

ENR145 Computational Methods

Digital toolbox: GitHub and webpage hosting

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Brain storming session:

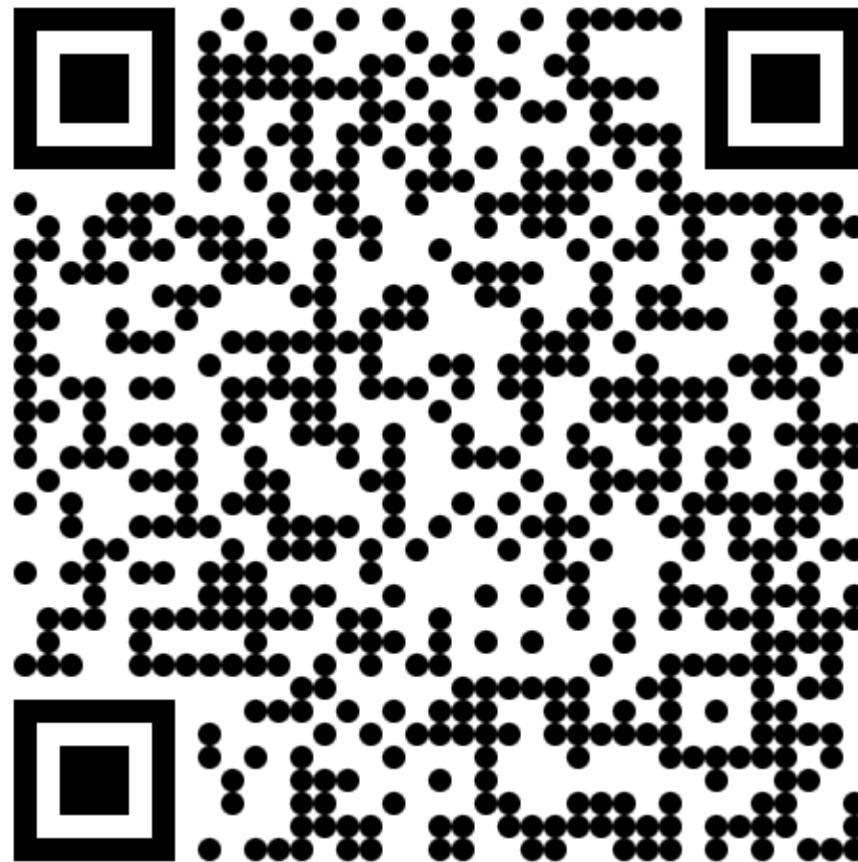
- What site would be fun to build in class?
- Let's generate a list of 3~5 together.



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Portals to detailed guides and documentation:

GitHub docs



<https://docs.github.com/en/get-started>

GitHub pages



<https://docs.github.com/en/pages/>



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Backstage of a GitHub site:



https://xlicoe.github.io/Base_Systems_Abacus/

GitHub Pages is a static site hosting service that takes

- **HTML**
- **CSS**
- **and JavaScript**

straight from a **repository** on GitHub, optionally runs the files through a **build** process, and **publishes** a website.

You can see examples of GitHub Pages sites in the [GitHub Pages examples collection](#).

Backstage of a GitHub site:

The screenshot shows a GitHub repository page for 'Base_Systems_Abacus'. The page includes a navigation bar with links for Code, Issues, Pull requests, Actions, Projects, Wiki, Security, Insights, and Settings. The repository name 'Base_Systems_Abacus' is displayed, along with a public status badge. On the right, there are buttons for Pin, Watch (0), Fork (0), and Star (0). The main content area shows a list of files and commits. A large bracket on the left side groups several items under the heading 'Repo': 'Build related...', 'Documentation', 'Version control', 'Files', and 'HTML'. The 'HTML' item is specifically highlighted with a bracket below it.

Repo

Build related... {

Documentation {

Version control {

Files {

HTML

Base_Systems_Abacus Public

Pin Watch 0 Fork 0 Star 0

main 1 Branch 0 Tags

Go to file Add file Code

About

Basic intro to base 2 and base 16.
Numerical methods 101.

Readme
MIT license
Activity
0 stars
0 watching
0 forks

Releases

No releases published
[Create a new release](#)

Packages

No packages published
[Publish your first package](#)

Deployments 9

[github-pages](#) inactive
[+ 8 deployments](#)

Commits

xlicoe	Update index.html	3fc1772 · 4 days ago	13 Commits
.github/workflows	Create jekyll-gh-pages.yml	5 days ago	
old_versions	Add files via upload	4 days ago	
LICENSE	Initial commit	5 days ago	
README.md	Update README.md	5 days ago	
index.html	Update index.html	4 days ago	

README MIT license

Interactive abacus to learn base 2 (binary) and base 16 (hexadecimal).

