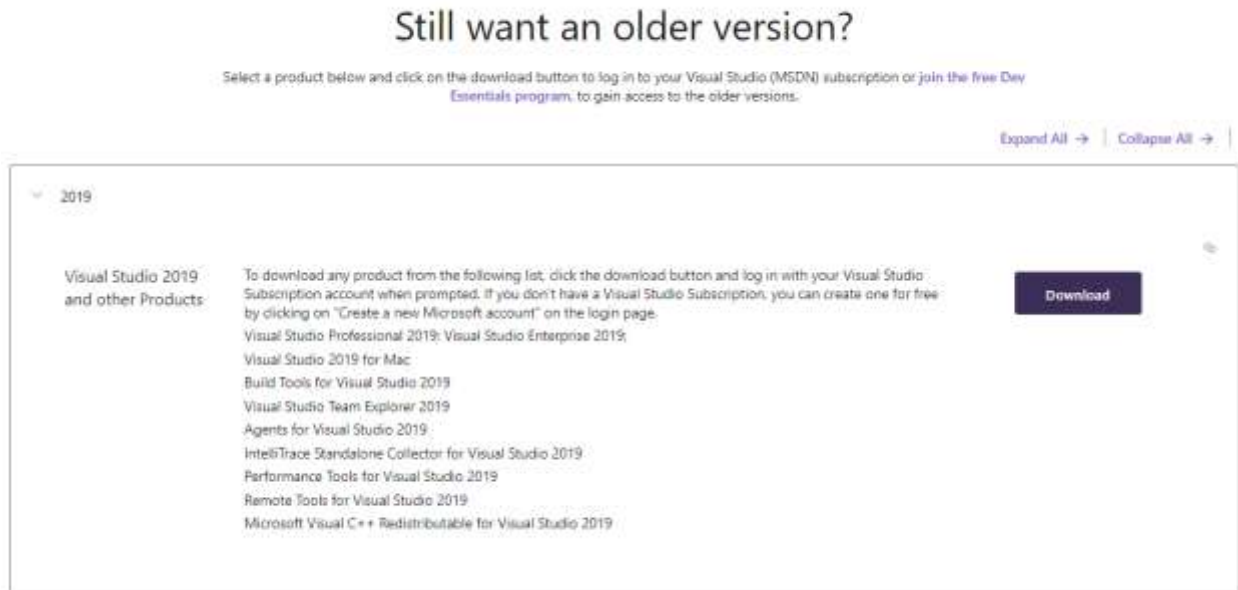


This is my simplified guide of "Getting started with Assembly" by Ahmed Shafeek

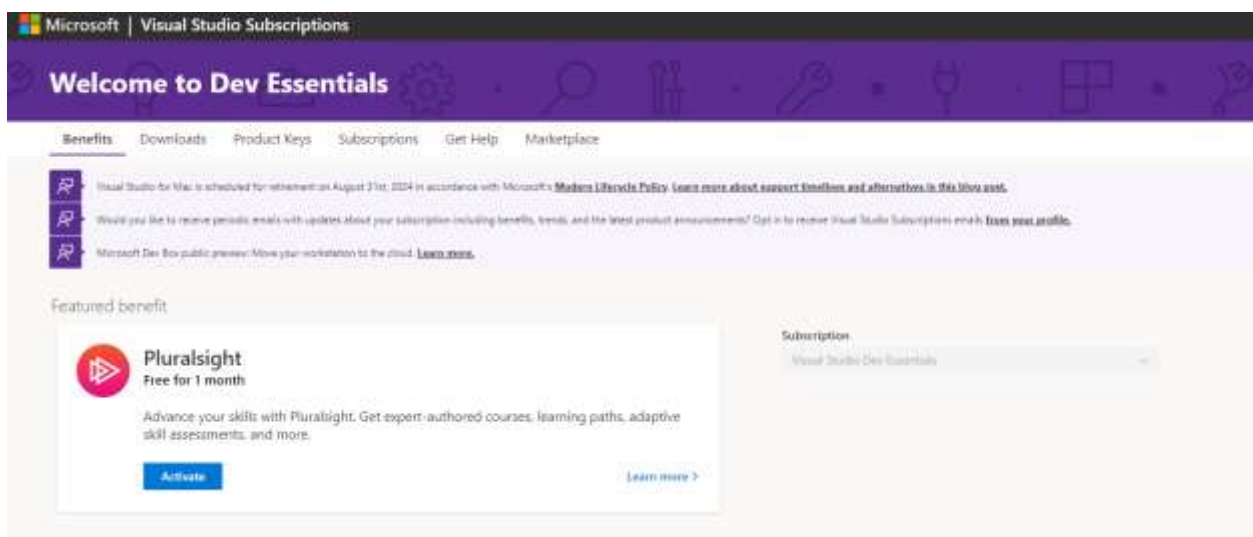
First, we want to download MS Visual Studio IDE using the link below.

For this semester we want the 2019 version since it is what the professor will be using in guides.

<https://visualstudio.microsoft.com/vs/older-downloads/>



Using this link above, you want to go to the 2019 dropdown and click download on the right. The download button should bring you to a portal where you need to fill in some information. After it has been filled out it should bring you to a homepage like this



Now click on downloads tab at the top left of the screen. Then you want to select Visual Studio 2019

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You want to find the "Visual Studio Community 2019".(it should be 4th one down)









