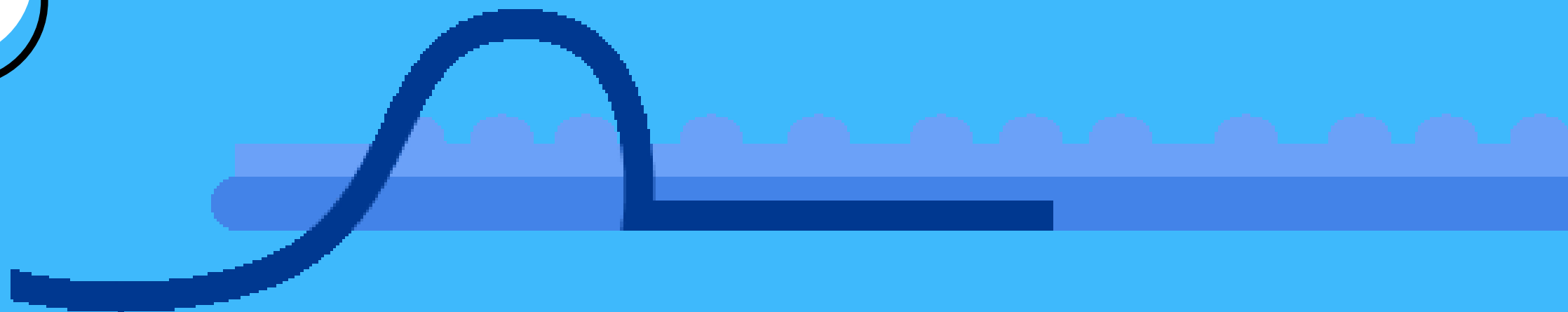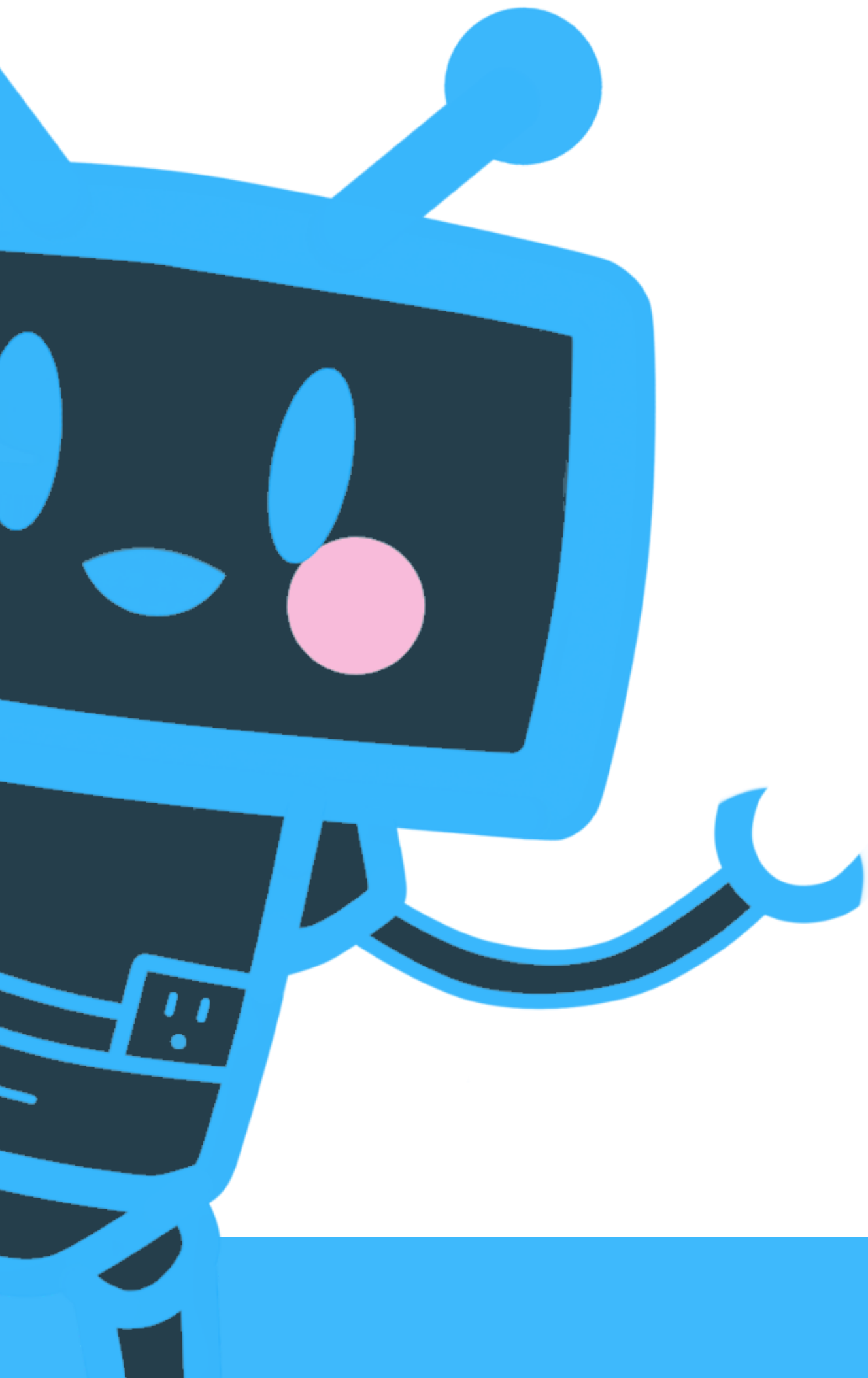# WEB DEV 101

INTRO TO HTML/CSS: CREATE A PERSONAL WEBSITE!

🤖 ADA'S TEAM

What is Ada's Team?

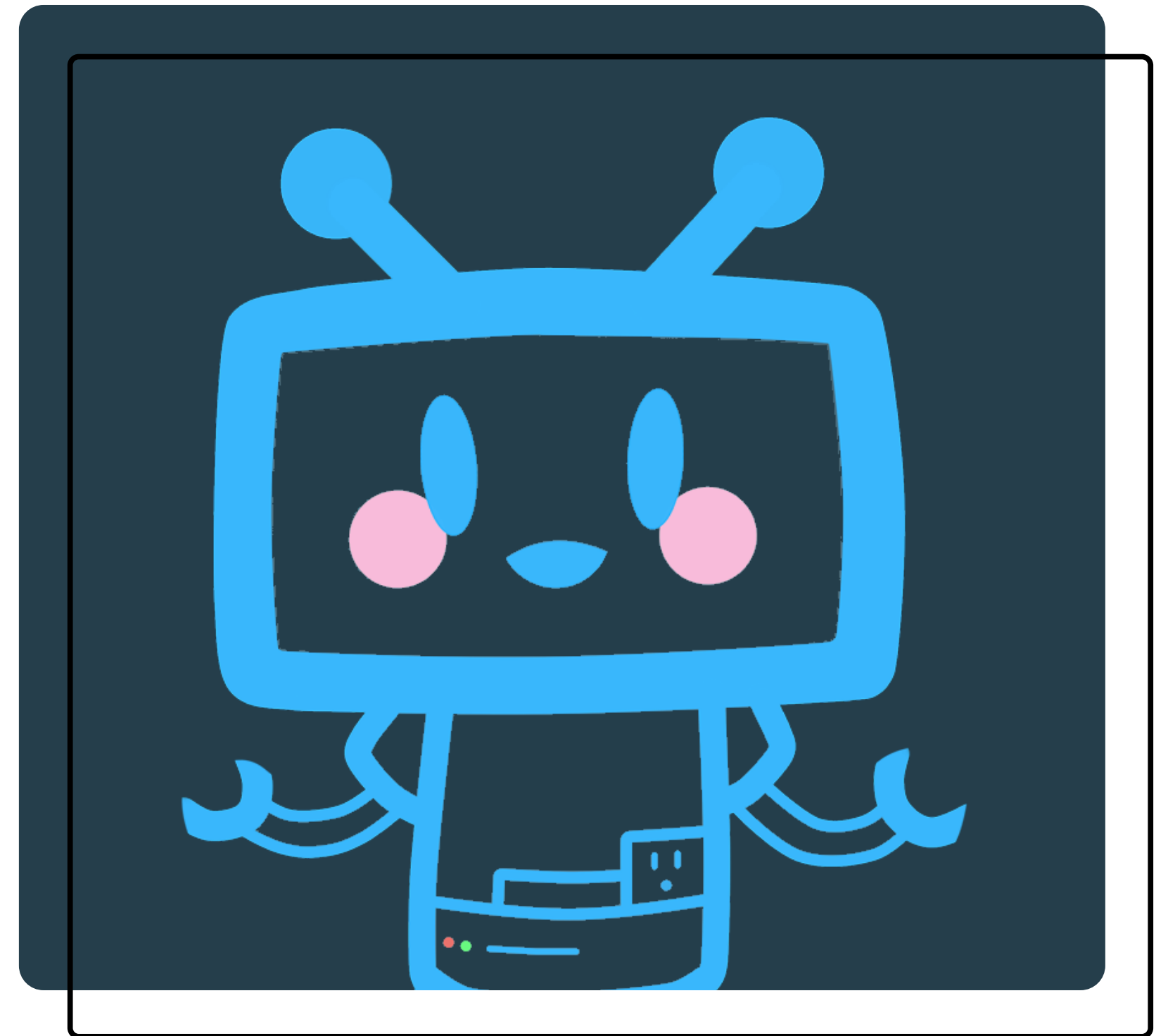Dedicated to promoting diversity in STEM with an emphasis in technology.