Site is live at: https://xlicoe.github.io/Base_Systems_Abacus/

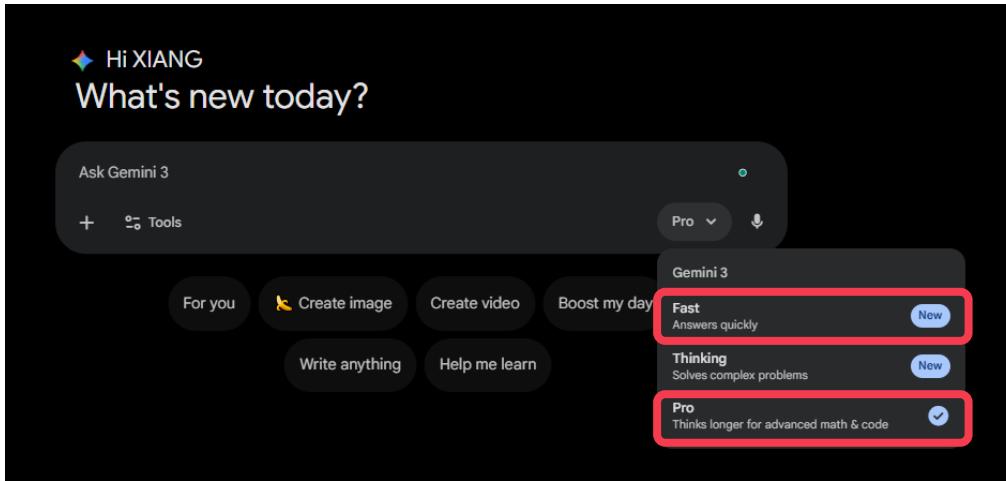
Basic intro to base 2 and base 16. Numerical methods 101.

Vibe coded for ENR145 with Google Gemini Fast version on Jan 14, 2026.

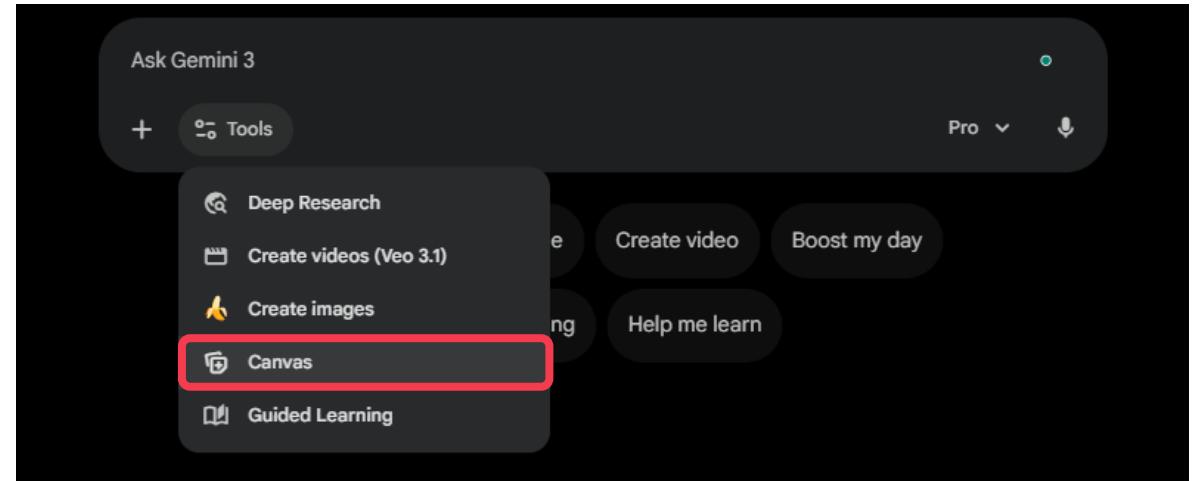
Vibe coding session (1/2):

Prompting and getting a working html code from Gemini:

Step 1: Pick a model



Step 2: Pick a tool (Canvas)