Your Downloads and Product Keys

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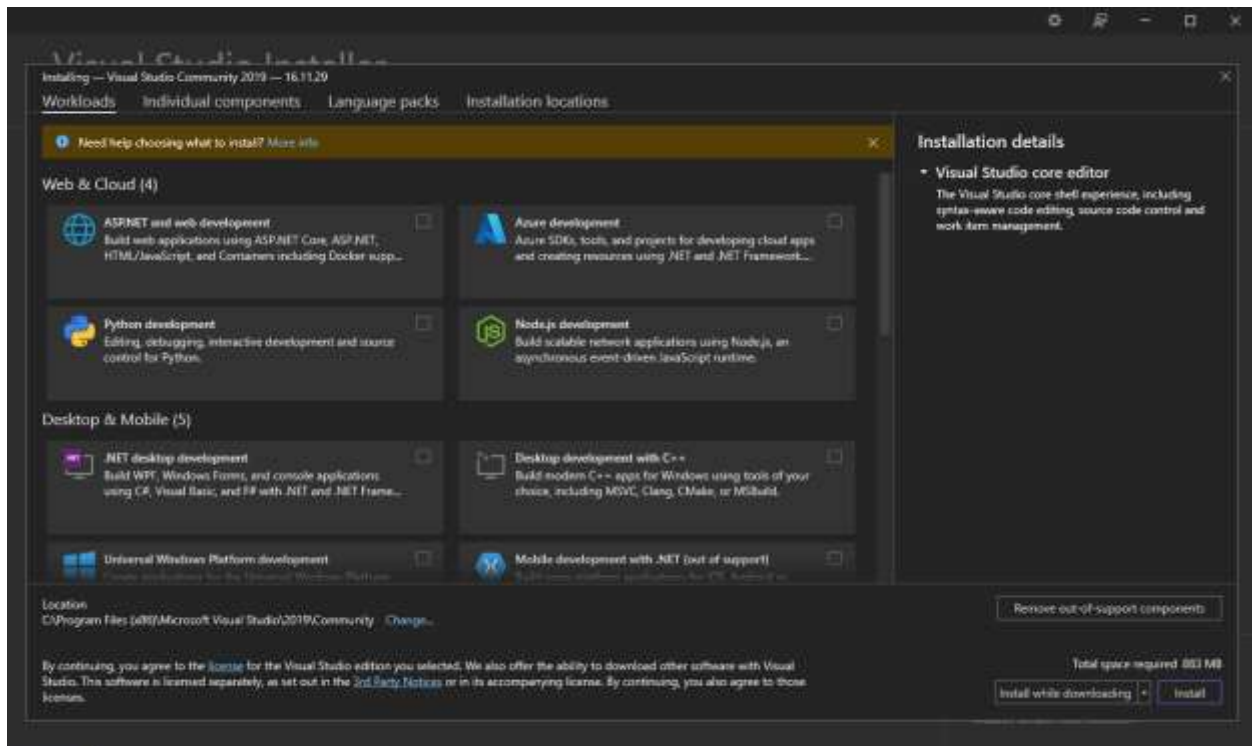
Visual Studio 2019

Product	Version	Download	Keys	Language	Architecture	Type	Release Date	Info
Visual Studio Enterprise 2019	16.11	Download >		Multixie Languages	x64	exe	5/5/2021	
Visual Studio Team Explorer 2019	16.11	Download >		Multixie Languages	x64	exe	5/5/2021	
Visual Studio Professional 2019	16.11	Download >		Multixie Languages	x64	exe	5/5/2021	
Visual Studio Community 2019	16.11	Download >		Multixie Languages	x64	exe	5/5/2021	

Product Family

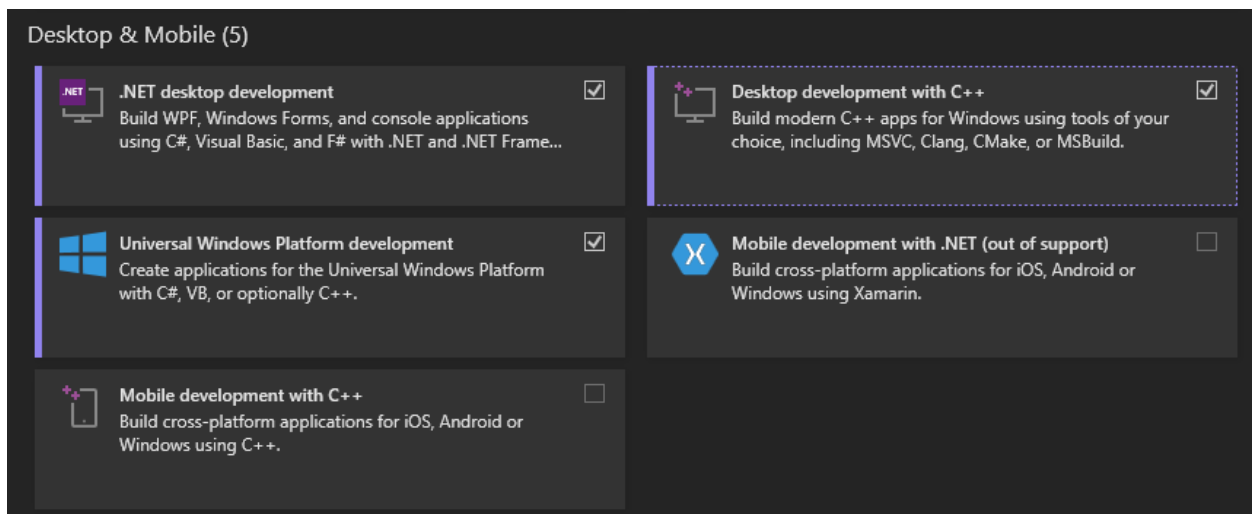
- ☐ Agents for Visual Studio 2019
- ☐ Build Tools for Visual Studio 2019
- ☐ Intelligence Standalone Collector for Visual Studio 2019
- ☐ Performance Tools for Visual Studio 2019
- ☐ Remote Tools for Visual Studio 2019
- ☐ Visual C++ Redistributable for Visual Studio 2019

Click download, run the exe file, and continue to press what it tells you.

