COMPUTER SCIENCE SOCIETY

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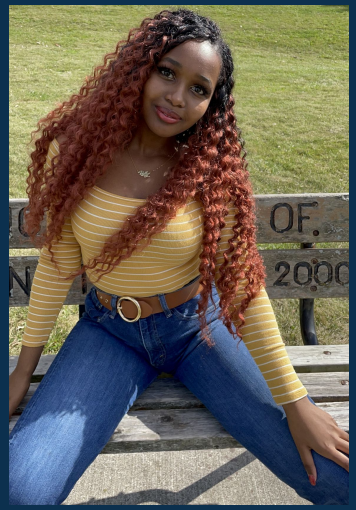
Setting up VSCode Workshop

FIRST YEAR BOOTCAMP - WORKSHOP #1



MEET THE PRESENTER

Kelly Owenya

Hi everyone! I’m a first year at UWindsor, majoring in Computer Science and minoring in Business. I’m also your first year Computer Science Society Representative! Feel free to contact me at any of the socials listed here!

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General Information!

What is VSCode, and why do I want to use it?

What is VSCode?

Visual Studio Code is a source-code editor made by Microsoft for Windows, Linux and macOS. It’s redefined and optimized for building and debugging modern web and cloud applications. Also, Visual Studio Code is free, fast and open-source!

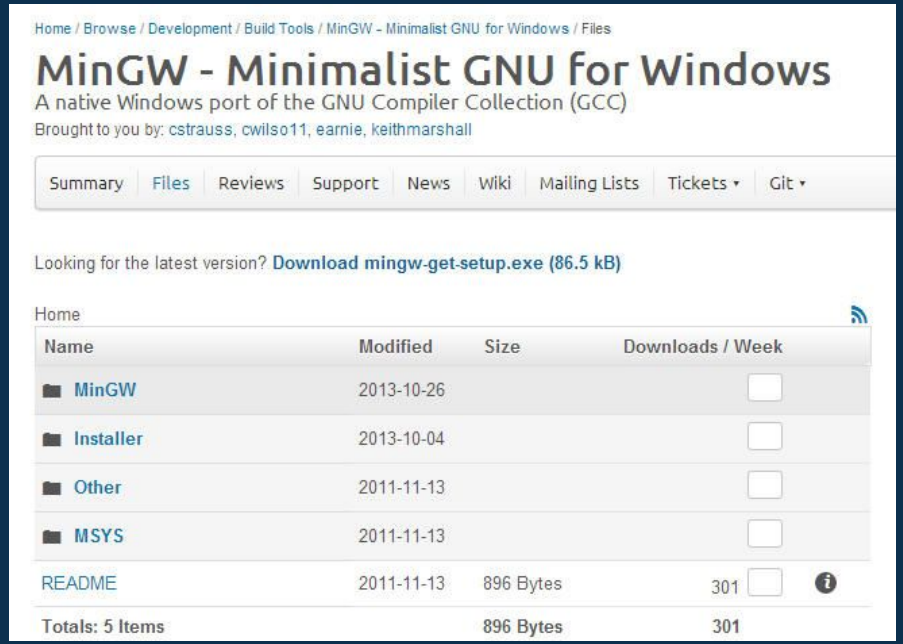
Why do I need it?

	NoMachine	Visual Studio Code
Fast user experience	✘	✔
Great graphics and user interface	✘	✔
Easy accessibility of files	✘	✔
Code Intellisense and Auto-Completion	✘	✔
Full Customization using Extensions	✘	✔

What is MinGW?

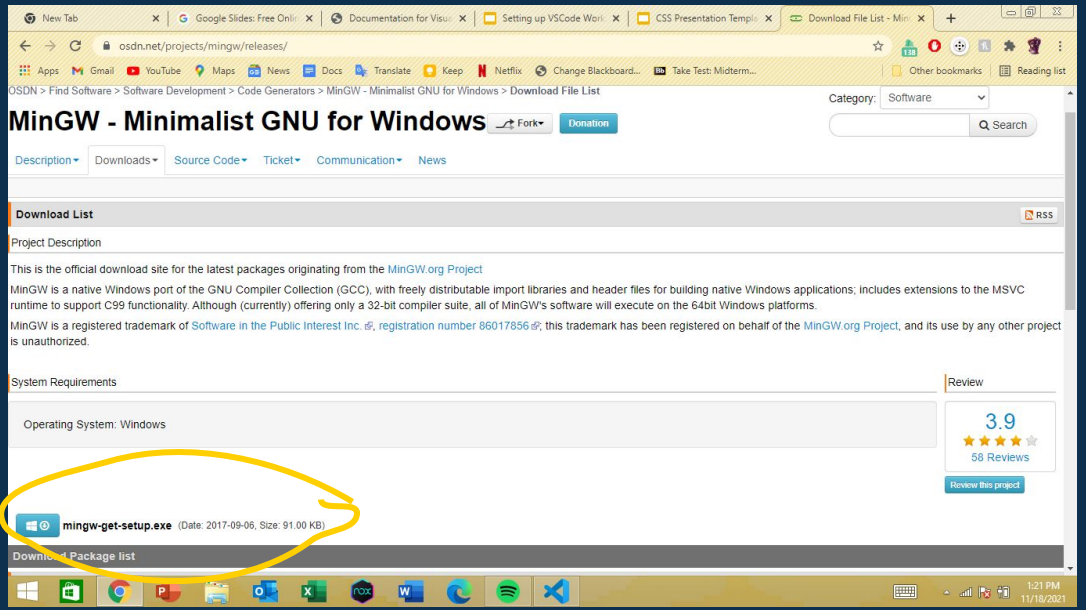
MinGW provides, among other things, the library(ies) needed for making a C implementation together with gcc.

To compile a C program you need a C implementation for your specific computer. C implementations consist, basically, of a compiler (its preprocessor and headers) and a library (the ready-made executable code). On a computer with Windows installed, the library that contains most ready-made executable code is, unfortunately, not compatible with the gcc compiler. So...to use this compiler in Windows you need a different library: that's where MinGW enters.



Installing and Setting Up VSCode!

