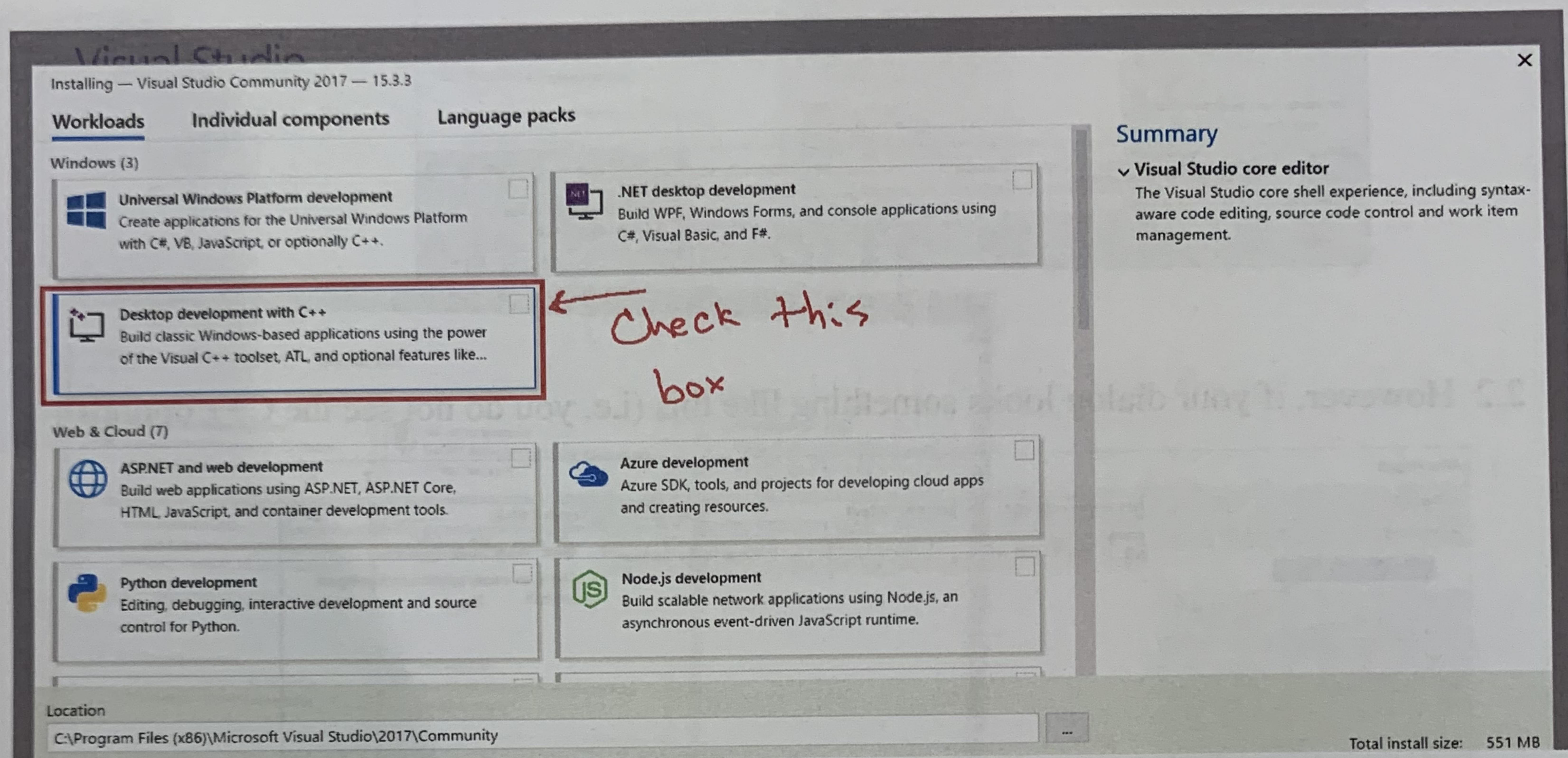


1. Installing Visual Studio

1.1 Download the “Visual Studio Community 201~” installer and execute it:

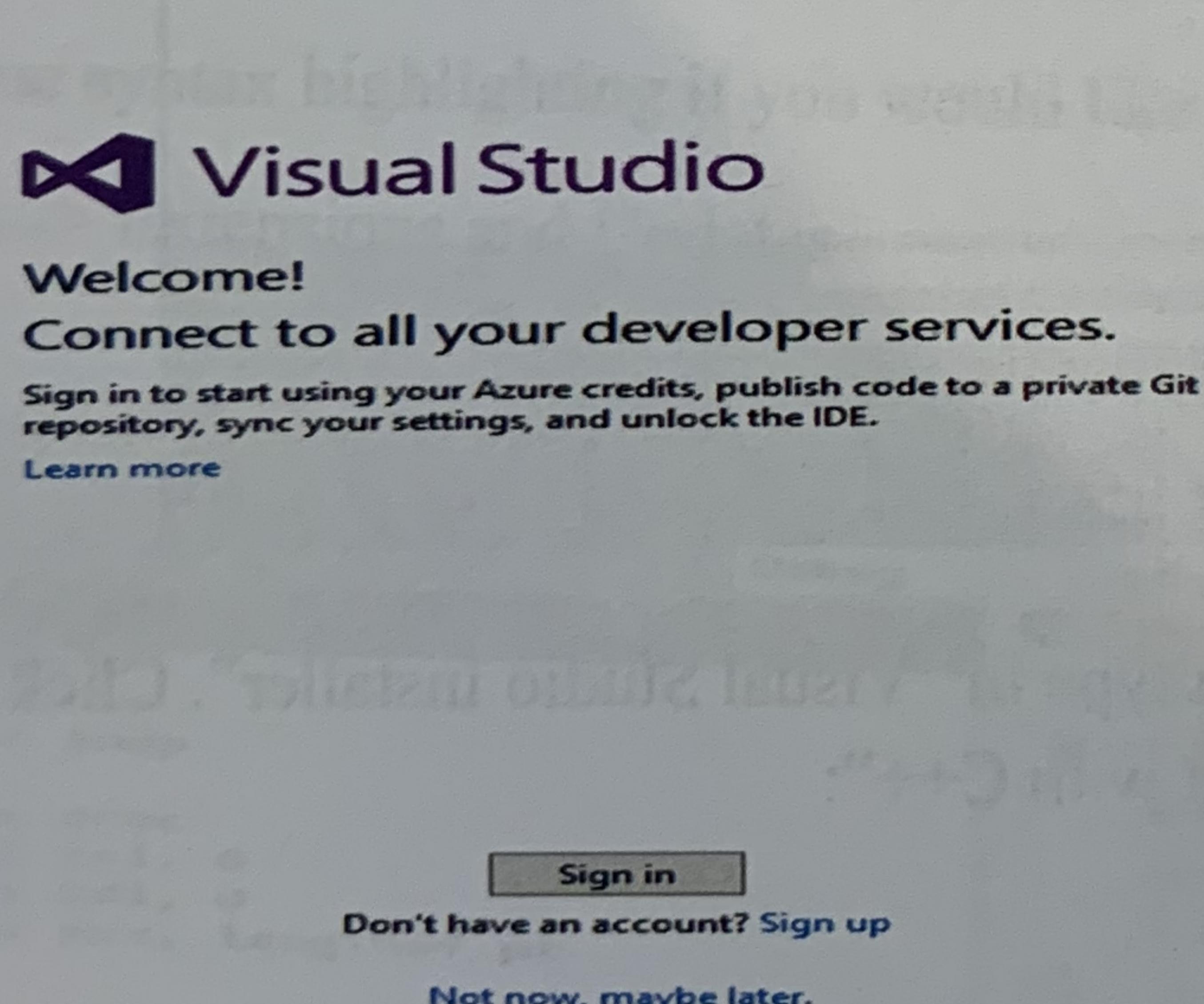
<https://www.visualstudio.com/downloads/>