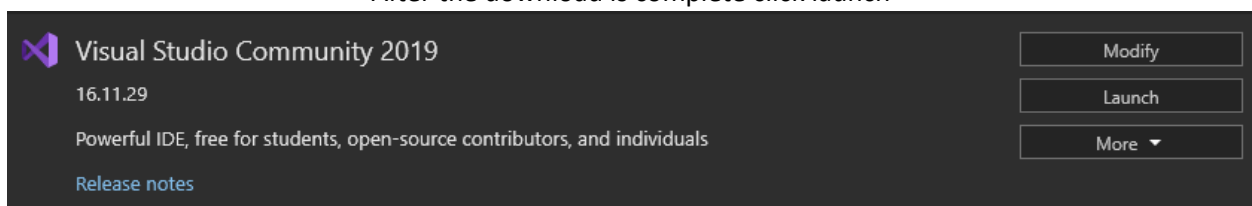


Afterwards you should end up with a screen like this ^

Under the Desktop & Mobile Tab you want to select the first 3

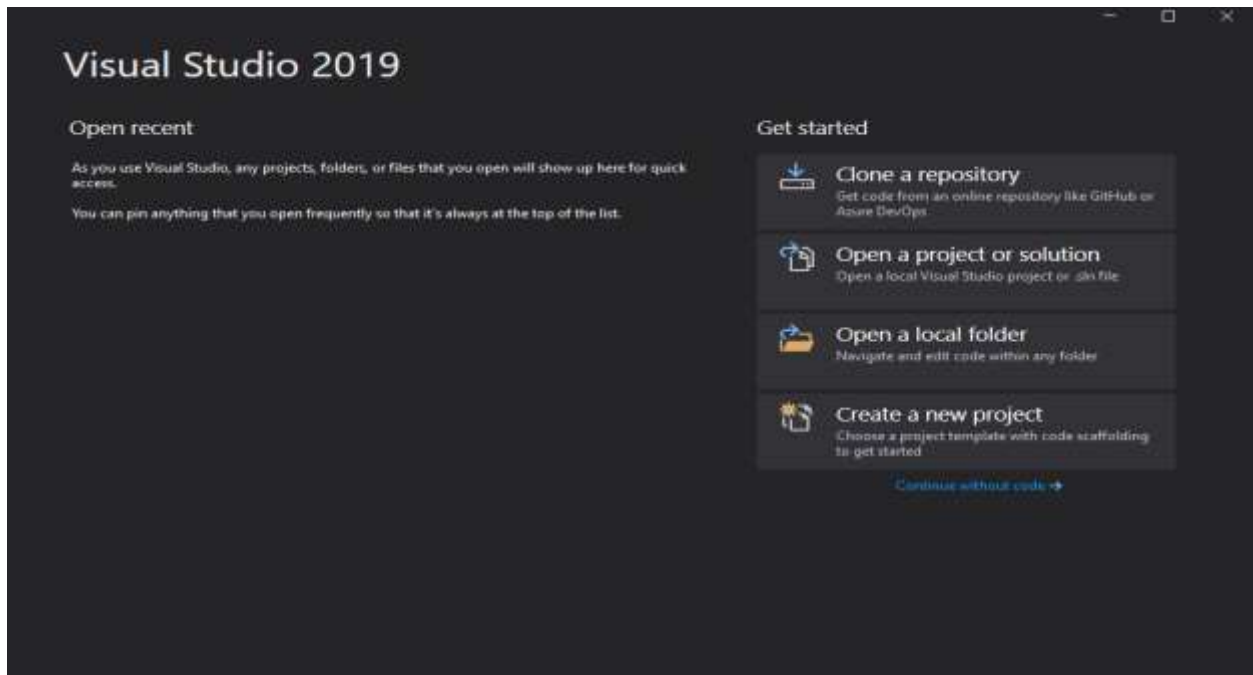


After the download is complete click launch

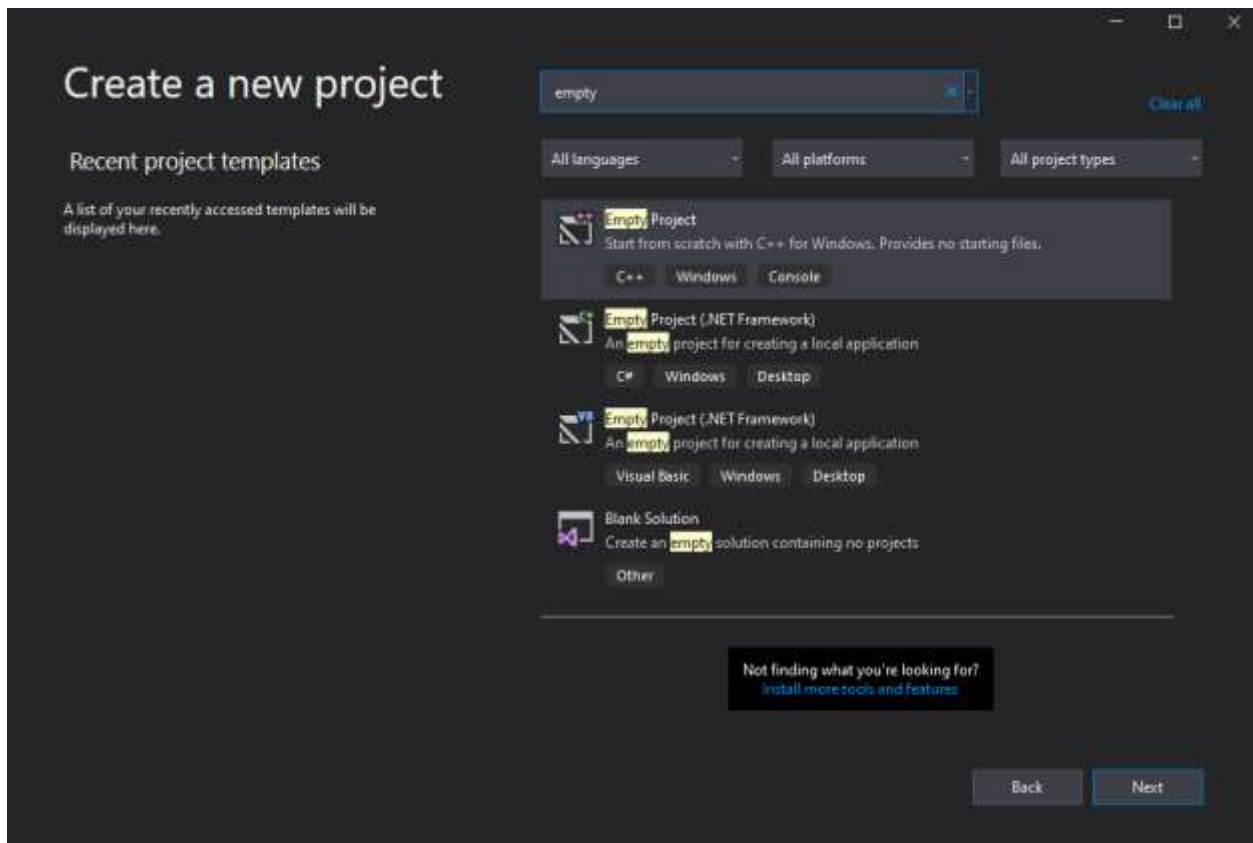


Sign in to your uwinsor account and select your UI mode and keep development settings on general.

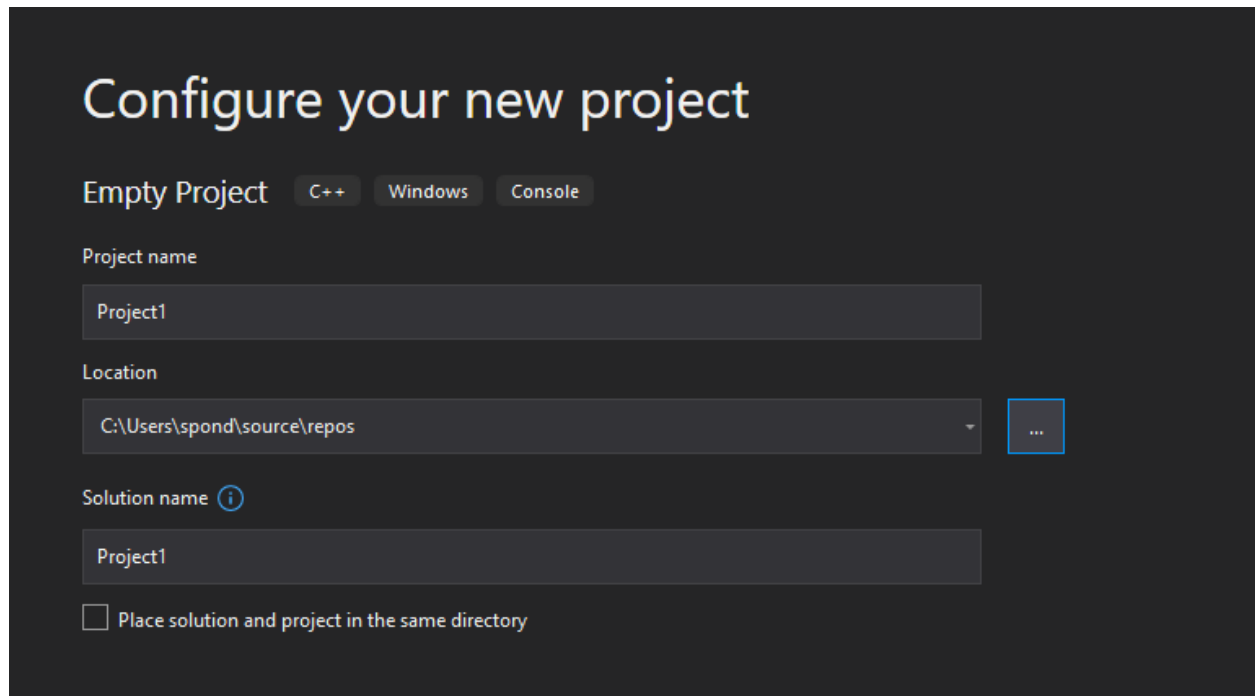
Afterwards you should have a screen like this.



