.vlb'.

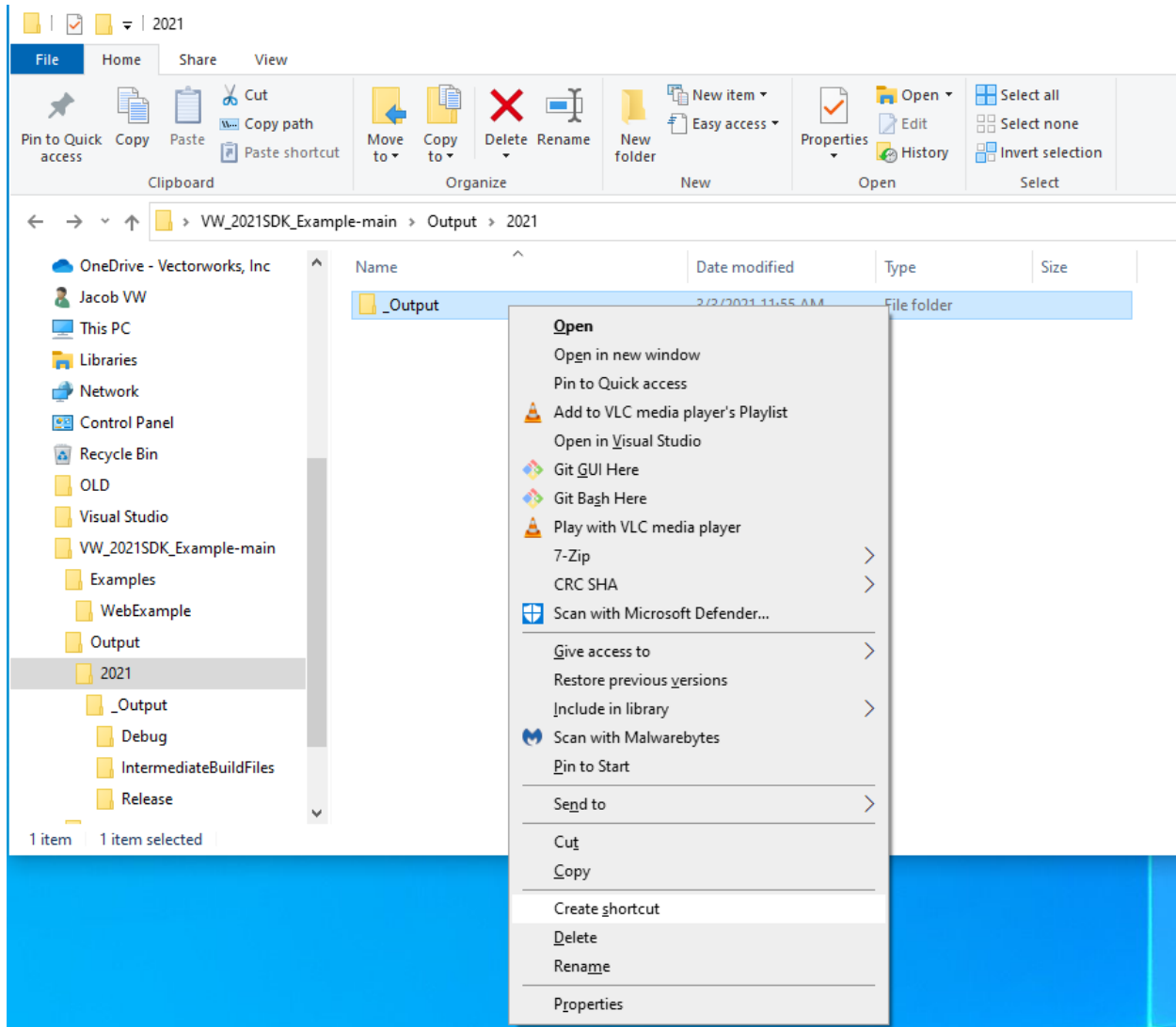
C:\Users\Jacob VW\Desktop\VW_2021SDK_Example-main\Examples\WebExample\..\..\Output\2021\Output\Debug\WebExample.vlb is not a valid Win32 application.

