

# PhysX Setup

# Before we start with PhysX...

Make sure you have CMake installed: <https://cmake.org/>

As well as the DirectX SDK:

<https://www.microsoft.com/en-ca/download/details.aspx?id=6812>

**Note:** If your DirectX installation fails, uninstall all “Microsoft Visual C++ 2010 x32 or x64 Redistributable - 10.XXXX” from your machine and try the installation again

Code

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## NVIDIA PhysX SDK

7 commits

3 branches

2 releases

1 contributor

Branch: 4.0







New pull request

Create new file

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 <b>sabdulaje</b> Update PhysX_4.0_RC_2019_01_23_25635910	Latest commit 624f2cb 3 hours ago
 <a href="#">externals</a>	Update PhysX_4.0_RC_2019_01_23_25635910 3 hours ago
 <a href="#">kaplademo</a>	Update PhysX_4.0_RC_2019_01_23_25635910 3 hours ago
 <a href="#">physx</a>	Update PhysX_4.0_RC_2019_01_23_25635910 3 hours ago
 <a href="#">pxshared/include/foundation</a>	Update PhysX_4.0_RC_2019_01_23_25635910 3 hours ago
 <a href="#">README.md</a>	Fix typo in readme a month ago

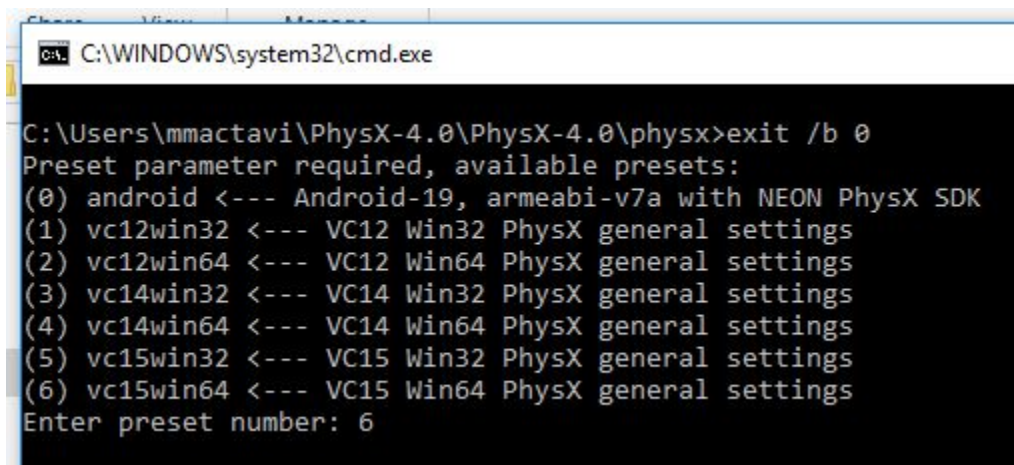
Download PhysX 4.0 as a .zip file

<https://github.com/NVIDIAGameWorks/PhysX>

The screenshot shows a Windows File Explorer window with the address bar displaying the path: `MacTavish > PhysX-4.0 > PhysX-4.0 > physx`. The left sidebar shows the 'Quick access' pane with 'mmactavi' selected. The main pane displays a list of files and folders with the following columns: Name, Date modified, Type, and Size.