Now you want to create a new project. Here you want to find empty project with the tag c++



Next you will get a screen like this. Here you want to edit the file path to create a new folder



Configure your new project

Empty Project C++ Windows Console

Project name

Project1

Location

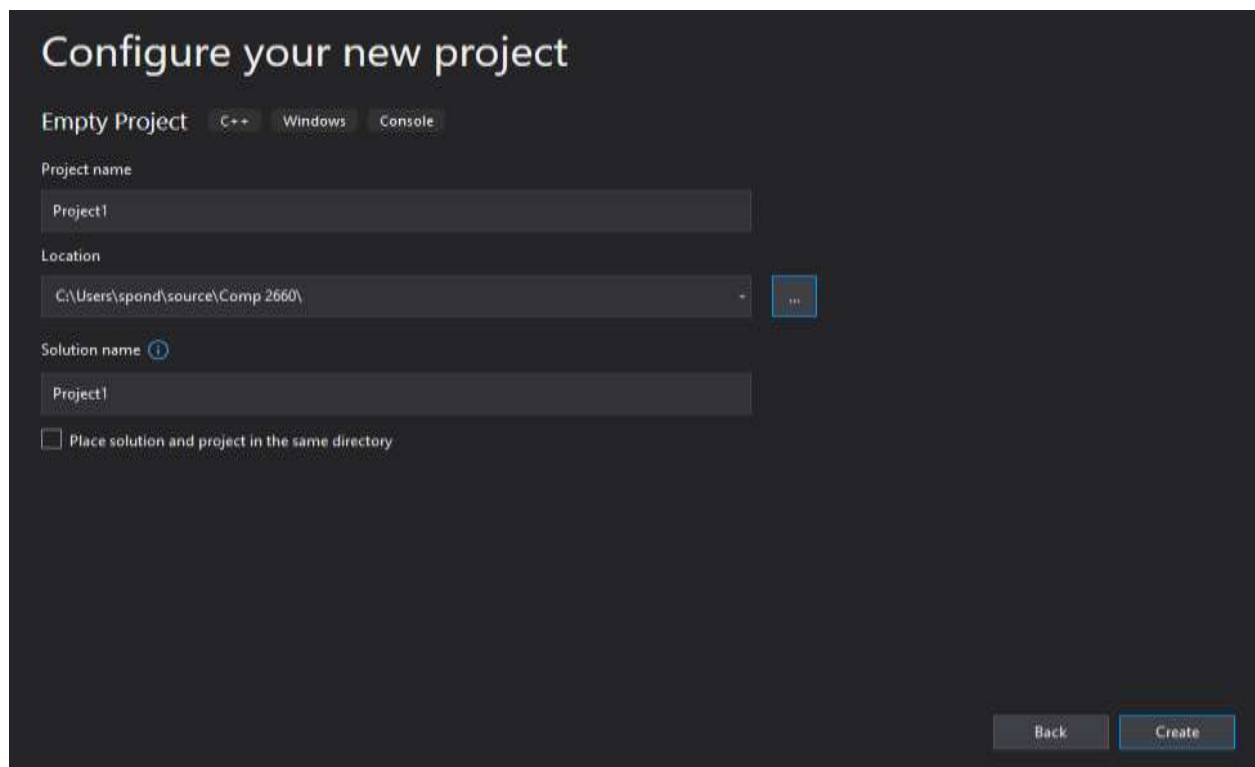
C:\Users\spend\source\repos

Solution name ⓘ

Project1

☐ Place solution and project in the same directory

By clicking the highlighted box above you want to go into the file explorer, go back to source folder, and create a new folder for Comp 2660. After you are done it should be like this.