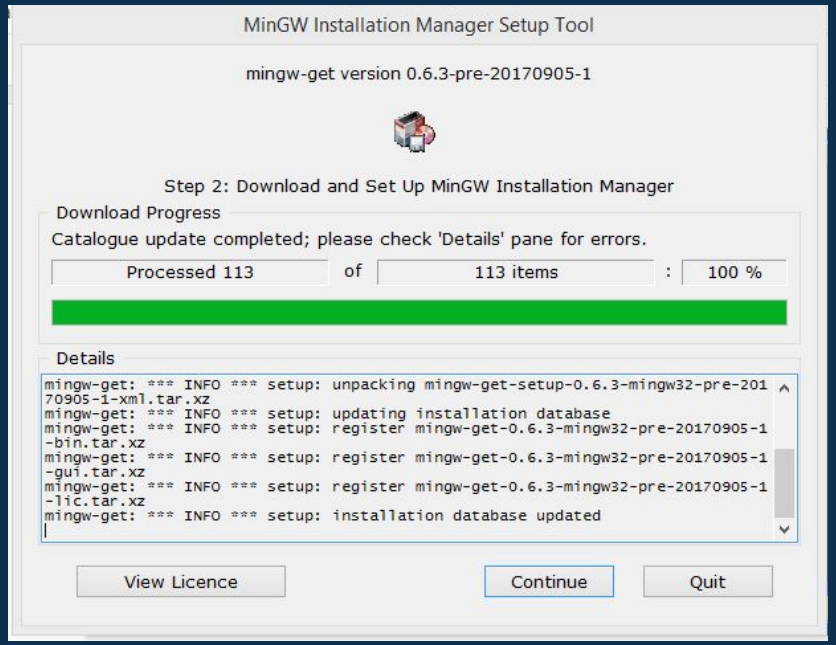
Now that we know what it is, let’s get to using it!



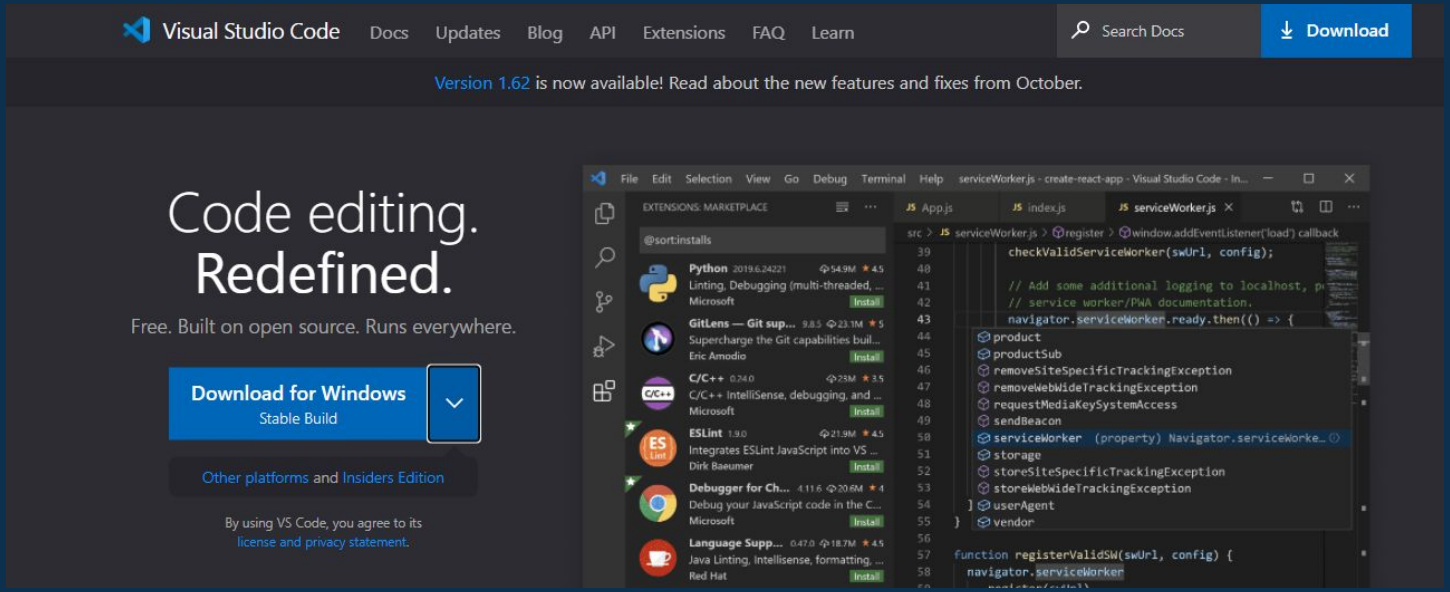
Link to install MinGW: https://osdn.net/projects/mingw/releases/

Go through the installation wizard!

IF you change the installation directory (I wouldn't), but if you must - PLEASE write it down somewhere. It's very important that you remember it for a future step!



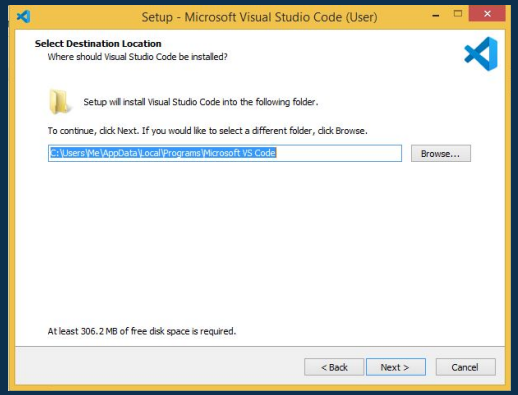
While it's installing, it takes a pretty long time. Leave it on in the background, and let's come back to it later.

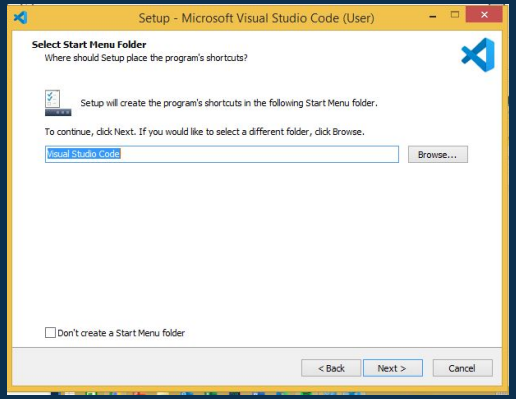


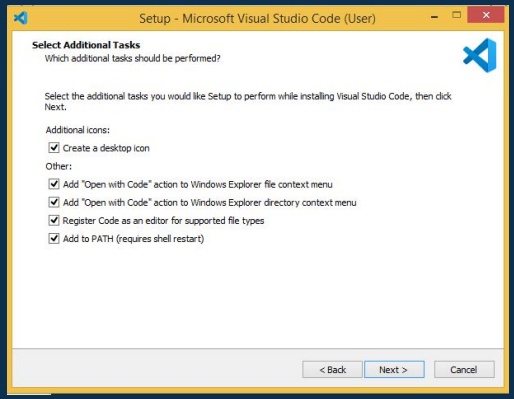
Link to install VSCode:
https://code.visualstudio.com/

You can also install it for other platforms if you have a Mac or Linux operating system by clicking the arrow beside it.

