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All Sections

with materials from former CS 0449

Teaching Assistants

Department of Computer Science  
School of Computing & Information  
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## Connecting to Thoth via VS Code

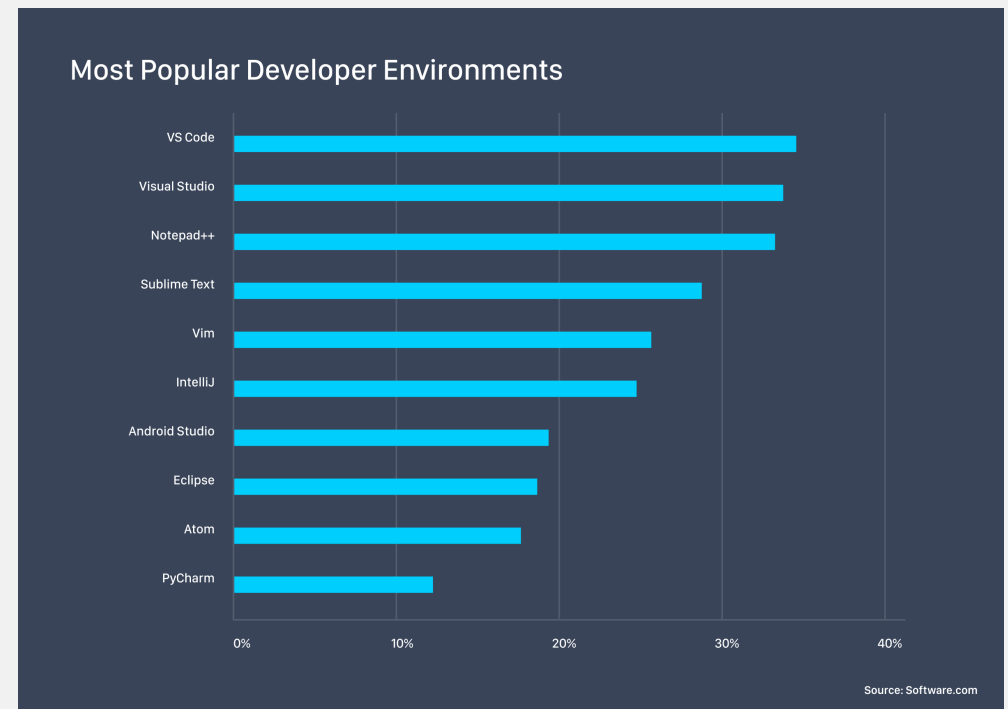
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- Installing VS Code
- Installing the Remote Development Extension
- **DISABLING FLOCK, C/C++ Extension**
- Connecting to Thoth
- Debugging VS Code/Thoth connections

# We need for a more robust text editor...

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- In Lab0, you most likely used a terminal-based text editor, such as Vim, Nano, and Emacs, to write a simple “*Hello World!*” program on Thoth.
- While those programs are great (they really are), once your projects become larger, you’re going to want a more robust text editor...
  - like Visual Studio Code!
- VS Code is a source-code editor made by Microsoft...
  - and it’s one of the most popular code editors (at least for now)
- VS Code is great because:
  - it supports many languages
  - it’s cross-platform
  - has huge library of extensions
  - **And can connect to Thoth (!)**