Name	Date modified	Type	Size
bin	1/22/2019 12:59 PM	File folder	
buildtools	1/22/2019 12:57 PM	File folder	
compiler	1/22/2019 1:04 PM	File folder	
documentation	1/22/2019 1:00 PM	File folder	
include	1/22/2019 12:56 PM	File folder	
samples	1/22/2019 12:57 PM	File folder	
snippets	1/22/2019 12:56 PM	File folder	
source	1/22/2019 12:57 PM	File folder	
tools	1/22/2019 12:58 PM	File folder	
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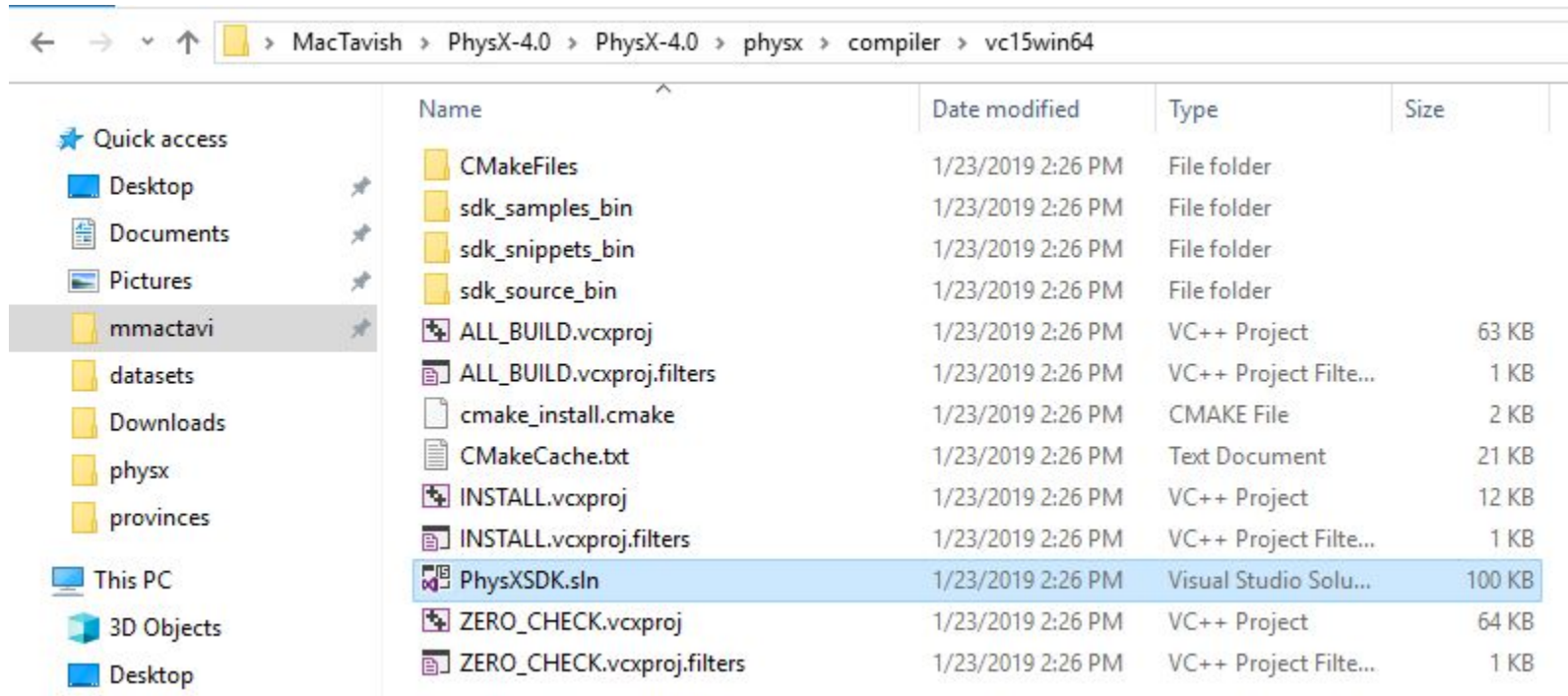
In the extracted PhysX directory, run the `generate_projects.bat` script to create the Visual Studio project files



