

Visual studio 2022에서 boost라이브러리 설치하기

SagalU 2022. 4. 3. 22:45

1. 우선은 boost홈페이지에서 파일을 받아다가 압축을 푼다.

다운 사이트는 여기: <https://www.boost.org/users/download/>

	<h2>Boost Downloads</h2> <p>Current Release Version 1.78.0 December 8th, 2021 03:45 GMT Updated Libraries: Asio, Assert, Atomic, Beast, Core, Describe, DLL...</p> <p>www.boost.org</p>
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압축을 푸는 위치는 아무데도 상관없으나, 영어이름으로, 최대한 루트드라이브와 가까운 곳에 푼다.

나는 C:\Develop\boost_1_78_0\ 에다가 풀었음

Disk (C:) > Develop > boost_1_78_0

Search boost_1_78_0

Name	Date modified	Type	Size
bin.v2	4/3/2022 9:45 PM	File folder	
boost	12/2/2021 4:25 PM	File folder	
doc	12/2/2021 3:56 PM	File folder	
libs	12/2/2021 4:25 PM	File folder	
more	12/2/2021 3:48 PM	File folder	
stage	4/3/2022 9:44 PM	File folder	
status	12/2/2021 3:45 PM	File folder	
tools	12/2/2021 3:45 PM	File folder	
b2.exe	4/3/2022 9:40 PM	Application	409 KB
boost.css	12/2/2021 3:45 PM	Cascading Style S...	1 KB
boost.png	12/2/2021 3:45 PM	PNG File	7 KB
boost-build.jam	12/2/2021 3:45 PM	JAM File	1 KB
boostcpp.jam	12/2/2021 3:45 PM	JAM File	20 KB
bootstrap.bat	4/3/2022 9:29 PM	Windows Batch File	3 KB
bootstrap.sh	12/2/2021 3:45 PM	Shell Script	11 KB
index.htm	12/2/2021 3:45 PM	Microsoft Edge H...	1 KB
index.html	12/2/2021 4:25 PM	Microsoft Edge H...	6 KB
INSTALL	12/2/2021 3:45 PM	File	1 KB
Jamroot	12/2/2021 3:45 PM	File	12 KB
LICENSE_1_0.txt	12/2/2021 3:45 PM	Text Document	2 KB
project-config.jam	4/3/2022 9:40 PM	JAM File	1 KB
README.md	12/2/2021 3:45 PM	MD File	1 KB
rst.css	12/2/2021 3:45 PM	Cascading Style S...	3 KB

2. 컴파일러의 버전을 체크한다.

빈 콘솔 프로젝트를 만들어서 `_MSC_VER` 변수값을 출력하게 만든 다음에 결과값을 아래 사이트에서 체크하면 된다.