OK



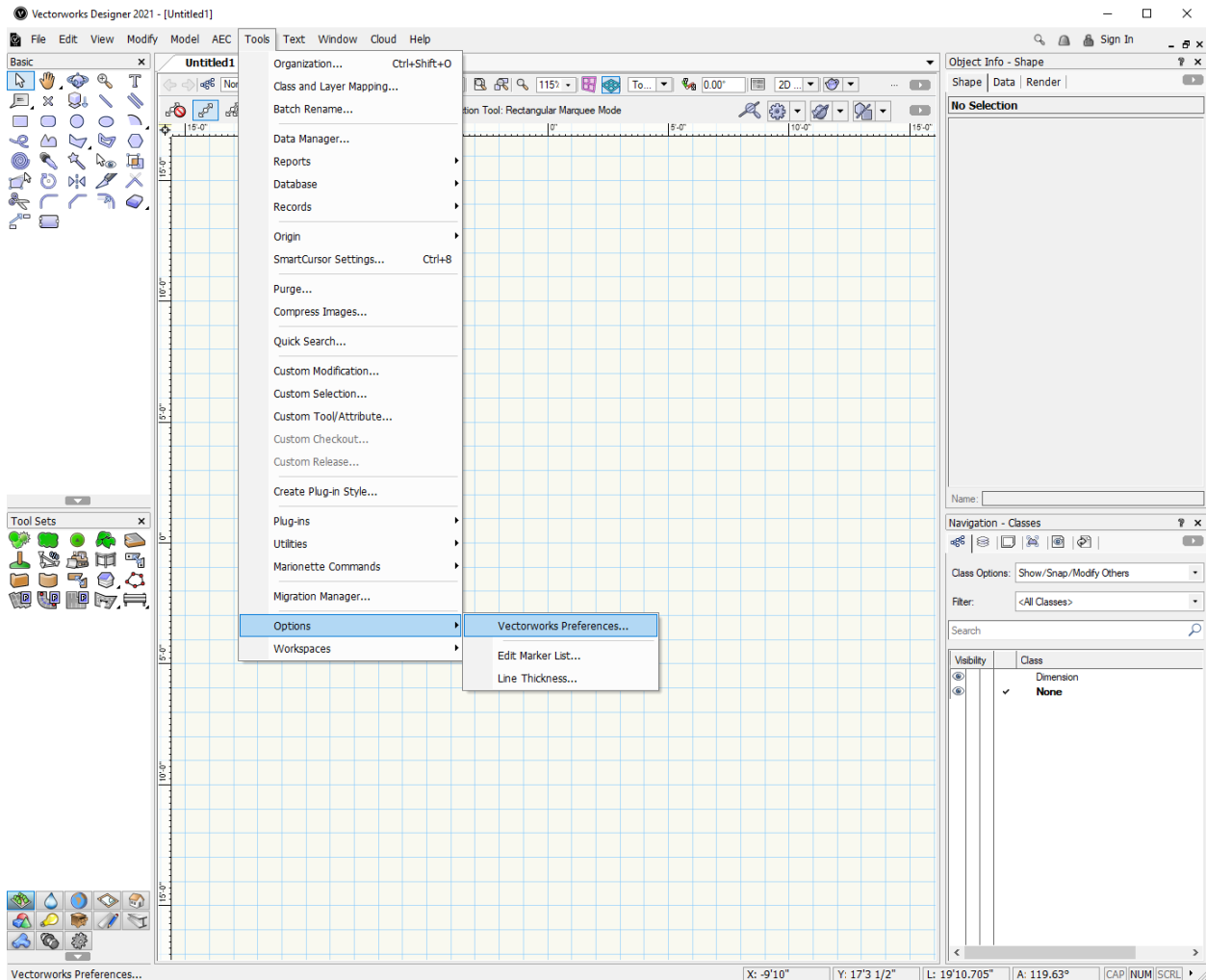
2021 Vectorworks SDK Web Example Installation Walkthrough