```
C:\WINDOWS\system32\cmd.exe

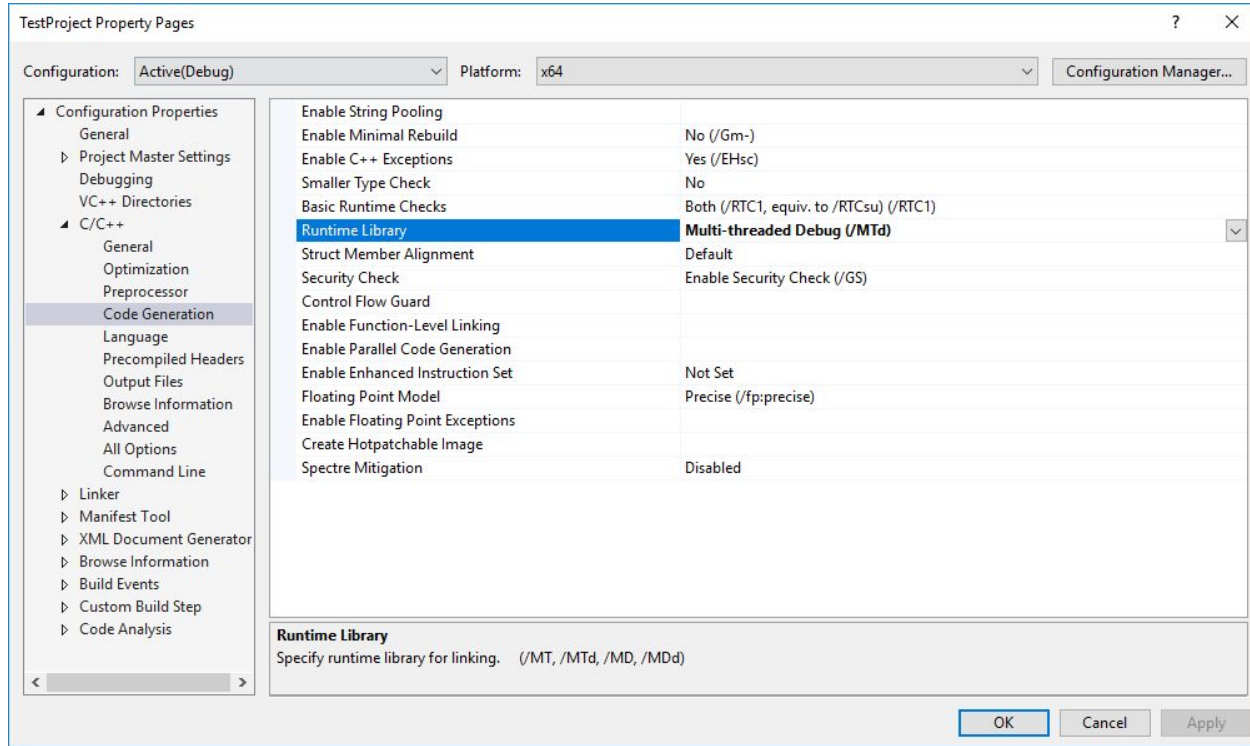
C:\Users\mmactavi\PhysX-4.0\PhysX-4.0\physx>exit /b 0
Preset parameter required, available presets:
(0) android <--- Android-19, armeabi-v7a with NEON PhysX SDK
(1) vc12win32 <--- VC12 Win32 PhysX general settings
(2) vc12win64 <--- VC12 Win64 PhysX general settings
(3) vc14win32 <--- VC14 Win32 PhysX general settings
(4) vc14win64 <--- VC14 Win64 PhysX general settings
(5) vc15win32 <--- VC15 Win32 PhysX general settings
(6) vc15win64 <--- VC15 Win64 PhysX general settings
Enter preset number: 6
```