https://en.wikipedia.org/wiki/Microsoft_Visual_C%2B%2B

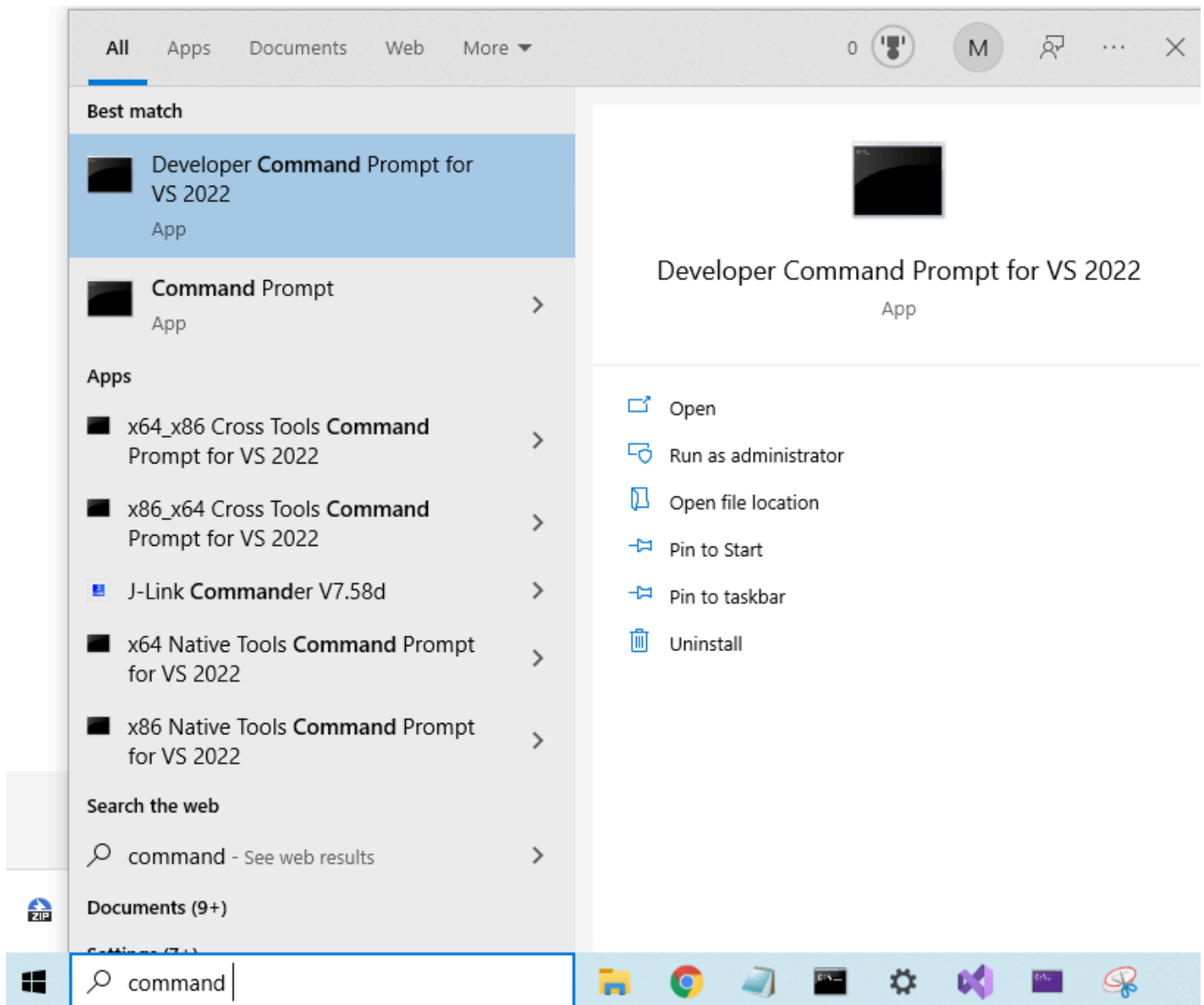


Microsoft Visual C++ - Wikipedia

From Wikipedia, the free encyclopedia Jump to navigation Jump to search Integrated development environment product by Microsof...

en.wikipedia.org

3. 비주얼스튜디오용 커맨드프롬프트를 관리자권한으로 실행시킨다.