1.2 Choose “Desktop development with C++”



1.3 Once the installation is complete then please start Visual Studio.

1.4 Please use your tigermail login to sign in if you are required.

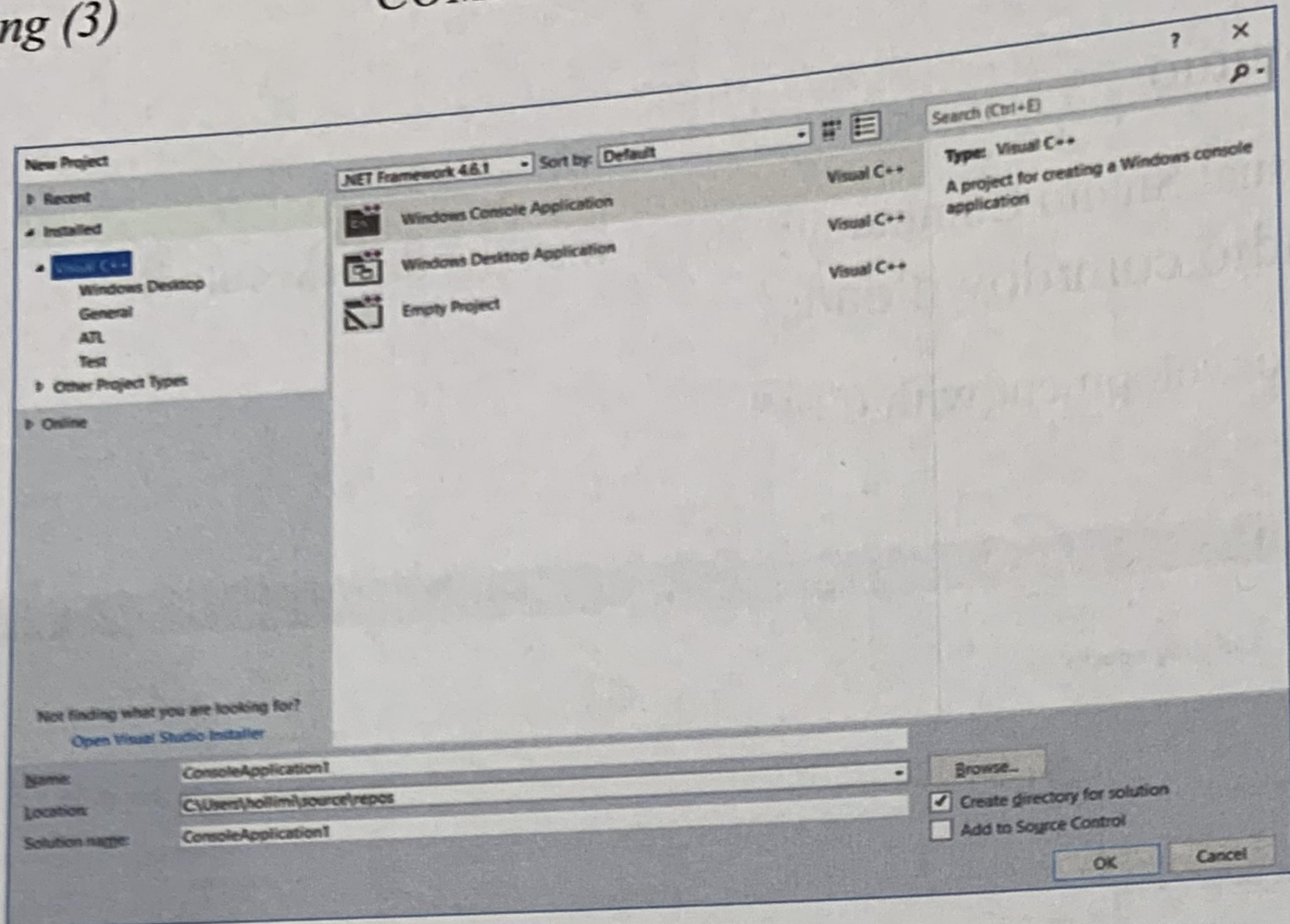


2. Installing masm compiler.

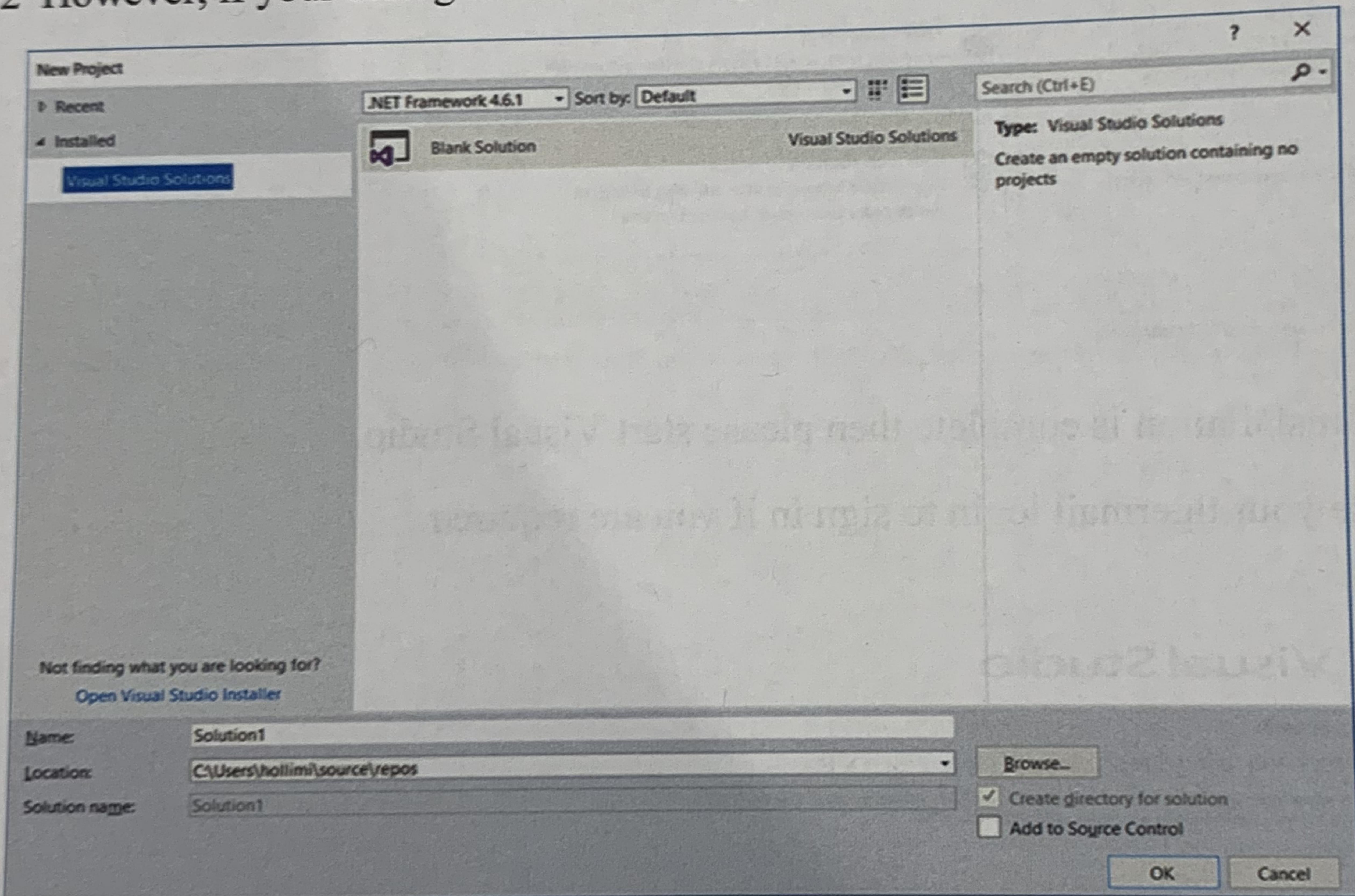
2.1 Launch VS -> Click “File”(top left corner) -> New -> Project -> Visual C++

enViro setting (3)

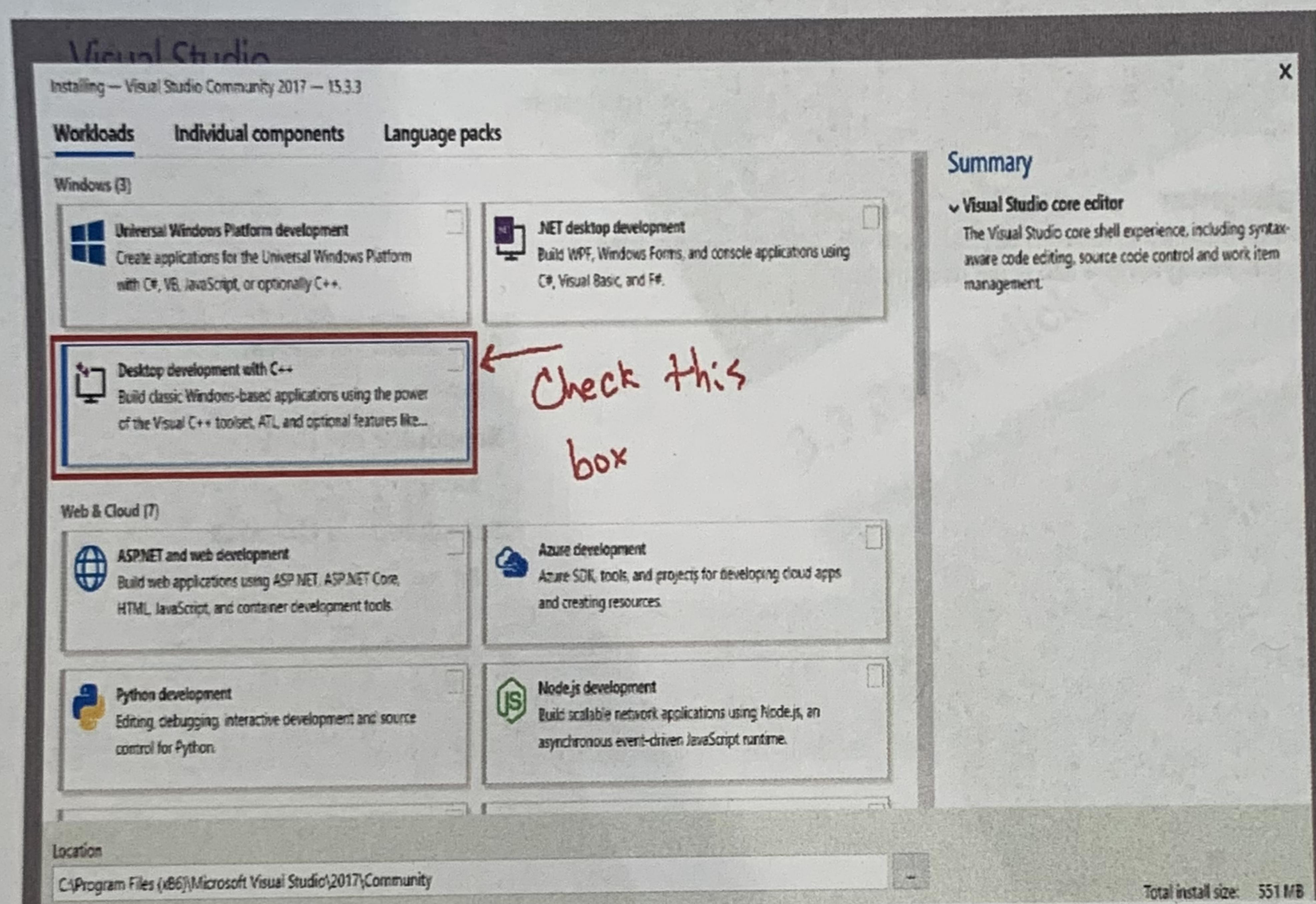
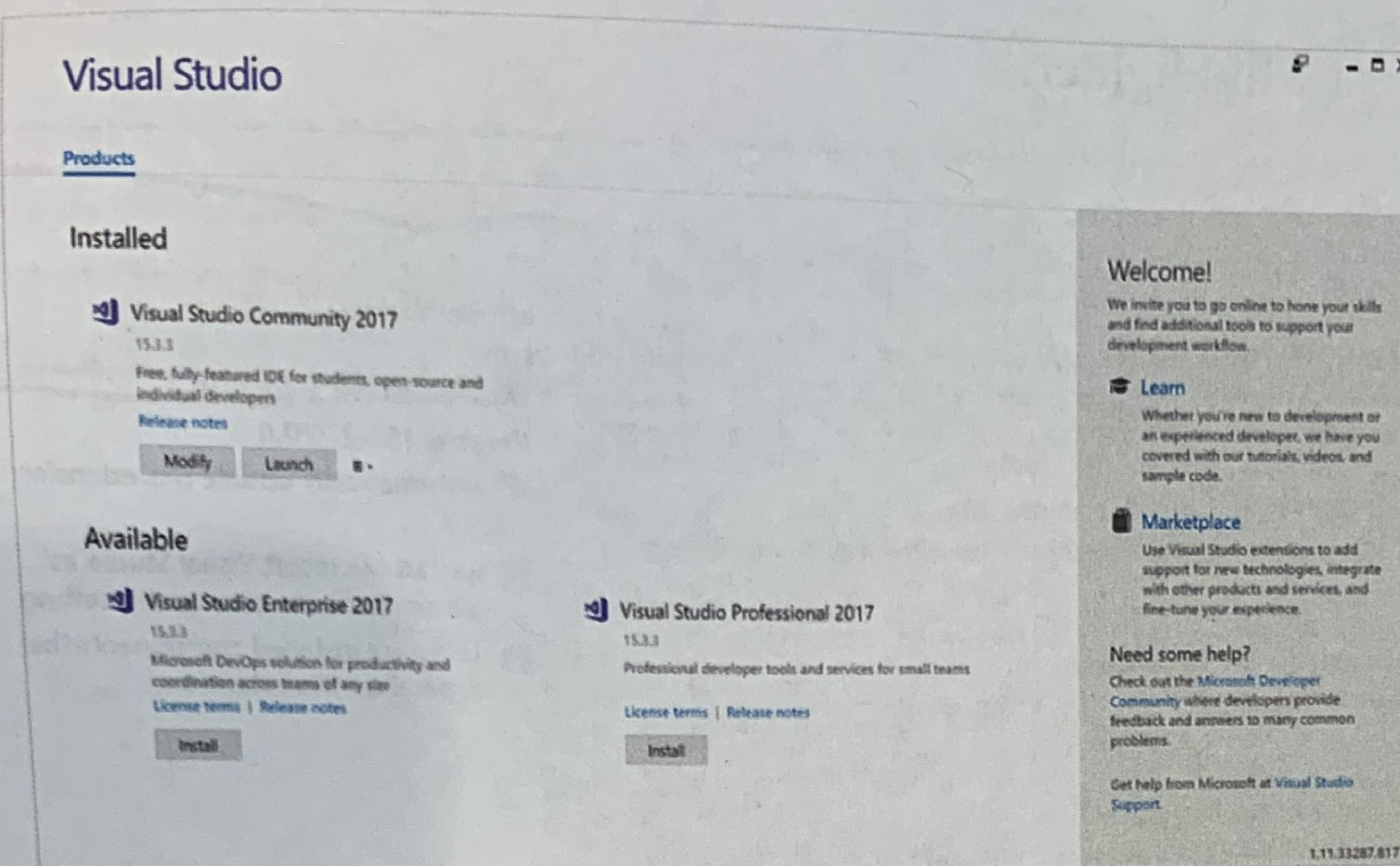
COMP3350—001 Fall 19'



