

2021 Vectorworks SDK Web Example Installation Walkthrough

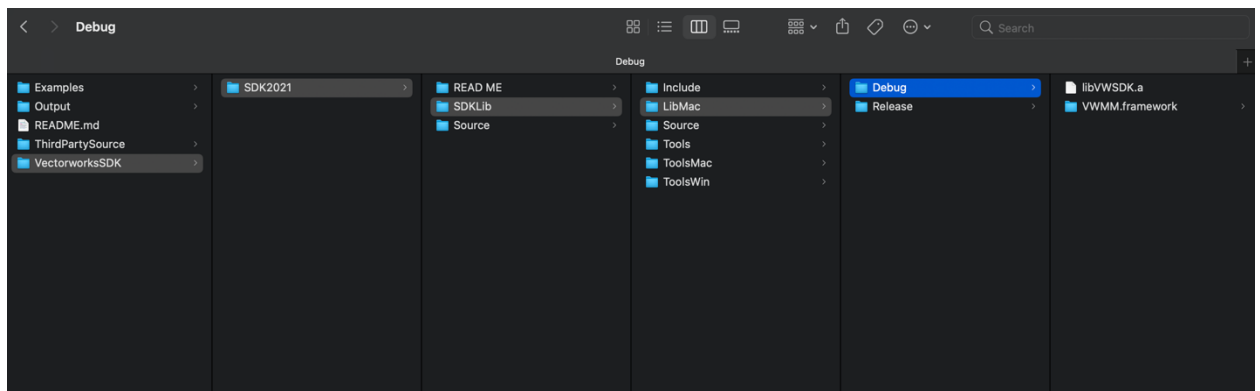
THIRD DRAFT

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

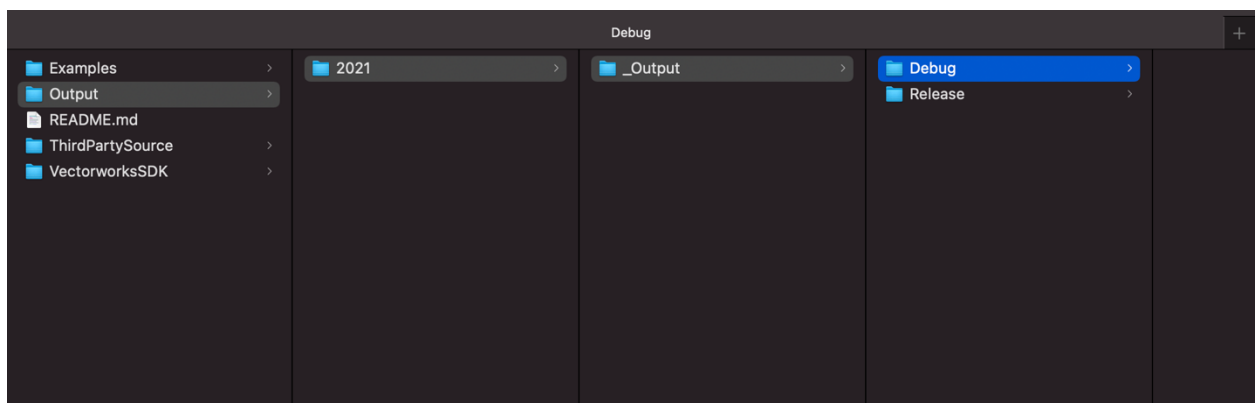
Find the Repo here: https://github.com/jacob-ditkoff/VW_2021SDK_Example

