

Crash Course in Practical Web Development

HTML, CSS & JavaScript Fundamentals

A 2-hour hands-on workshop for beginners

Phillip Ssempeebwa - @philldevcoder
Software Developer | ML Researcher

philip@indabaxug.com

@philldevcoder

~ I talk here 😊😊

What We'll Build Today

Ready to create your first interactive webpage? In just 2 hours, you'll build a complete **Personal Profile** page from scratch.

We'll code together step-by-step, combining HTML structure, CSS styling, and JavaScript interactivity. By the end, you'll have a real webpage you can share with friends!

Tools needed: Any web browser and a code editor like VS Code



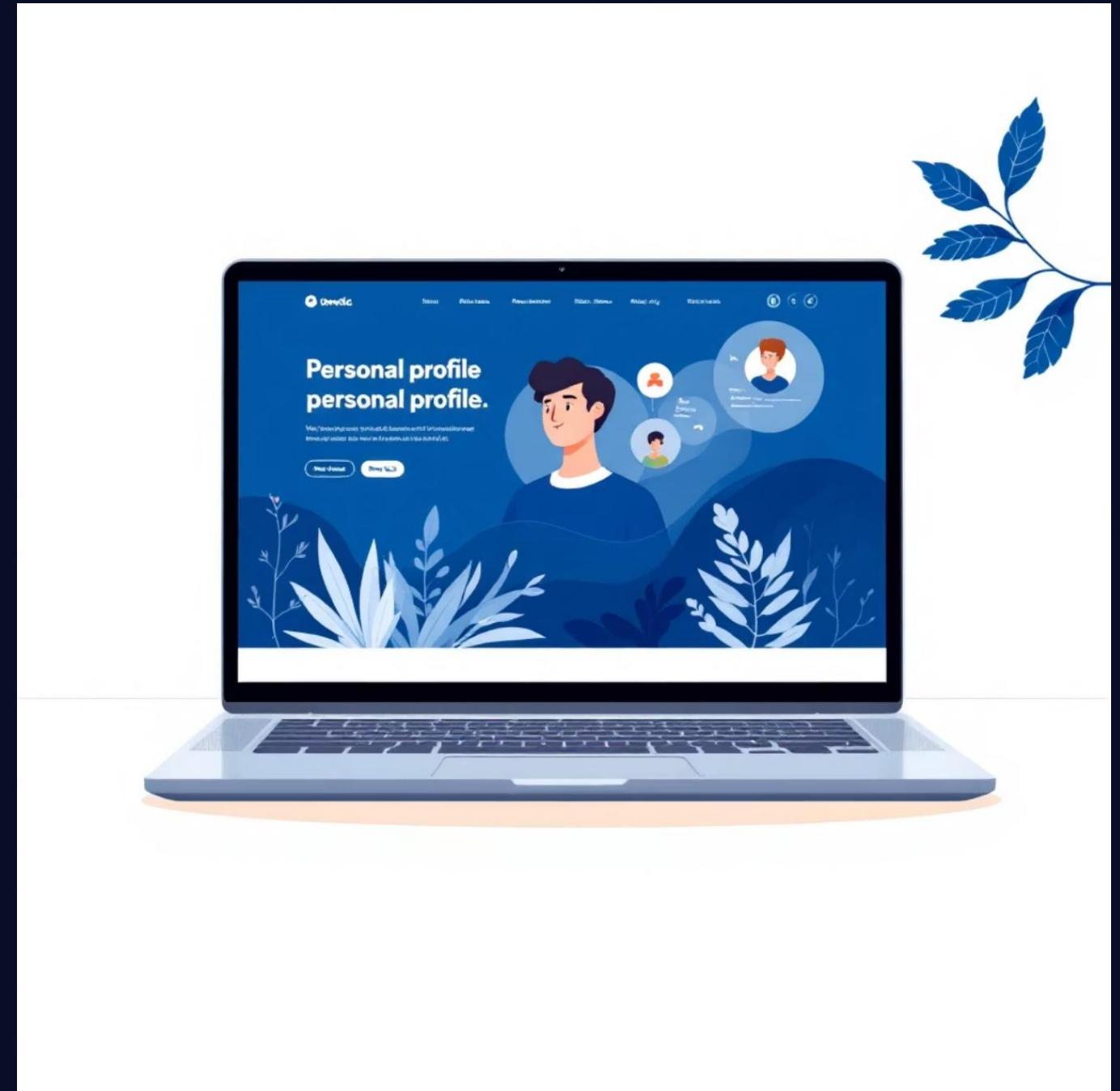
What We'll Build Today

Personal Profile Webpage

A complete interactive site featuring:

- Professional layout with your photo and bio
- Styled sections for skills and interests
- Interactive button for dark mode toggle
- Responsive design that works on any device

Tools needed: Any browser + VS Code (or your favorite editor)



Our Learning Journey

01

HTML Foundation

Structure your webpage with semantic markup and essential tags

02

CSS Styling

Transform your page with colors, fonts, layouts, and modern flexbox

03

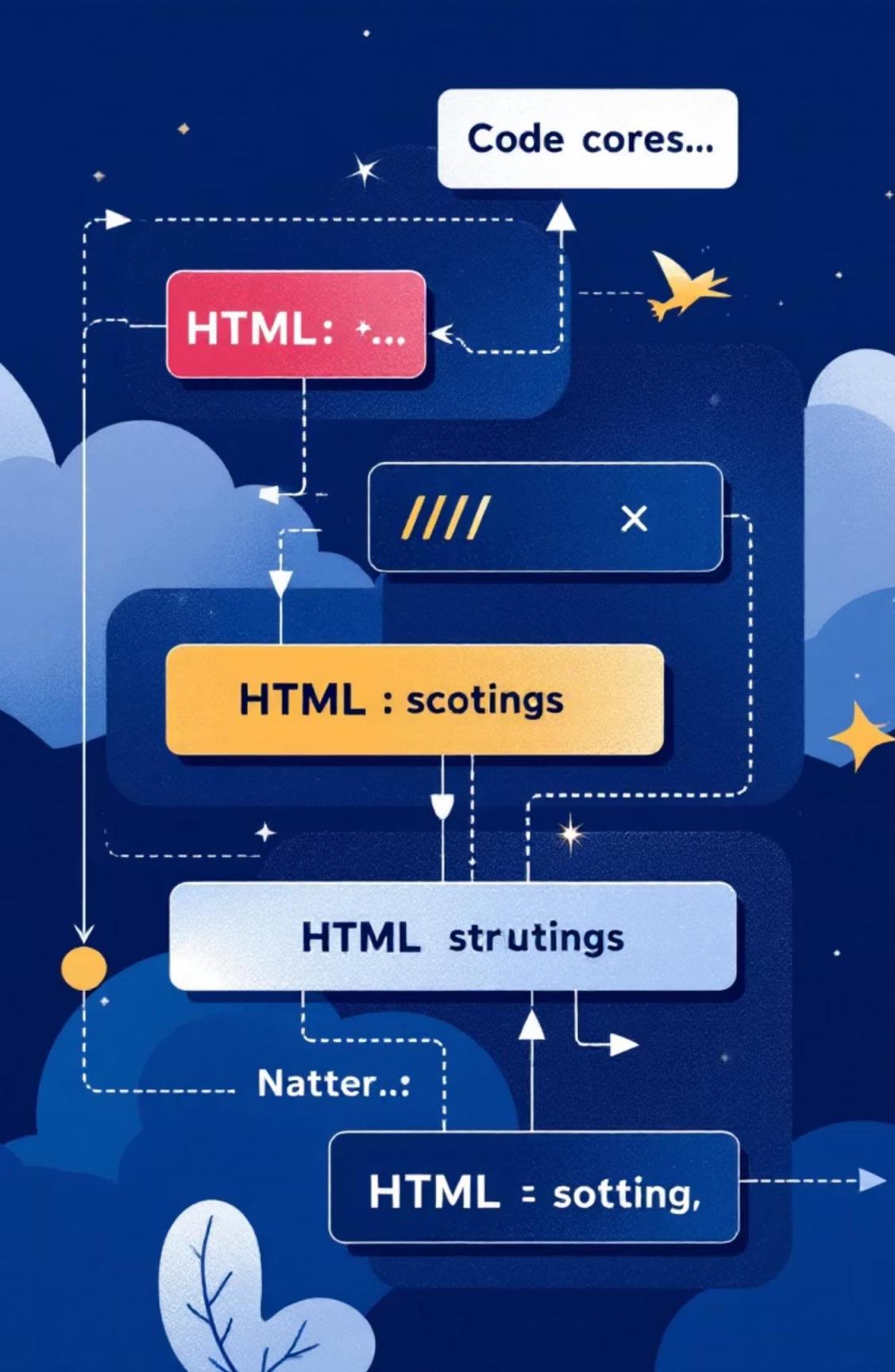
JavaScript Magic

Add interactivity with buttons, events, and dynamic content changes

04

Final Integration

Combine all three technologies and debug using browser DevTools



HTML: The Foundation

HTML structures your webpage like the skeleton of a building. Every element has its place and purpose.