2.2 However, if your dialog looks something like this (i.e. you do not see the C++ options):

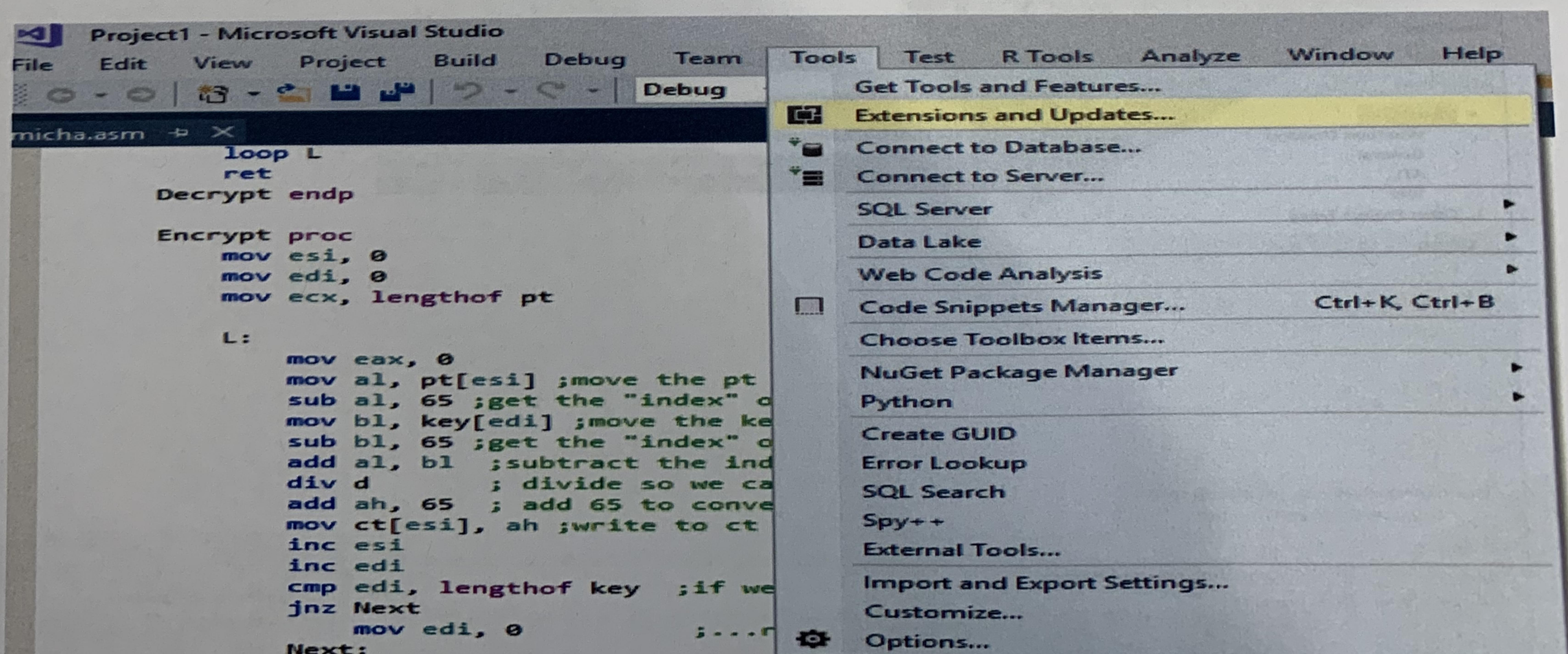


Please click the ‘start’ button () then type in “Visual Studio Installer”. Click on “Modify” then click on “Desktop development with C++”:

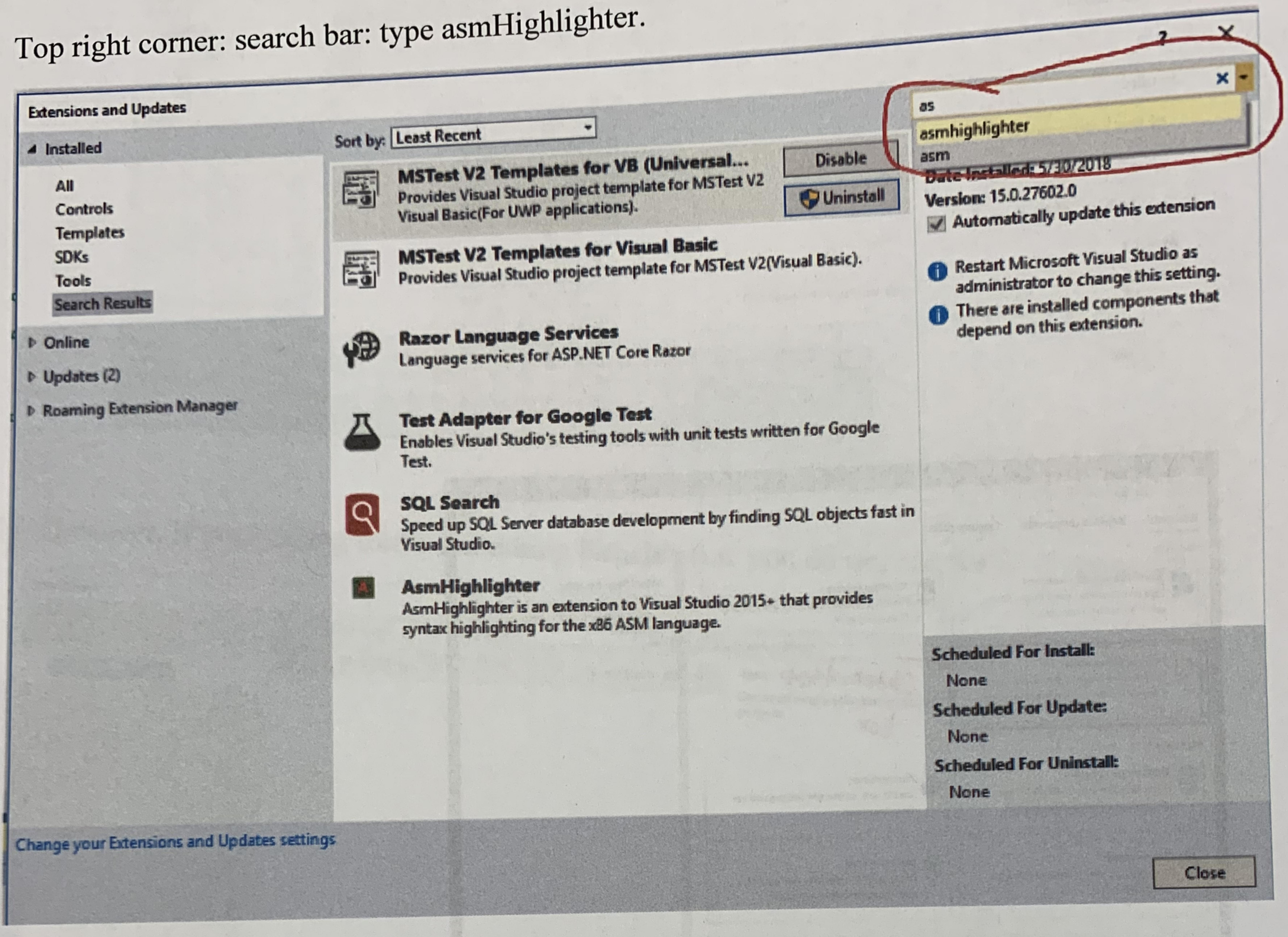


2.3 Adding some syntax highlighting if you would like to.

Click Tools -> Extensions and Updates



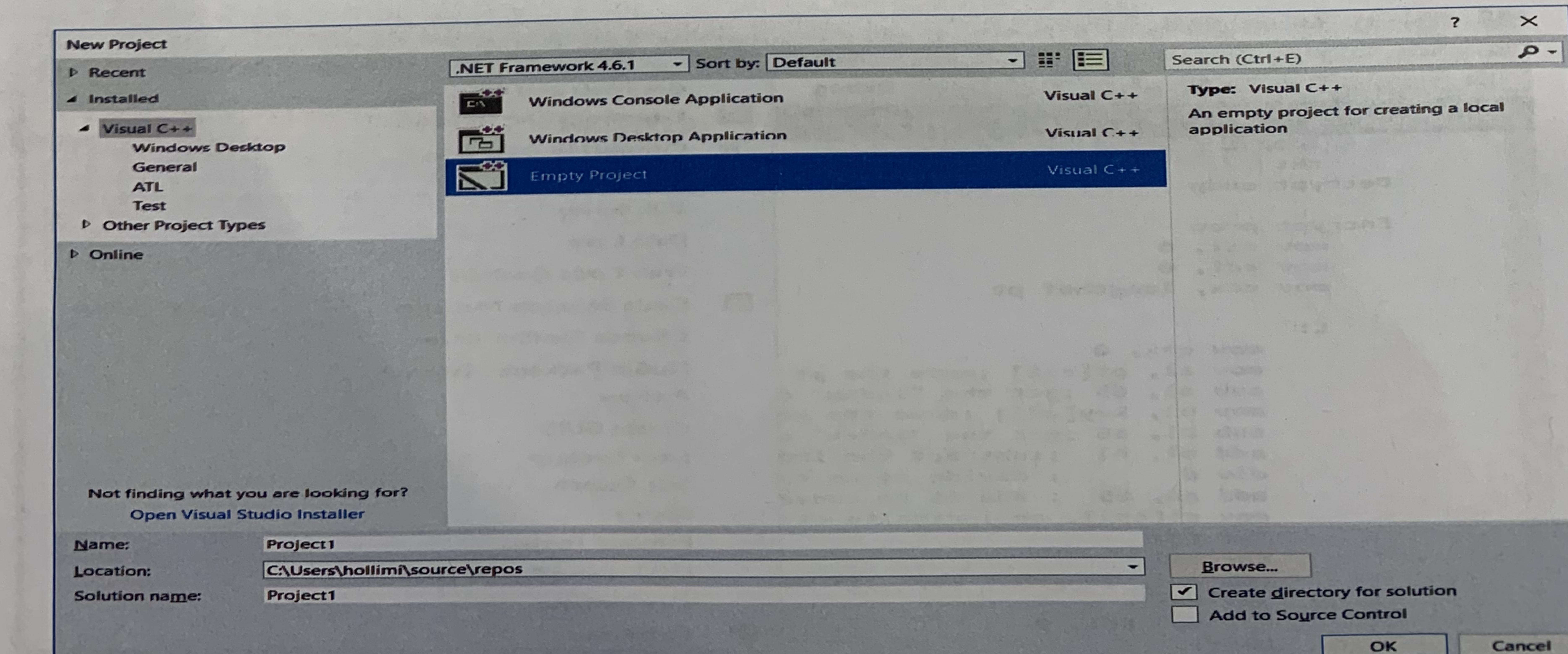
Top right corner: search bar: type asmHighlighter.