Steps

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

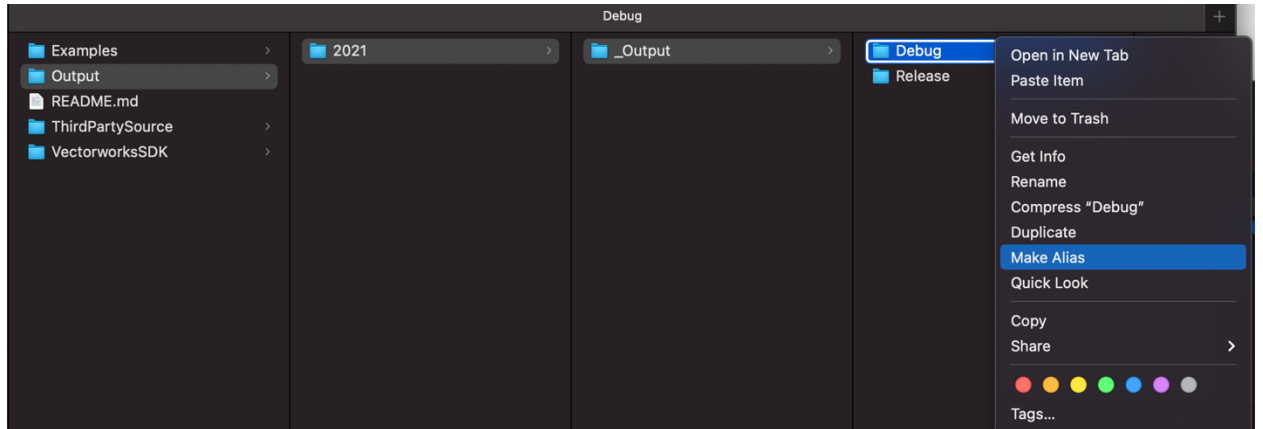


- 2) Unpack libVWSDK.a.zip and delete the .zip file once unzipped.
- 3) From the main directory (VW_2021SDK_Example-main), navigate to Output/2021/_Output/Debug. This folder will be empty until you compile the project, which will be done in Step 10. There will be both a debug and release folder which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

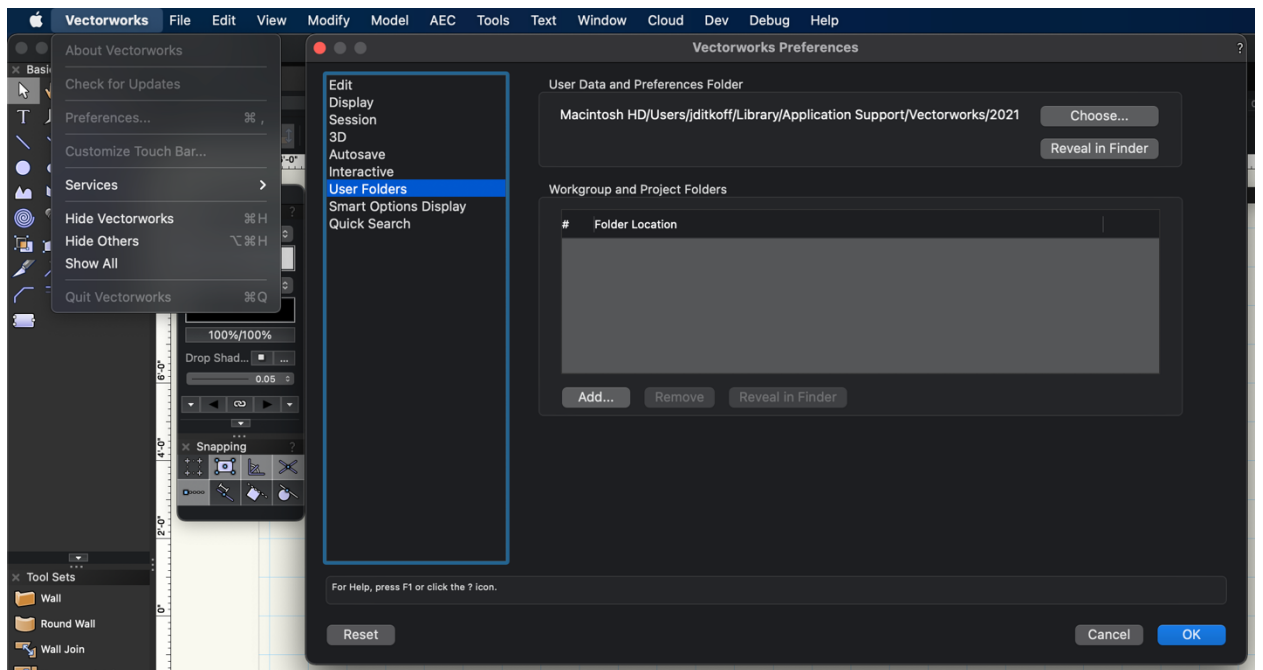


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- 4) Right click on the Debug folder and click Make Alias. Rename the Alias to WebExample. This is the output location that houses the created plugin once the project is successfully compiled. The alias folder mirrors whatever is in the original folder,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