<https://www.software.com/src/ranking-the-top-5-code-editors-2019>

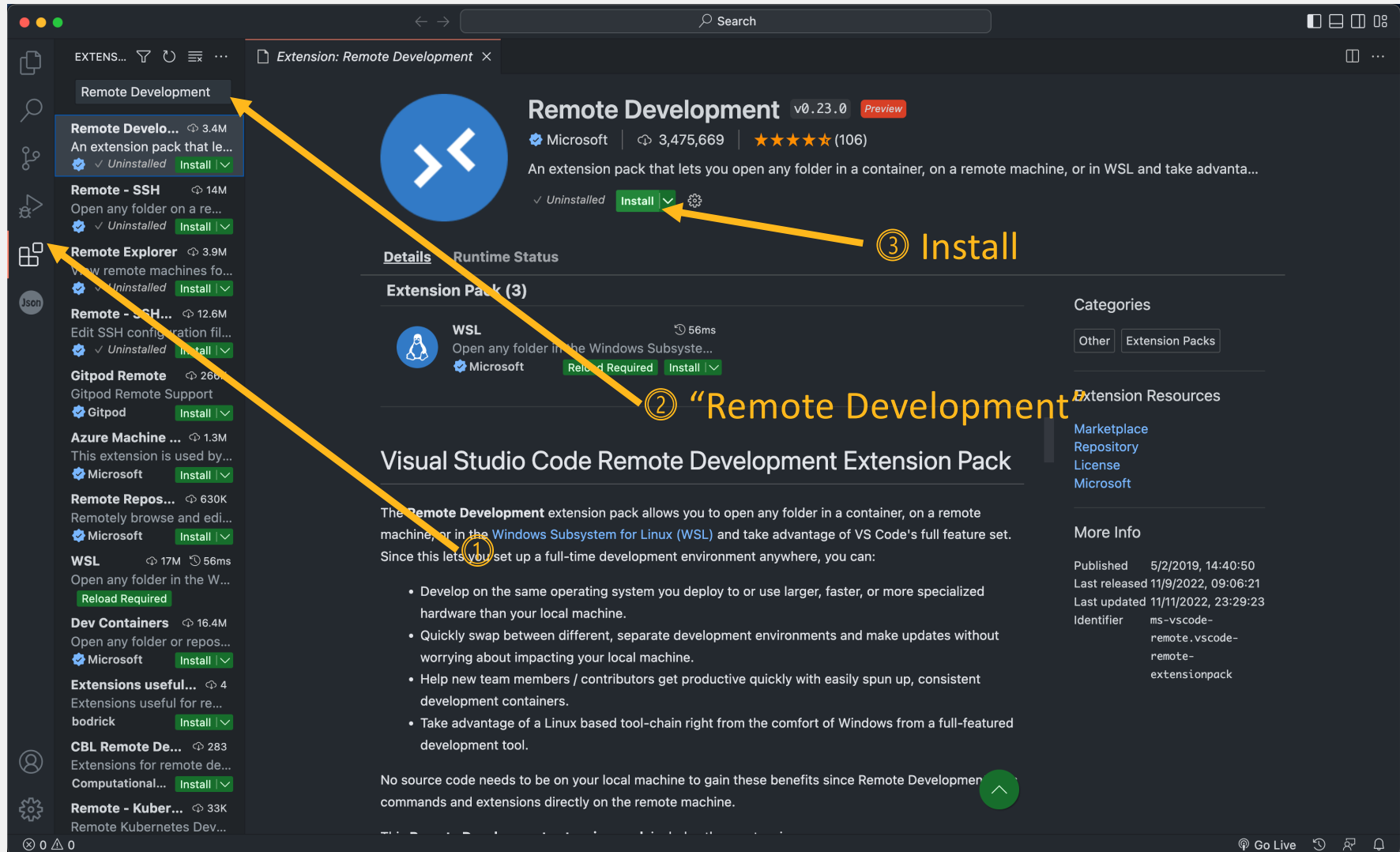
# Downloading VS Code

- If you haven't already, you can download VS Code
  - from <https://code.visualstudio.com/>
    - Select 'Stable Version' for your platform
- Run the installer
  - Video Walkthrough: <https://code.visualstudio.com/learn/get-started/basics>

The screenshot displays the Visual Studio Code website. At the top, there is a navigation bar with links for 'Visual Studio Code', 'Docs', 'Updates', 'Blog', 'API', 'Extensions', 'FAQ', and 'Learn'. A search bar and a 'Download' button are also present. Below the navigation bar, a banner announces 'Version 1.74 is now available!'. The main content area features the text 'Code editing. Redefined.' and 'Free. Built on open source. Runs everywhere.' A prominent blue button labeled 'Download Mac Universal Stable Build' is highlighted with a yellow arrow. Below this button, there are links for 'Web, Insiders edition, or other platforms' and a link to the 'license and privacy statement'. The background of the website shows a blurred image of the VS Code interface, including the 'EXTENSIONS: MARKETPLACE' sidebar with various extension cards like Python, GitLens, C/C++, ESLint, and Debugger for C++, and a code editor window displaying JavaScript code.