Configure your new project

Empty Project C++ Windows Console

Project name

Project1

Location

C:\Users\spend\source\Comp 2660\

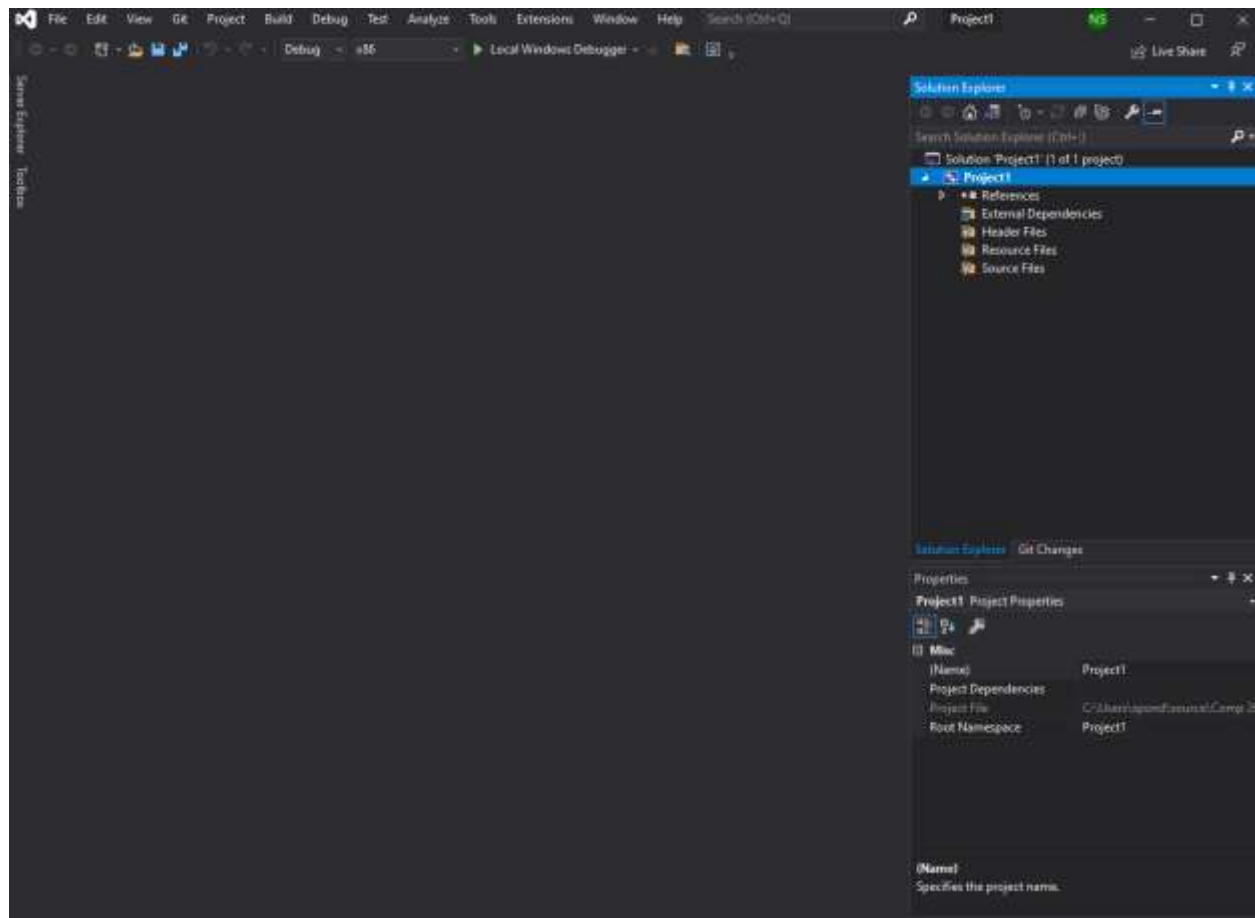
Solution name ⓘ

Project1

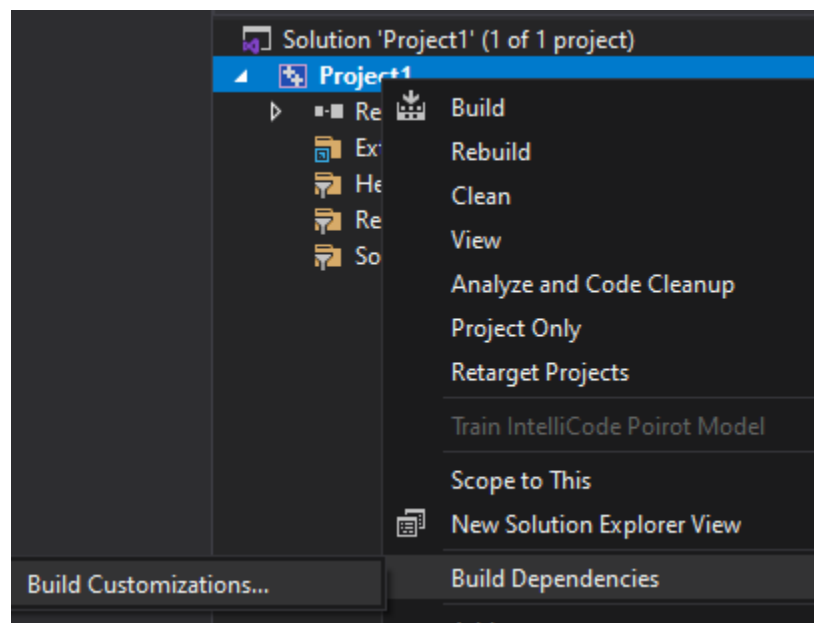
☐ Place solution and project in the same directory

Back Create

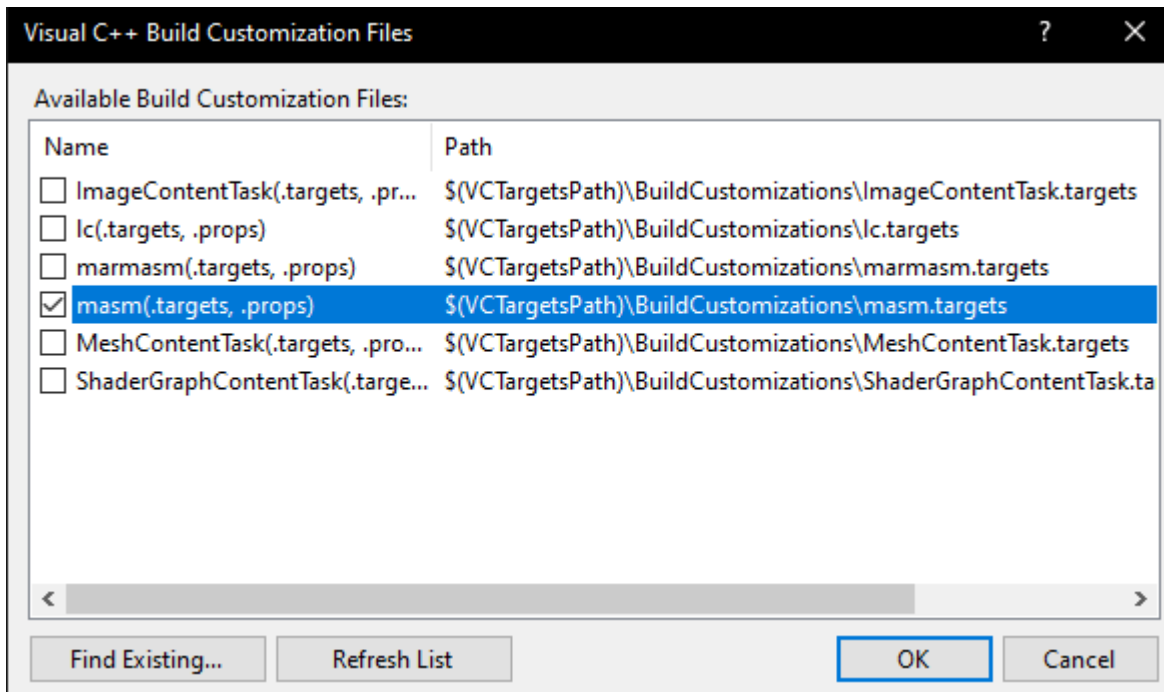
Now click create and you will be greeted with a screen like this.



Now you want to right click the project to go to build dependency and select build customizations.