We are a family.

We embrace, celebrate, and empower you to reach your full potential by fostering a safe, supportive space & many opportunities to advance your career.

Ada's Team provides...

- **Free tutoring**
- **Technical Workshops**
- **Industry Events**
- **Conferences**
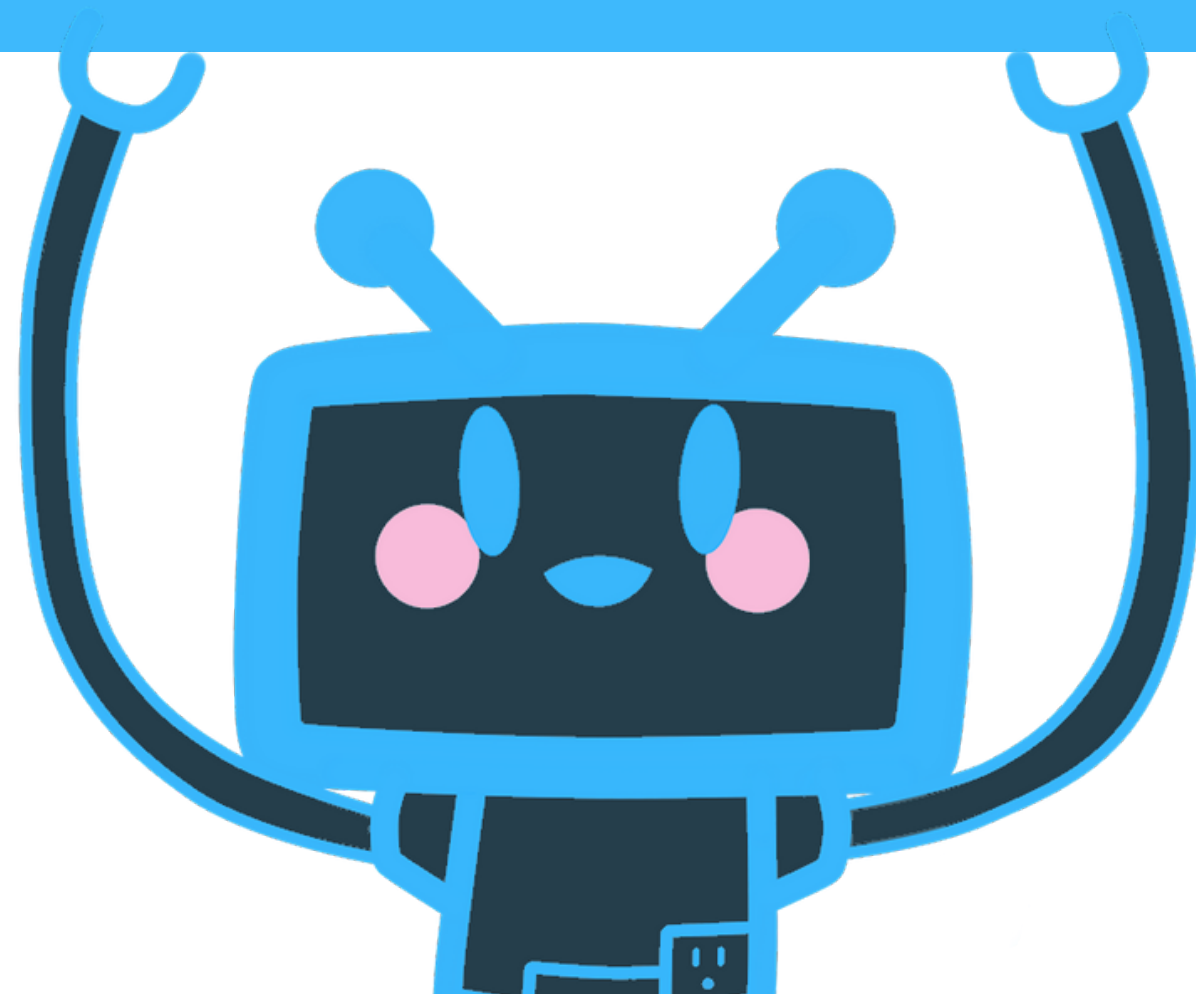
Agenda