It’ll show up in your downloads bar (if you’re on Chrome or a similar browser). Wait for it to download.

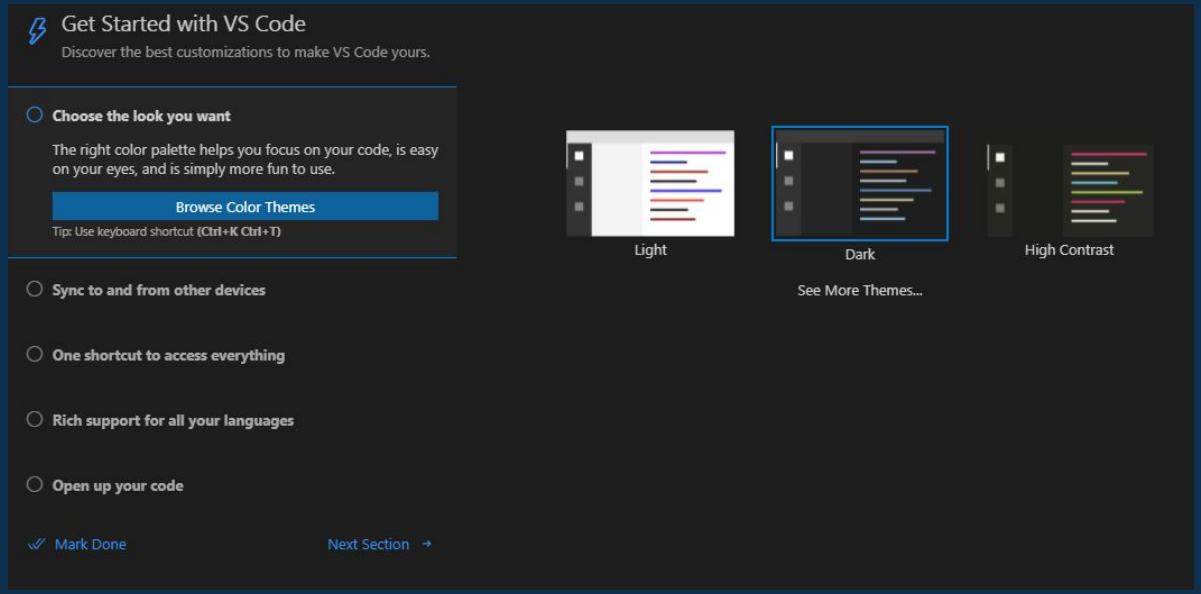




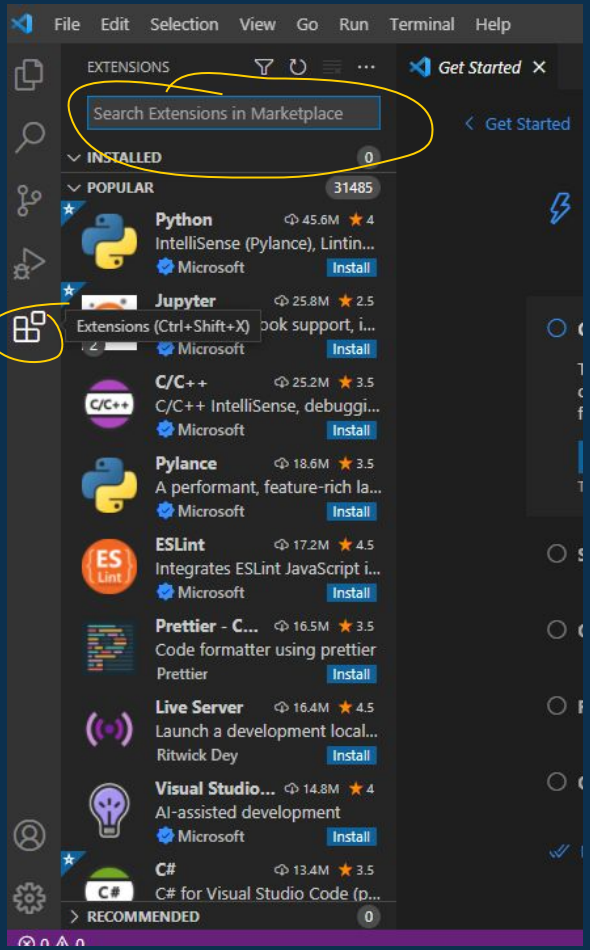


Follow the setup wizard process! Keep everything the same as these pictures (unless you must).

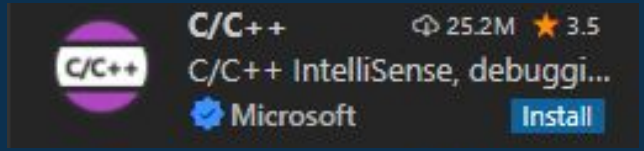
Now, wait for it it to finish installing, and launch it!

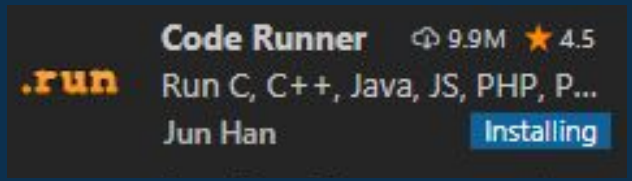


You can skip the “Get Started w/ VS Code” Menu for now. Don’t mark it all as done though, in case you want to return to it. Feel free to choose your theme though!

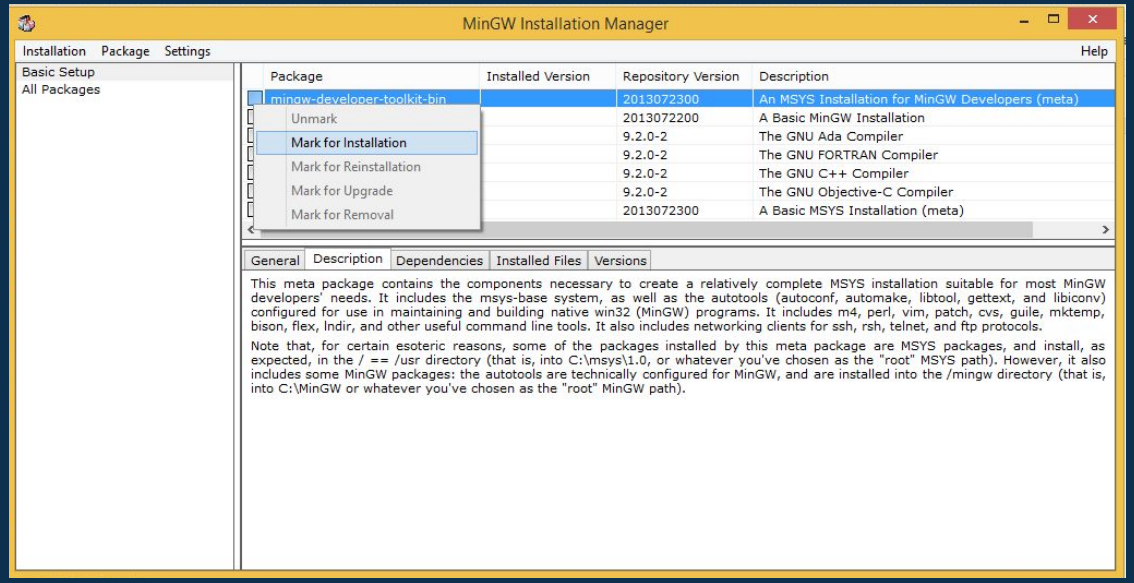


Open the Extensions Menu by clicking on the four squares icon on the left side of the screen, and search for and install these four extensions!