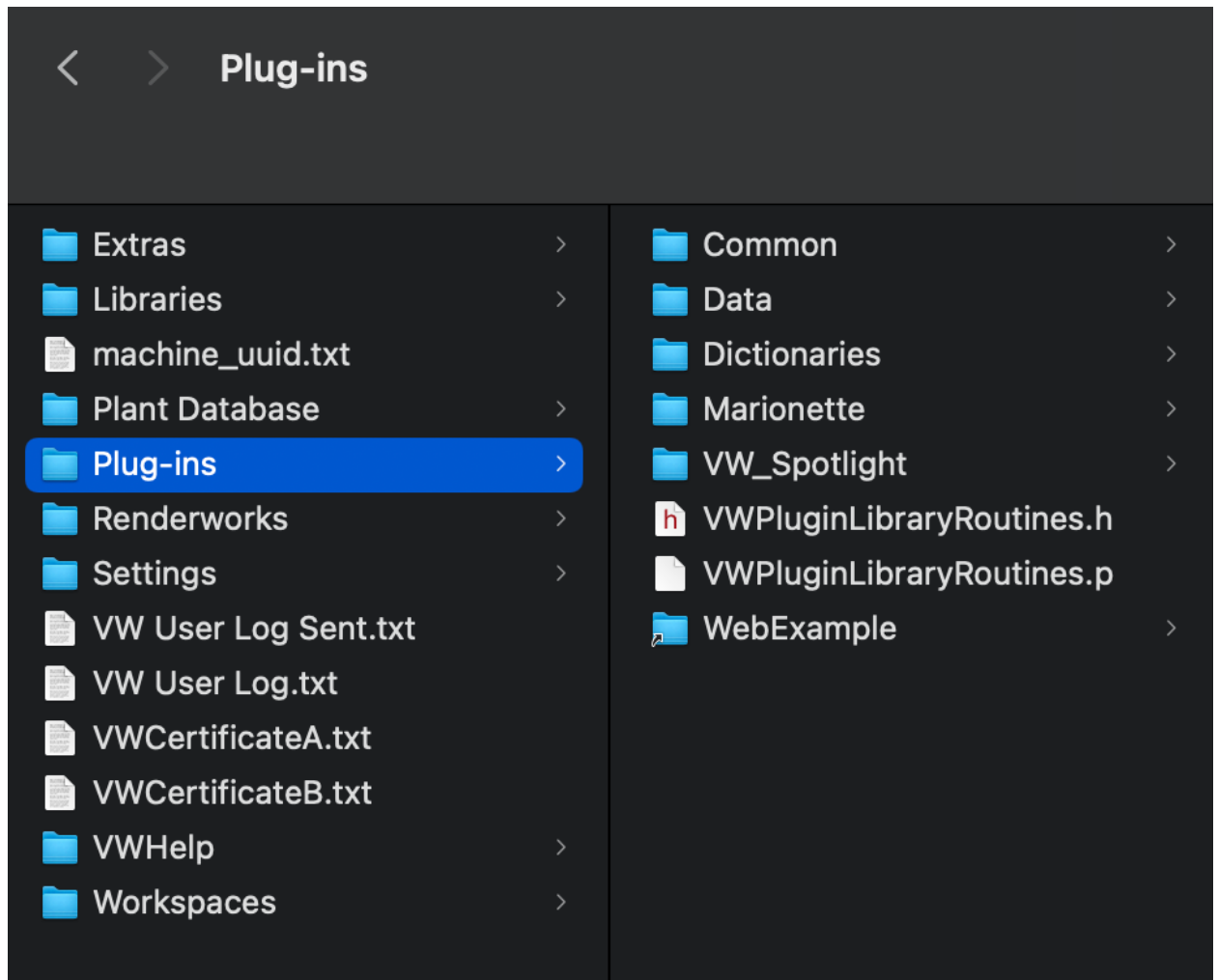


- 5) Next, we need to move the alias folder to the Vectorworks User Plug-in folder. The easiest way to locate this folder is to open up Vectorworks 2021.
- 6) Once open, Click Vectorworks on the Menu bar. Click Preferences, then click on User Folders to the left of the Preferences menu. At the top of 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.