Web Dev Overview

Intro to HTML

Let's Build!
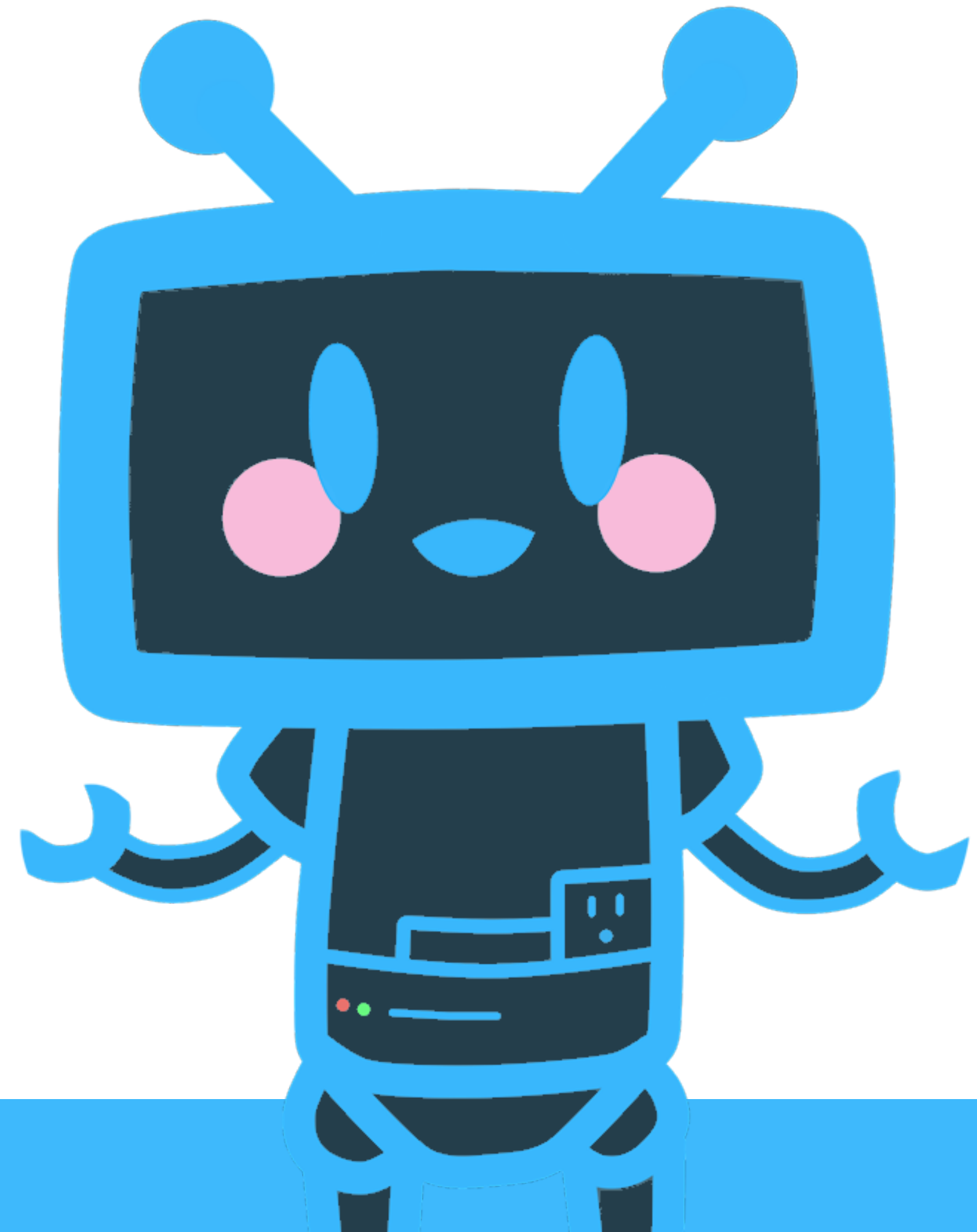
Intro to CSS

Let's Style!

What next?

What is web devlopment?

What is web development?

- **Wikipedia**: Work involved in developing a website for the Internet (World Wide Web) or an intranet (a private network).

- **Front-end**: Presentation layer
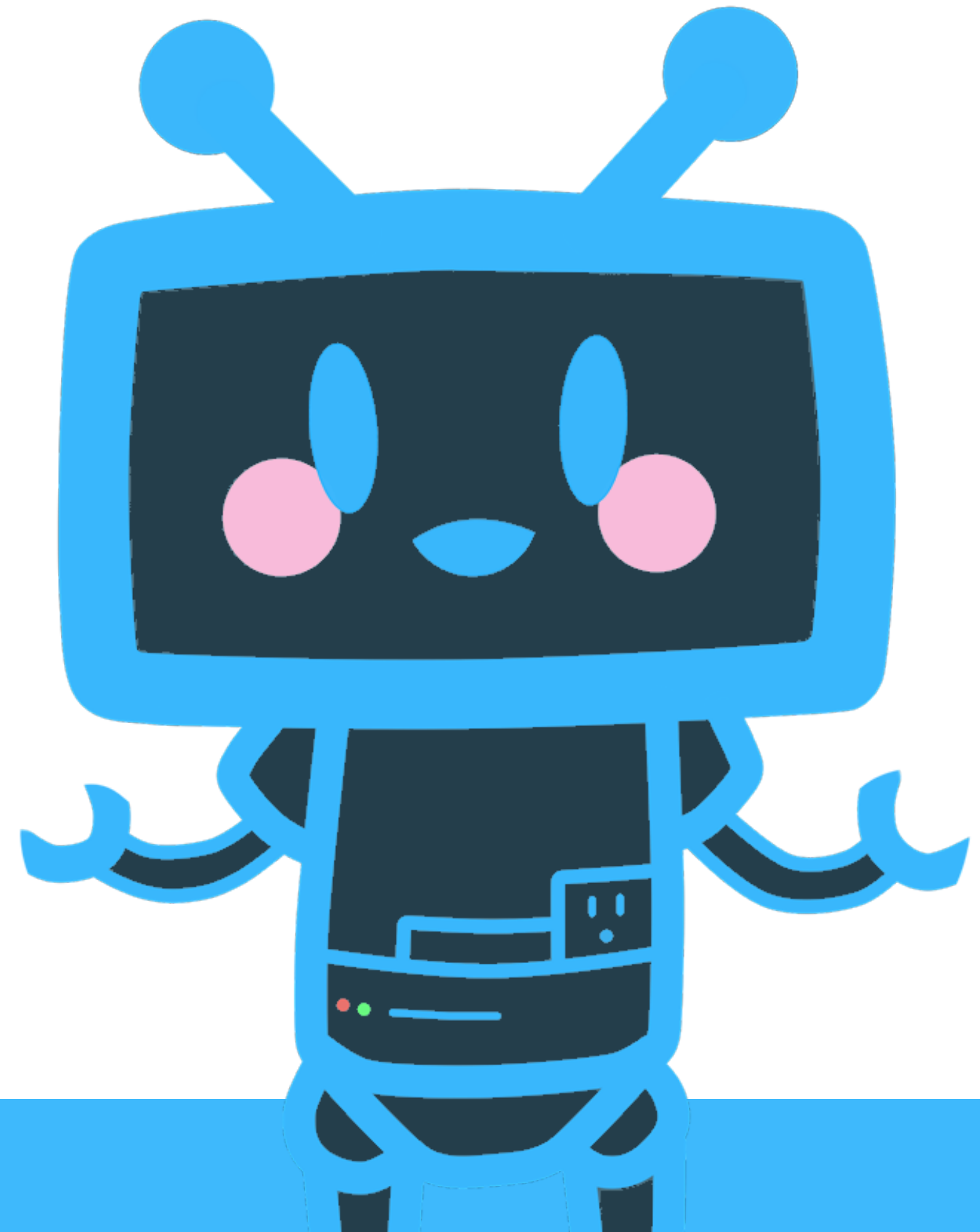
- **Back-end:** Data access layer

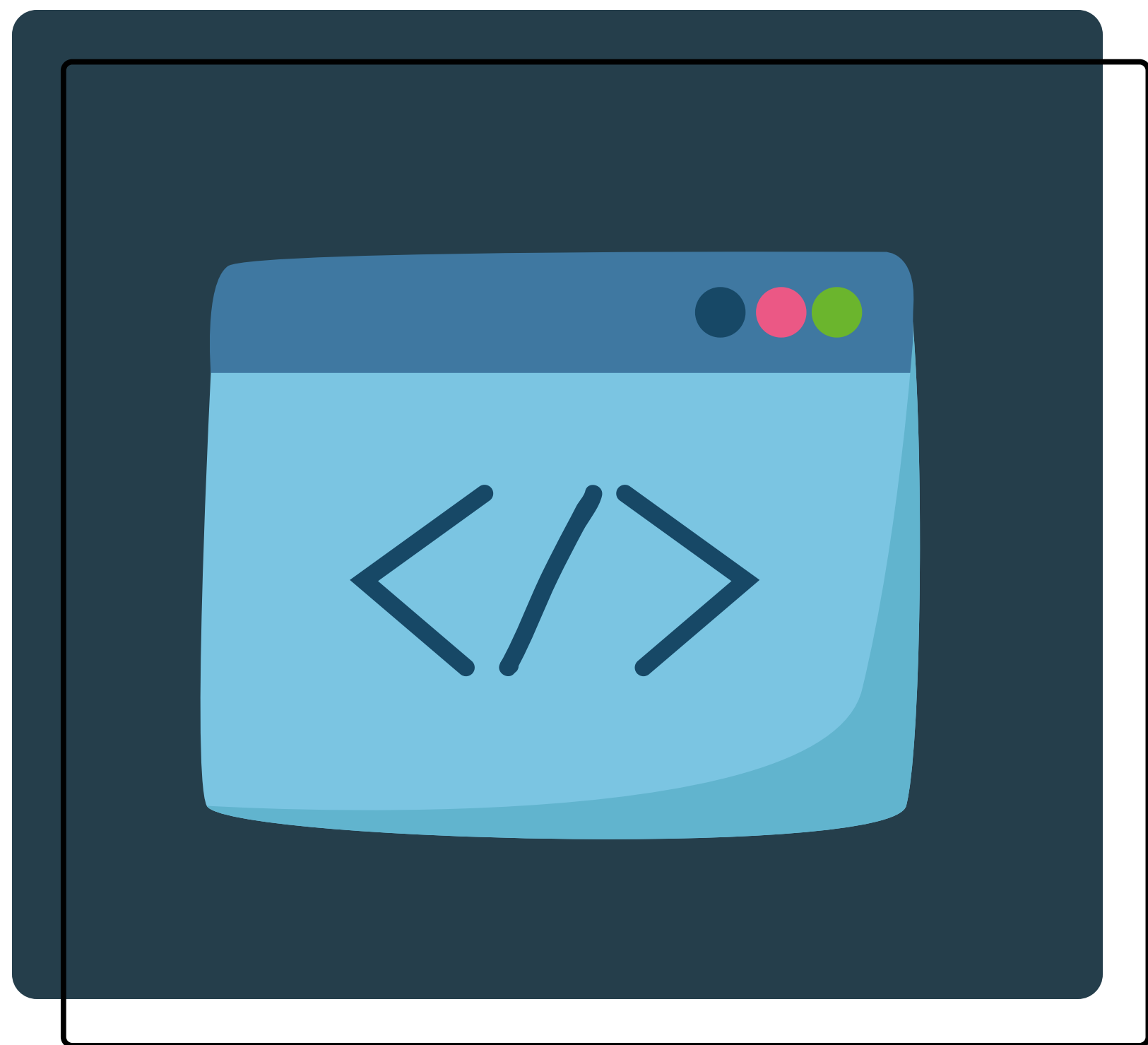# What is web development?