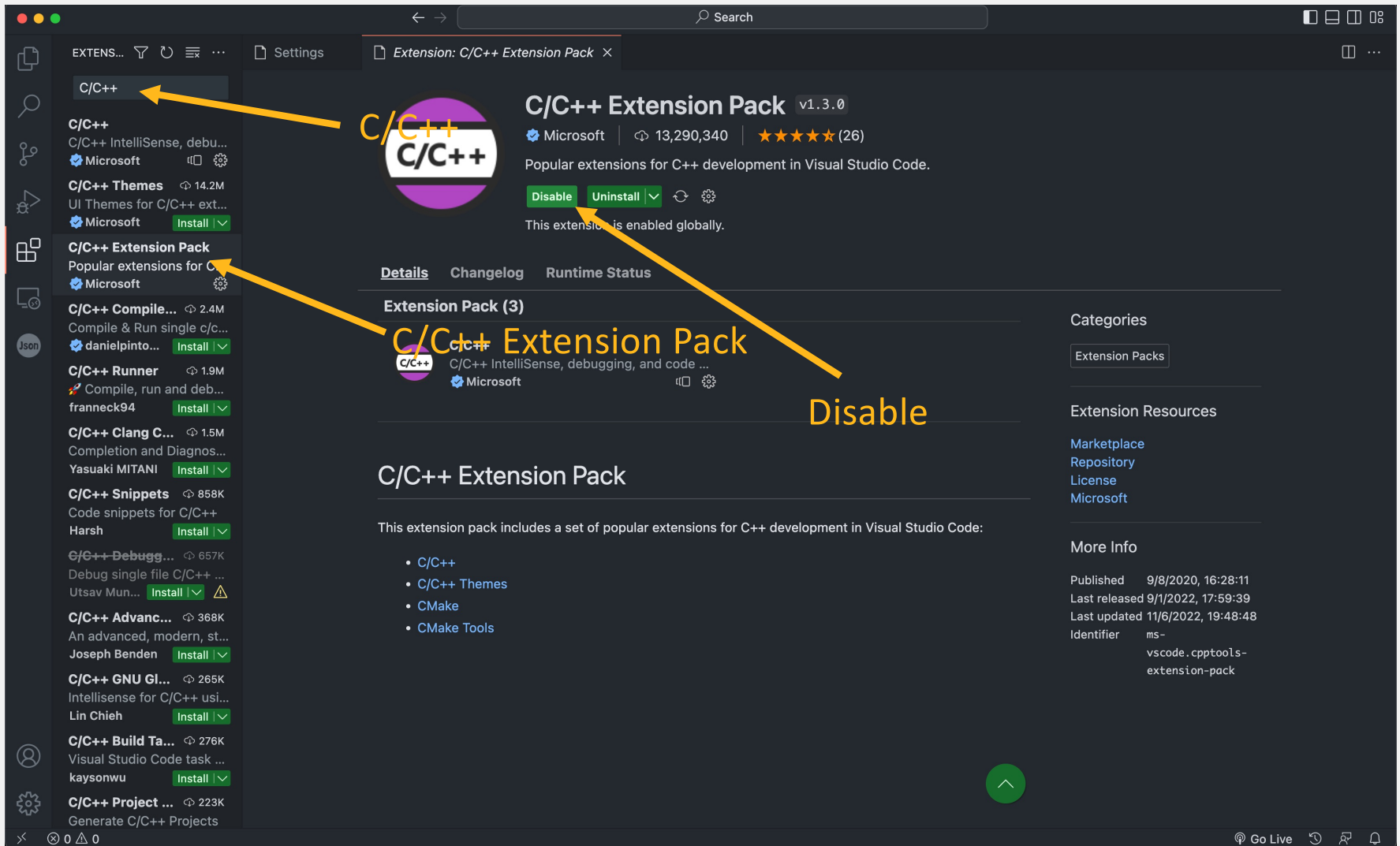
# Once you've installed VS Code...

- You are going to want to install the Remote Development Extension Pack
  - This extension is what allows us to connect to Thoth