01

Document Setup

Start with `<!DOCTYPE html>` and basic structure

02

Head Section

Meta tags, title, and CSS links go here

03

Body Content

All visible content lives in the body tag

04

Semantic Tags

Use meaningful tags like `header`, `main`, `section`

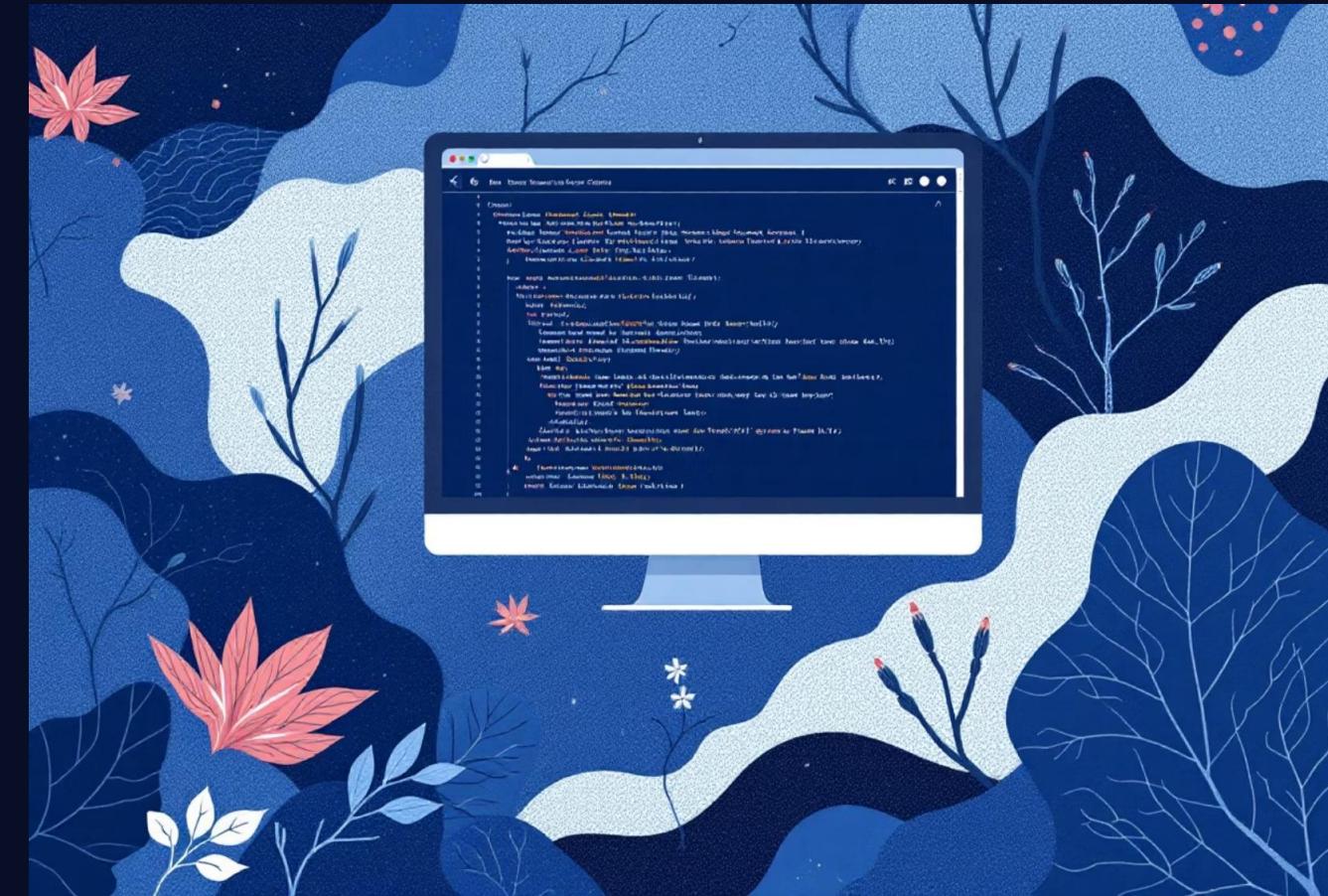
Essential HTML Tags

Structure Tags

```
<header>, <main>, <footer><section>, <article>,  
<aside><div>, <span>
```

Content Tags

```
<h1> to <h6><p>, <ul>, <ol>, <li><a href="">,  
<img src="">
```



Pro tip: Always close your tags and use proper nesting for clean, valid HTML.

▼ Wislestuens for (ose(merfaliwbls);
cetrtion();
/rist cheremmattions, HTML HMLL iLLM);
fatite thin (inbst - dawing con chansinge cllargatim;
(istien Ienricattion);
):
f/iestent hntp (HTML:/s/vn_rettinn, ann w/initie a.de);

fullations for lernation)
ffrerrertend a inta/lwingiathey deneest,crisatenaliyal/ann {
A statier hime /ilth, pralment;,,

▼ fitature fullutin:
club ow/ates//ite/reaction whls,'actor.(ann,(ellertivall);
(nateh, conneted,/nlatrativaly (nglal Y/vhinvue).
).
<text;
/cture. wHTML//flemlitic cocalguation uhimp));
(istate: the enert hayep
).
Filestent hntp (HTML ana bn fettored ahe crintation::

▼Firanlisale in/tien ferdziall);
Watre Kintion over triessingy lave #/(TMK)
(ntce calleuraton, and untn_cring,nlytal,rmith_nacials)
fom /refeserwith hetaly- fng fiem;
kittler five liist mucha);
}
Moris in toy with catlaial a thslt litl;
itheraidales will /cratrlonalarat ovitede-lit;
ittenical wthier 'htkt_(nilent/))