4. 1번 항목에서 압축을 풀은 폴더에서 bootstrap.bat을 실행시킨다.

```

c:\Development\boost_1_78_0>bootstrap
Building Boost.Build engine
Call_If_Exists "bin\VCVARS32.BAT"
###
### Using 'msvc' toolset.
###
c:\Development\boost_1_78_0\tools\build\src\engine>"cl" /nologo /MP /MT /TP /Feb2 /wd4996 /O2 /GL /EHsc -DNDEBUG builtins
.cpp class.cpp command.cpp compile.cpp constants.cpp cwd.cpp debug.cpp debugger.cpp exceccmd.cpp execnt.cpp execunix.cpp
filent.cpp filesys.cpp fileunix.cpp frames.cpp function.cpp glob.cpp hash.cpp hcache.cpp hdrmacro.cpp headers.cpp jam.cpp
jamgram.cpp lists.cpp make.cpp makel.cpp md5.cpp mem.cpp modules.cpp native.cpp object.cpp option.cpp output.cpp parse
.cpp pathnt.cpp pathsys.cpp pathunix.cpp regexp.cpp rules.cpp scan.cpp search.cpp jam_strings.cpp startup.cpp subst.cpp
sysinfo.cpp timestamp.cpp variable.cpp w32_getreg.cpp modules/order.cpp modules/path.cpp modules/property-set.cpp module
s/regex.cpp modules/sequence.cpp modules/set.cpp /link kernel32.lib advapi32.lib user32.lib
builtins.cpp
class.cpp
command.cpp
compile.cpp
constants.cpp
cwd.cpp
debug.cpp
debugger.cpp
exceccmd.cpp
execnt.cpp
execunix.cpp
filent.cpp
fileys.cpp
fileunix.cpp
frames.cpp

```

5. 바로 위 항목을 실행시키면 해당 폴더에 b2.exe가 생성되는데 이걸 아래와 같은 옵션을 넣어서 실행하여 라이브러리를 빌드한다.

b2.exe toolset=msvc-14.3 variant=debug,release link=static threading=multi address-model=64 runtime-link=shared

여기서 주의할건 14.3이라는 말인데, 이걸 stageWlib폴더에서 확인할 수 있다.

2번항목에서 찾은 버전과 다소 차이가 날 수 있는데, 이쪽을 따르는 것이 시행착오를 줄일 수 있다.

또, 만약에 쓰는 컴퓨터가 32비트 컴퓨터면 64를 32로 바꿔줄 것.

al Disk (C:) > Develop > boost_1_78_0 > stage > lib

Search lib

Name	Date modified	Type	Size
libboost_math_tr1-vc143-mt-x32-1_78.lib	4/3/2022 9:45 PM	Object File Library	2,315 KB
libboost_math_tr1-vc143-mt-x64-1_78.lib	4/3/2022 9:48 PM	Object File Library	3,007 KB
libboost_nowide-vc143-mt-gd-x32-1_78.lib	4/3/2022 9:45 PM	Object File Library	1,546 KB
libboost_nowide-vc143-mt-gd-x64-1_78.lib	4/3/2022 9:48 PM	Object File Library	1,664 KB
libboost_nowide-vc143-mt-x32-1_78.lib	4/3/2022 9:45 PM	Object File Library	120 KB