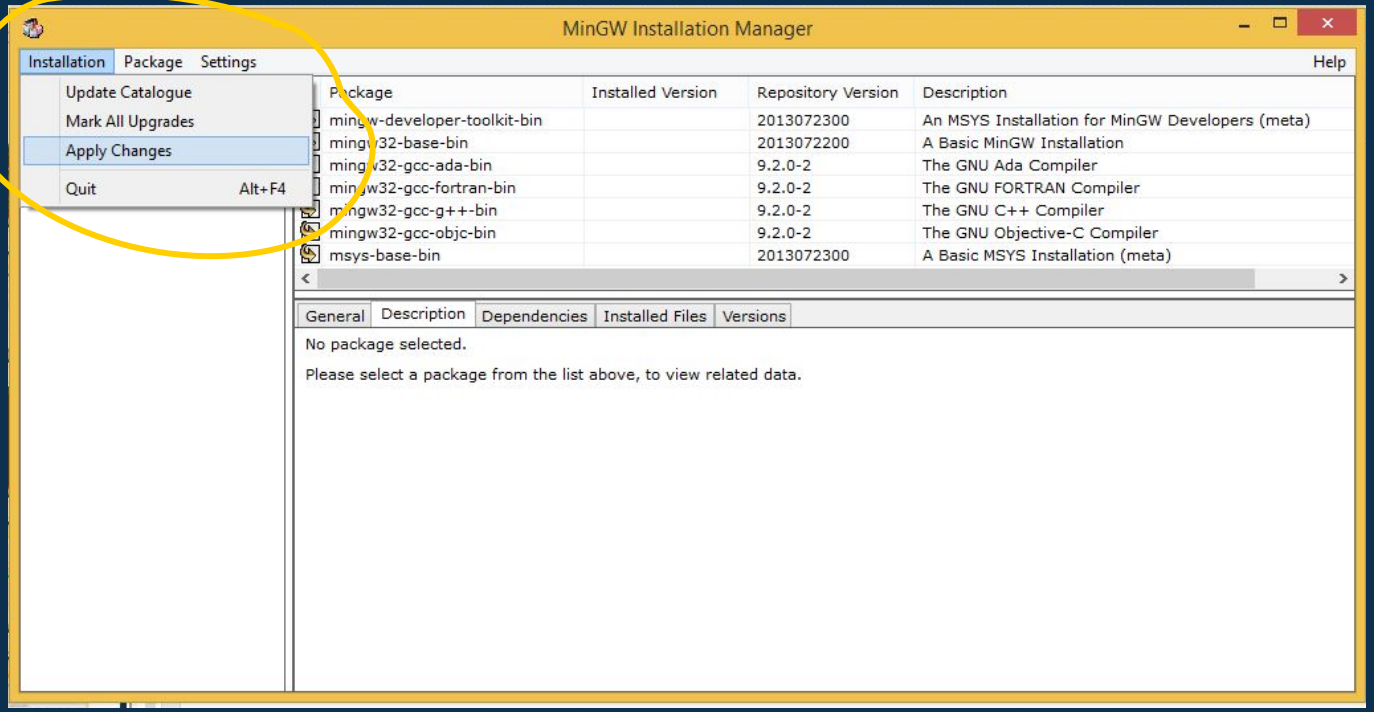
If you install Remote - SSH, Remote - SSH Editing Configuration Files *should* install automatically.



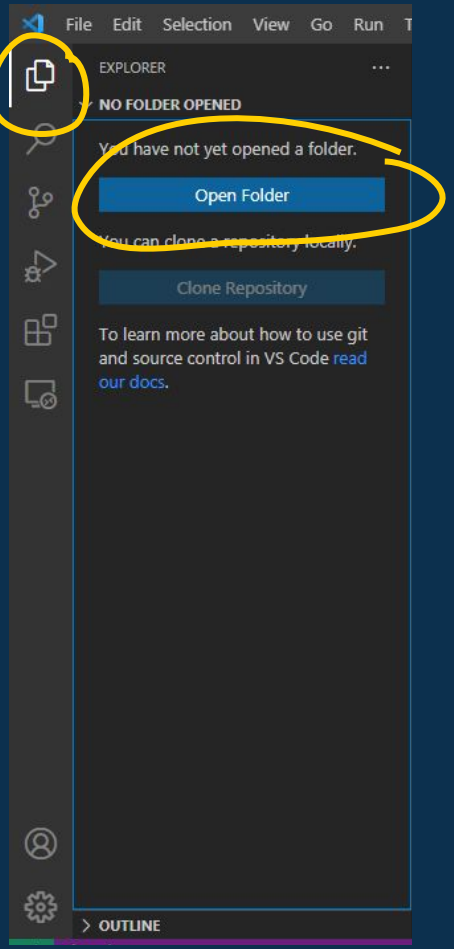
Let’s check on MinGW!

Mark these packages for installation (in Basic Setup):

- mingw-developer-toolkit-bin
- mingw32/64-base-bin
- mingw32/64-gcc-g++-bin
- mingw32/64-gcc-objc-bin
- msys-base-bin



Click “Apply Changes” and let it run in the background again! (This also takes a long time.)



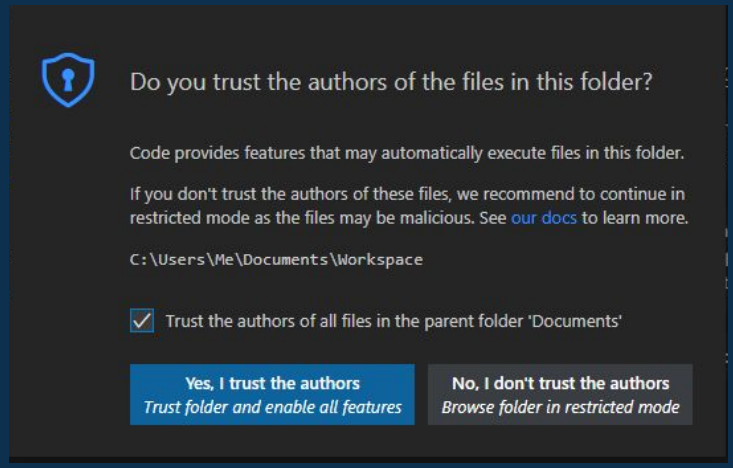
Open VSCode again, because it's time to…
Set up your workspace!