- 5) To install the plug-in so Vectorworks picks it up, we have to create a shortcut to the `_Output` folder located within the project folder. Navigate from the root folder to: `\Output\2021\`. Inside this folder, you will see another folder labeled `'_Output'`. This folder houses the components Vectorworks needs for the plug-in to work. Vectorworks will recursively search through every folder within the Output folder to find the files it needs for the plug-in. Create a shortcut to `_Output` by right-clicking on it and clicking `Create shortcut`. Next, rename the shortcut to `'WebExample'`.



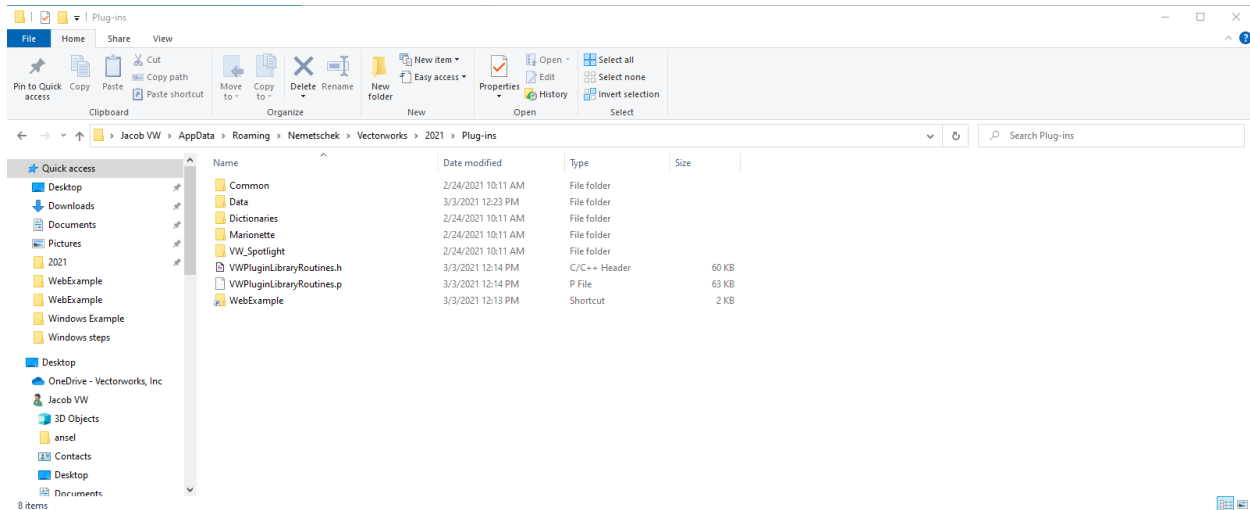
2021 Vectorworks SDK Web Example Installation Walkthrough

- 6) From here, we need to place this shortcut in Vectorwork's User Plug-in folder. To find the folder, open Vectorworks 2021, click on the Tools menu, then hover over Options and click on Vectorworks Preferences.