libboost_nowide-vc143-mt-x64-1_78.lib	4/3/2022 9:48 PM	Object File Library	178 KB
libboost_prg_exec_monitor-vc143-mt-gd-x32-1_...	4/3/2022 9:45 PM	Object File Library	1,901 KB
libboost_prg_exec_monitor-vc143-mt-gd-x64-1_...	4/3/2022 9:48 PM	Object File Library	2,214 KB
libboost_prg_exec_monitor-vc143-mt-x32-1_78.lib	4/3/2022 9:46 PM	Object File Library	261 KB
libboost_prg_exec_monitor-vc143-mt-x64-1_78.lib	4/3/2022 9:48 PM	Object File Library	375 KB
libboost_program_options-vc143-mt-gd-x32-1_7...	4/3/2022 9:45 PM	Object File Library	15,006 KB
libboost_program_options-vc143-mt-gd-x64-1_7...	4/3/2022 9:48 PM	Object File Library	18,410 KB
libboost_program_options-vc143-mt-x32-1_78.lib	4/3/2022 9:45 PM	Object File Library	2,404 KB
libboost_program_options-vc143-mt-x64-1_78.lib	4/3/2022 9:48 PM	Object File Library	3,283 KB
libboost_random-vc143-mt-gd-x32-1_78.lib	4/3/2022 9:45 PM	Object File Library	733 KB
libboost_random-vc143-mt-gd-x64-1_78.lib	4/3/2022 9:48 PM	Object File Library	808 KB
libboost_random-vc143-mt-x32-1_78.lib	4/3/2022 9:45 PM	Object File Library	100 KB
libboost_random-vc143-mt-x64-1_78.lib	4/3/2022 9:48 PM	Object File Library	141 KB
libboost_regex-vc143-mt-gd-x32-1_78.lib	4/3/2022 9:45 PM	Object File Library	5,573 KB
libboost_regex-vc143-mt-gd-x64-1_78.lib	4/3/2022 9:47 PM	Object File Library	7,010 KB
libboost_regex-vc143-mt-x32-1_78.lib	4/3/2022 9:45 PM	Object File Library	1,042 KB
libboost_regex-vc143-mt-x64-1_78.lib	4/3/2022 9:48 PM	Object File Library	1,507 KB
libboost_serialization-vc143-mt-gd-x32-1_78.lib	4/3/2022 9:45 PM	Object File Library	26,372 KB
libboost_serialization-vc143-mt-gd-x64-1_78.lib	4/3/2022 9:48 PM	Object File Library	31,299 KB

```
C:\Develop\boost_1_78_0>
C:\Develop\boost_1_78_0>b2.exe toolset=msvc-14.3 variant=debug,release link=static threading=multi address-model=64 runt
ime-link=shared
Performing configuration checks
```

```
- default address-model    : 64-bit (cached) [1]
- default architecture    : x86 (cached) [1]
```