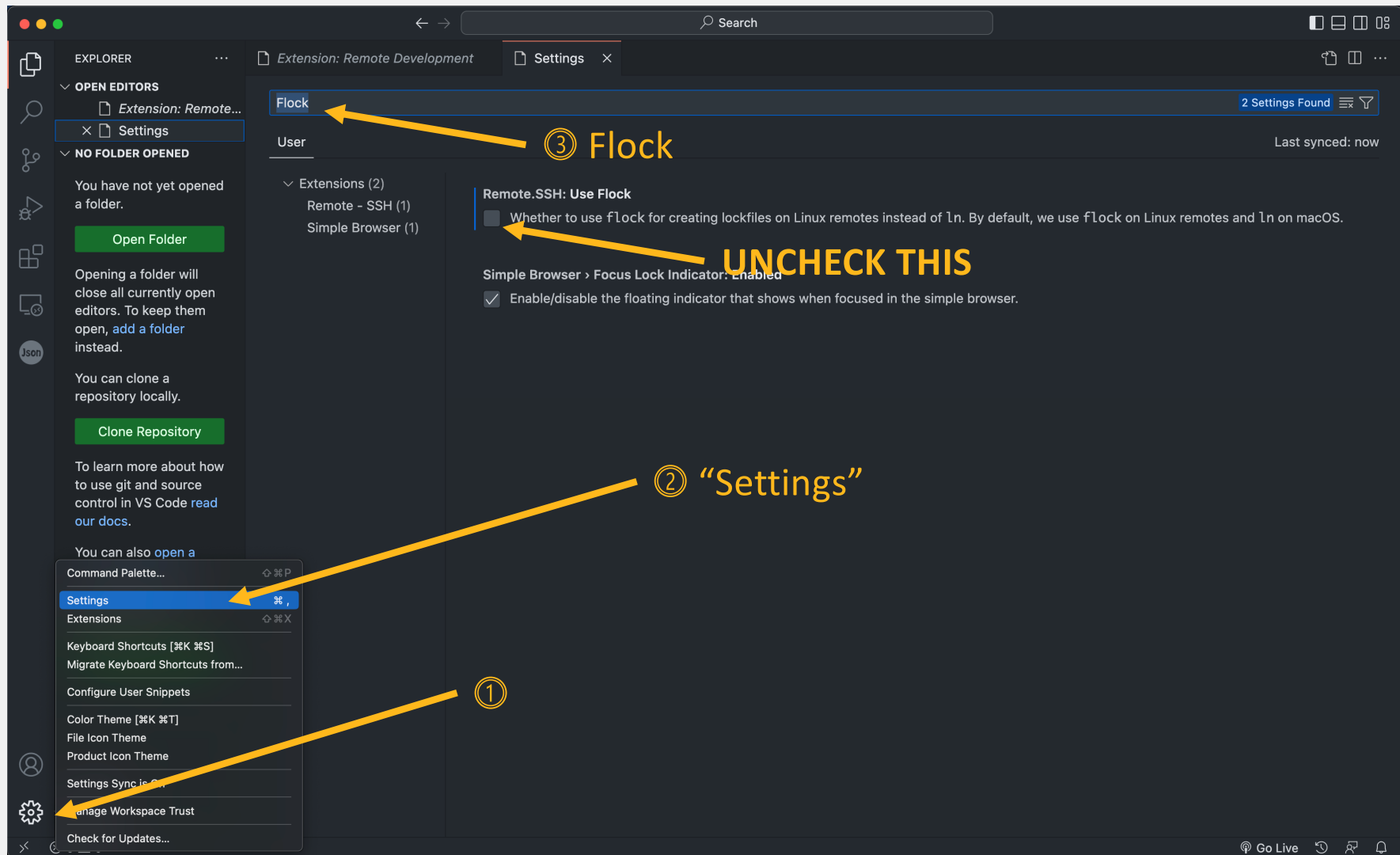
# Changing a few settings

- While you have the extensions tab open
  - Search for C/C++ Extension and **disable** it
  - Otherwise, you will get errors every time you are programming