- **Wikipedia**: Work involved in developing a website for the Internet (World Wide Web) or an intranet (a private network).

- **Front-end**: Presentation layer

- **Back-end:** Data access layer

Front-End Development

- What the user sees and interacts with

- **Languages**: HTML, CSS, and JavaScript

- HTML: HyperText Markup Language

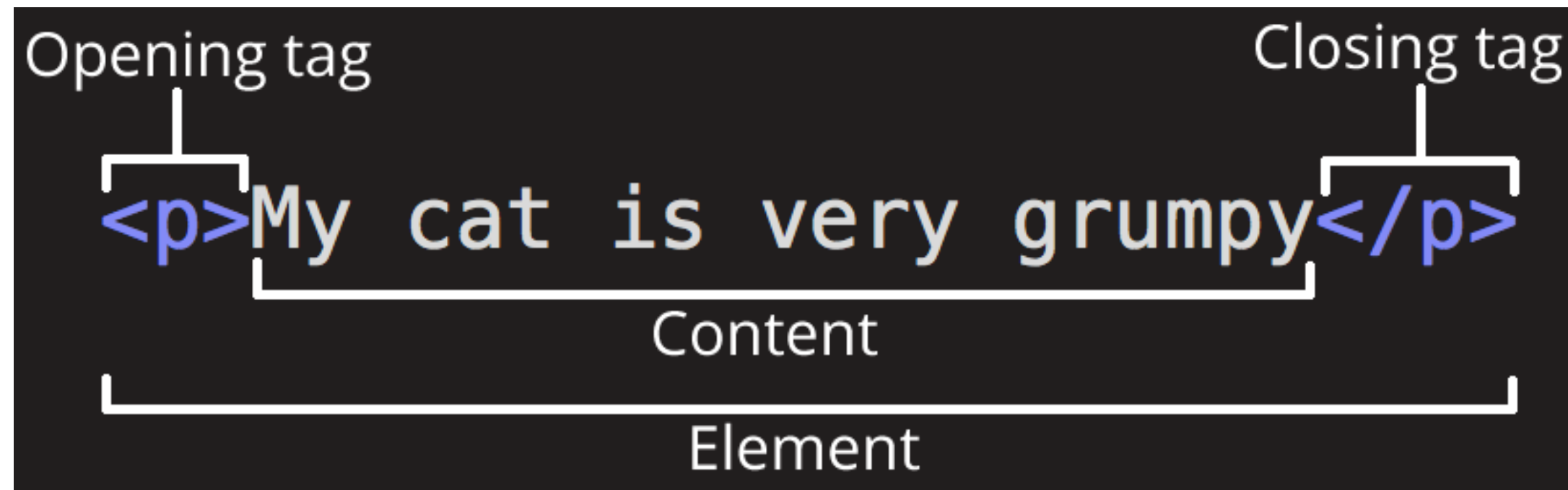- CSS: Cascading Style Sheets
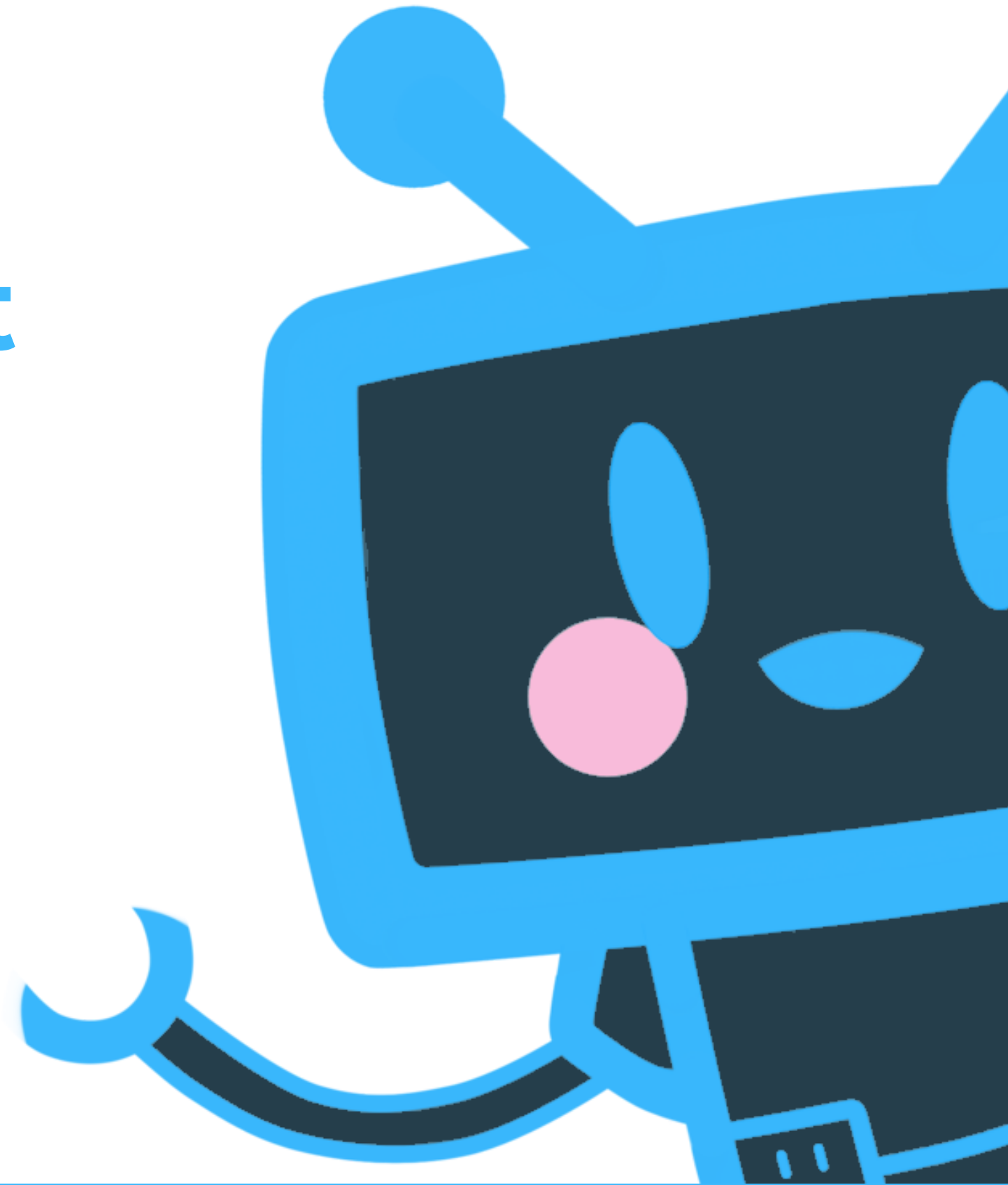
HTML

What is HTML?