Building the Boost C++ Libraries.

```
- compiler supports SSE2   : yes [2]
- compiler supports SSE4.1 : yes [2]
- has synchronization.lib  : yes [2]
- has std::atomic_ref      : no [2]
- has statx                : no [2]
- has statx syscall        : no [2]
- has BCrypt API           : yes [2]
- has init_priority attribute : no [2]
- has stat::st_blksize     : no [2]
- has stat::st_mtim        : no [2]
- has stat::st_mtimensec   : no [2]
- has stat::st_mtimespec   : no [2]
- has stat::st_birthtim    : no [2]
- has stat::st_birthtimensec : no [2]
- has stat::st_birthtimespec : no [2]
```

```
1 file(s) copied.
common.copy C:\Development\boost_1_78_0\stage\lib\cmake\boost_wave-1.78.0\libboost_wave-variant-vc143-mt-x64-1_78-static.cmake
bin.v2\libs\wave\build\msvc-14.3\release\link-static\threadapi-win32\threading-multi\libboost_wave-variant-vc143-mt-x64-1_78-static.cmake
1 file(s) copied.
...updated 1190 targets...

The Boost C++ Libraries were successfully built!

The following directory should be added to compiler include paths:
    C:\Development\boost_1_78_0

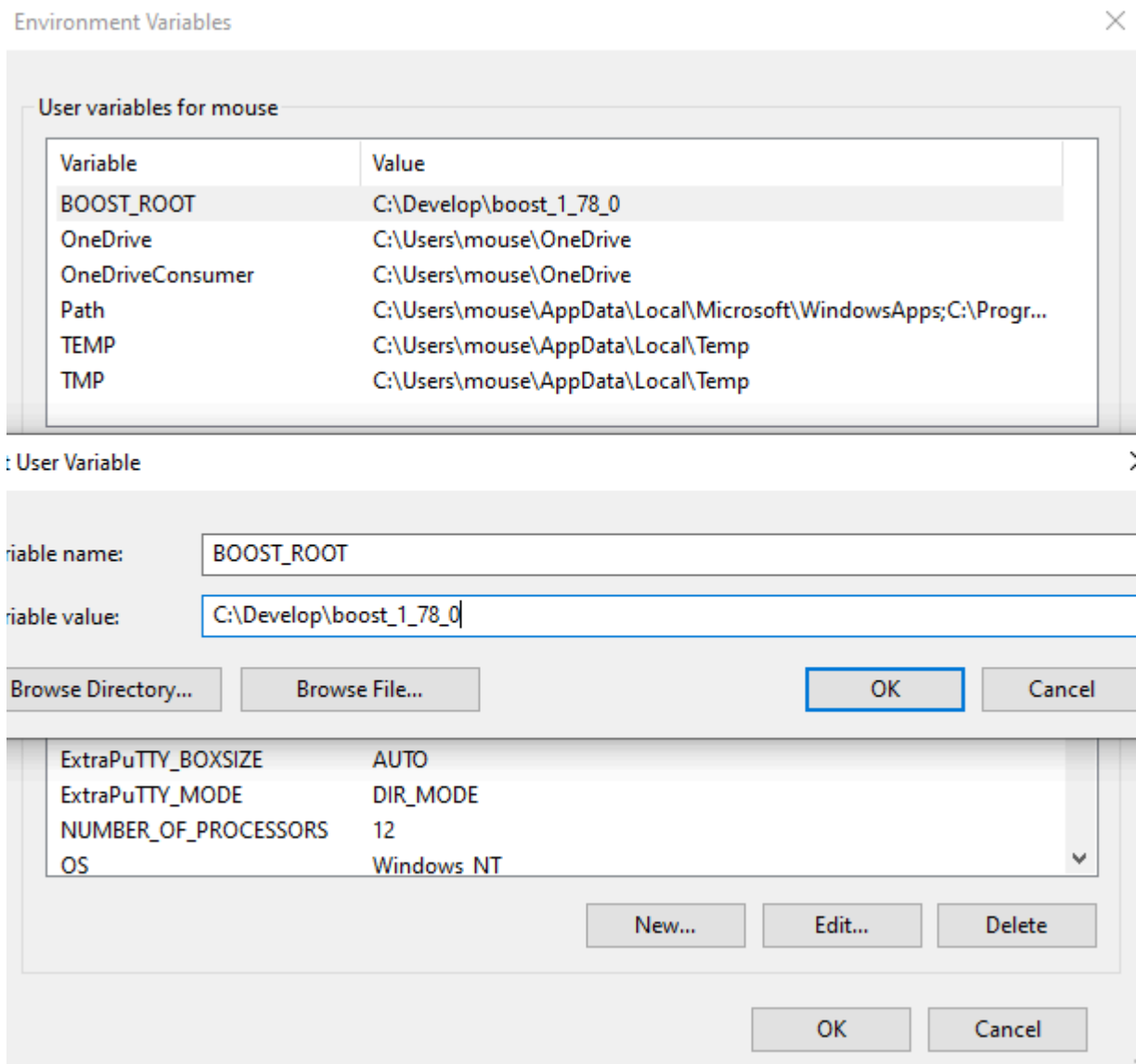
The following directory should be added to linker library paths:
    C:\Development\boost_1_78_0\stage\lib

c:\Development\boost_1_78_0>
```