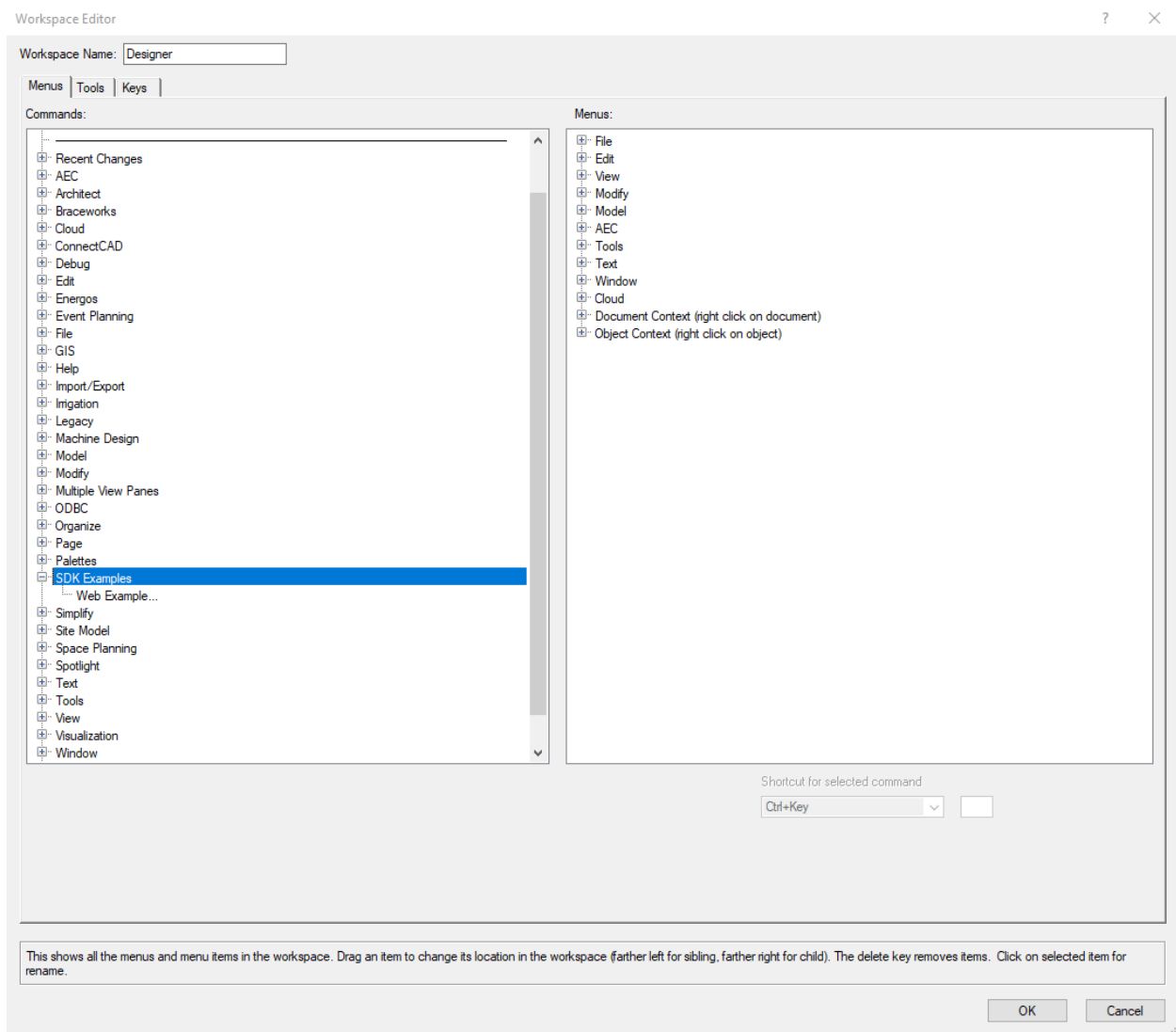
2021 Vectorworks SDK Web Example Installation Walkthrough

- 7) Inside Preferences, select User Folders. Inside this pane, you'll see a file path showing where the Users' folder is. Select Explore, which will open the file path seen. Inside the folder that popped up, there will be a folder titled 'Plug-ins'. Drag your WebExample shortcut into the Plug-ins folder.