- **Defines WHAT is on the page**
- Code used to structure a webpage and its content
- Consists of a series of **elements**, which you use to enclose, or wrap, different parts of the content to make it appear or act a certain way
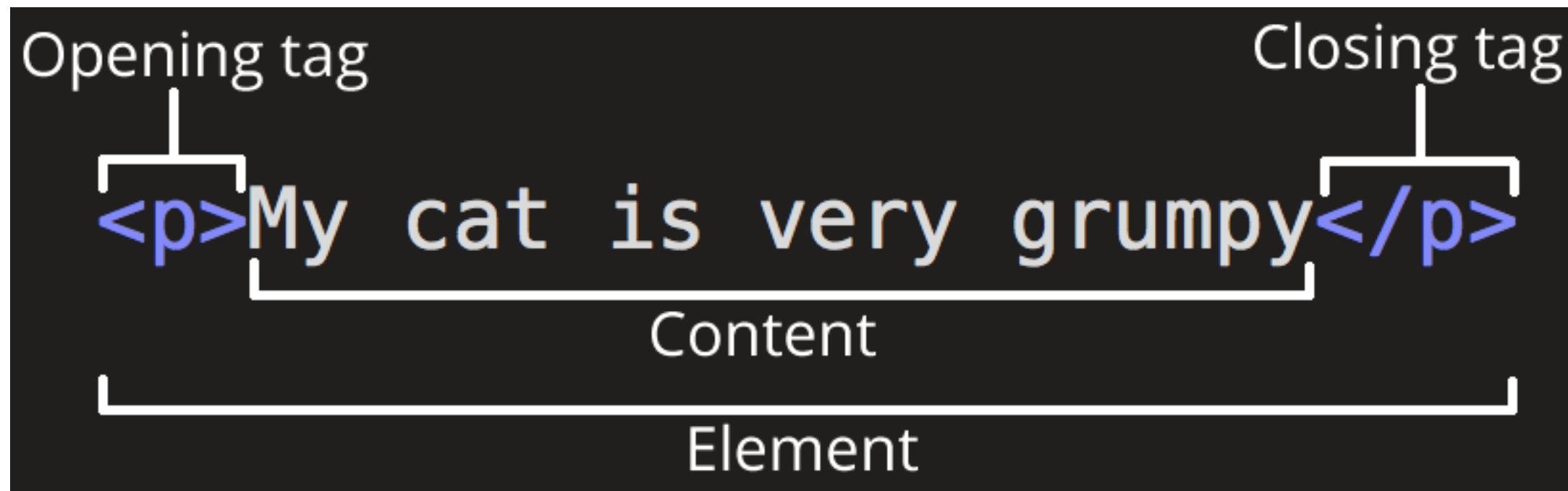
Anatomy of an HTML Element

Element
- The opening tag, the closing tag, and the content together comprise the element.

Anatomy of an HTML Element

Opening Tag
- Name of the element, wrapped in angle brackets.
- States where the element begins or starts to take effect.

Anatomy of an HTML Element
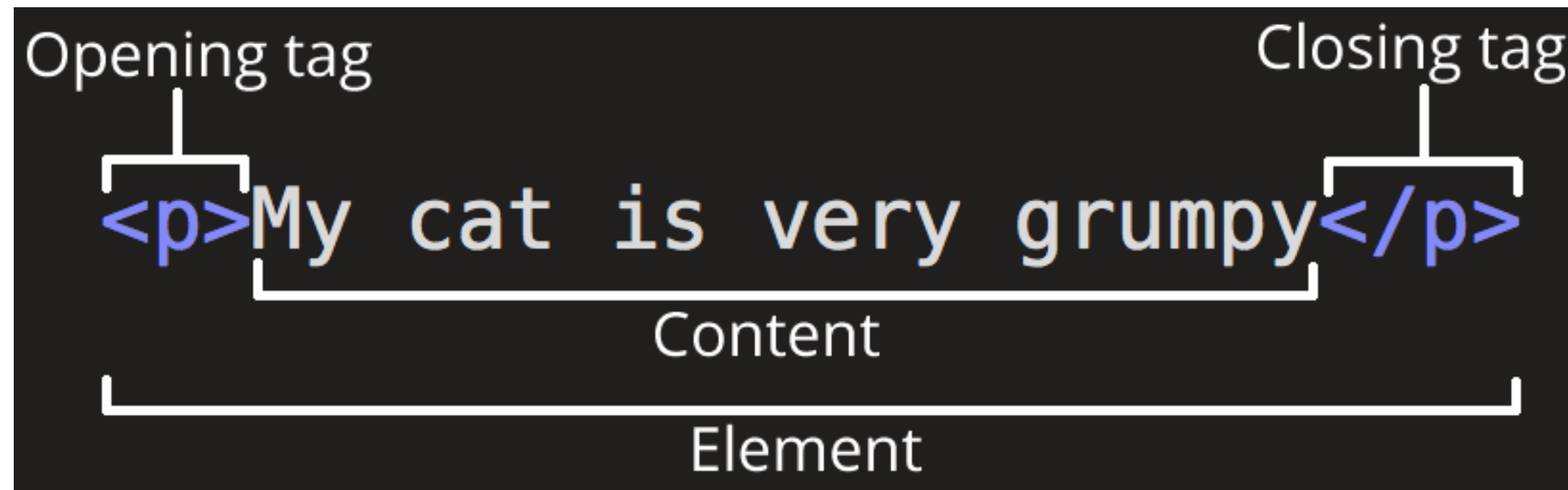
Closing Tag

- Same as the opening tag, except that it includes a forward slash before the element name
- States where the element ends
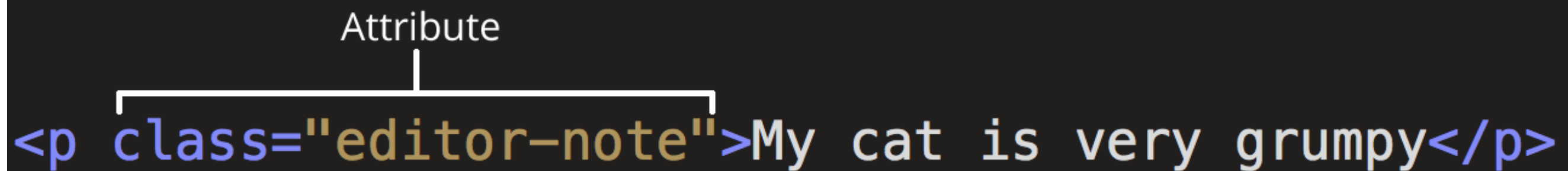
Anatomy of an HTML Element
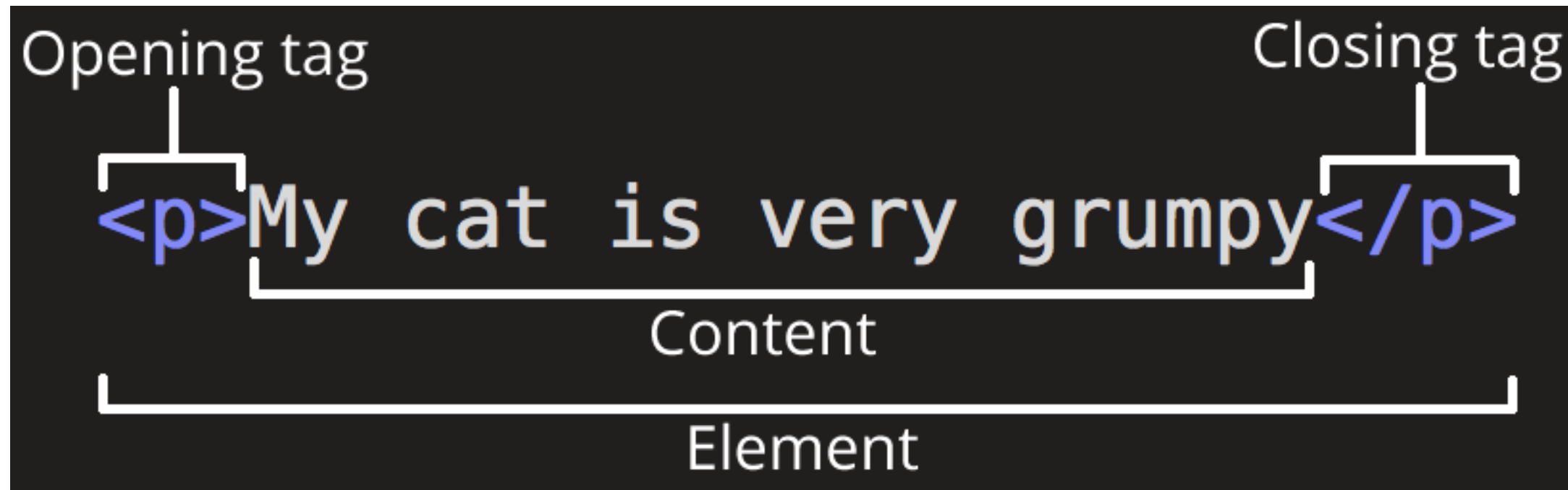
Content
- This is the content of the element, which in this case, is just text.