6. 성공적으로 빌드가 끝나면 인클루드경로랑 라이브러리 경로를 추가하라고 메시지가 나온다.

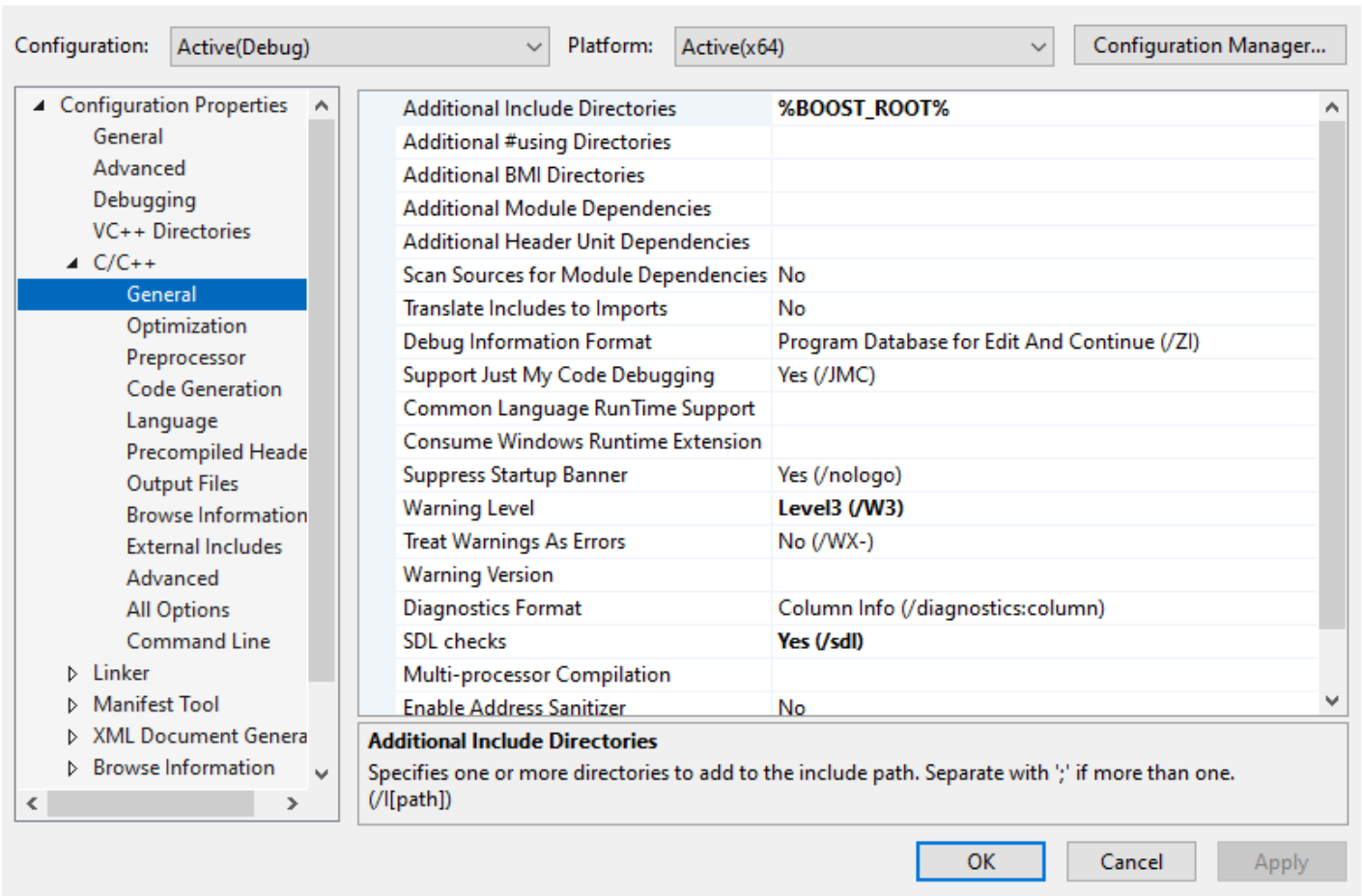
이걸 굳이 그대로 소스코드나 프로젝트 설정에 적어줘도 되지만, 다수의 프로젝트를 사용할 경우에 대비하여 시스템 환경변수로 등록해준다.

내 경우는 인클루드 경로를 BOOST_ROOT라고 지정해주었다.