Select the appropriate version number



Now in the compiler/(VSversion) directory, you should have a PhysXSDK.sln file.

# NOTE:



Under your project's Properties -> C/C++ -> Code Generation, verify that your setting for "Runtime Library" is the same for both your PhysX SDK project and your game's project.

# Build modes

the **debug build** can be useful for error analysis, but contains asserts used for SDK development which some customers may find too intrusive for daily use. Optimizations are turned off for this configuration.

the **checked build** contains code to detect invalid parameters, API race conditions, and other incorrect uses of the API which might otherwise cause mysterious crashes or failures in simulation.

the profile build omits the checks, but still has PVD and memory instrumentation.

the release build is built for minimal footprint and maximum speed. It omits most checks and instrumentation.



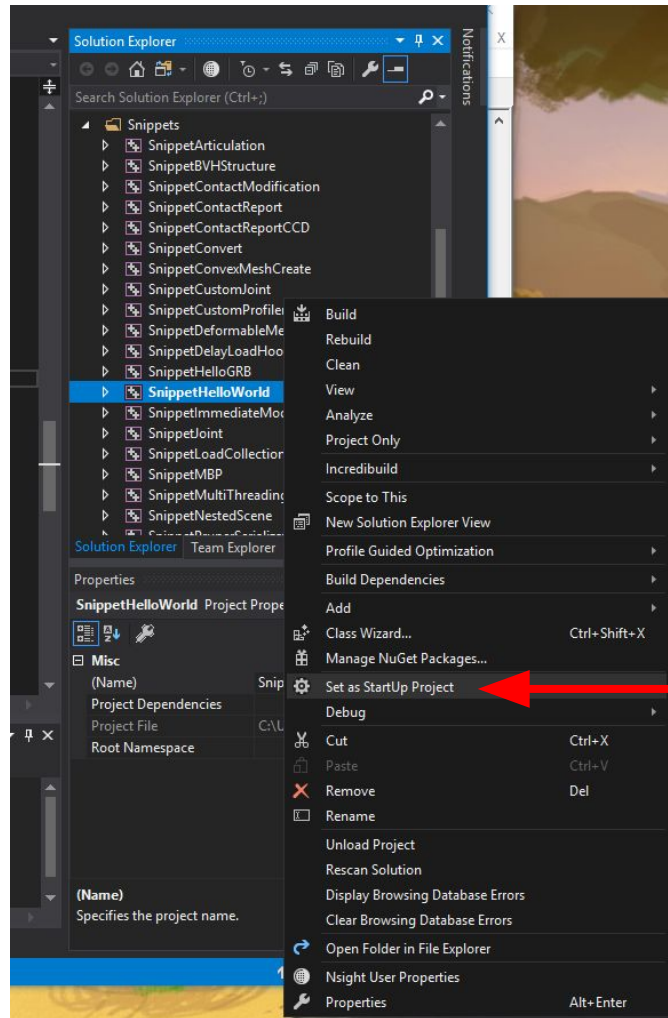
# Running Snippet/Sample code

The screenshot shows a Windows File Explorer window with the address bar displaying the path: `MacTavish > PhysX-4.0 > PhysX-4.0 > physx > compiler > vc15win64 > sdk_snippets_bin`. The left sidebar shows the 'mmactavi' folder selected. The main pane displays a list of files and folders with columns for Name, Date modified, Type, and Size. The file 'Snippets.sln' is highlighted in blue.

Name	Date modified	Type	Size
SnippetPrunerSerialization.vcxproj.filters	1/23/2019 2:26 PM	VC++ Project Filte...	2 KB
SnippetRaycastCCD.vcxproj	1/23/2019 2:26 PM	VC++ Project	57 KB
SnippetRaycastCCD.vcxproj.filters	1/23/2019 2:26 PM	VC++ Project Filte...	2 KB
SnippetRender.vcxproj	1/23/2019 2:26 PM	VC++ Project	31 KB
SnippetRender.vcxproj.filters	1/23/2019 2:26 PM	VC++ Project Filte...	2 KB
<b>Snippets.sln</b>	1/23/2019 2:26 PM	Visual Studio Solu...	88 KB
SnippetSerialization.vcxproj	1/23/2019 2:26 PM	VC++ Project	57 KB
SnippetSerialization.vcxproj.filters	1/23/2019 2:26 PM	VC++ Project Filte...	2 KB
SnippetSplitFetchResults.vcxproj	1/23/2019 2:26 PM	VC++ Project	57 KB
SnippetSplitFetchResults.vcxproj.filters	1/23/2019 2:26 PM	VC++ Project Filte...	2 KB
SnippetSplitSim.vcxproj	1/23/2019 2:26 PM	VC++ Project	57 KB
SnippetSplitSim.vcxproj.filters	1/23/2019 2:26 PM	VC++ Project Filte...	2 KB

The `sdk_snippets_bin` subdirectory has a `.sln` file containing all the available PhysX Snippets (examples)

Build the Snippets solution.  
You can set one of the projects as  
the StartUp Project so it will run  
once the solution is built.



# Linking to your Project

You need: the include files, DLLs, and .lib files

Navigate to `physx\bin\<(your build version)\checked`

Copy all .dll files into your directory with your exe, copy all .lib files to your project's lib directory.