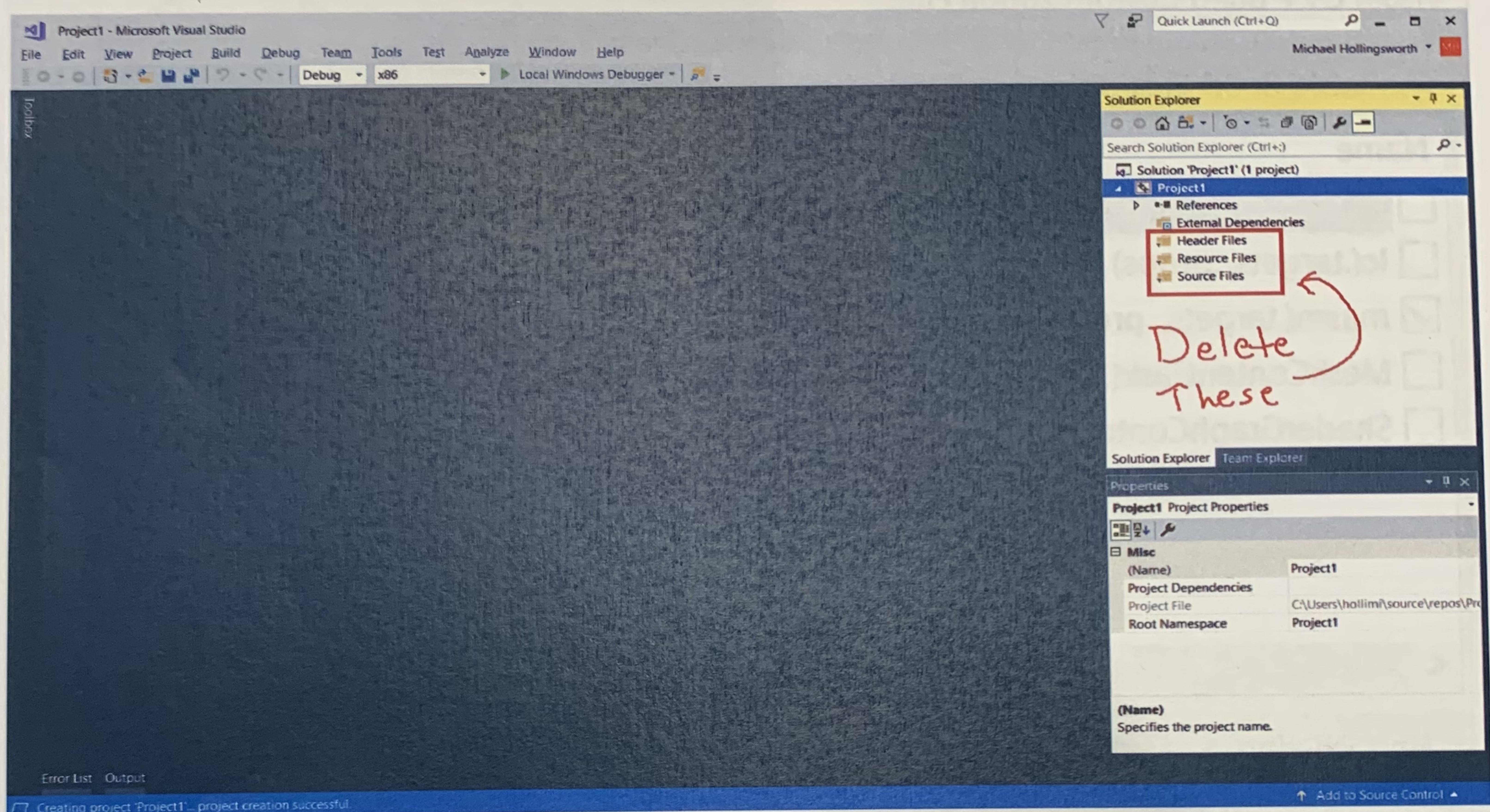
3. Create a project

3.1 Launch VS.

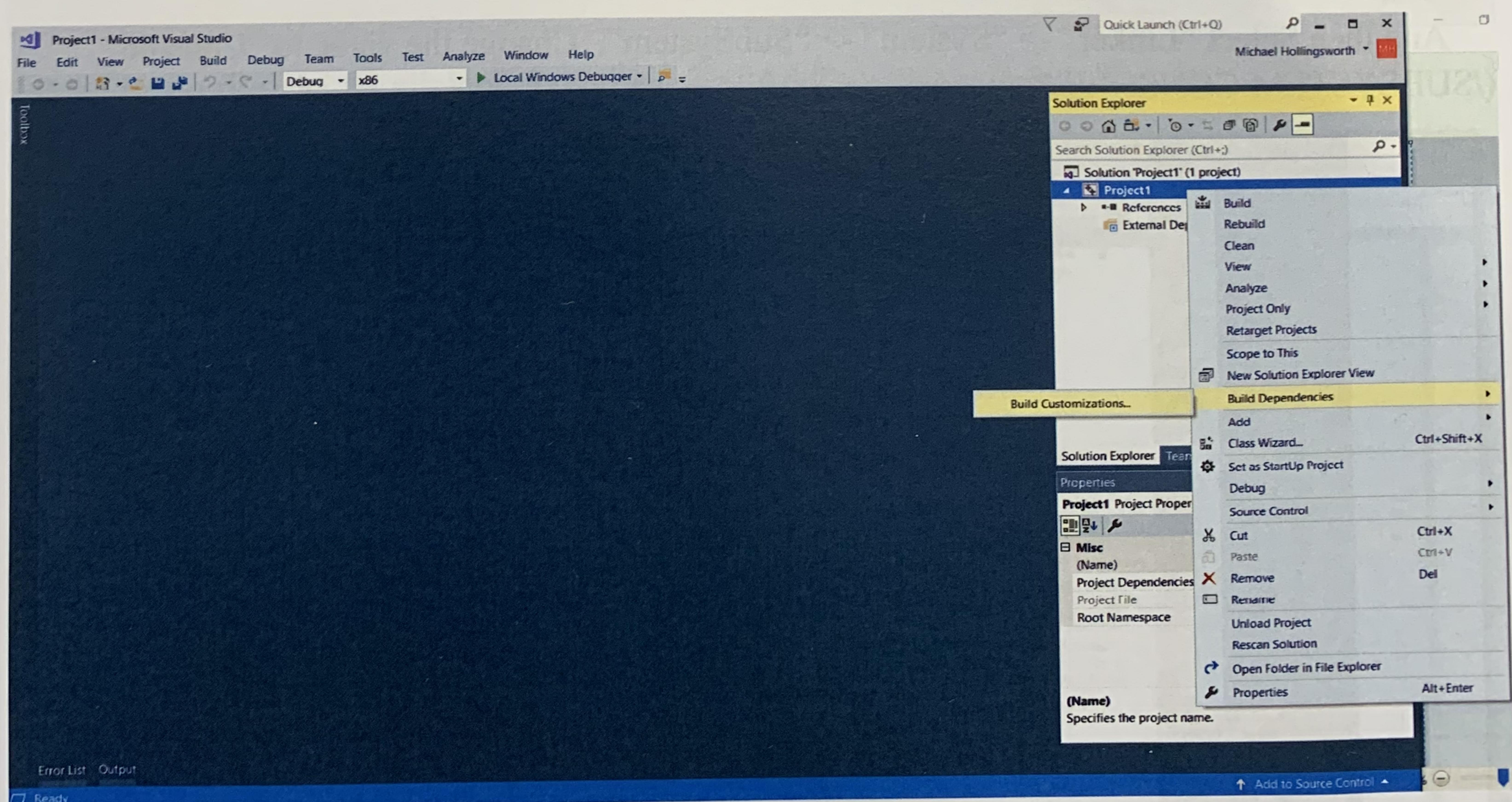
Click on File->New->Project: choose “Empty Project” with a project name.