Element Attributes
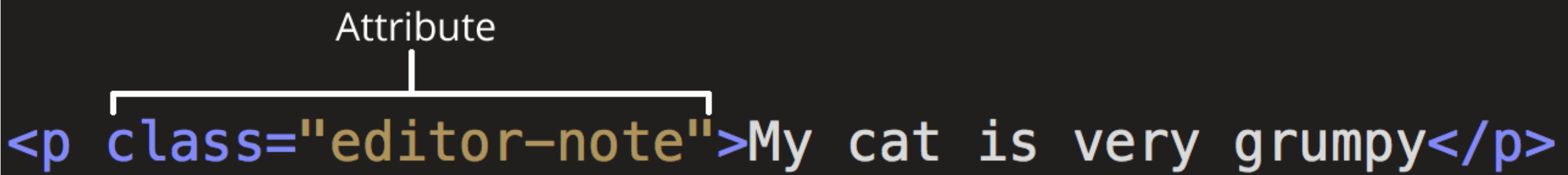
- **Attributes** contain extra information about the element that you don't want to appear in the actual content
- Here, <u>class</u> is the attribute name and <u>editor-note</u> is the attribute value

Element Attributes
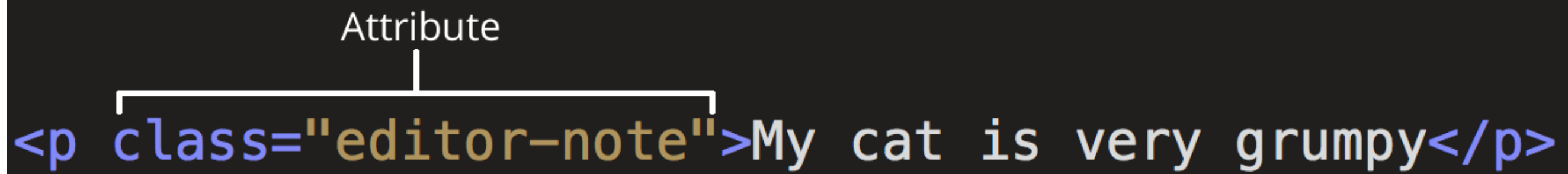
Rules:
1. A space between it and the element name (or the previous attribute).
2. The attribute name, followed by an equal sign.
3. The attribute value, wrapped by opening + closing quotes.

Element Attributes

- **Class** attribute allows you to give the element a non-unique identifier
- Can be used to target it (and any other elements with the same class value) with style information and other things
- Will become important with CSS!

Nesting Elements

```
<p>My cat is <strong>very</strong> grumpy.</p>
```

- **Nesting:** putting elements inside other elements
- The <strong> tag empasizes the word "very".

Nesting Elements

```
<p>My cat is <strong>very</strong> grumpy.</p>
```

- **Nesting**: putting elements inside other elements
- The <strong> tag empasizes the word "very".

```
<p>My cat is <strong>very grumpy.</p></strong>
```

Be sure to nest properly!

Empty Elements

```
<img src="images/firefox-icon.png" alt="My test image">
```

- Sometimes, elements don't have content
- Your tag and/or attributes encapsulate the desired behaviour
- Common empty tags:
  - **img** — an image
  - **br** — a line break
- These tags are self-closing – you don't need a closing tag

Anatomy of an HTML Document

```html
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <title>My test page</title>
  </head>
  <body>
    <img src="images/firefox-icon.png" alt="My test image">
  </body>
</html>
```

Doctype:
Used to act as links to a set of rules. Now, basically just needed to make sure your document behaves correctly.

Anatomy of an HTML Document

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <title>My test page</title>
  </head>
  <body>
    <img src="images/firefox-icon.png" alt="My test image">
  </body>
</html>
```

<html> element:
Element that wraps all the content on the page.
AKA root element.

Anatomy of an HTML Document

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <title>My test page</title>
  </head>
  <body>
    <img src="images/firefox-icon.png" alt="My test image">
  </body>
</html>
```

<head> element:
Contains all the non-content information. Things like the page title, keywords, metadata, CSS links, external libraries...

Anatomy of an HTML Document

```html
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <title>My test page</title>
  </head>
  <body>
    <img src="images/firefox-icon.png" alt="My test image">
  </body>
</html>
```