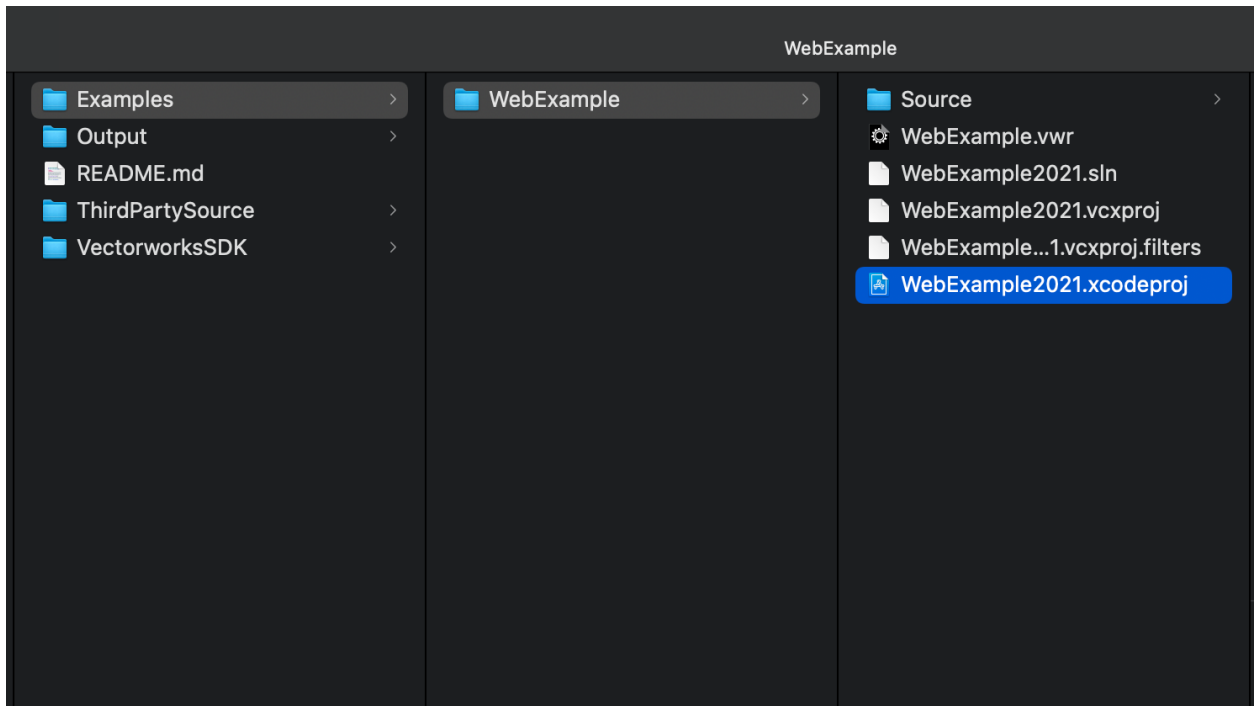
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- 7) Drag the WebExample alias folder into the Plug-ins folder. When Vectorworks opens up, it will run through its internal plug-in libraries, then through the user's installed plug-ins. It recursively checks all folders in the Plug-ins folders to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