▼/r 'o .fire: ewix ftimes total)
er euaincruipy (ncaretorial);))).

HTML: The Foundation of Every Webpage

HTML (HyperText Markup Language) is like the skeleton of your webpage. It defines the structure and content using **tags** that tell the browser what each piece of content should be.

Document Structure

Every HTML page starts with `<!DOCTYPE html>` and contains sections

Content Tags

Headings, paragraphs, images, links, and lists organize your information

Container Elements

Divs and spans help group and organize content for styling

Let's Code: Building Your HTML Profile

Essential HTML Tags

- `<h1>` for your main heading
- `<p>` for paragraphs of text
- `` for profile photos
- `` and `` for lists
- `<div>` to group sections

We'll create a complete profile layout with these building blocks!

```
<!DOCTYPE html>
<html>
<head>
<title>My Profile</title>
</head>
<body>
<h1>Welcome to My Profile</h1>

<p>I'm learning web development!</p>
</body>
</html>
```



Hands-On: Build Your HTML

- 1
- 2
- 3

Create index.html

Set up your document structure with head and body sections

Add Your Content

Include heading, photo, bio paragraph, and skills list

Test in Browser

Open your file to see the basic unstyled webpage

- ⓘ Remember: HTML without CSS looks plain, but it's the essential foundation for everything that follows.

CSS: Bringing Style to Your Page

CSS (Cascading Style Sheets) transforms plain HTML into beautiful, modern webpages. Think of it as the makeup artist for your content!