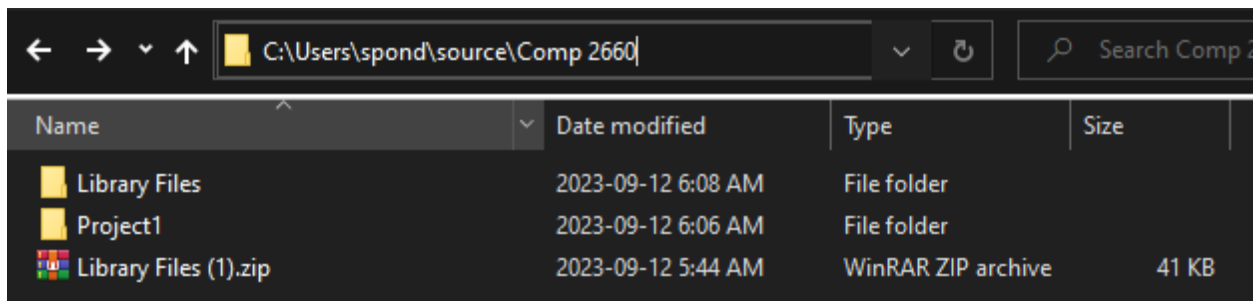
So after you click that you want to select `masm(.target, .props)` and then click “ok”



We are almost done. We want to install Assembly Library Files

[https://github.com/NahiyarSayed/FallTermProjects/blob/main/COMP2660/Library%20Files%20\(1\).zip](https://github.com/NahiyarSayed/FallTermProjects/blob/main/COMP2660/Library%20Files%20(1).zip)

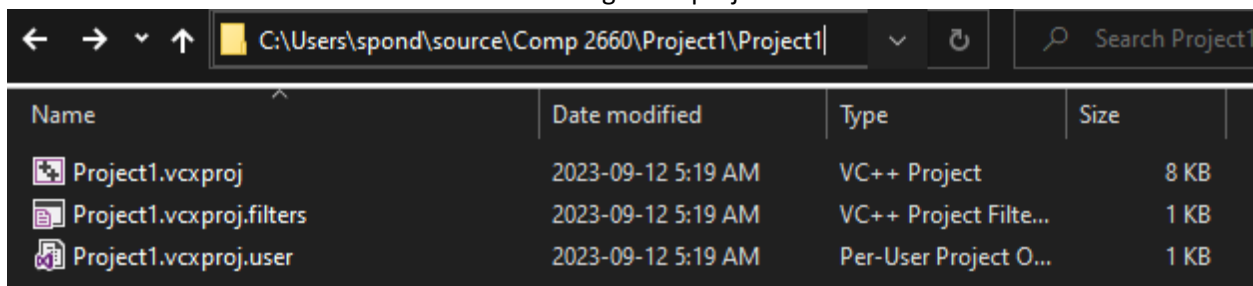
After the installation you want to extract the zip file in your default assembly folder



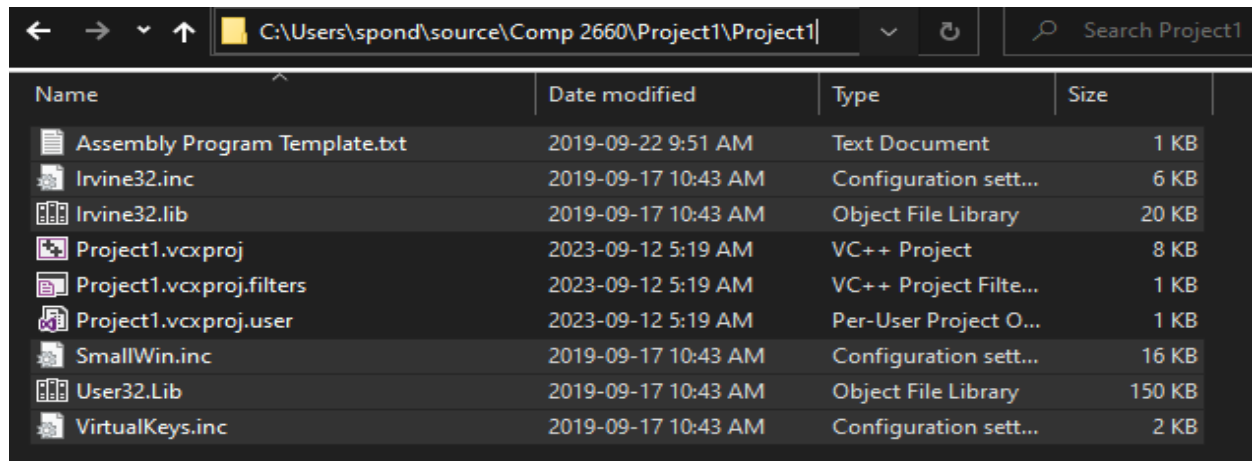
We did this so we can have quick access to Library files since we will need it for every project.

(I put the txt file into “Library Files”)