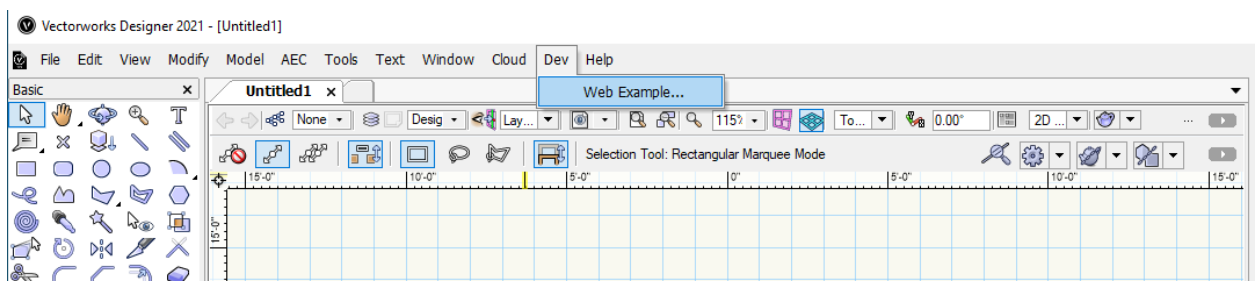
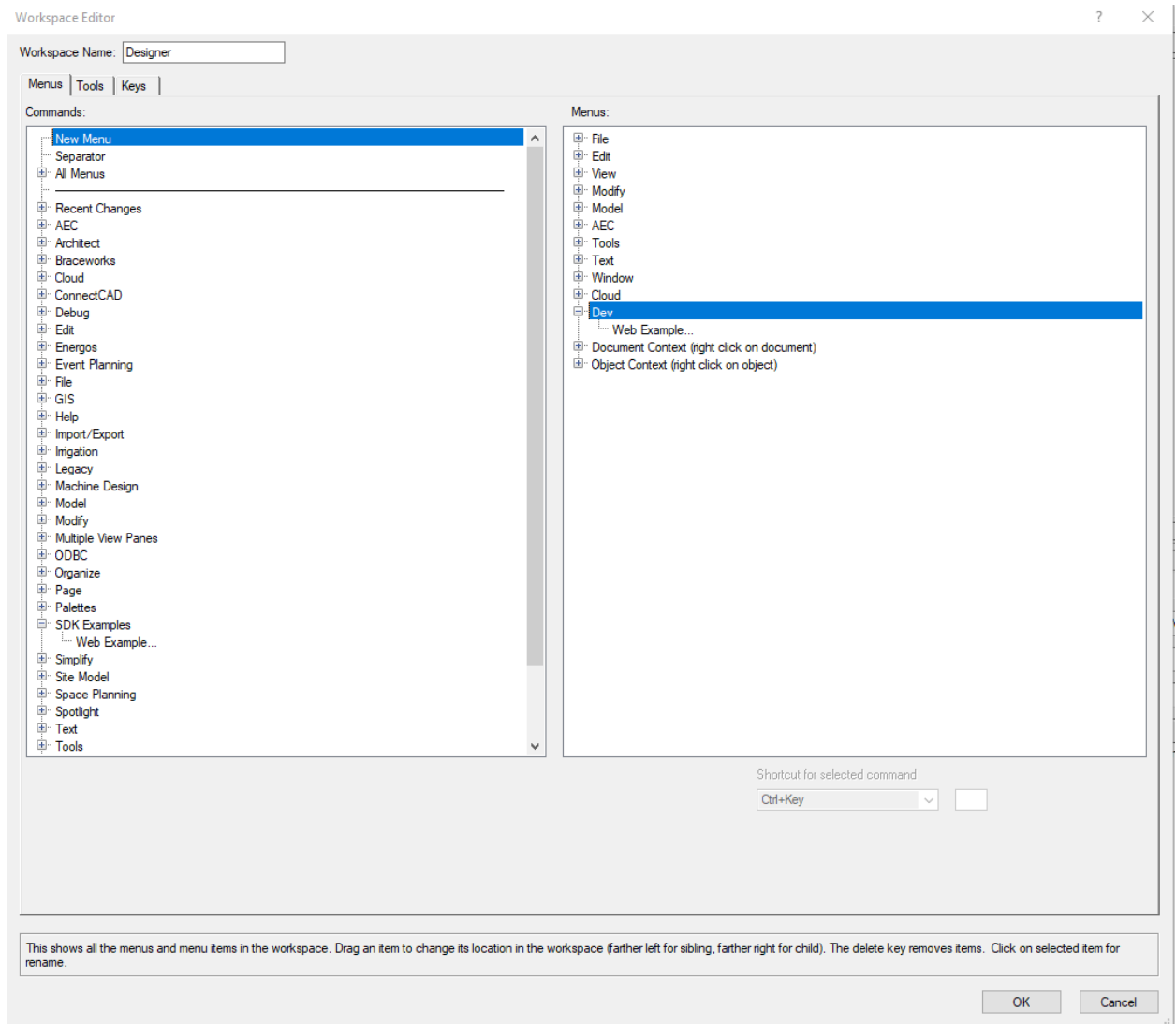
2021 Vectorworks SDK Web Example Installation Walkthrough