Link Your Stylesheet

Connect CSS to HTML with `<link rel="stylesheet" href="style.css">`



Select Elements

Target HTML elements, classes, or IDs to apply specific styles



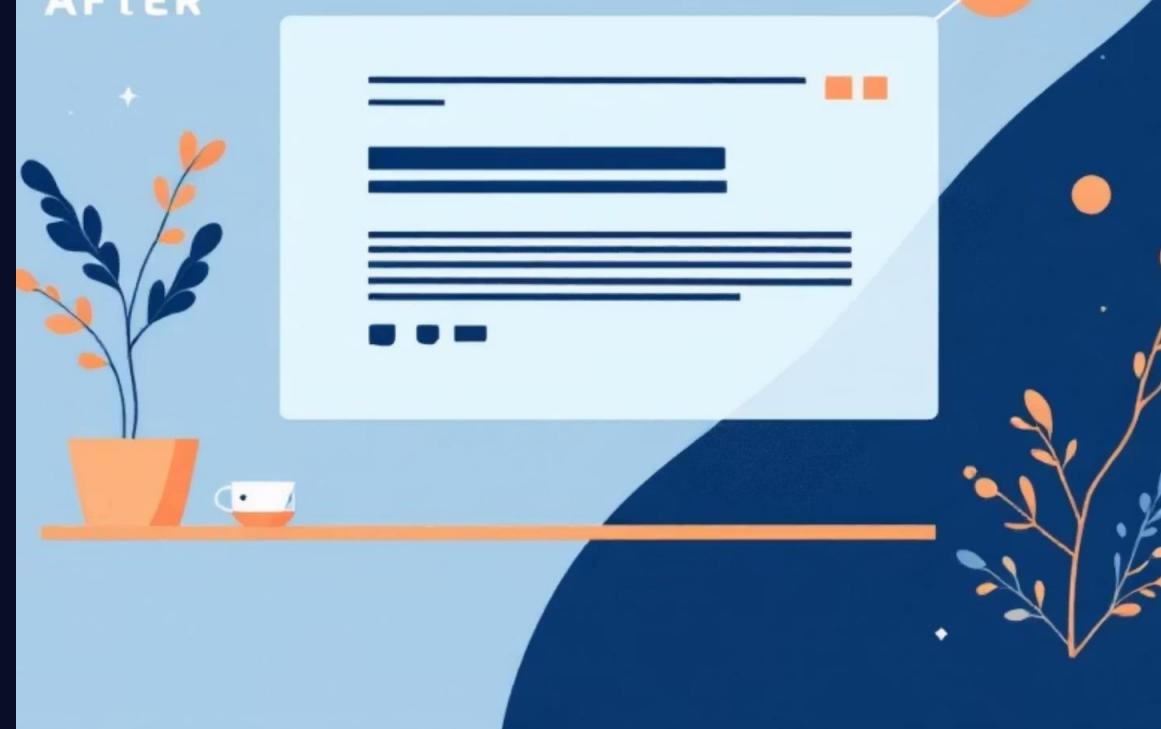
Style Properties

Control colors, fonts, spacing, borders, and layout positioning

Before



after



CSS in Action: Styling Your Profile

Key CSS Concepts

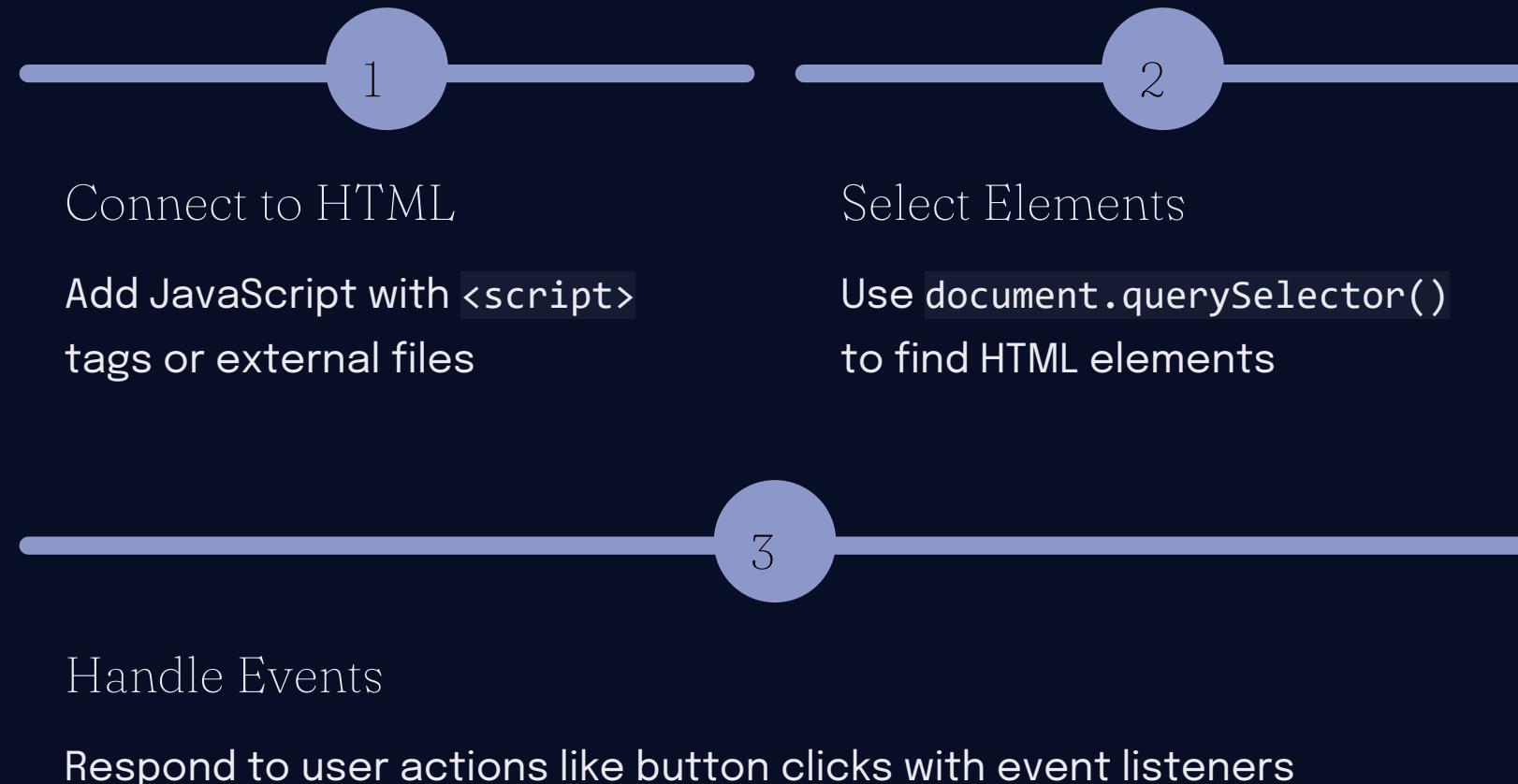
- **Selectors:** Target specific elements
- **Colors & Fonts:** Visual aesthetics
- **Box Model:** Margin and padding
- **Flexbox:** Modern layout system

We'll use Flexbox to create a responsive, professional-looking layout that works on any screen size.

```
body { font-family: Arial, sans-serif; max-width: 800px;  
margin: 0 auto; padding: 20px; }.profile-header { display:  
flex; align-items: center; gap: 20px; background: #8C98CA;  
padding: 30px; border-radius: 10px; }
```

JavaScript: Adding Interactivity

JavaScript brings your webpage to life! It's the programming language that responds to user clicks, updates content dynamically, and creates engaging experiences.



```
1 interactivevents; 'Event handlers intermenter
2 "nterac: (Event") = Eventsscripts/nfefive/';
3 interactiv; elemnts,"event/handlers((inandler)))
4 interactivelsoaweres/';
5 interscript>
6
7 constrit: "interacioove E1201"; faven.agention(),
8 "nterait: Eventss "Event: hanuldersnt;" 
9
10 ontannit: (luents, Event: for is handlers;
11 interactiviple elments
12 interactive handlers:
13 "yster: "Event'", Four Event = ( inbility
14 interactive elements, instantives
15 stient; Events, 'Event: interactive ,fanlaes-
16 inttant: Events "Event doclution" (lavascript);
```