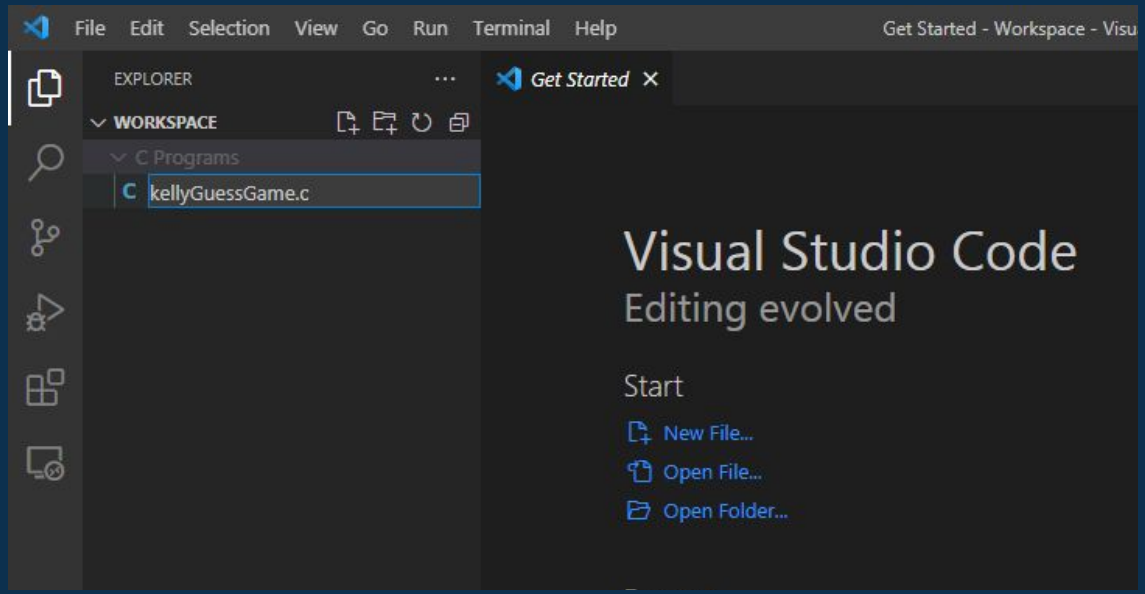
1. Go to Explorer (the paper icon in the top left).
2. Select "Open Folder".
3. Navigate to your Documents Folder and create a new folder. Name it Workspace. This is where all your VSCode files and projects will be located! *So, choose the location wisely.*

“Do you trust… **yourself?**”

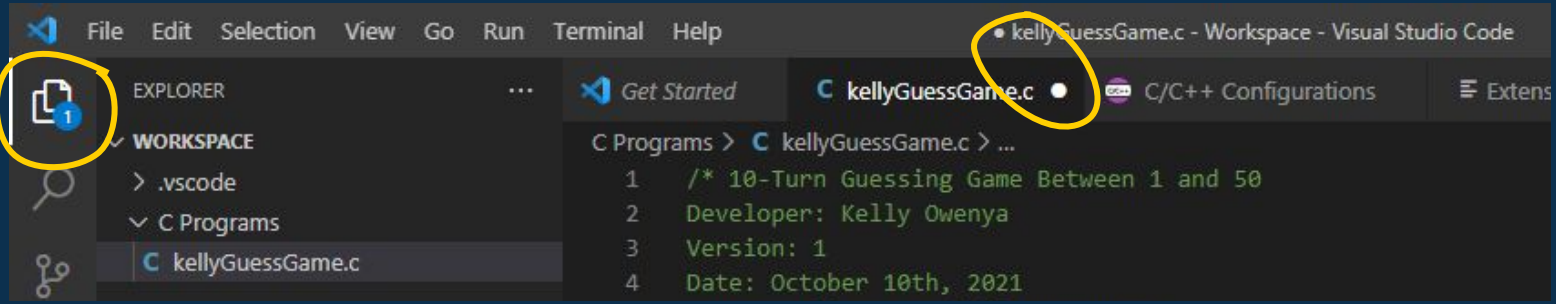
- *VSCode*

(Say yes, PLEASE.)



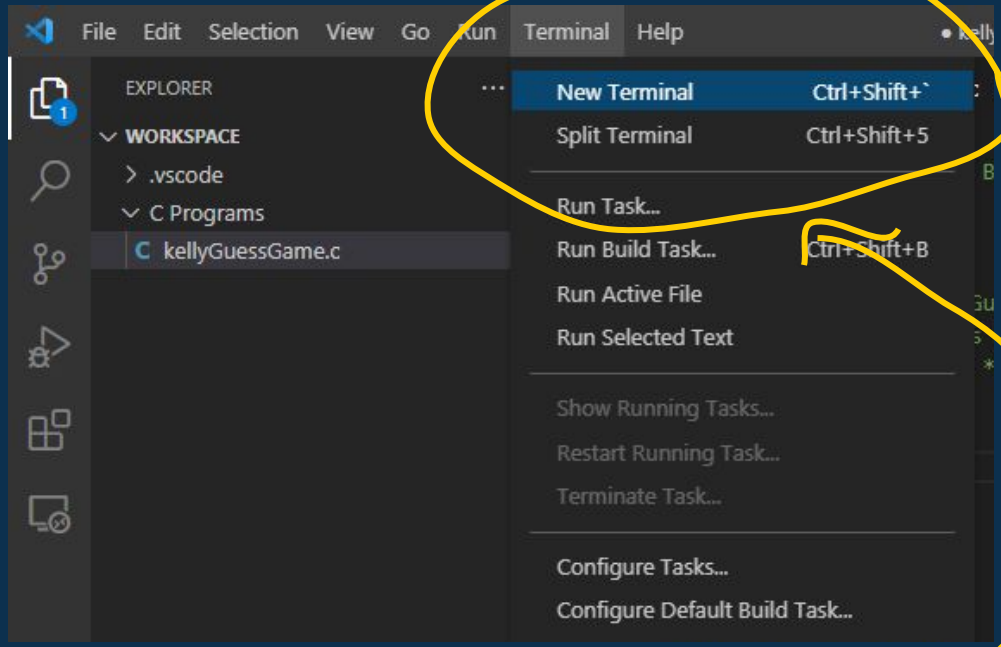


1. Make a folder by clicking on the folder icon with a plus on it. Call it “C Programs” or whatever you’d like (to hold all your programs in C). This is just for organization’s sake.
2. Here’s a link to a C Program I made for you to test out the features of VSCode! https://drive.google.com/file/d/1IjVxOk7mtdiVyN_27prL8mF7A-FukmZr/view?usp=sharing
3. Make a new file by clicking on the paper icon with a plus on it. Name it “kellyGuessGame.c”. (The .c turns it into a C file).
4. Copy and paste the text from the C Program I made into your new file.