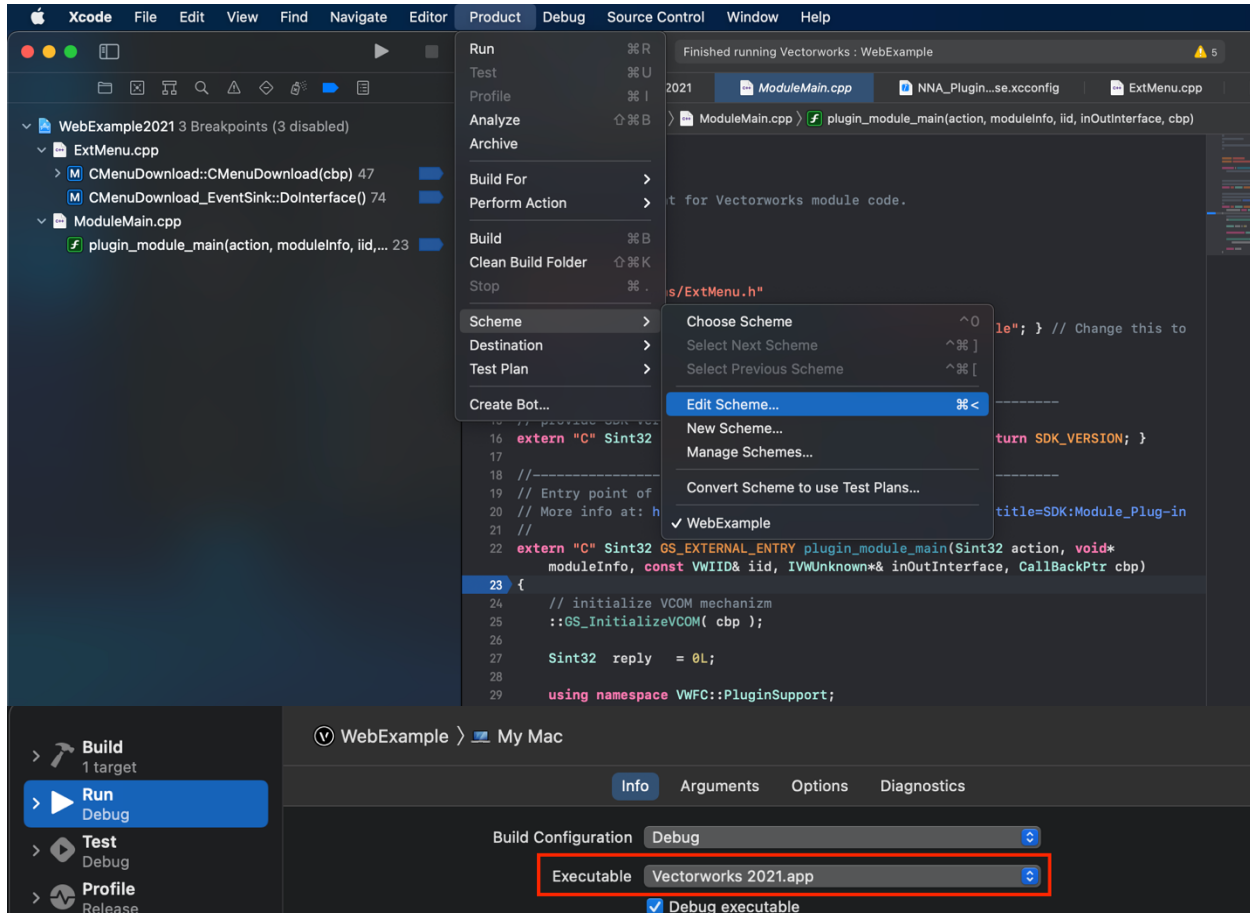
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- 8) Next, navigate back to VW_2021SDK_Example-main. From the main directory, go to: Examples/WebExample/. This houses the WebExample2021.xcodeproj.