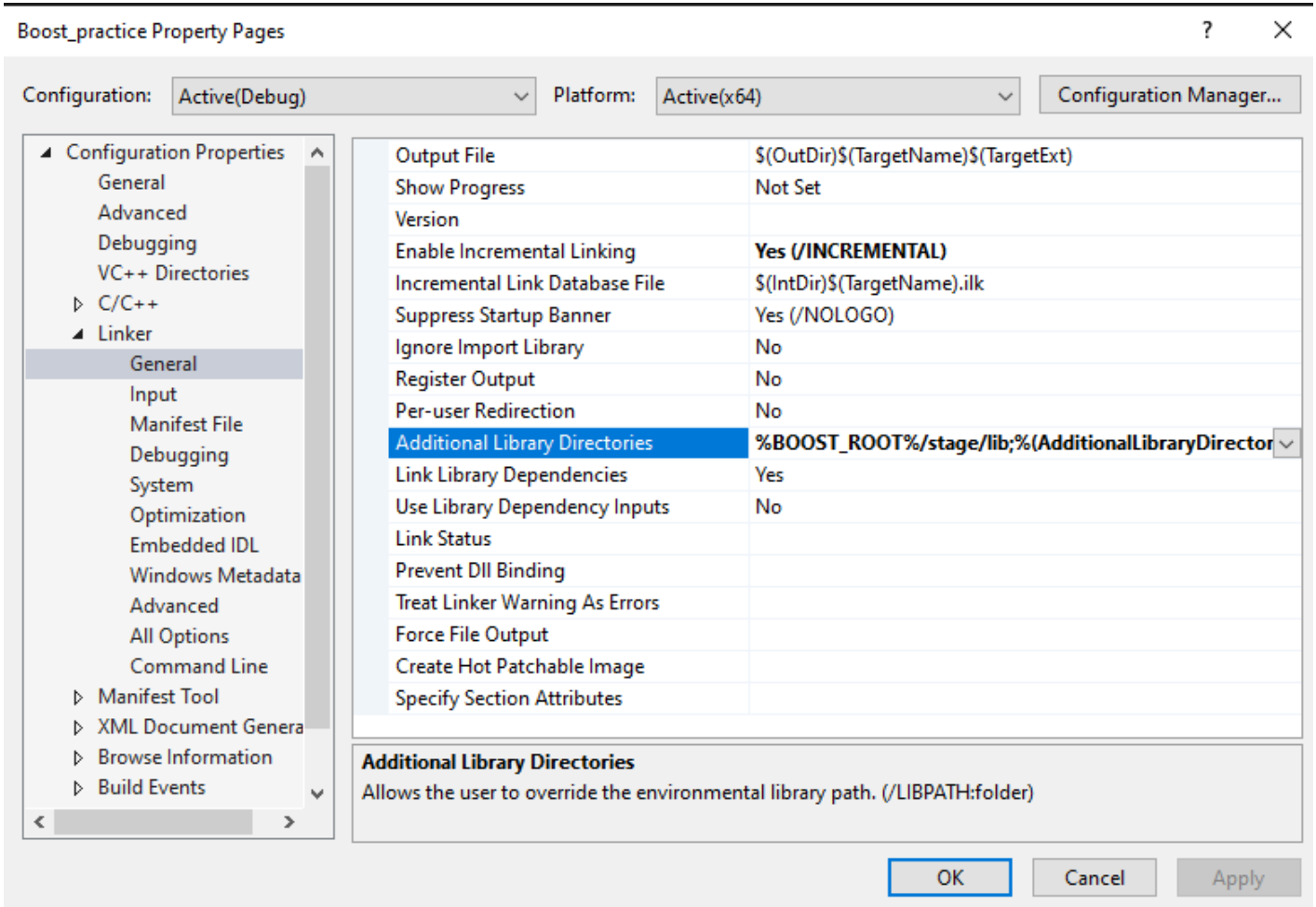


7. 만들고자 하는 프로젝트에서 인클루드 경로와 라이브러리 경로를 추가해준다.