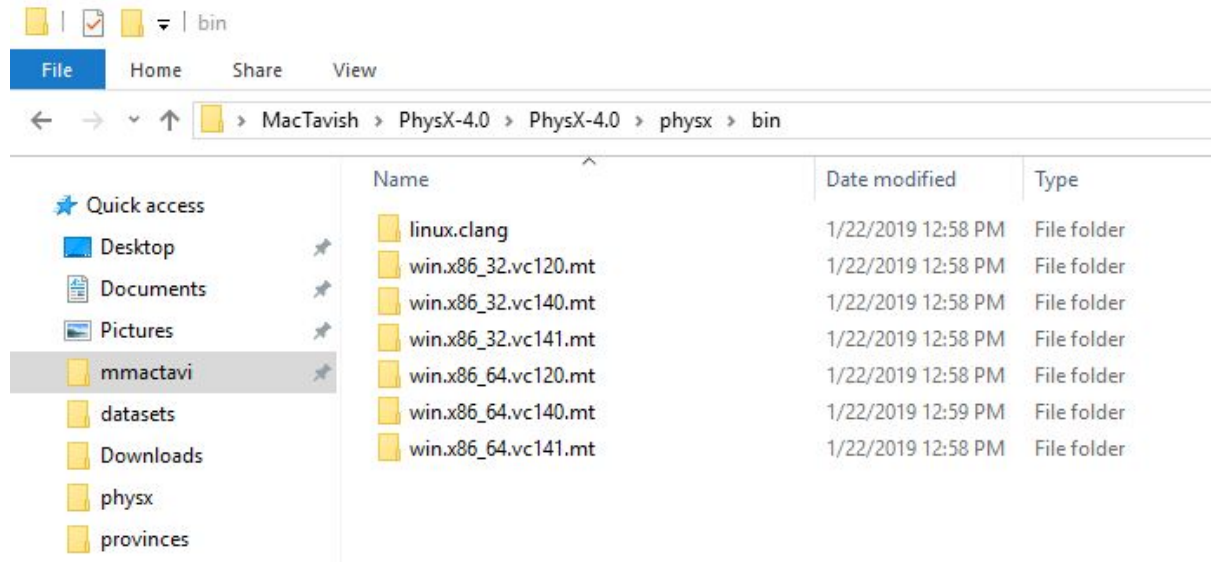
Navigate to `physx\include` and move folder content to your project's include directory. Do the same with the `pxshared\include` folder

Make sure to link the PhysX libraries to your project

# Linking to your Project

You need: the include files, DLLs, and .lib files

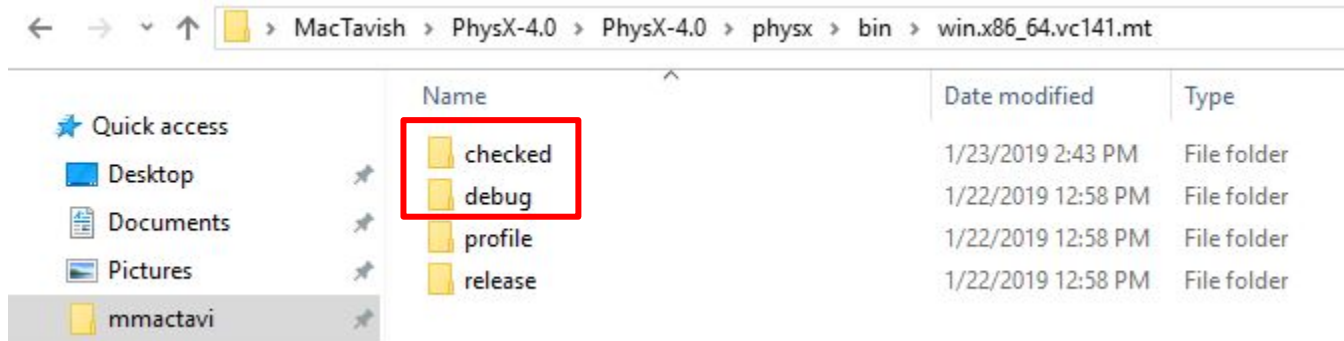
Navigate to `physx\bin\`(your build version)\checked (or `\debug`)