- 8) Reopen Vectorworks 2021 and select the Tools menu, then navigate to Workspaces and select 'Edit Current Workspace'. Inside the Commands box, you should find a tab labeled 'SDK Examples'. If this is present, then you've successfully added the example plug-in to Vectorworks.



2021 Vectorworks SDK Web Example Installation Walkthrough

- 9) Next, at the top of the Commands Box, click on 'New Menu' and drag it into the Menu box. Rename the New Menu to Dev by clicking on the newly added menu and waiting for a second. Optionally, you can name the menu to whatever you'd like. For the purposes of this tutorial, we're naming the new menu Dev. Then, open the SDK Examples drop-down in the Commands box. Drag 'Web Example' into your new Dev menu and press OK. Once Vectorworks reloads, you will see a new drop-down Menu titled Dev. When you click on it, you will see the Web Example plug-in.



2021 Vectorworks SDK Web Example Installation Walkthrough

Debugging and troubleshooting

Mac Potential Issues:

- 1) If you move any of the directories within the project directory around, keep in mind you will potentially have to edit those file paths within the project preferences pane.
- 2) Outdated software/ Updated SDK/ Updated XCode – This project is tested to work on MacOS Big Sur with XCode Version 12.2.
- 3) Vectorworks doesn't pick up the plugin –
 - a. Potential reasons:
 - i. Incorrect alias folder: When making an alias, make sure that the folder contains the WebExample.vwlibrary file. For clarification, see steps 3, 4, and 10.
 - ii. Delete the .vwlibrary and .dSYM files present in the Debug/Alias folder and recompile the project so that it contains a brand new library file. An older version may potentially cause you issues.
 - iii. Incorrect version of the SDK or SDK Library. Please make sure you're using the 2021 Version of the SDK included in the repo. Using older versions may result in missing or changed dependencies.
- 4) NNA_Plugin_x files may not be found.
 - i. How to fix: Press on the red-text missing file name so that the properties box on the right of XCode opens up. Under the Location option, there should be the full path of the file. To the right of the full path, there is a little Folder icon. Click that, then navigate into the included Vectorworks SDK -> /VectorworksSDK/SDK2021/SDKLib/Include/OnlyMac/. In here, you should find the correct file. Select it and the red text should go away, indicating that it is able to detect the file.
- 5) Command CodeSign failed with nonzero exit
 - i. Potential solutions:
 1. Make sure the project is stored locally. Storing it remotely may result in XCode needing the code to be signed. Storing it remotely allows for the target and project to be signed remotely.
 2. Go to Project AND Target Build Settings, navigate to the Signing section, set Code Signing Identity to Don't Code Sign, or to an empty box. (Source: <https://stackoverflow.com/questions/31039513/how-can-i-skip-code-signing-for-development-builds-in-xcode>)

2021 Vectorworks SDK Web Example Installation Walkthrough

Windows Potential Issues:

- 1) If you change any file paths around, please keep in mind that you may have to edit some of the file paths inside of the Properties pane. If you decide to edit file paths, ensure that if you make changes to the Debug configuration, make those same changes to the Release configuration. You can minimize the amount of individual changes you'll have to make by making these changes under the All Configurations option in the Configuration drop-down menu by the top of the Properties pane. You may also have to manually edit the project file itself in a text editor.
- 2) Incorrect Windows SDK installed: The Windows SDK version being used for this project is: 10.0.15063.0.
- 3) Visual Studio 17 (v141) was used for this project and tutorial.