CS50 Seminar
Flying the Nest
Andrew Holmes, Fall 2023
Why Local Development?

- Offline work
- Customizable environment
- Simplicity and speed
Why not Local Development?

- Pain to setup
- Hardware limitations
- Hardware dependent behavior
- Security
VSCode

- Familiar!
- Powerful!
- Common!
Visual Studio Code for CS50
CS50's adaptation of Codespaces for students and teachers

- with these features

Log In or browse documentation

- Open in VS Code Desktop
- Restart Codespace
- Backups
- Commits
- Repository
Local Development on Windows

Windows

WSL

Windows
Why WSL?

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>• More similar to CS50 tools.</td>
<td>• Some overhead.</td>
</tr>
<tr>
<td>• Easier to install once setup.</td>
<td>• Demanding to run.</td>
</tr>
<tr>
<td>• Linux / unix system better compatibility.</td>
<td>• It’s not as good as just running Linux :P</td>
</tr>
</tbody>
</table>
Install WSL

1. `Terminal> wsl --install`
2. `// Restart after setup!`

Setup WSL

**Sudo**: super user do

(Windows equivalent: run as administrator)
Setup VSCode + WSL

Search for the **WSL** extension and press ‘install’.

The extension tab is the one with the four cubes, one being added to the pile of three!
```html
<html lang="en">
<head>
  <link href="https://fonts.googleapis.com/css?family=Montserrat:wght@700&display=swap" rel="stylesheet">
  <link href="/static/styles.css" rel="stylesheet">
  <title>Birthdays</title>
</head>
<body>
  <div class="header">
    <h1>Birthdays</h1>
  </div>
  <div class="container">
    <div class="section">
      <h2>Add a Birthday</h2>
      <!-- TODO: Create a form for users to submit a name, a month, and a day -->
    </div>
    <div class="section">
      <h2>All Birthdays</h2>
      <table>
        <thead>
          <tr>
            <th>Name</th>
            <th>Month</th>
            <th>Day</th>
          </tr>
        </thead>
        <tbody>
          <!-- Add rows for each birthday entry -->
        </tbody>
      </table>
    </div>
  </div>
</body>
</html>
```
Already installed for us

```bash
# We can run Python with:
python3

# Git is also already installed
git --version
```
Things we are missing 😞

There’s plenty we are missing though! Not to worry, installing all of these on Linux is super easy.

*Note: you may want to update your python and git installations.*
Things we are missing 😞

1 # Install a C compiler and the make tool!
2 sudo apt install gcc
3 sudo apt install make
4
5 # Install sqlite3!
6 sudo apt install sqlite3
Things we are missing 😞

1. pip3 install flask
2. pip3 install flask_session
3. pip3 install cs50
VSCode Extensions

- Live Server
- Live Share
- C / Python
- Codesnap
- Plenty of others!
Working on a final project together demo!
A million more options

There’s a world of possibilities for you to explore!
Customize to your heart’s content!

Local development with just pure Windows is often still useful.

Install other tools that you need!
Thanks!

Hopefully this was useful! I’ll try to help out in the comments when I have time!

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