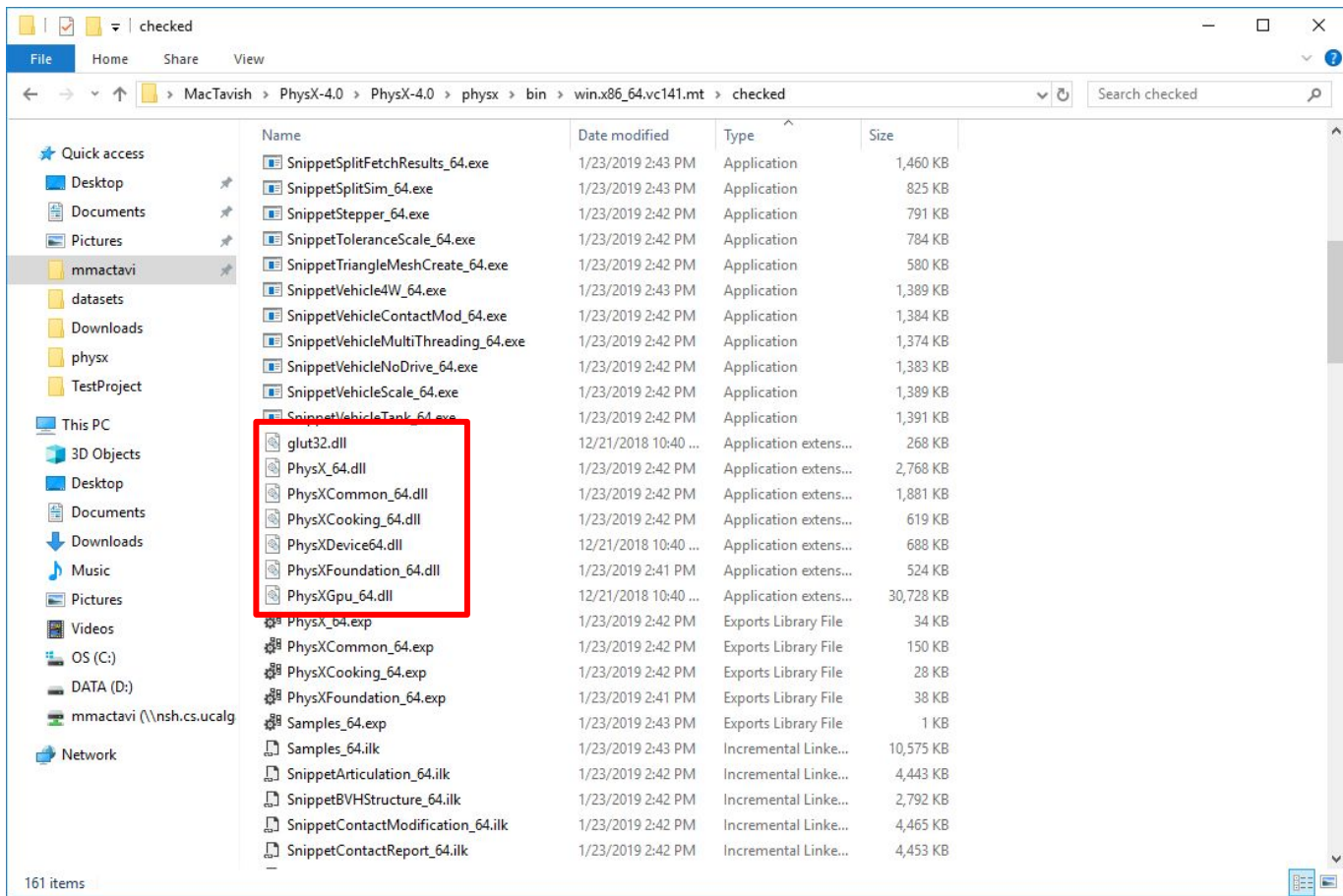


# NOTE:

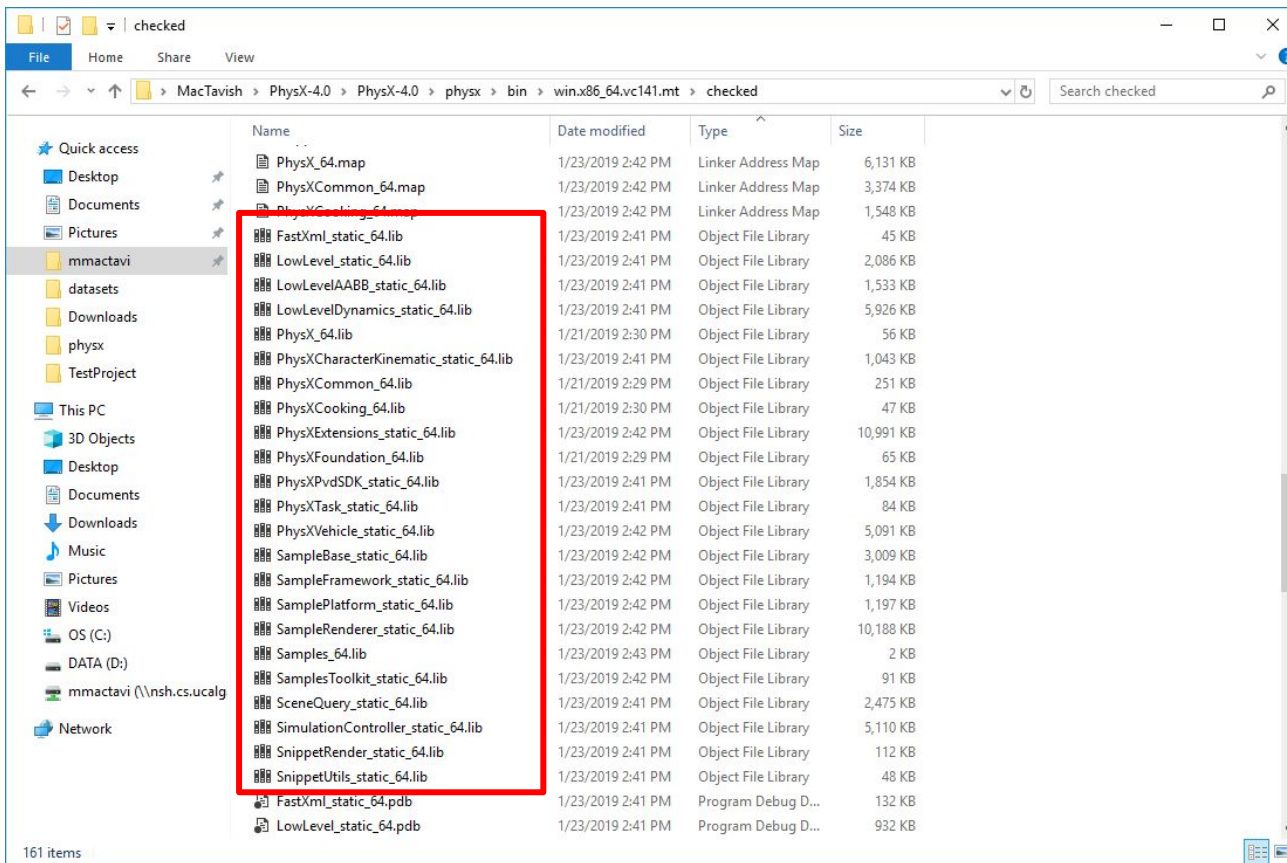
To link against your project, you will want to use the DLLs and .lib files generated in *debug* mode when you are also running your project in Debug mode, and use the files generated in *checked* mode when you are running your project in Release mode.

If your project gives you linker errors or other unexpected issues when you try to build it, verify that you are using the appropriate .dll and .lib files for your build configuration.