3.2 Delete the “Header Files”, “Resource Files”, and “Source Files” folders.

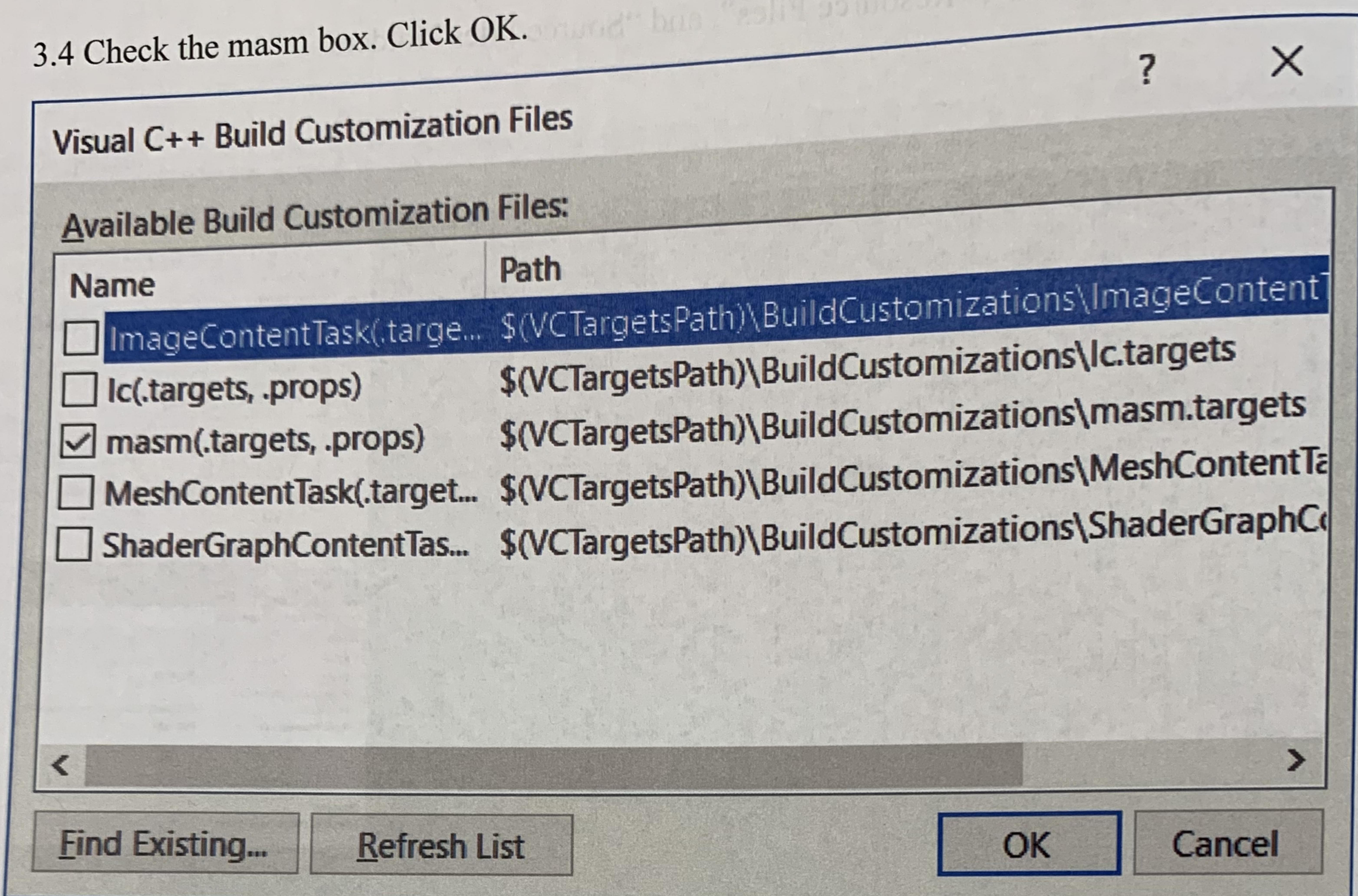


3.3 Right click on the project file then click “Build Dependencies” -> “Build Customizations”.



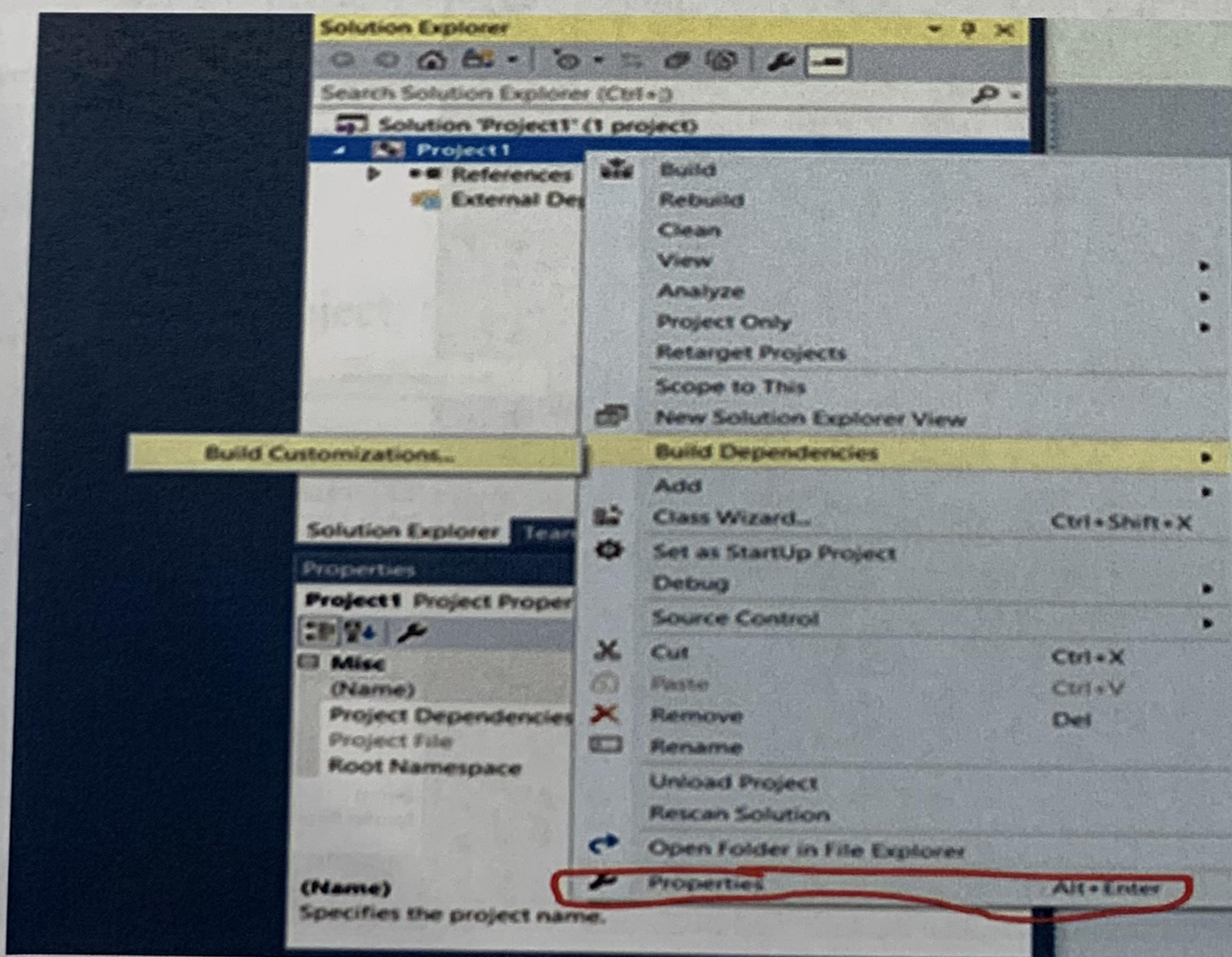
enViro setting (3)

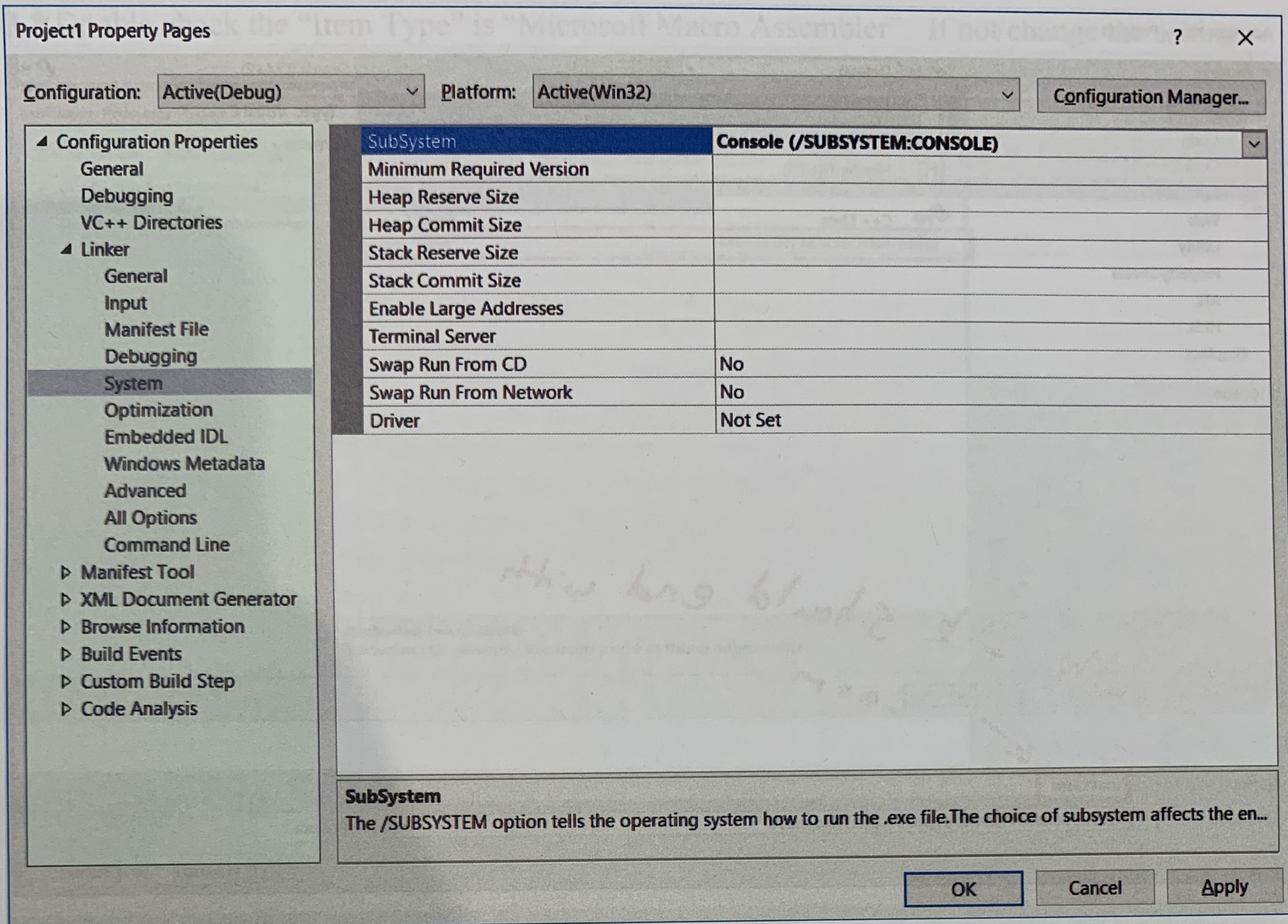
3.4 Check the masm box. Click OK.



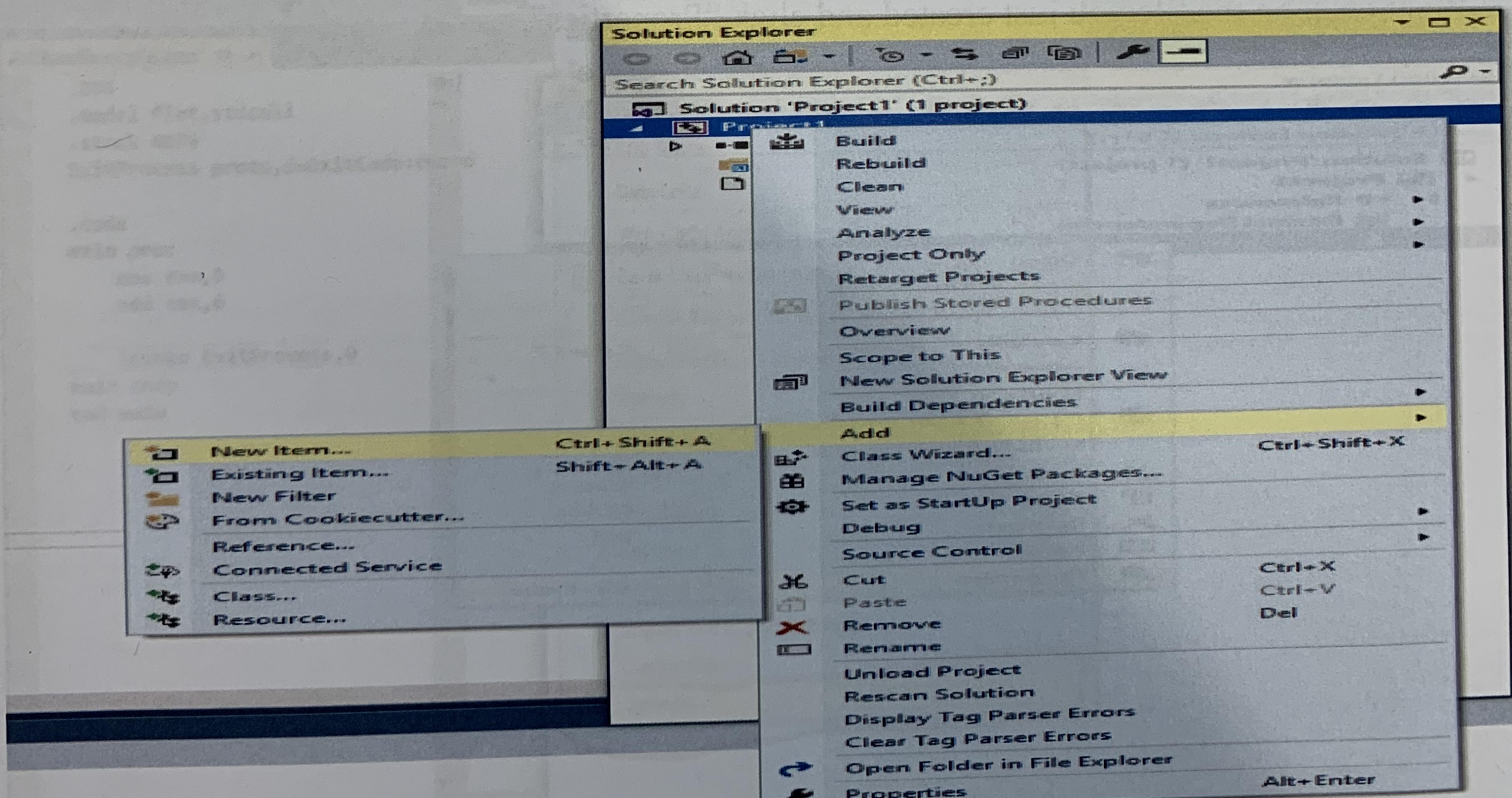
3.5 Right click on the project, then select “Properties”.

And then Select “Linker” -> “System” -> “SubSystem”. Change the value to “Console (/SUBSYSTEM:CONSOLE)”.





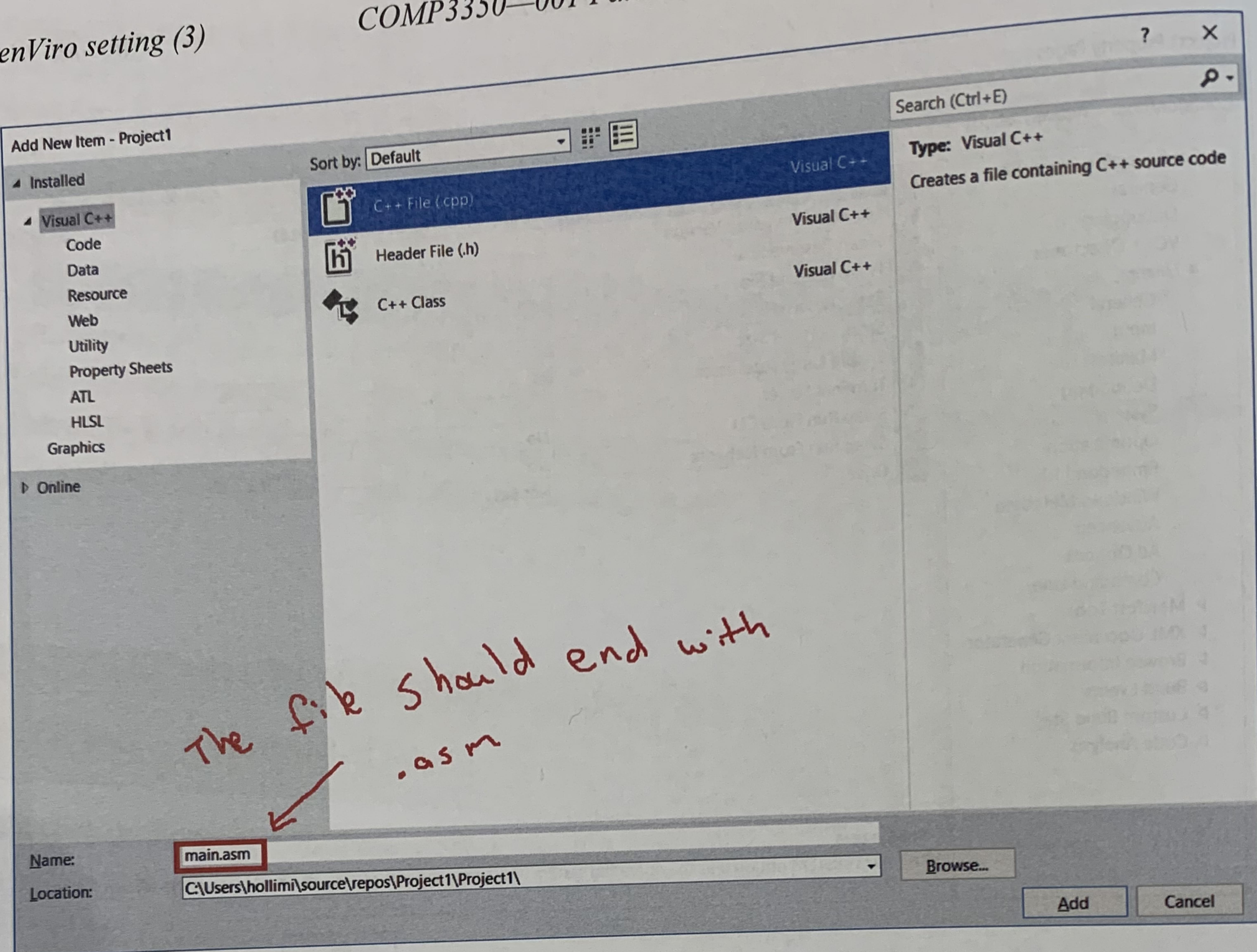
3.6 Adding a file. Right click on the project -> “Add” -> “New Item...”