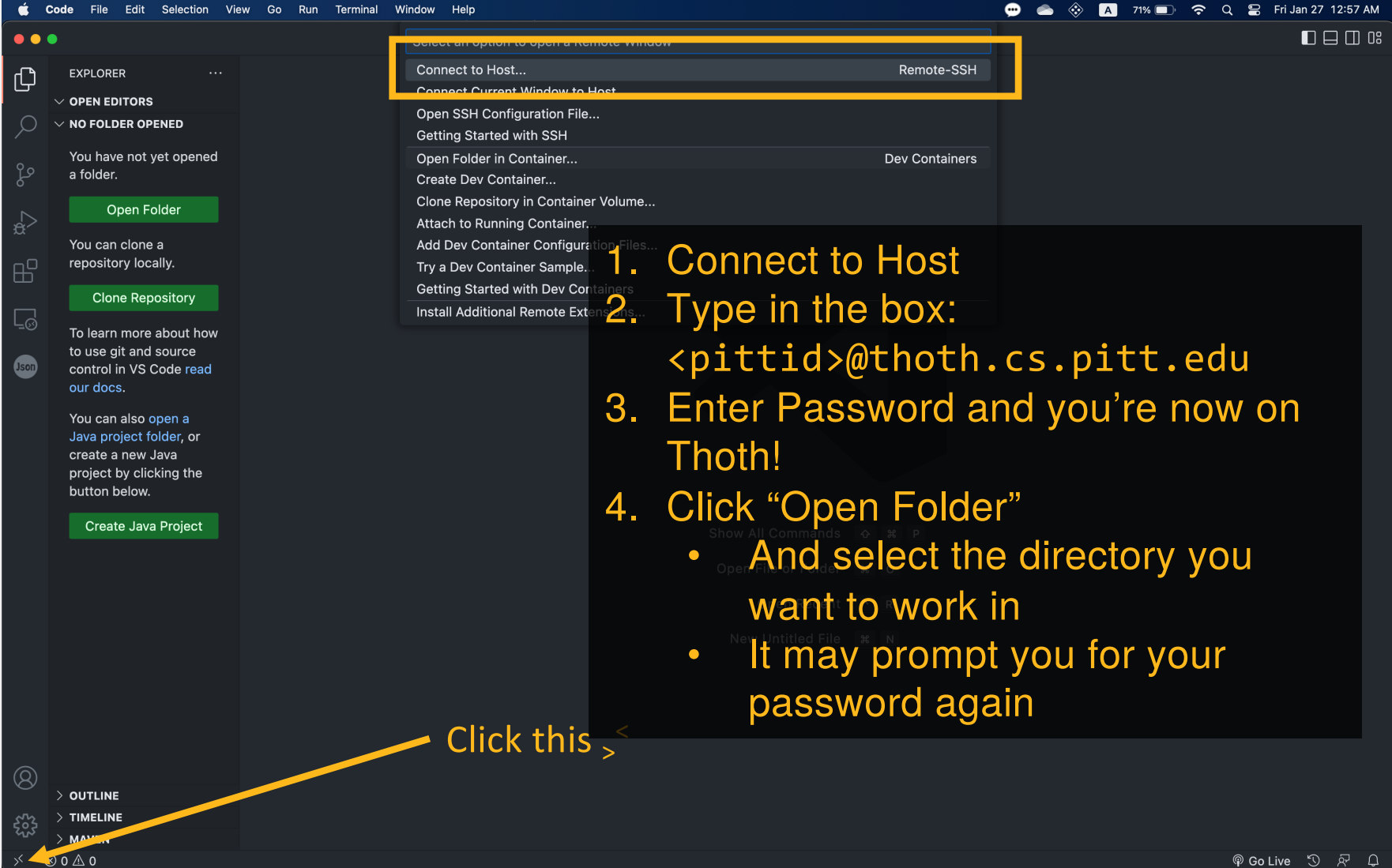
# Changing a few settings

- Before you connect to Thoth, you need to **Disable Flock**
  - If you don't do this, VS Code will continuously hang on login
    - And debugging this is a hassle...*(really)*





# At last, connecting to Thoth



The screenshot shows the Visual Studio Code interface. The Remote Explorer sidebar is open, displaying a menu with the following options:

- Select an option to open a Remote Window
- Connect to Host... Remote-SSH
- Connect Current Window to Host
- Open SSH Configuration File...
- Getting Started with SSH
- Open Folder in Container... Dev Containers
- Create Dev Container...
- Clone Repository in Container Volume...
- Attach to Running Container...
- Add Dev Container Configuration Files...
- Try a Dev Container Sample...
- Getting Started with Dev Containers
- Install Additional Remote Extensions...

A yellow box highlights the 'Connect to Host...' option. A yellow arrow points to the gear icon in the bottom left corner of the interface.

1. Connect to Host
2. Type in the box:  
`<pittid>@thoth.cs.pitt.edu`
3. Enter Password and you're now on Thoth!
4. Click "Open Folder"
  - And select the directory you want to work in
  - It may prompt you for your password again

Click this >

# Debugging VS Code

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- If you were able to get on Thoth without errors, Hurray!
- If you are experiencing errors however:
  1. First, make sure both Flock and C/C++ extension is **disabled**
  2. Make sure you are able to login to Thoth via ssh (terminal)
    - And make sure you're entering your id & password correctly
  3. You may have to kill the VS Code process manually (to restart it)
    1. Log on to Thoth via SSH
    2. Run: `kill `ps -ux | grep vscode | awk '{print $2}'``
      - This command should kill any VS code instances still running on Thoth
    3. Using `ls -a` and `rm -r`, remove the `.vscode` folder on your home directory (of Thoth)
  4. Try logging in again from VS Code
- Usually, these steps should be sufficient. However, if you are still experiencing issues with VS Code and Thoth, come visit the TA's office hours, and we will be able to assist you!