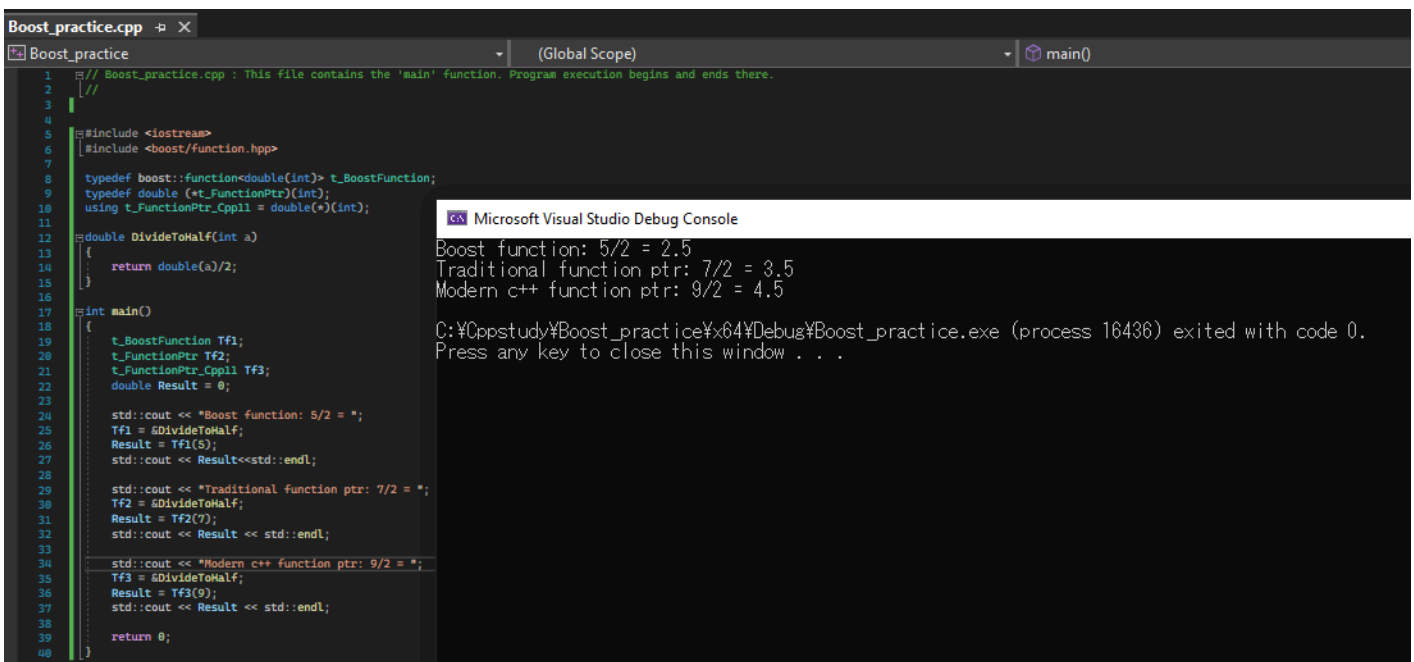
우선은 인클루드 경로



그 다음은 라이브러리 경로인데, 5번항목에서 스크린샷을 보면 인클루드경로에서 조금만 손을 봐주면 되기에 그렇게 추가해주었다.




8. 이제 이 프로젝트에서는 boost라이브러리를 사용할 수 있다. 다른 프로젝트에서도 사용하고 싶다면 똑같이 추가해주기만 하면 된다.



Boost라이브러리의 기능중 function이라는 것을 사용해서 함수포인터 비슷한 동작을 하게 만들어봤는데, 잘 작동한다.


다음은 boost::function과 boost::bind에 대해 공부해보고 포스팅을 해봐야겠다.

<https://arikalog.hateblo.jp/entry/2013/09/28/011734>

	<h2>【C++ / Boost】boost::bindについての適...</h2> <p>何語だこれ...状態になったのでメモしておきます。</p> <p>arikalog.hateblo.jp</p>
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참고사항: boost라이브러리가 설치된 visual studio의 컴파일러를 인식하지 못하더라도 이를 교정해서 인식시키는 방법이 있는 듯 하다.

<https://github.com/boostorg/build/issues/735>

	<h2>Building Boost 1.77 using Visual Studio...</h2> <p>Building Boost 1.77 using Visual Studio 2022 fails when using Boost files from the repository as is. I have made building work with Boo...</p> <p>github.com</p>
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내가 지금은 boost라이브러리가 msvc14.3을 인식하기에 별다른 문제가 없었지만, 만약 그렇지 않는다면 참고해도 괜찮을 것 같다.