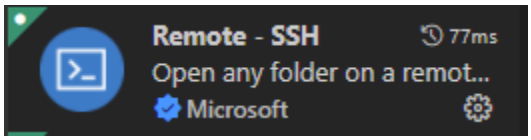
Credit to the TAs and Nick Hopper who created this to help students set up ocaml through a ssh connection. I have modified this to where it will apply to any class.

First, what is an SSH? A ssh is Secure Shell, which doesn't really explain what it does or why we need it. But to explain, an SSH is basically when you use a terminal that is connected to another computer. For example you need a linux machine to run some languages by using an ssh to connect to a linux computer, you can then run linux commands. These below steps will allow you to remotely run and write code on a CSE computer, which means as a student you don't have to worry about storing files or downloading programs.

I recommend that you set this up either during csci1133 or at the beginning of csci1933

Another similar resource is VOLE a virtual environment for connect and using CSE machines

1. In VSCode, select View on the toolbar along the top and click on Extensions.
2. Search "remote" in the extensions search bar and install Remote - SSH by Microsoft.



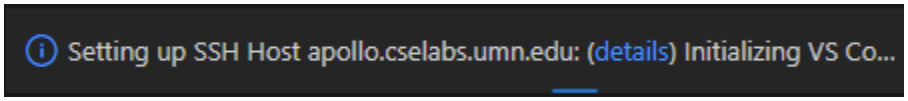
3. After this is installed, a small green box will appear in the lower left of VSCode:  Click on this, and a popup will appear along the top.
4. Select "Connect to Host" or "Connect Current Window to Host".
5. Select "+ Add New SSH Host"
6. In the text box along the top, type in the following command and press enter to run:

   ssh x500@preferred-lab-machine

   Lab machine information can be found here.
   Make sure that the chosen lab machine has remote access computer names.

   For example, If I wanted to connect to Keller 4-250 machine 13, the command for me would be: "ssh helge393@kh4250-13.cselabs.umn.edu"

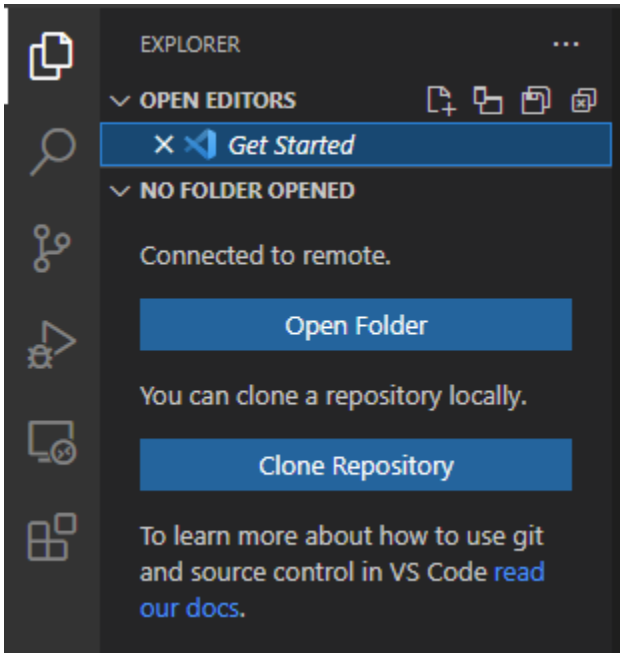
7. After applying the ssh command, you will be prompted for your UMN password. Type this in and press enter.
8. In the lower right corner, a popup will appear:



9. Click on details on this, and you will see a Duo Mobile terminal appear, along with another password prompt. In this prompt, input 1 for a Duo push, or 2 for a phone call to log in.

10. Once connected, the green box in the lower left should display “SSH: preferred-lab-machine” meaning that you have established a connection to the machine.

11. After this, click on the Explorer tab in the upper left, and you should see this:



12. Select the Open Folder option and hit enter. A dropdown window will appear at the top. Verify that your home directory is showing in this, which should look like “/home/user123/” and press Enter. This will prompt you to log into the lab machines again which can be done by repeating steps 7 through 9.
13. Once connected, select Terminal in the toolbar along the top and select New Terminal. You should now see a blank terminal along the bottom of your screen.

The terminal that appears is the same terminal that runs on the lab machines and you can now use any commands that are taught in class through this terminal. This includes any git, ocaml compiling, utop, python, java,and directory navigation commands.