\<body\> element: Contains all the content you want to display on your page. Text, images, videos, games, playable audio tracks, ...
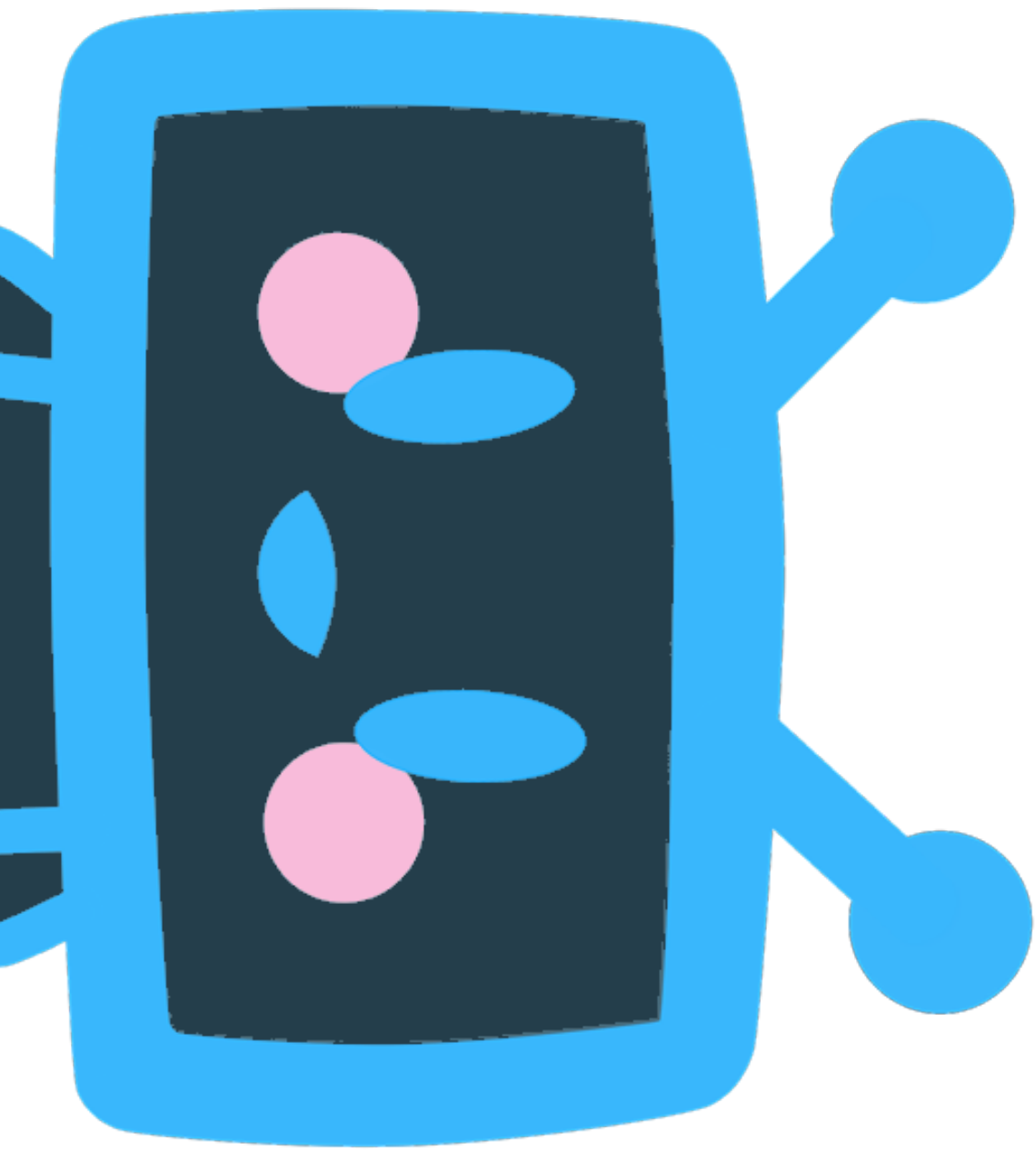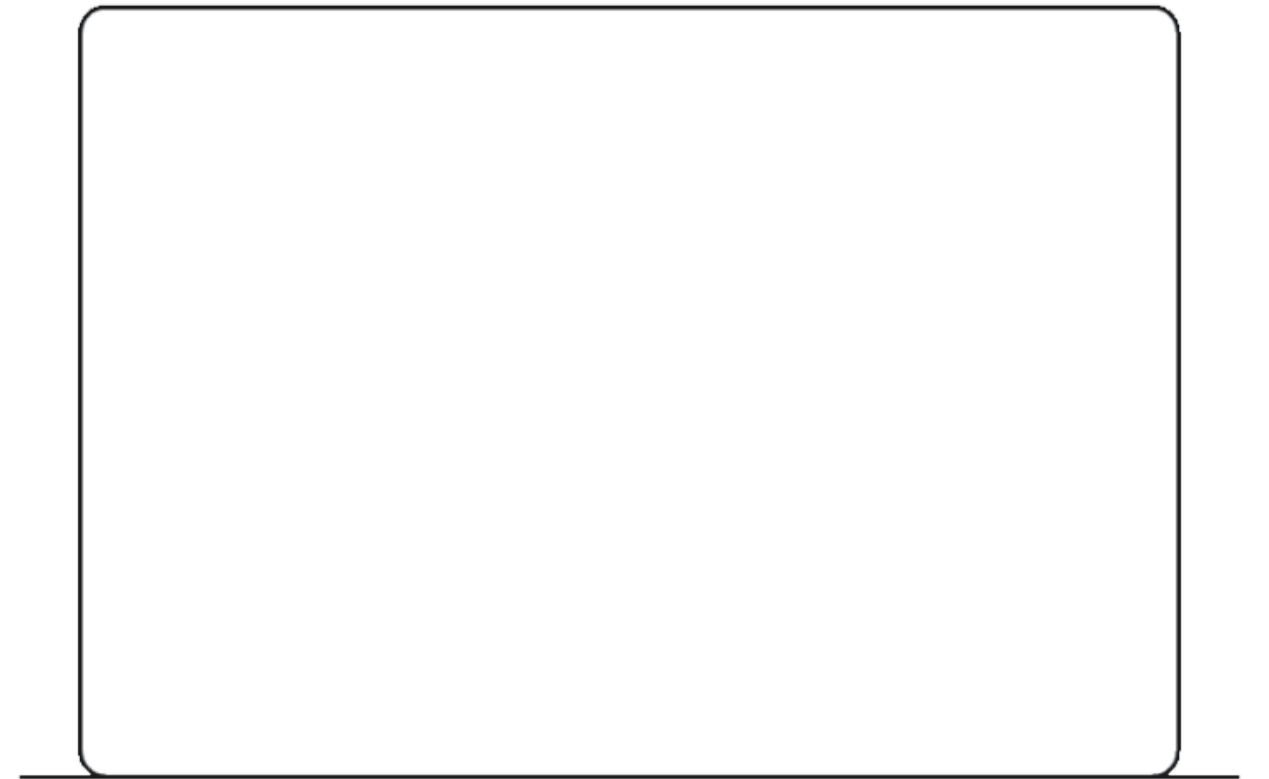
OK, enough talk...
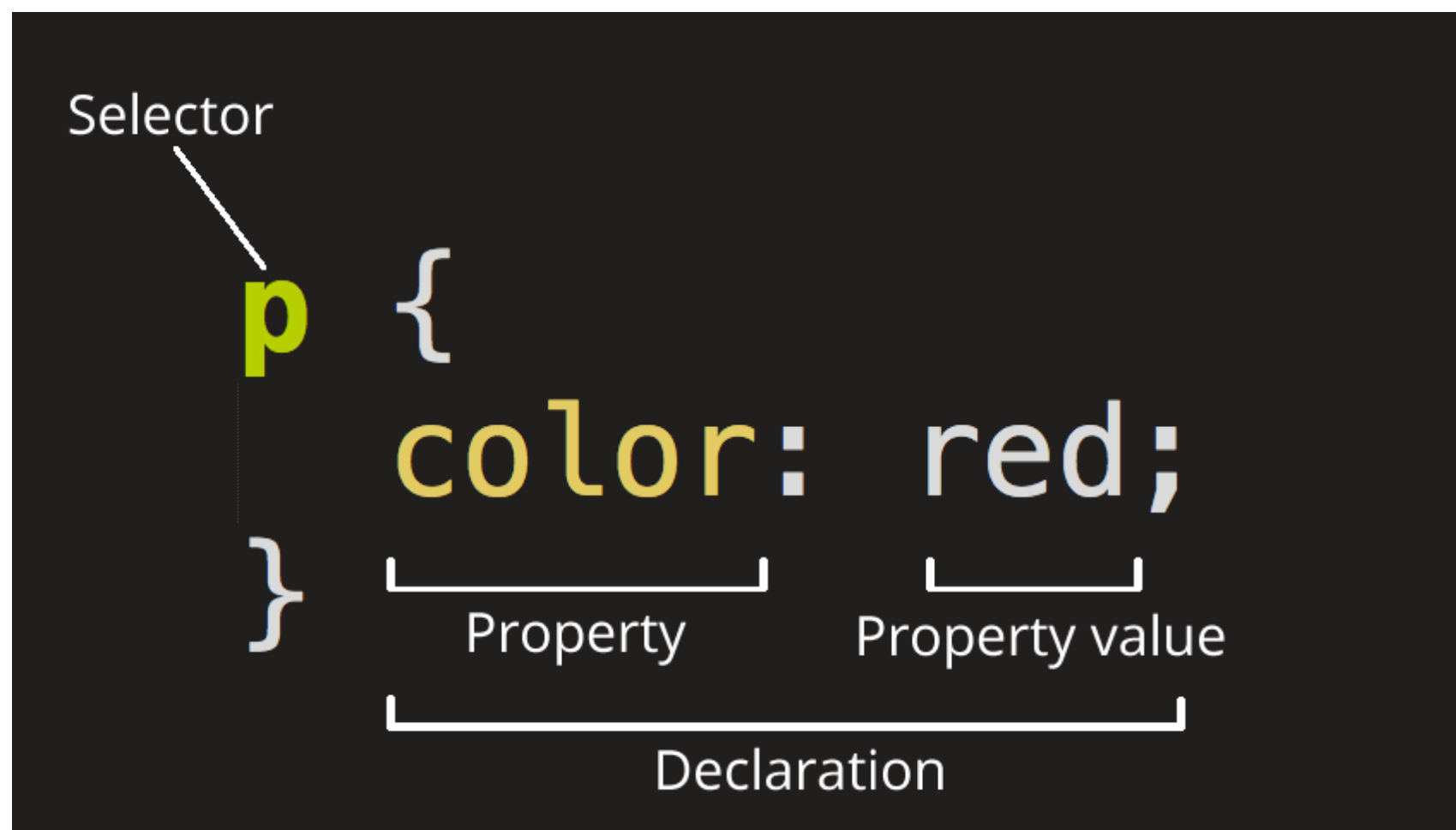
Let's start building!