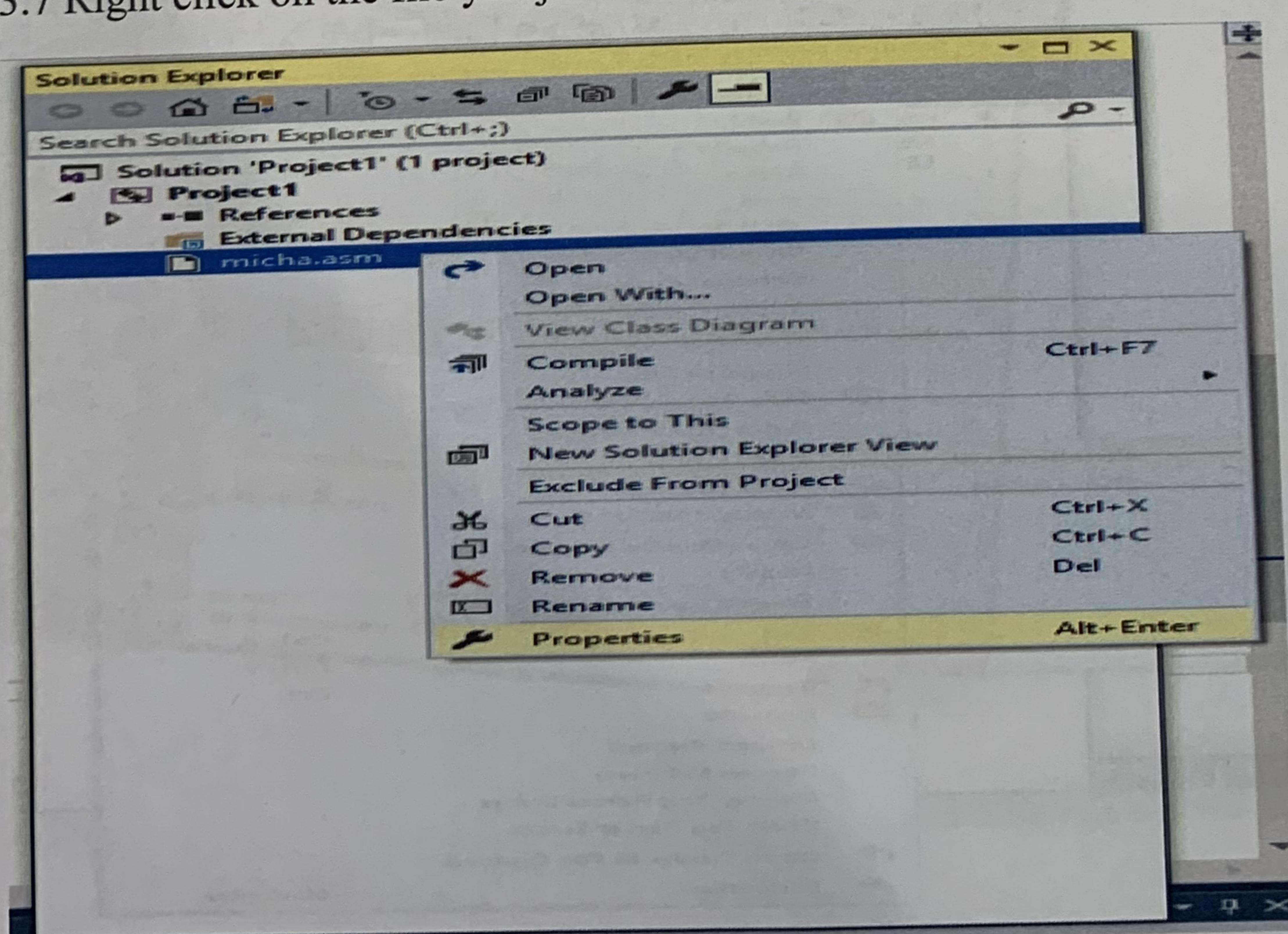
enViro setting (3)

COMP3350—001 Fall 19'