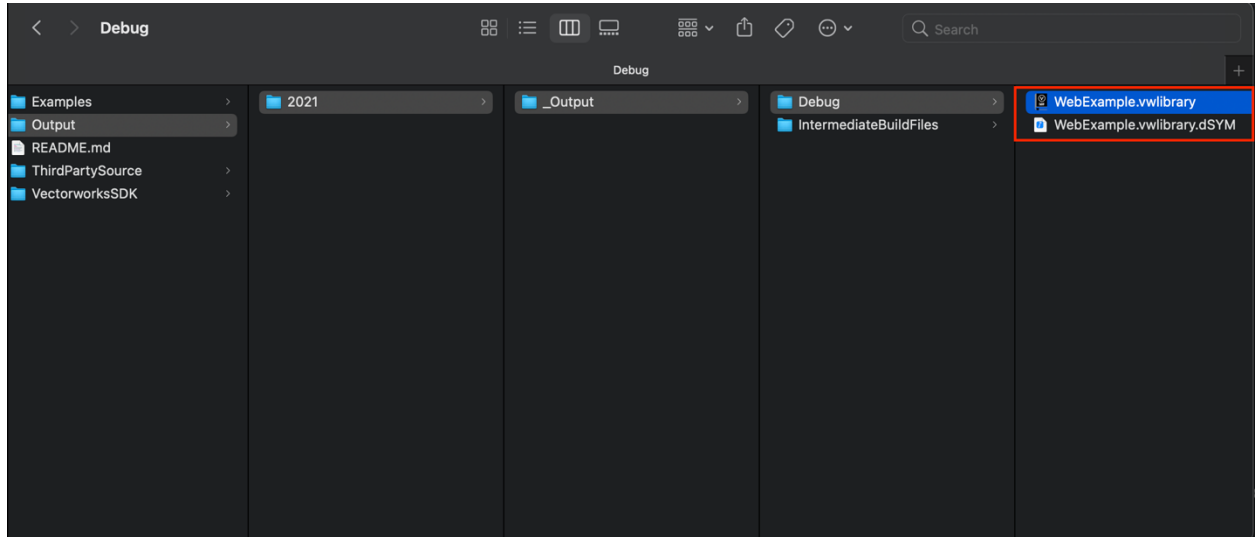
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- 9) Open up the WebExample2021 project.
 - a. Optionally, if you want Vectorworks 2021 to automatically open up after compiling, you can press Product at the top Menu bar, then press hover over Scheme and press Edit Scheme. Then under the Run tab,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