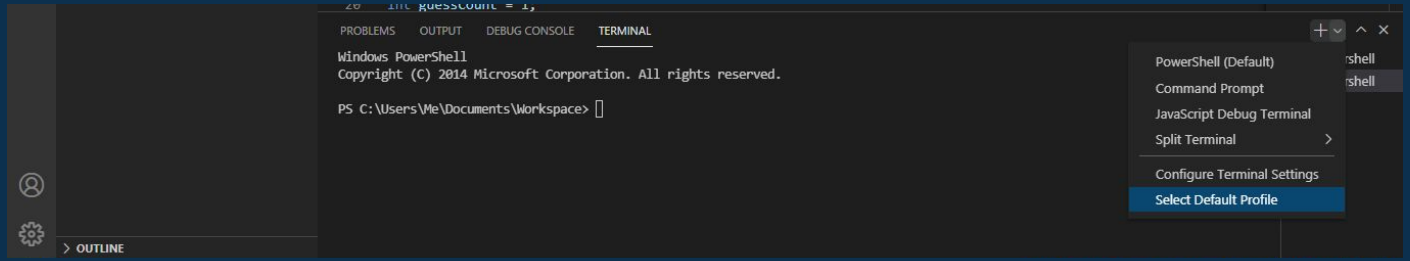


These all mean your program is *unsaved*!

To save your program: use **Ctrl + S.**

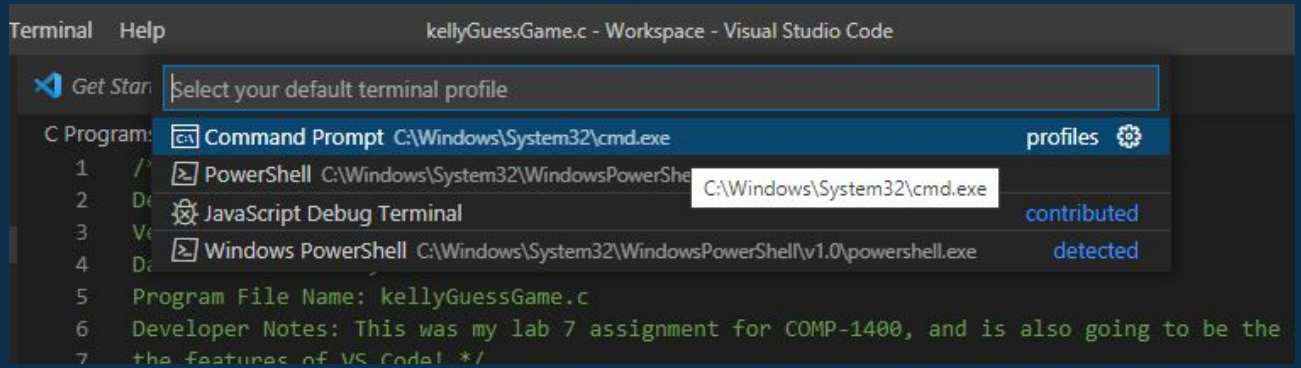


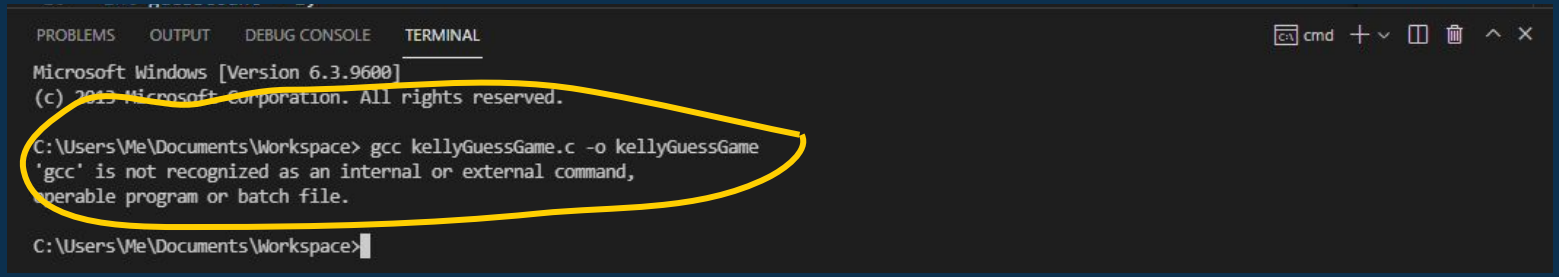
Open a new terminal by clicking here!



Powershell is not that great for our purposes, so let's permanently change it to Command Prompt (which has the same/similar commands to NoMachine). It's as simple as…

1. Open the small arrow next to the plus sign in the terminal, and select "Select Default Profile".
2. Select "Command Prompt" when it appears!





Great, let's run our program!

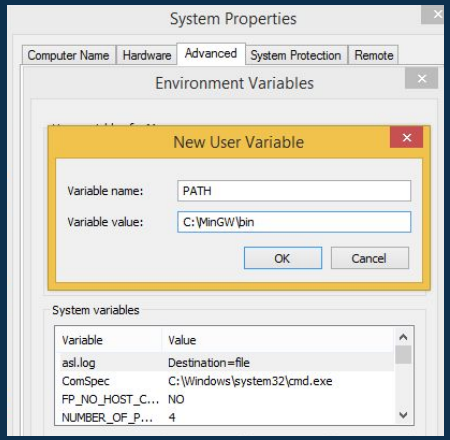
Let's just type in "gcc kellyGuessGame.c -o kellyGuessGame"...

Oh no! It won't work! GCC doesn't exist??? What shall we do??!!??

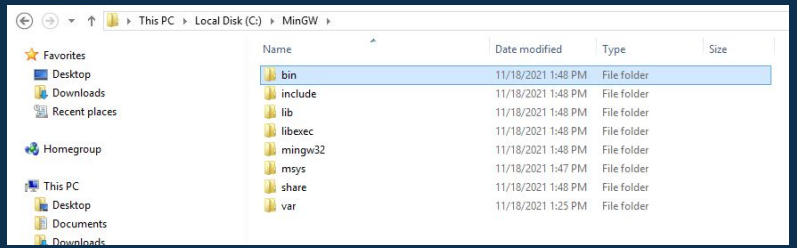
This is why we need MinGW.