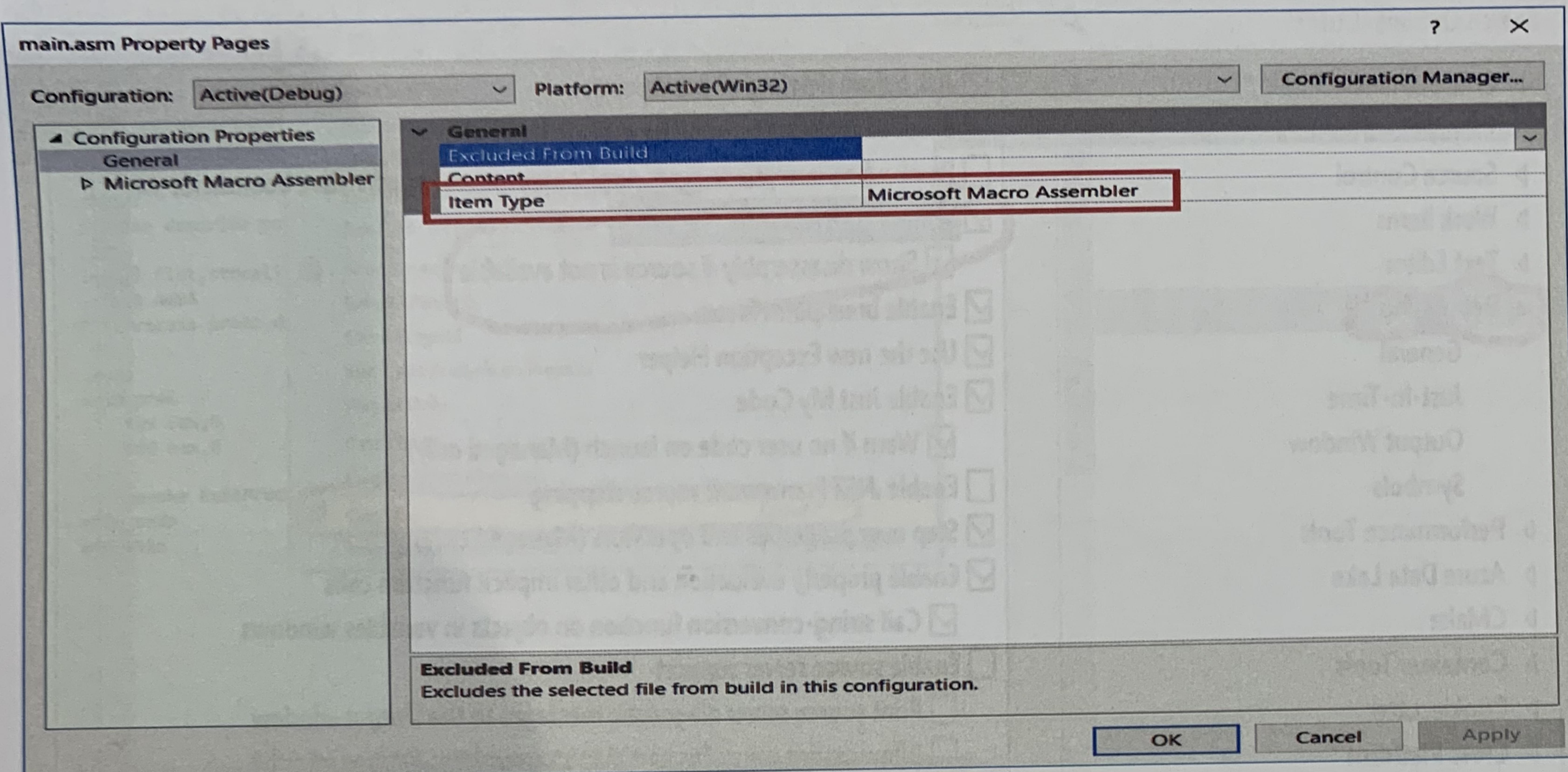
Xuechao Li



3.7 Right click on the file you just created and click “Properties”.

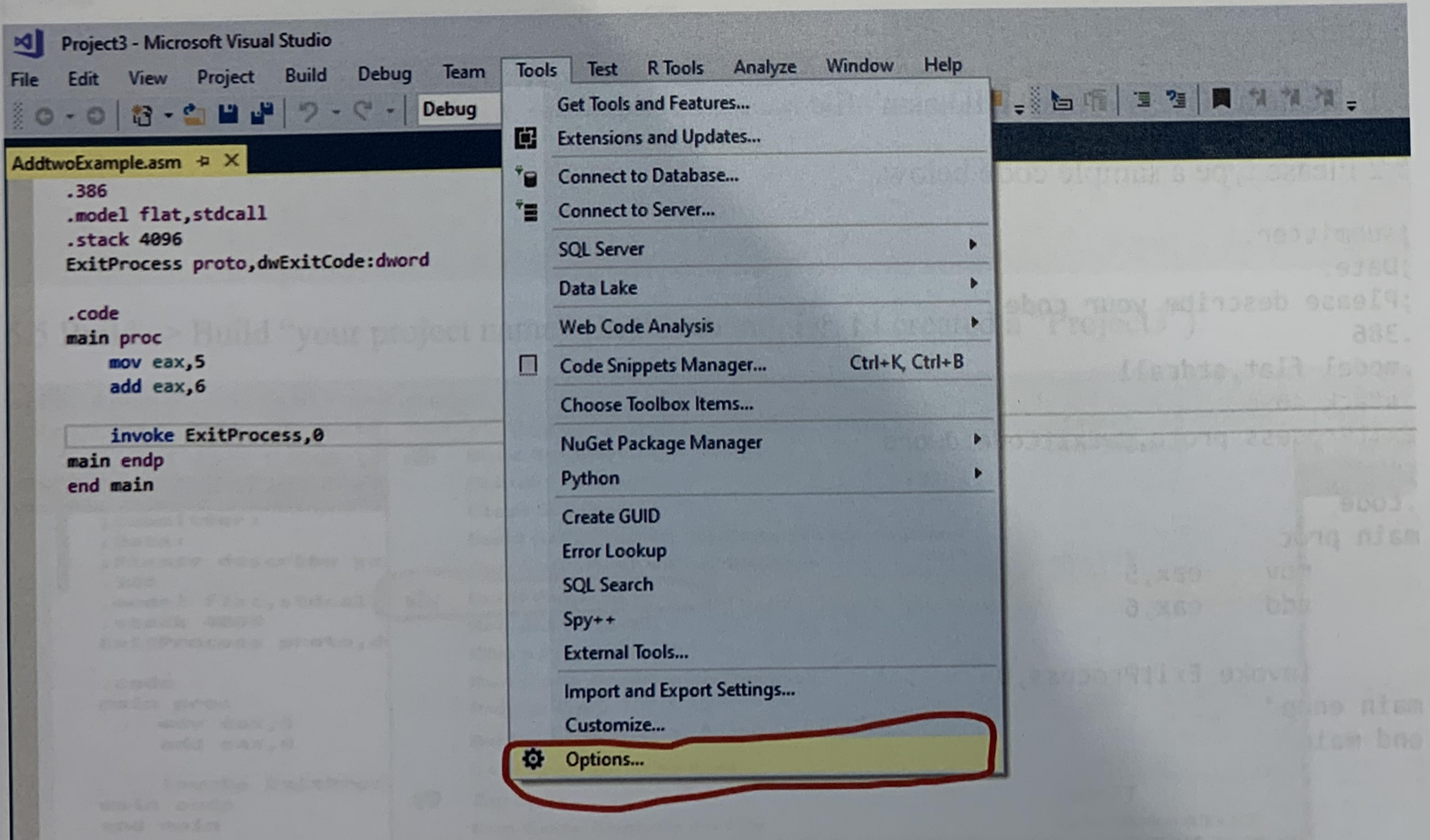


3.8 Double check the “Item Type” is “Microsoft Macro Assembler”. If not change the setting.

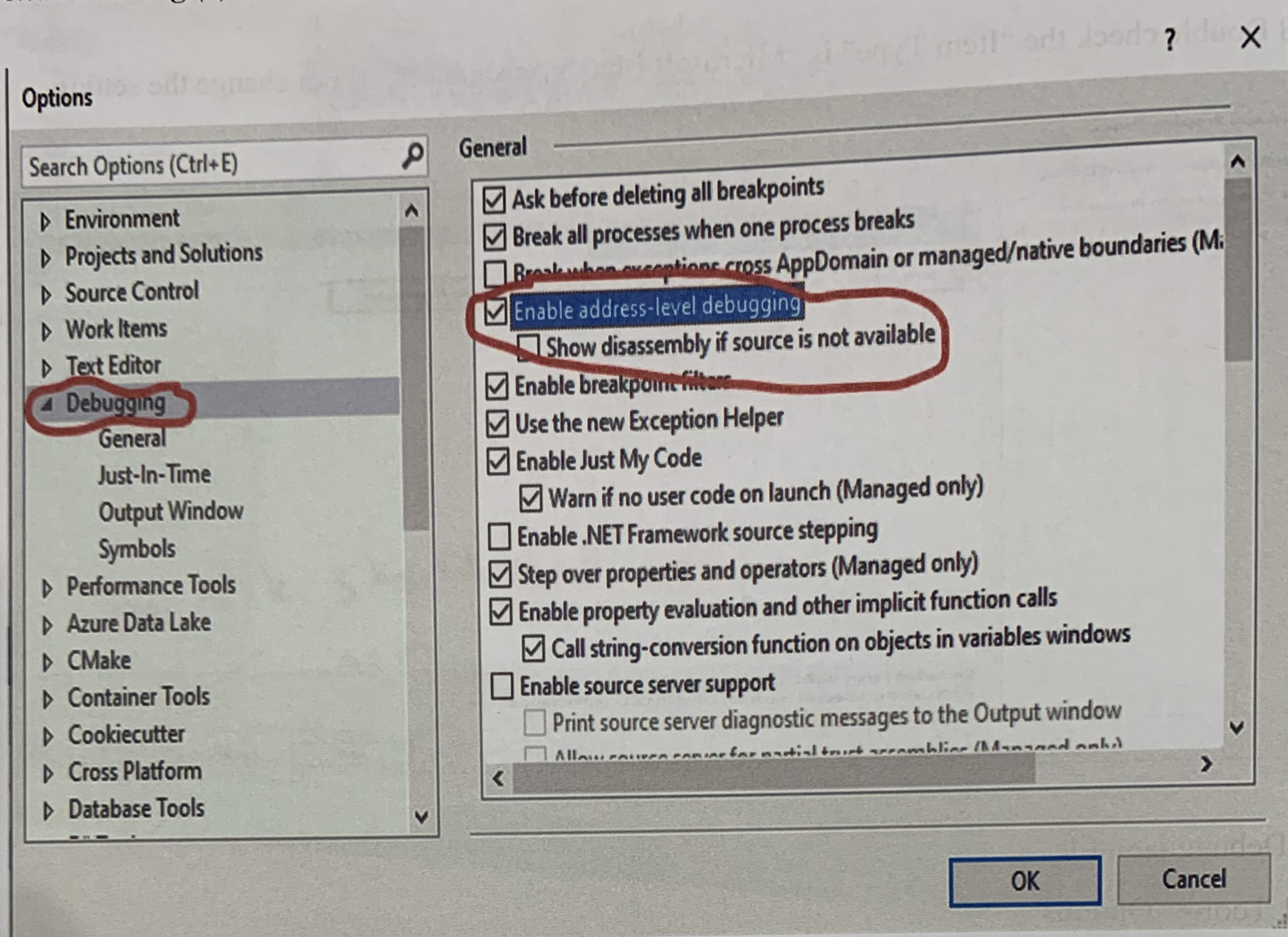


4. Debugging a file

4.1 Tool--> Options



enViro setting (3)



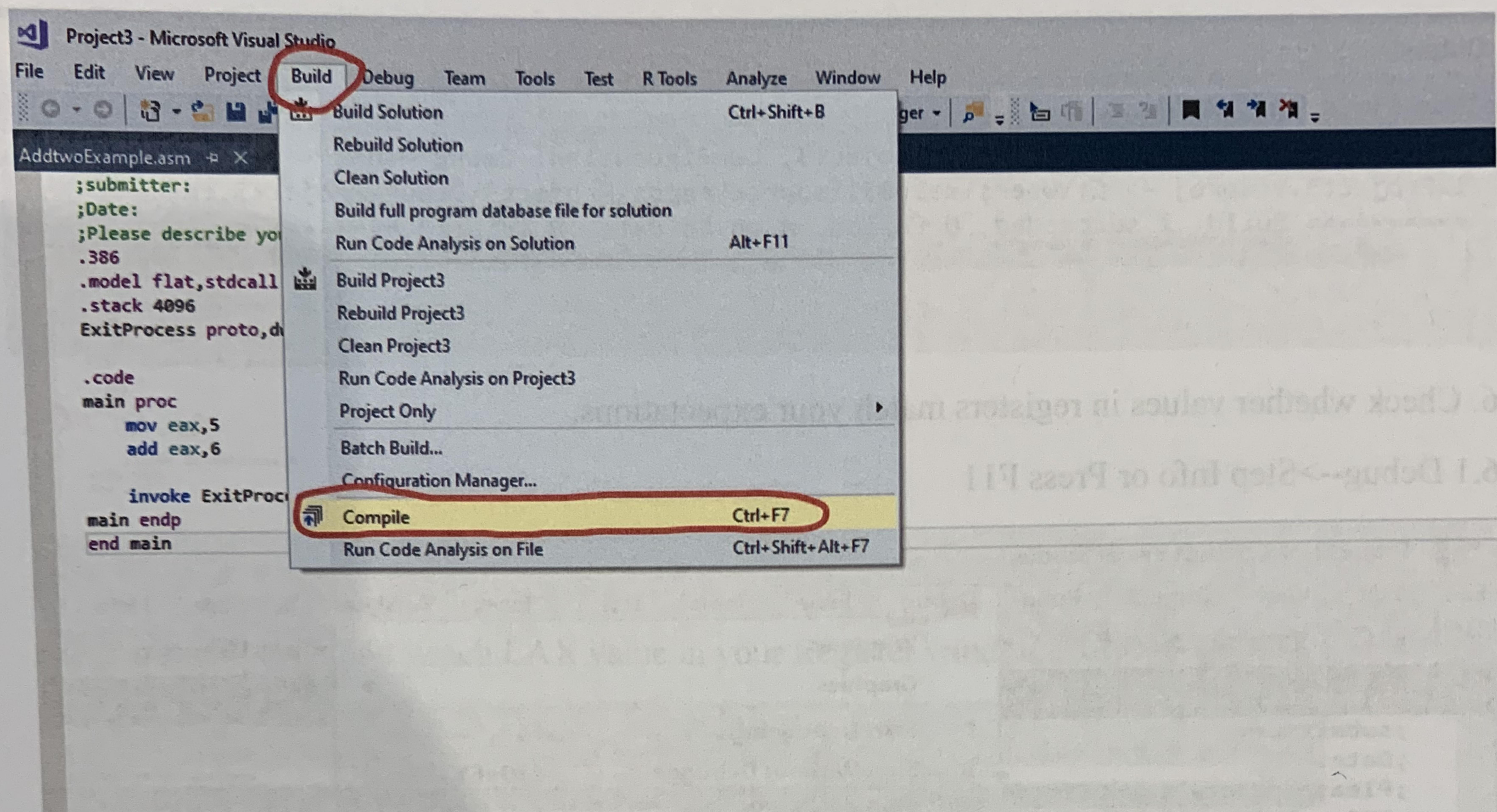
5. Quiz1.

5.1 Create a “Quiz1_yourAUID.asm” file

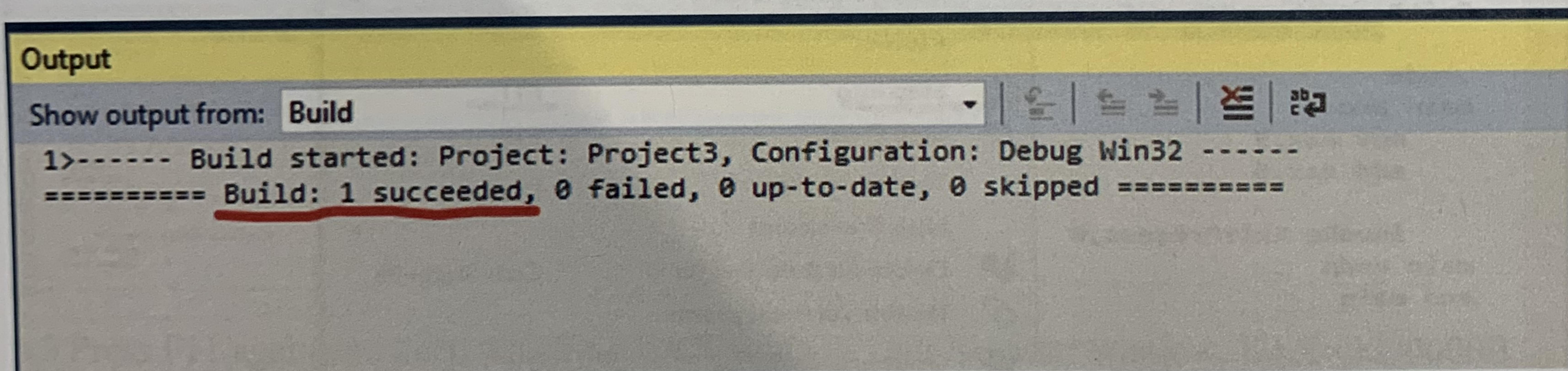
5.2 Please type a sample code below.

```
;submitter:  
;Date:  
;Please describe your code  
.386  
.model flat,stdcall  
.stack 4096  
ExitProcess proto,dwExitCode:dword  
  
.code  
main proc  
    mov     eax,5  
    add     eax,6  
  
    invoke ExitProcess,0  
main endp  
end main
```