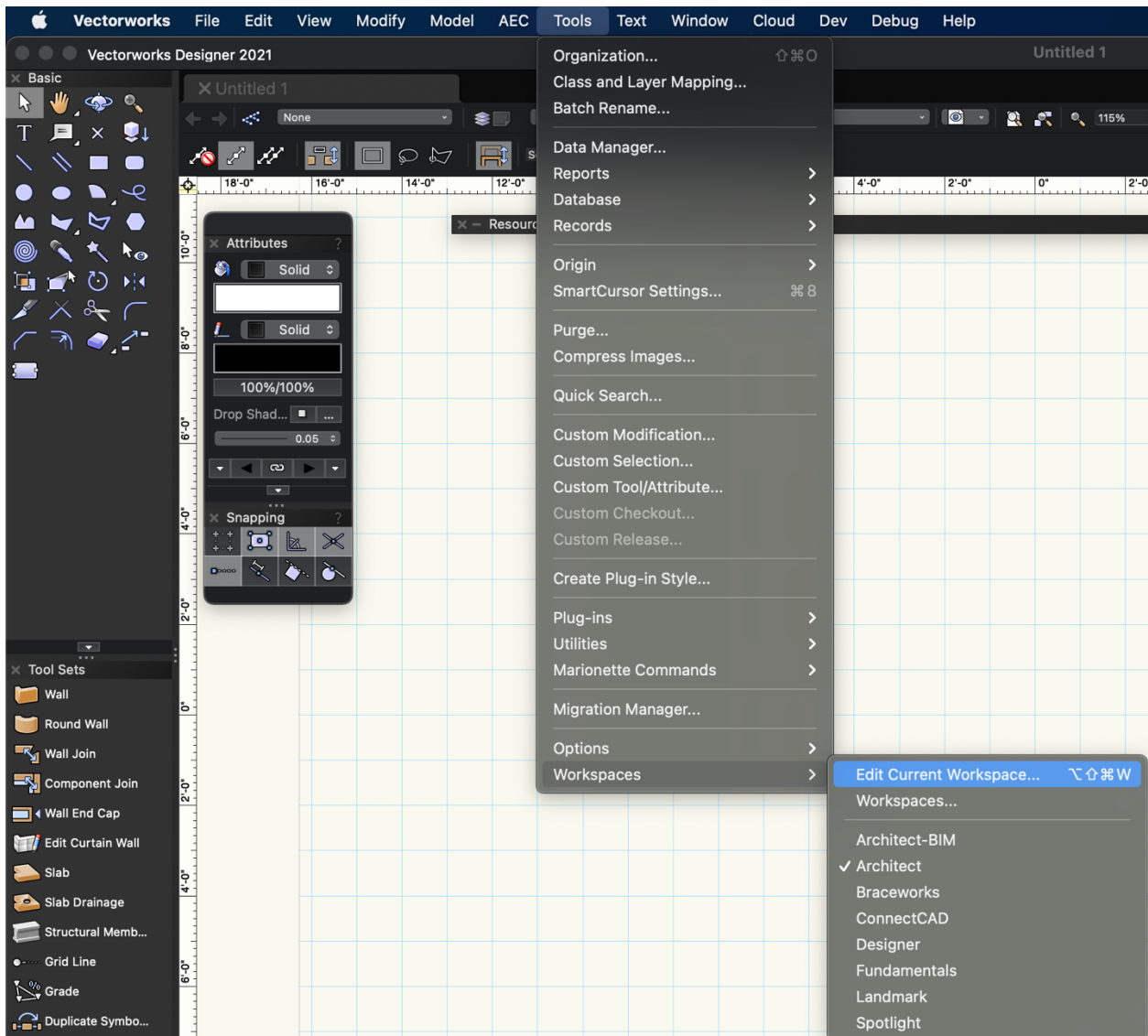
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- 10) Compile and run the program. **It should compile with no issues.** You'll see the Debug folder from step 3 be populated with two files: WebExample.vwlibrary and WebExample.vwlibrary.dSYM. These files will also be present in the WebExample folder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