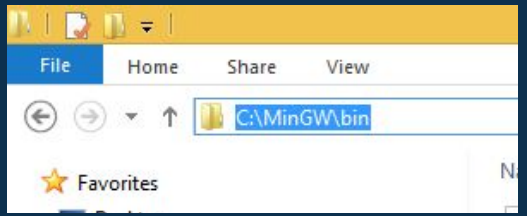
To make “gcc” work...

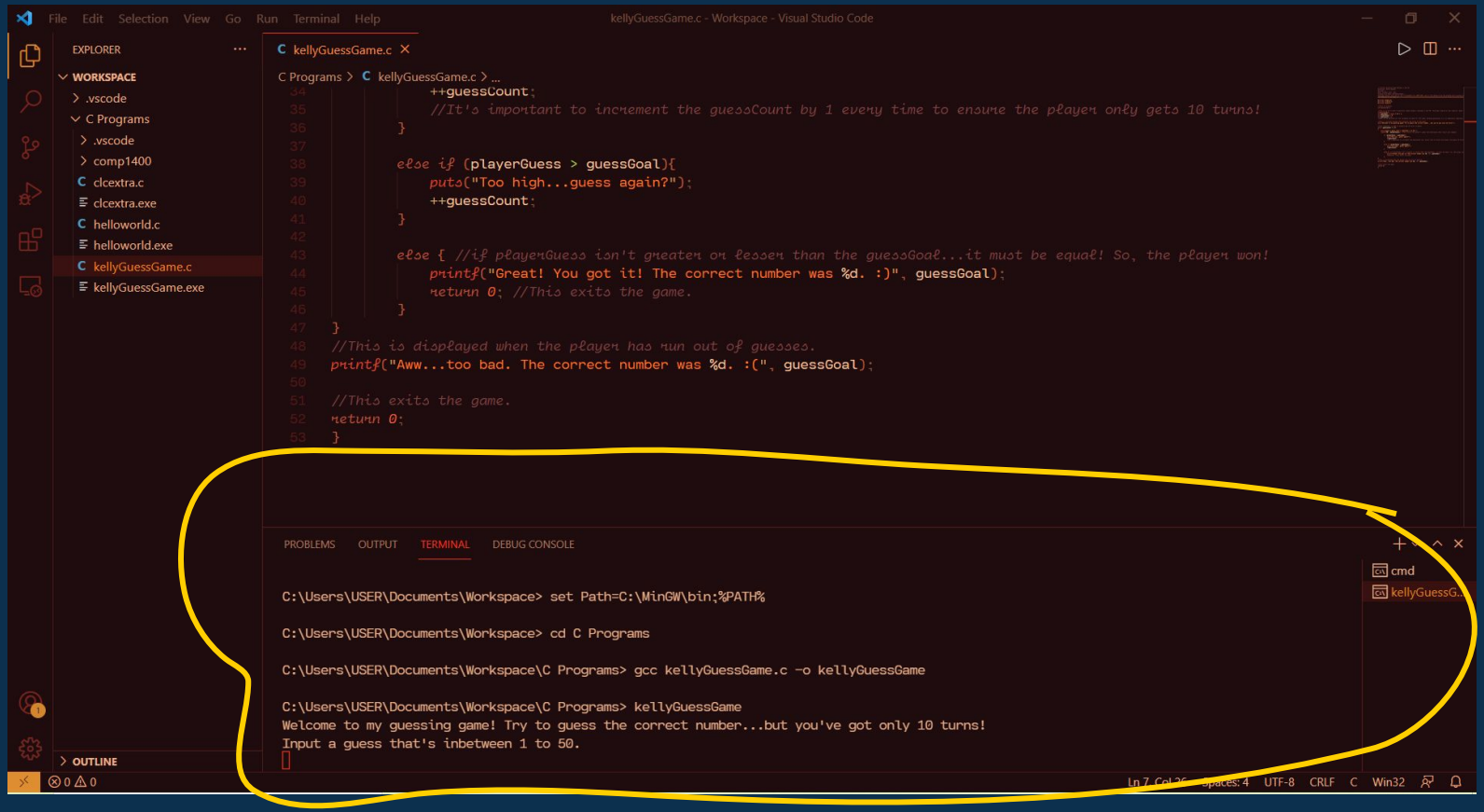
1. In your computer’s search bar, type “settings” to open your Windows Settings.
2. Search for “Edit environment variables for your account”.
3. Go to Advanced, and add a new variable by selecting “New”.
4. Fill in the boxes according to the picture (if you didn’t change where MinGW was installed).



Note: THIS is why it was important to remember where it was installed. If you installed it somewhere else - navigate to it and copy its file path! You want the path to the “bin” folder.