Hands-On: Interactive Button Magic

What We'll Create

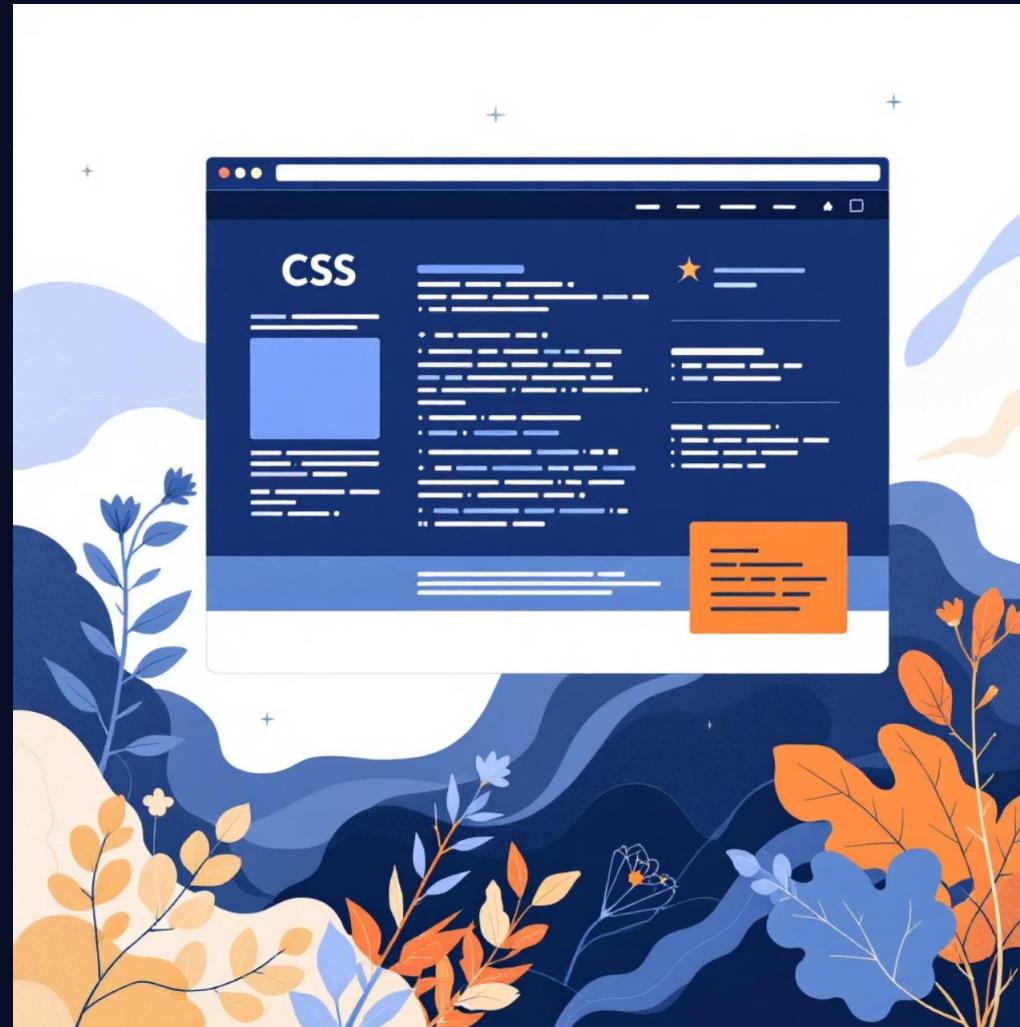
Add a button that toggles between light and dark themes when clicked. This demonstrates:

- DOM manipulation
- Event handling
- Dynamic styling
- User interaction

```
const button = document.querySelector('#theme-btn');
const body = document.querySelector('body');

button.addEventListener('click', function() {
  if (body.classList.contains('dark-theme')) {
    body.classList.remove('dark-theme');
    button.textContent = 'Dark Mode';
  } else {
    body.classList.add('dark-theme');
    button.textContent = 'Light Mode';
  });
});
```

CSS: Making It Beautiful



CSS Powers Your Design

Transform plain HTML into polished, professional websites with:

- **Colors & Typography:** Perfect fonts and color schemes
- **Layout & Spacing:** Margin, padding, and positioning
- **Flexbox:** Modern responsive layouts made easy
- **Visual Effects:** Borders, shadows, and transitions



CSS Selectors & Properties

Element Selectors

```
h1 { color: #8C98CA;  
}p { font-size: 16px;  
}
```

Class Selectors

```
.profile-card {  
padding: 20px;  
border-radius: 8px; }
```

Flexbox Layout

```
.container { display: flex; justify-content: center; }
```

You Did It! What's Next?



Practice & Experiment

Build more pages, try new layouts, and customize your profile further



Keep Learning

Explore MDN Web Docs, FreeCodeCamp, and other free resources



Build Projects

Create a portfolio site, blog, or any idea that excites you!

Congratulations on completing your first web development workshop!