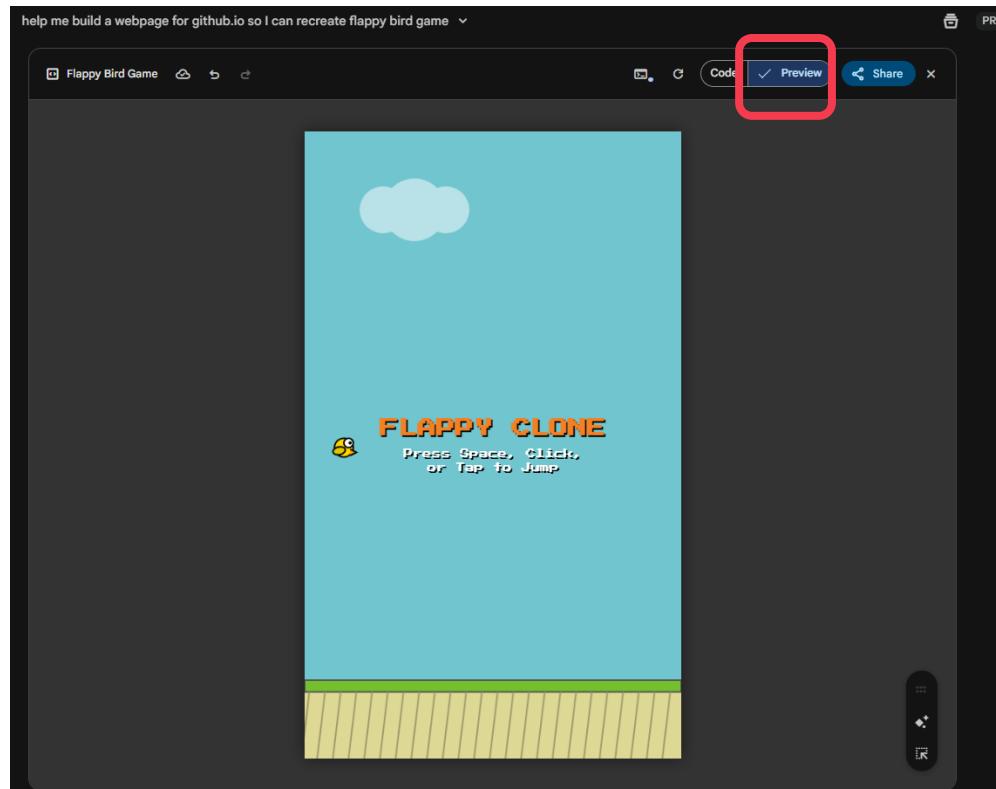
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Vibe coding session (2/2):

Prompting and getting a working html code from Gemini:

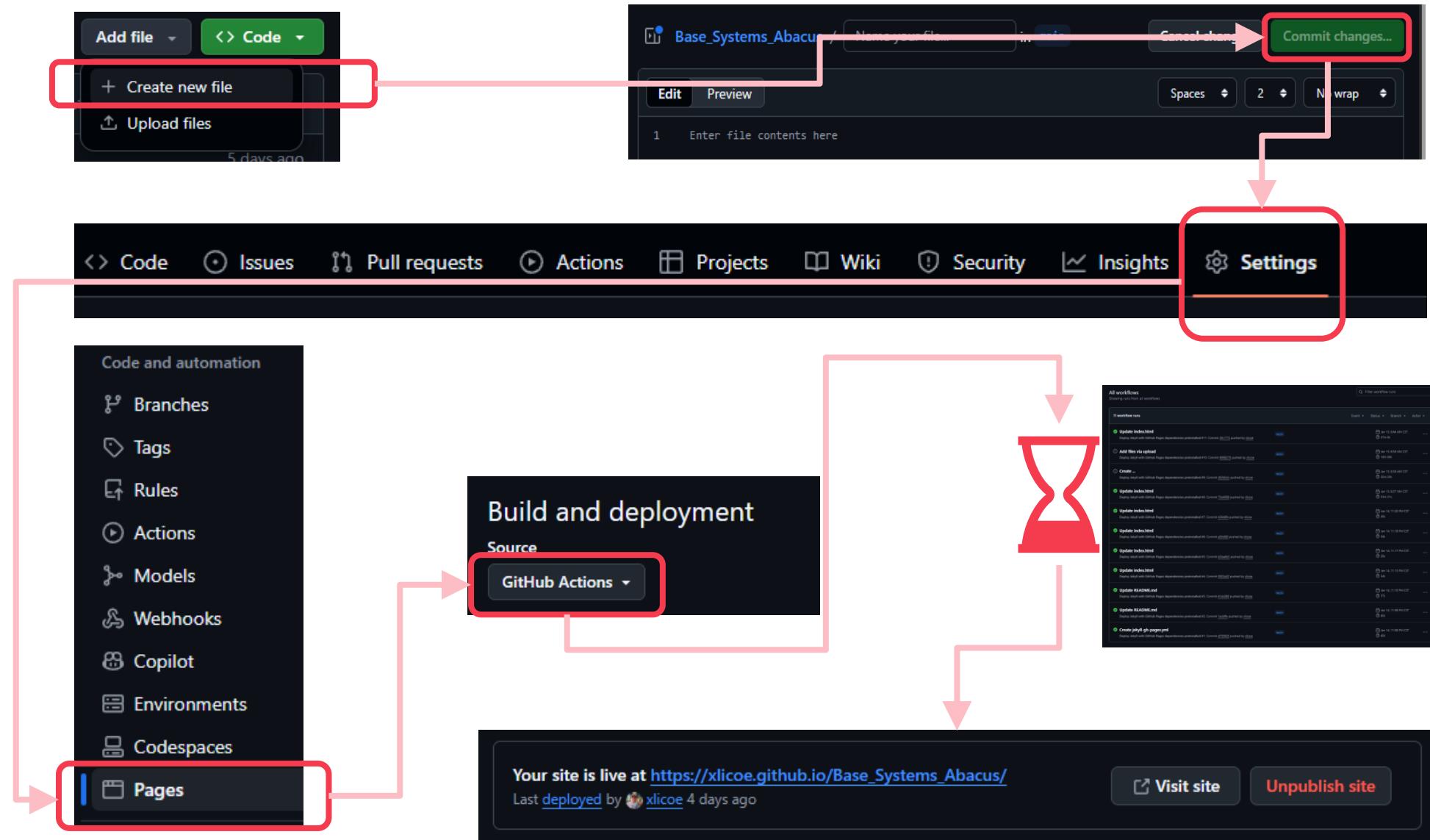
Step 3: Prompt: help me build a webpage for github.io so I can recreate flappy bird game