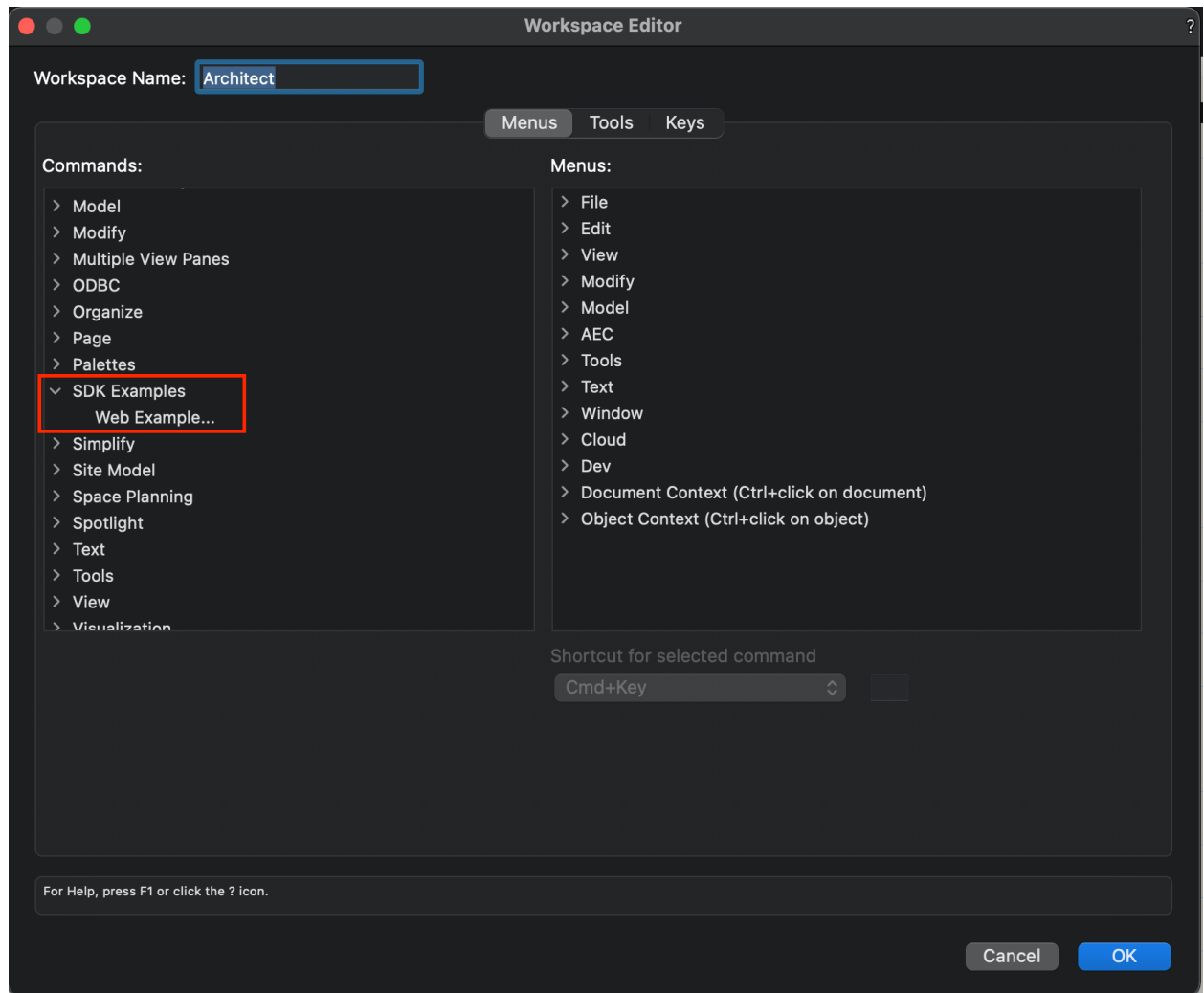
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- 11) Once you see those files present, you can open up Vectorworks 2021. Once open, navigate to the Tools menu, then hover over Workspaces and click on Edit Current Workspace.



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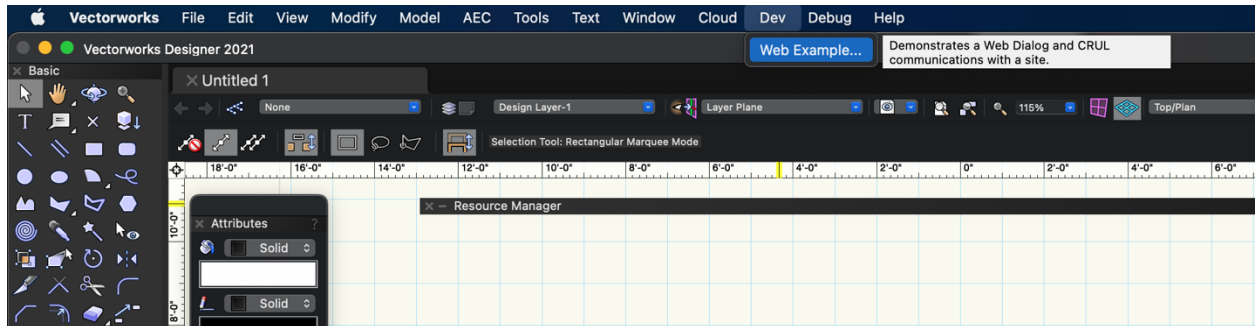
- 12) If you scroll through the Commands box, you'll find an entry titled SDKExample with a drop-down arrow next to it. If you click on that arrow, you'll see the Web Example plug-in. In order to use the plug-in, you'll need to add it to a menu.



- 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.

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- 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.



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Debugging and troubleshooting

Potential issues:

- 1) Directories are moved around, causing xcode/the program to be unable to find the correct folders.
- 2) Outdated software/ Updated SDK/ Updated XCode – This tutorial is only really guaranteed to work for this version. Test out other versions? There shouldn't be major changes between different builds of VW as long as it's VW2021.
- 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>)