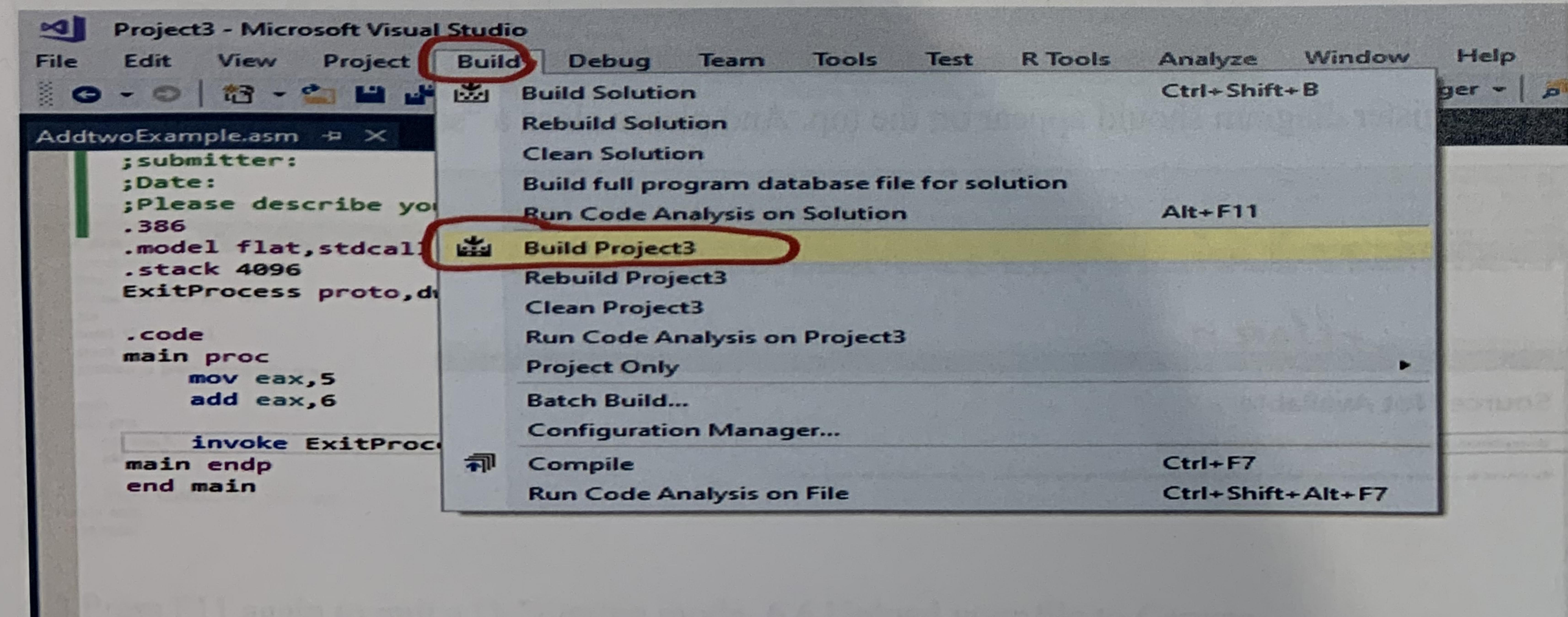
5.3 Build-->Compile



5.4 At the bottom—an output diagram, you will see a “successful” build.



5.5 Build--> Build “your project name” (In this demo, Dr. Li created a “Project3”).



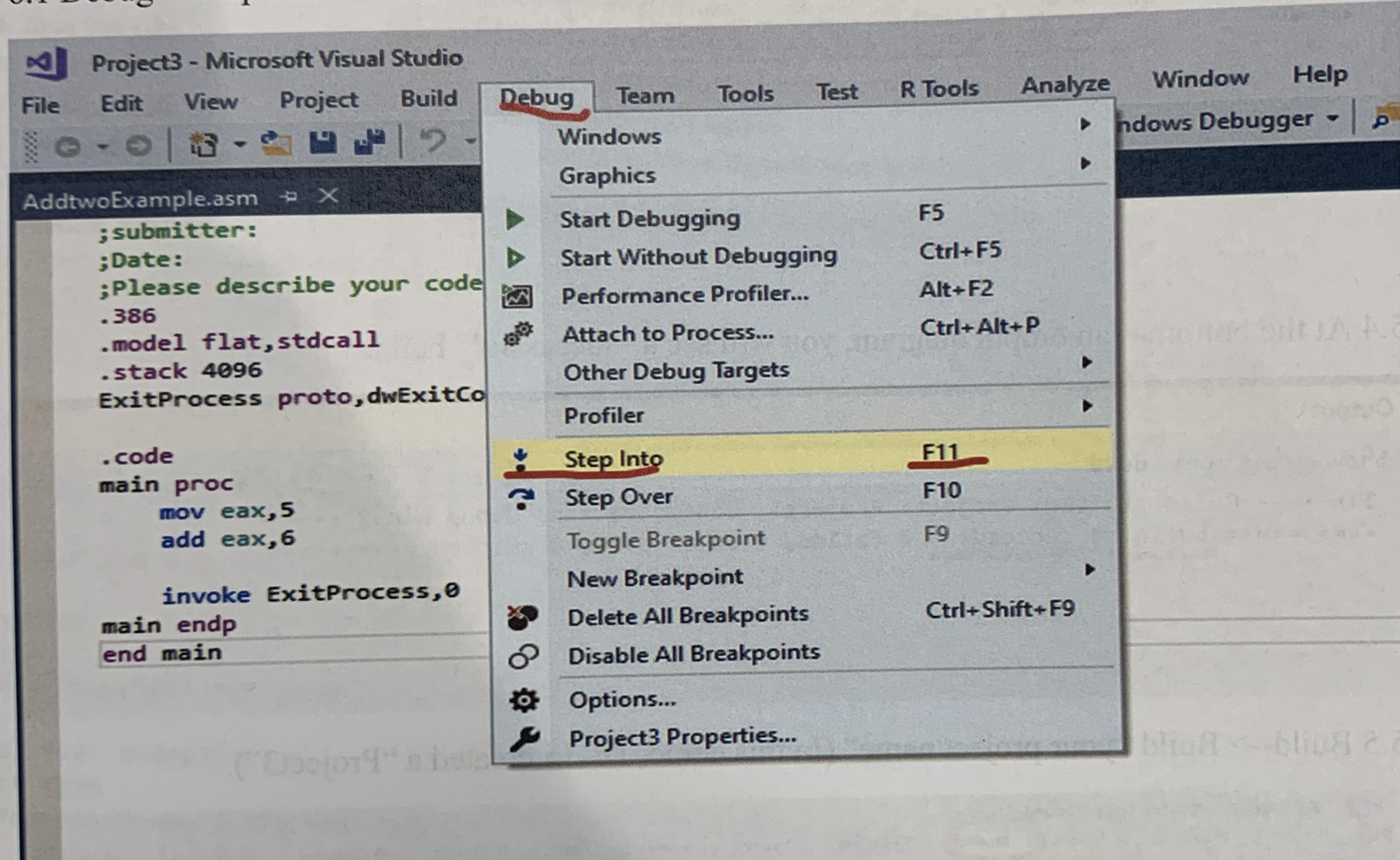
5.5 At the bottom—an output diagram, you will see a “successful” build.

The screenshot shows the Microsoft Visual Studio Output window. The title bar says "Output". The dropdown menu "Show output from:" is set to "Build". The main area displays the build log:

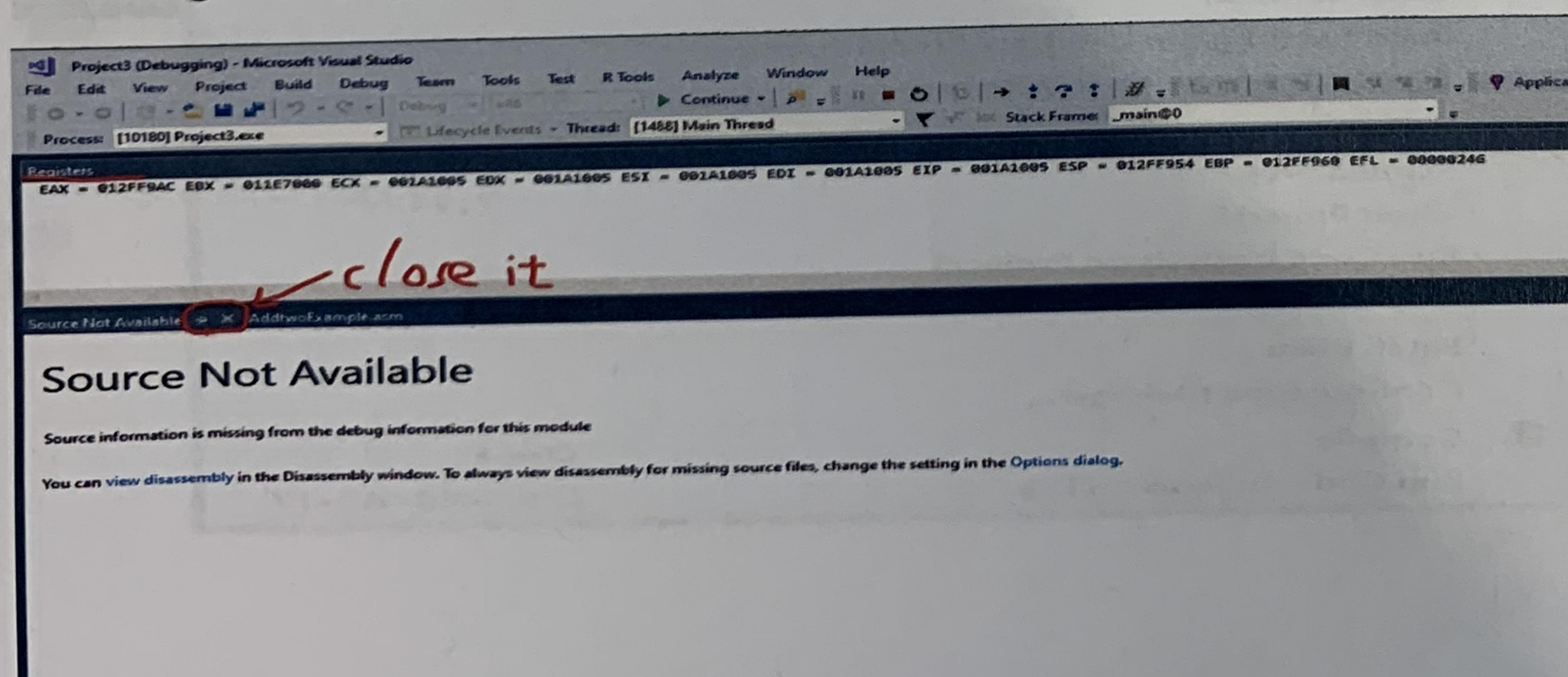
```
1>----- Build started: Project: Project3, Configuration: Debug Win32 -----
1>Project3.vcxproj -> C:\Users\xz10031\source/repos\Project3\Debug\Project3.exe
===== Build: 1 succeeded, 0 failed, 0 up-to-date, 0 skipped =====
```

6. Check whether values in registers match your expectations.

6.1 Debug-->Step Info or Press F11



6.2 A register diagram should appear on the top. And please close a “source” window.



6.3 Press F11 again and you will see an arrow on the left side of the first line code

```

AddtwoExample.asm  X
;submitter:
;Date:
;Please describe your code
.386
.model flat,stdcall
.stack 4096
ExitProcess proto,dwExitCode:dword

.code
main proc
    mov eax,5      $1ms elapsed
    add eax,6
    invoke ExitProcess,0
main endp
end main

```

6.4 Press F11 again and watch EAX value in your Register window. EAX=00000005

```

AddtwoExample.asm  X
;submitter:
;Date:
;Please describe your code
.386
.model flat,stdcall
.stack 4096
ExitProcess proto,dwExitCode:dword

.code
main proc
    mov eax,5      $1ms elapsed
    add eax,6
    invoke ExitProcess,0
main endp
end main

```

6.5 Press F11 again and keep watching EAX value in your Register window. EAX=0000000B

```

AddtwoExample.asm  X
;submitter:
;Date:
;Please describe your code
.386
.model flat,stdcall
.stack 4096
ExitProcess proto,dwExitCode:dword

.code
main proc
    mov eax,5      $1ms elapsed
    add eax,6
    invoke ExitProcess,0 $1ms elapsed
main endp
end main

```

6.5 Press F11 again to quit a Debugging mode. 6.6 Upload your file to Canvas.