Now we want to go into project1 twice

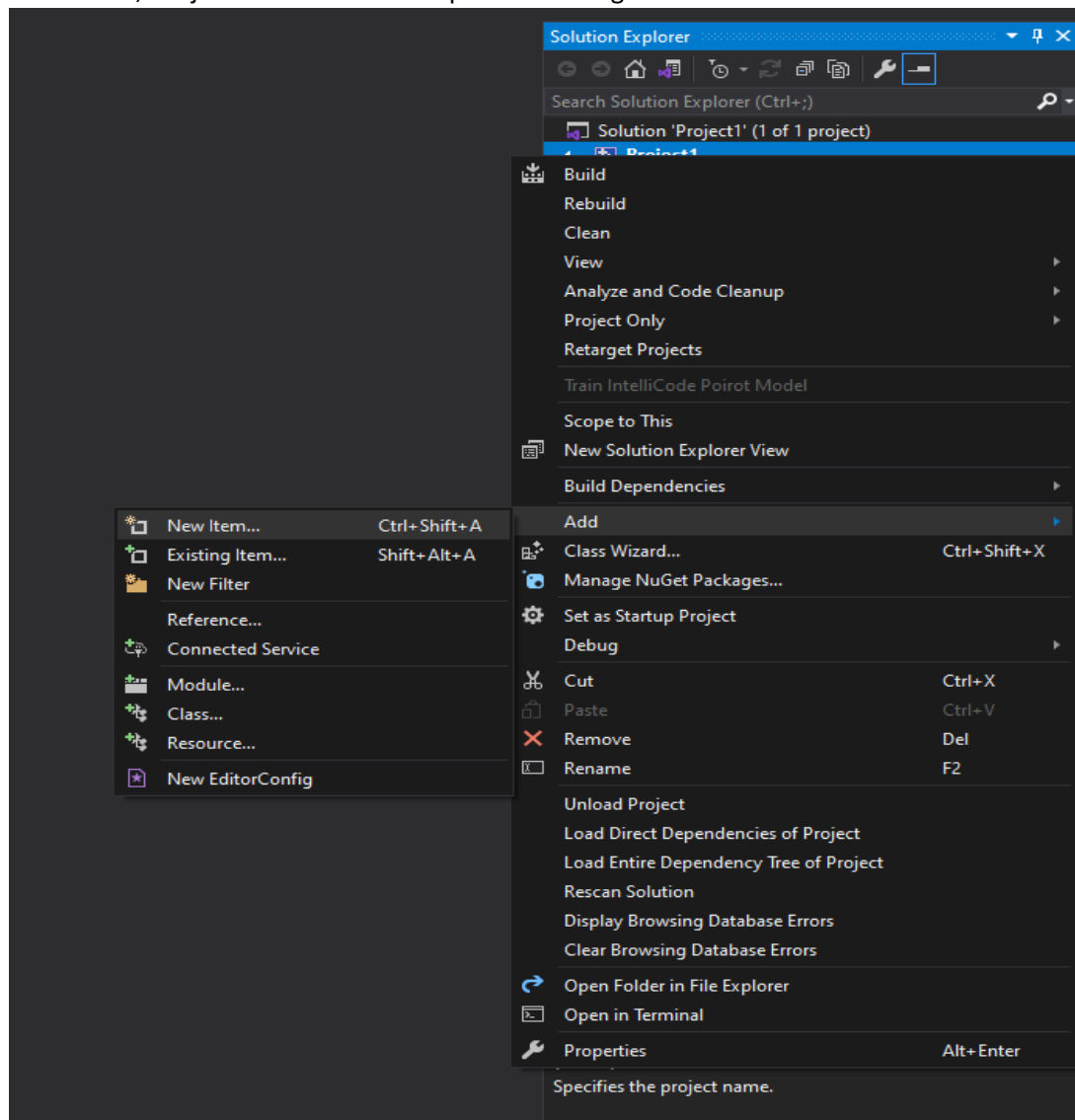


Now we copy paste the contents of “Library files” to this folder

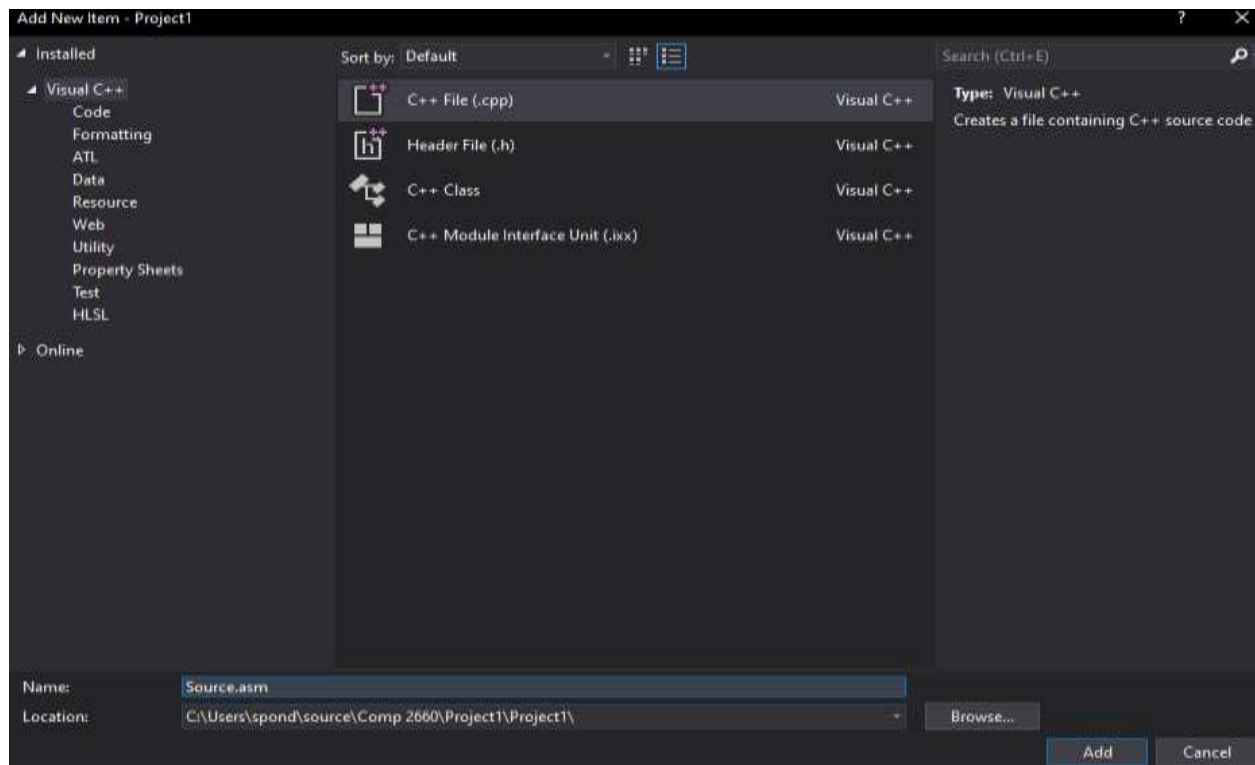


Name	Date modified	Type	Size
Assembly Program Template.txt	2019-09-22 9:51 AM	Text Document	1 KB
Irvine32.inc	2019-09-17 10:43 AM	Configuration sett...	6 KB
Irvine32.lib	2019-09-17 10:43 AM	Object File Library	20 KB
Project1.vcxproj	2023-09-12 5:19 AM	VC++ Project	8 KB
Project1.vcxproj.filters	2023-09-12 5:19 AM	VC++ Project Filte...	1 KB
Project1.vcxproj.user	2023-09-12 5:19 AM	Per-User Project O...	1 KB
SmallWin.inc	2019-09-17 10:43 AM	Configuration sett...	16 KB
User32.Lib	2019-09-17 10:43 AM	Object File Library	150 KB
VirtualKeys.inc	2019-09-17 10:43 AM	Configuration sett...	2 KB

After this, we just need the txt file open. We now go to Visual studio and add a new item



Select C++ file, and in the name tab change the extension from “.cpp” to “.asm”



A terminal will open and we just need to copy paste from “assembly program template.txt”