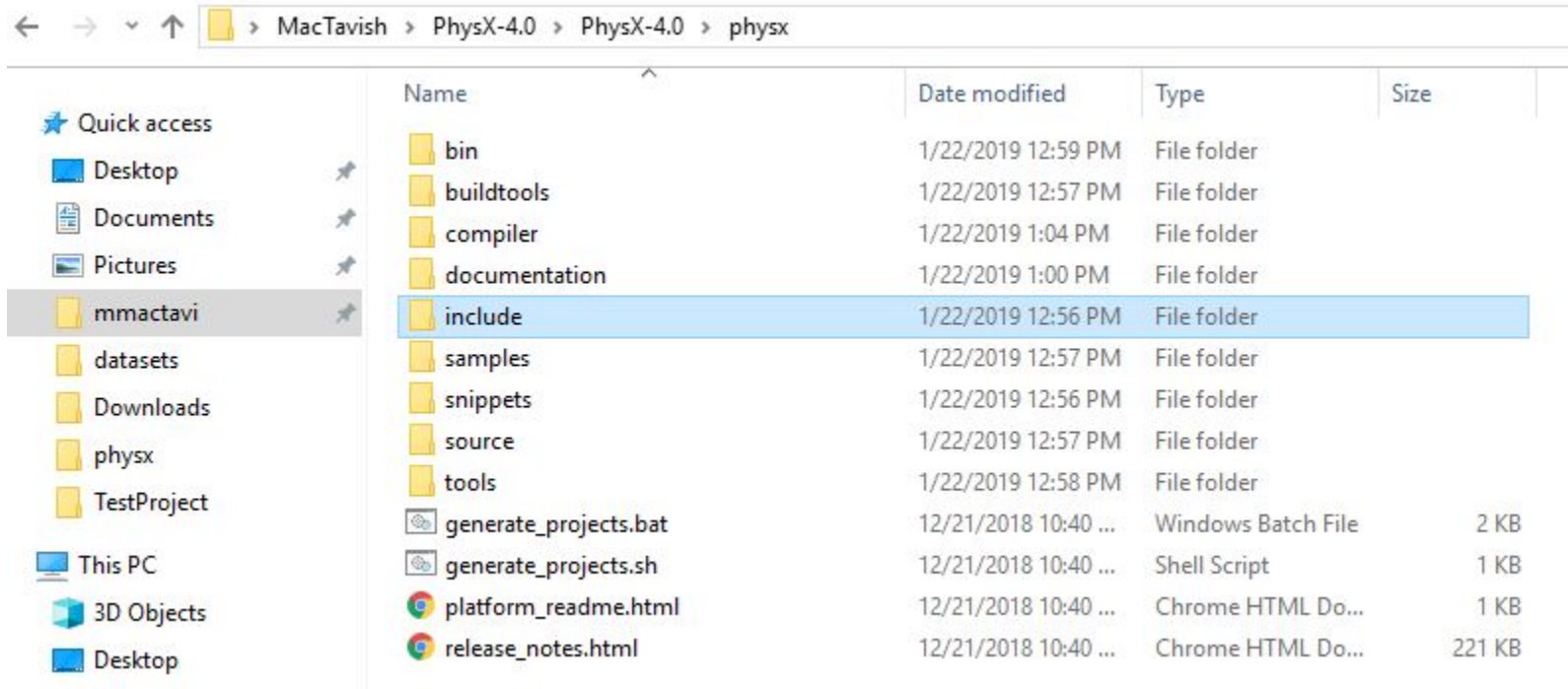
Copy all DLL files to the same directory as the .exe file that runs your game



Copy all .lib files to your project's lib directory.



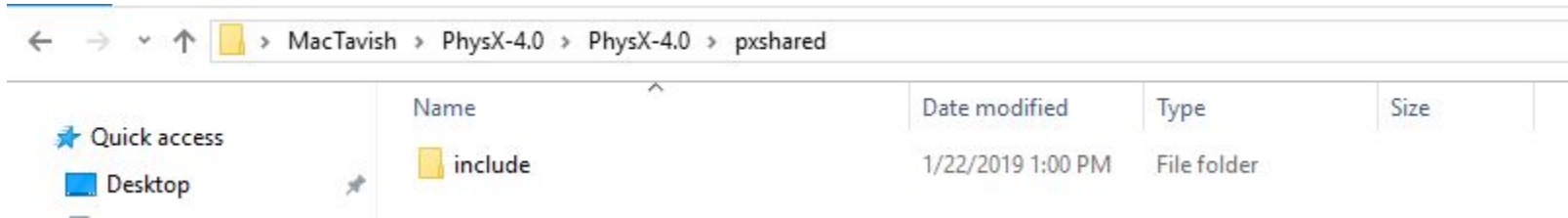
# Include files



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bin	1/22/2019 12:59 PM	File folder	
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Copy everything from the physx\include directory into your project's include directory.





Do the same with the “include” folder in the pxshared directory that should have also been included in the .zip download of the PhysX Git repository.