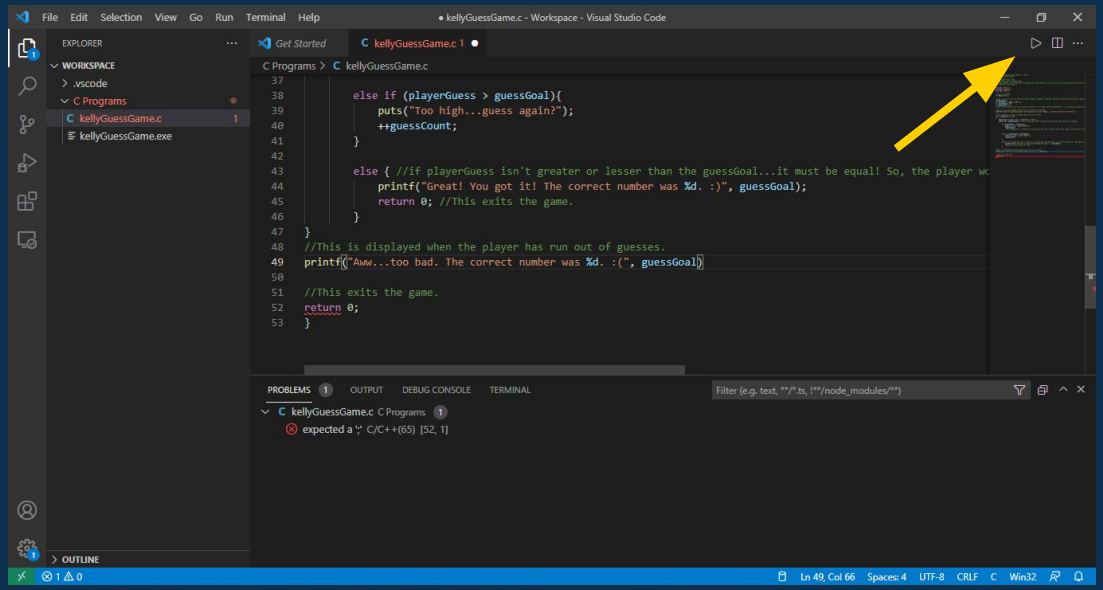


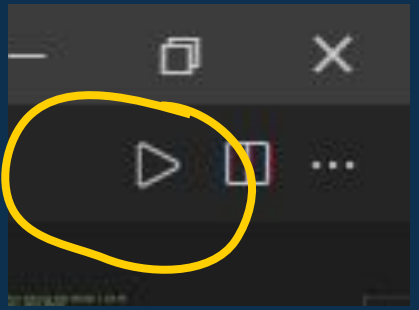


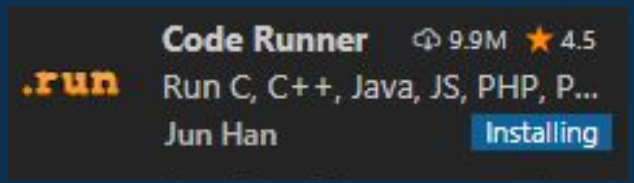
Copy down what's written in the terminal here. If you have another path, replace C:\MinGW\bin.

cd into your folder where the program is located, compile it using gcc and run the program!

Here's my finished installation of VSCode on my main computer. Want a VSCode that's fully customized with your own colour palette and font, and also able to connect to the school's server? Tune in to my next workshop~

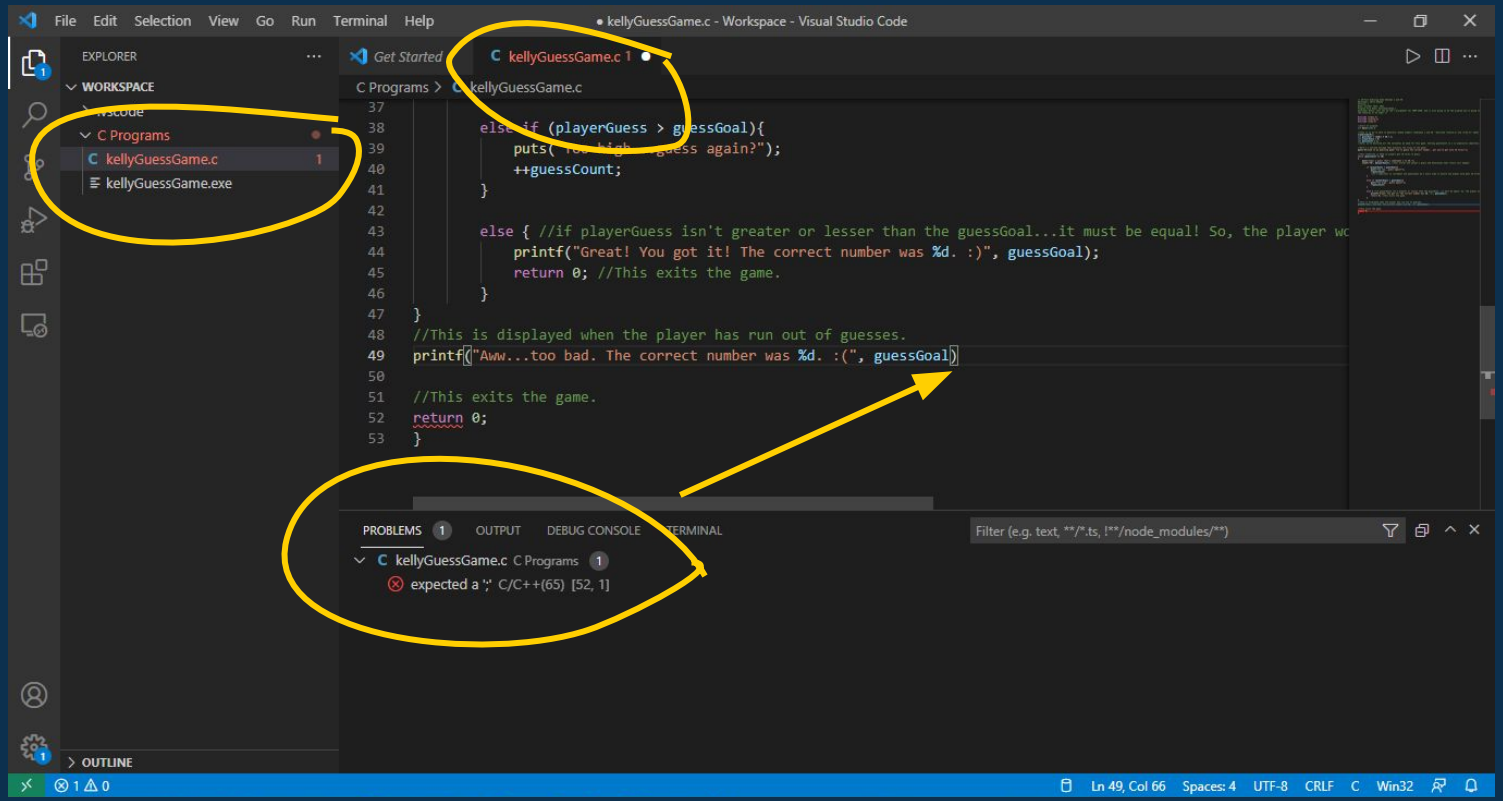


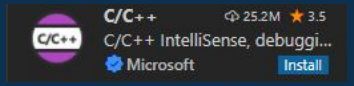




Feeling lazy and don't want to always have to type in "gcc whatever -o blahblah too much effort can i sleep now"?

Be gloriously lazy and use the Code Runner button (play button in top right)!
It auto-compiles and runs your code for you!





Always making small syntax errors when you code and can't figure out what's gone wrong?

C Intellisense will catch all those nasty syntax errors for you and alert you of them before you code!

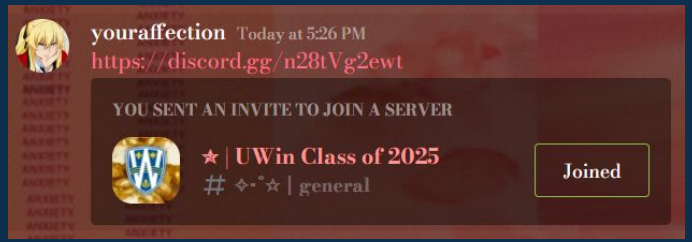
Okay, so then, what do these do?

Attend my next workshop next week (First Year Bootcamp - Workshop #2) to find out!

COMPUTER SCIENCE SOCIETY

THANK YOU

FOR JOINING US!



Join my first years' discord if you have questions or need help!
https://discord.gg/n28tVg2ewt