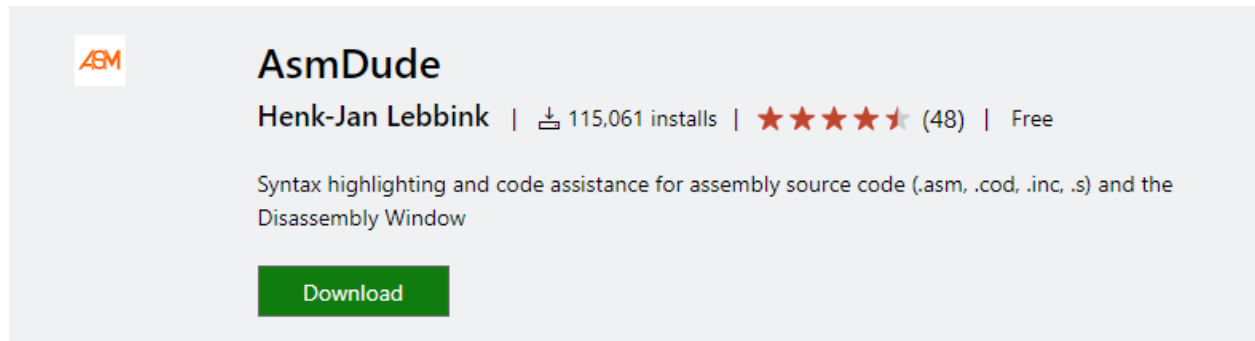
```
Source.asm*  X
1  TITLE
2
3  ; Name:
4  ; Date:
5  ; ID:
6  ; Description:
7
8  INCLUDE Irvine32.inc
9  INCLUDELIB Irvine32.lib
10
11  .data
12
13      ; data declarations go here
14
15  .code
16  main PROC
17
18      ; program syntax here
19
20      call DumpRegs ; displays registers in console
21
22      exit
23
24  main ENDP
25  END main
```

Congratulations we are now set up and ready to go.

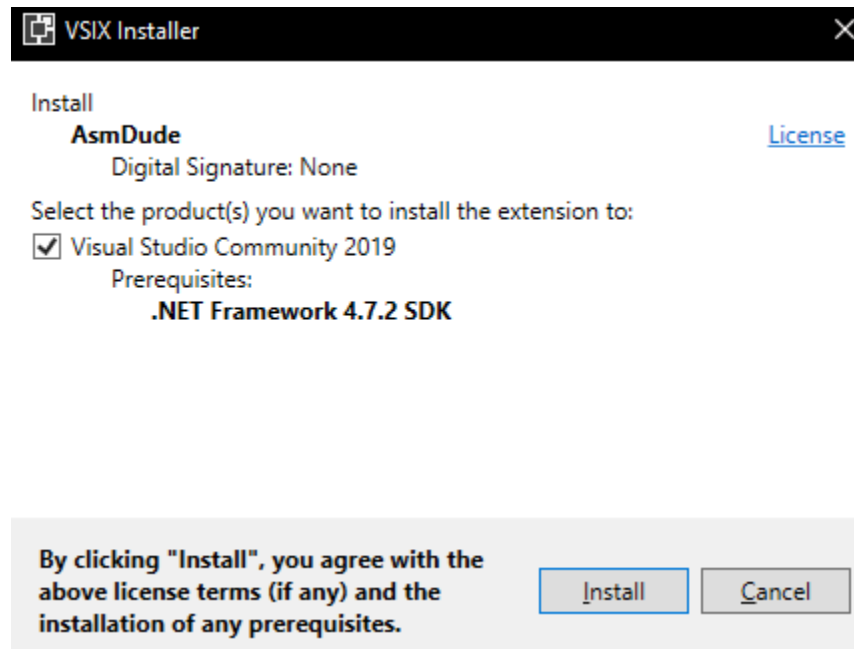
If you want the colour code like in VS Code follow along for a few extra steps.

Go to this website and download the addon

<https://marketplace.visualstudio.com/items?itemName=Henk-JanLebbink.AsmDude>



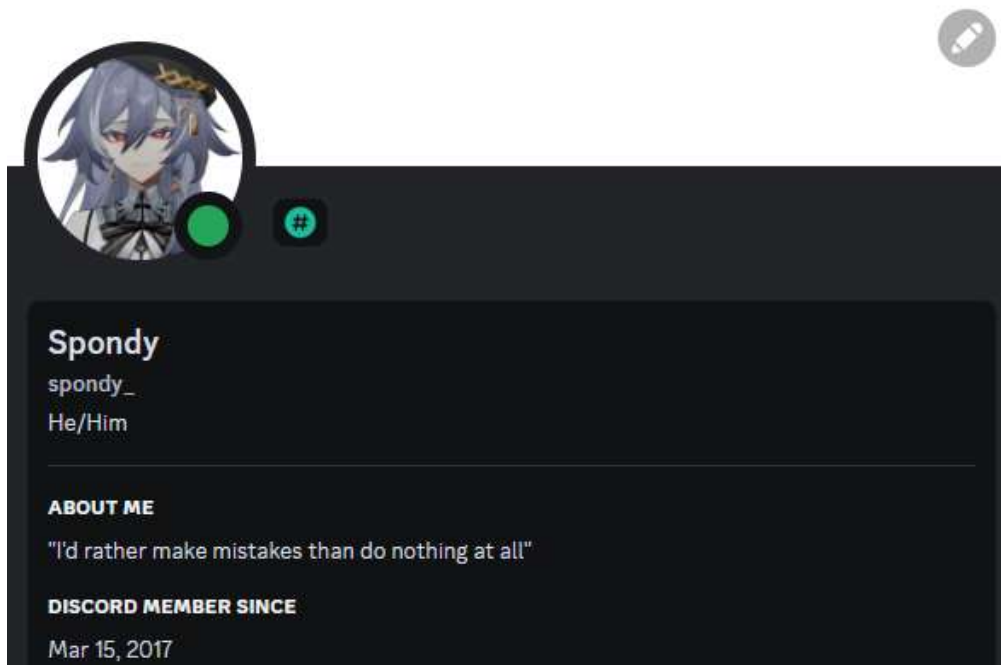
Run the VSIX installer



Click Install and let it finish, then restart visual studio and the end result should look like this

```
Source.asm  X
1  TITLE
2
3  ; Name:
4  ; Date:
5  ; ID:
6  ; Description:
7
8  INCLUDE Irvine32.inc
9  INCLUDELIB Irvine32.lib
10
11 .data
12
13     ; data declarations go here
14
15 .code
16 main PROC
17
18     ; program syntax here
19
20     call DumpRegs ; displays registers in console
21
22     exit
23
24 main ENDP
25 END main
```

Thank you for reading the guide, if you have any questions contact me on discord (#Spondy_2511)



A Discord profile card for a user named "Spondy". The card features a circular profile picture of an anime-style character with purple hair and a green status indicator. To the right of the profile picture is a small icon of a speech bubble with a pencil. Below the profile picture, the name "Spondy" is displayed in a large, bold font, followed by the username "spondy_" and the nickname "He/Him". A horizontal line separates the header from the bio section, which is titled "ABOUT ME" and contains the text "I'd rather make mistakes than do nothing at all". Below the bio, the section "DISCORD MEMBER SINCE" is displayed, followed by the date "Mar 15, 2017".

Spondy
spondy_
He/Him

ABOUT ME
"I'd rather make mistakes than do nothing at all"

DISCORD MEMBER SINCE
Mar 15, 2017