Step 4: Iteration



```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0, maximum-scale=1.0, user-scalable=no">
6   <title>Flappy Bird Clone</title>
7   <style>
8     @import url('https://fonts.googleapis.com/css2?family=Press+Start+2P&display=swap');
9
10  body {
11    margin: 0;
12    padding: 0;
13    background-color: #333;
14    font-family: 'Press Start 2P', cursive; /* Retro font */
15    overflow: hidden; /* Prevent scrolling */
16    touch-action: none; /* Prevent zooming/scrolling on mobile */
17    display: flex;
18    justify-content: center;
19    align-items: center;
20    height: 100vh;
21
22  #game-container {
23    position: relative;
24    box-shadow: 0 0 20px rgba(0,0,0,0.5);
25  }
26
27  canvas {
28    display: block;
29    background-color: #70c5ce; /* Sky blue */
30  }
31
32  #ui-layer {
33    position: absolute;
34    top: 0;
35    left: 0;
36    width: 100%;
37    height: 100%;
38    pointer-events: none; /* Let clicks pass through to canvas */
39    display: flex;
40    flex-direction: column;
41    justify-content: center;
42    align-items: center;
43    text-align: center;
44  }
45
46
```

Workflow of publishing a site



Some sites don't publish, but have a good README file to explain everything:

<https://github.com/xlicoe/klotski-state-space-tutorial>

The screenshot shows a GitHub repository page for 'klotski-state-space-tutorial'. The repository is public and has 1 branch and 0 tags. The main branch is selected. There is a search bar, an 'Add file' button, and a 'Code' button. Below the navigation bar, a list of commits is shown:

Commit	Message	Date
xlicoe Update index.html	✓	38fc213 · 3 months ago
.github/workflows	Add GitHub Actions workflow for Jekyll deployment	3 months ago
graphs	Add files via upload	3 months ago
older-versions	Add files via upload	3 months ago
LICENSE	Add MIT License to the project	3 months ago
README.md	Update image syntax in README.md	3 months ago
index.html	Update index.html	3 months ago

Some sites don't publish, but with a good README file to explain everything:

<https://github.com/xlicoe/klotski-state-space-tutorial>

The image displays three screenshots of a GitHub repository for a Klotski State Space Tutorial. The first screenshot shows the README page with basic information about the puzzle and how to play. The second screenshot shows the state space visualization interface where a user can move blocks on a grid and see the resulting states. The third screenshot shows a 3D network graph generated from the state space data.

Basic writing and formatting syntax:

QR code linking to the GitHub repository: <https://docs.github.com/en/get-started/writing-on-github/getting-started-with-writing-and-formatting-on-github/basic-writing-and-formatting-syntax>

What if?

Get your own site up as assignment?



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