CSS

What is CSS?

- **Defines HOW the page looks**
- **Cascading**: children inherit parents' styling
- **Style**: refer to properties such as layout, position, color, font, background, padding, borders, ...
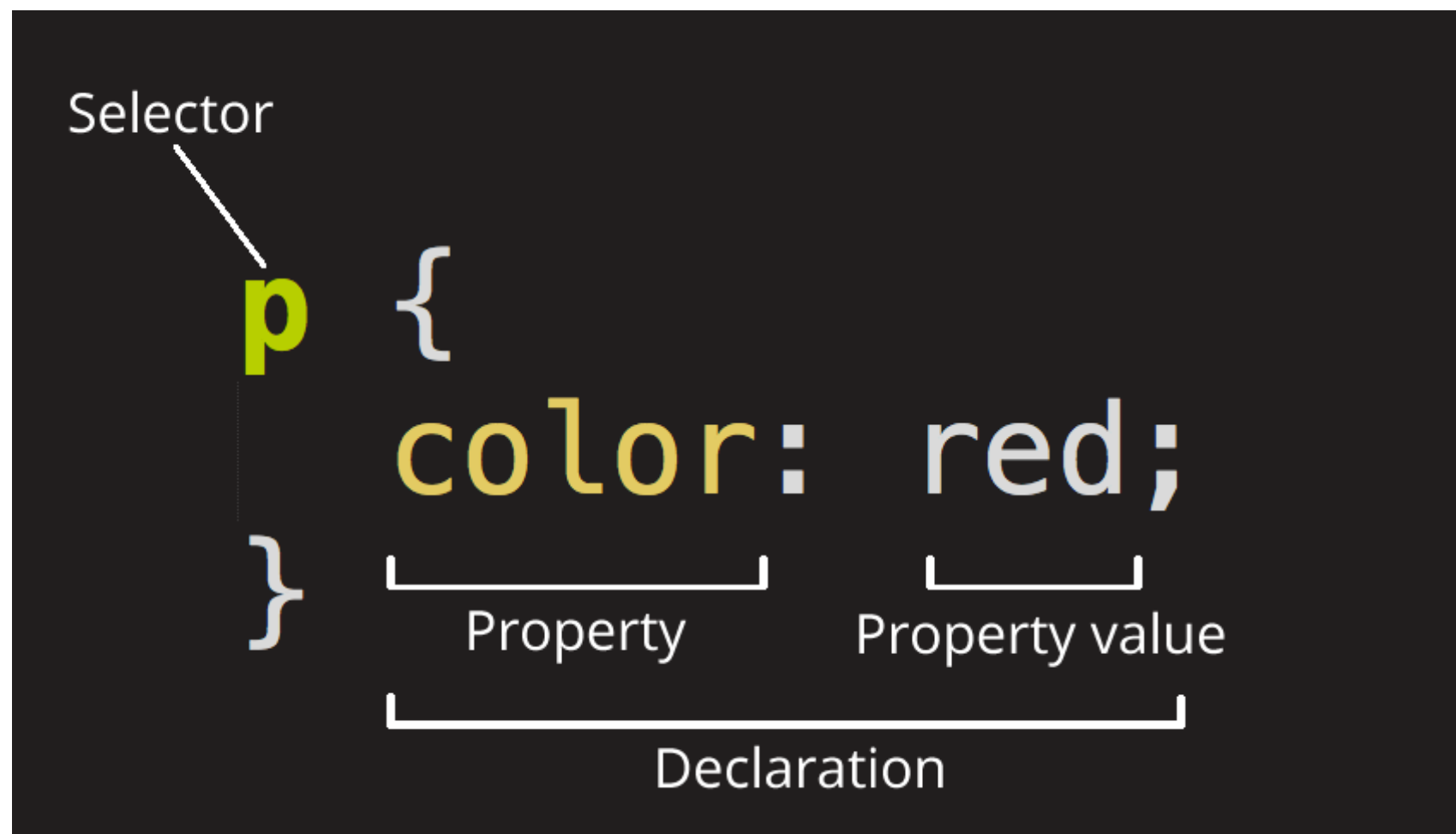- **Sheet**: apply to a whole page

Anatomy of a CSS Ruleset

Selector: Defines element(s) to be styled.

- **Element:** eg. p, img,...
- **Class:** .class-name
- **ID:** #id-name
- **Attribute:** img[src]
- **Pseudo-class:** img:hover

Anatomy of a CSS Ruleset

Declaration: specifies which of the element's properties you want to style

**Property:** specifies which property to affect in the rule

Property value: chooses one out of many possible appearances

Anatomy of a CSS Ruleset

```css
p {
  color: red;
  width: 500px;
  border: 1px solid black;
}
```

```css
p, li, h1 {
  color: red;
}
```

- Each ruleset must be wrapped in curly braces ({})
- Must use a colon (:) to separate the property from its value or values
- Must use a semicolon (;) to separate each declaration from the next one
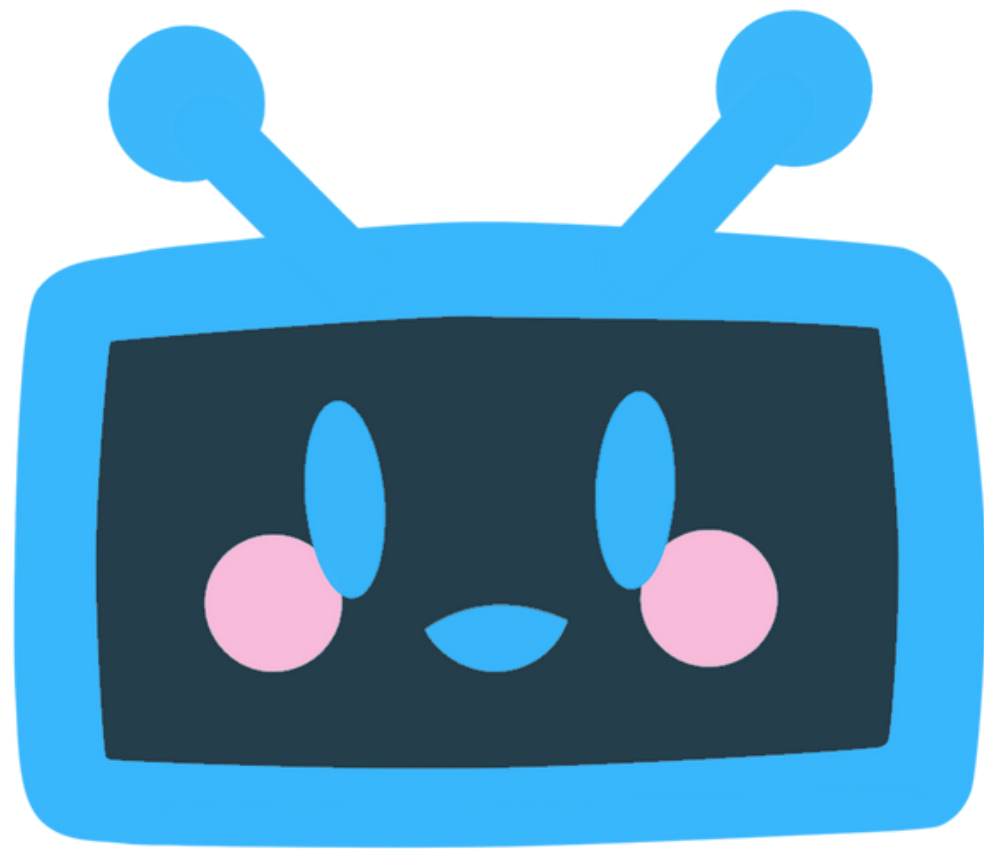- Can have more than on selector
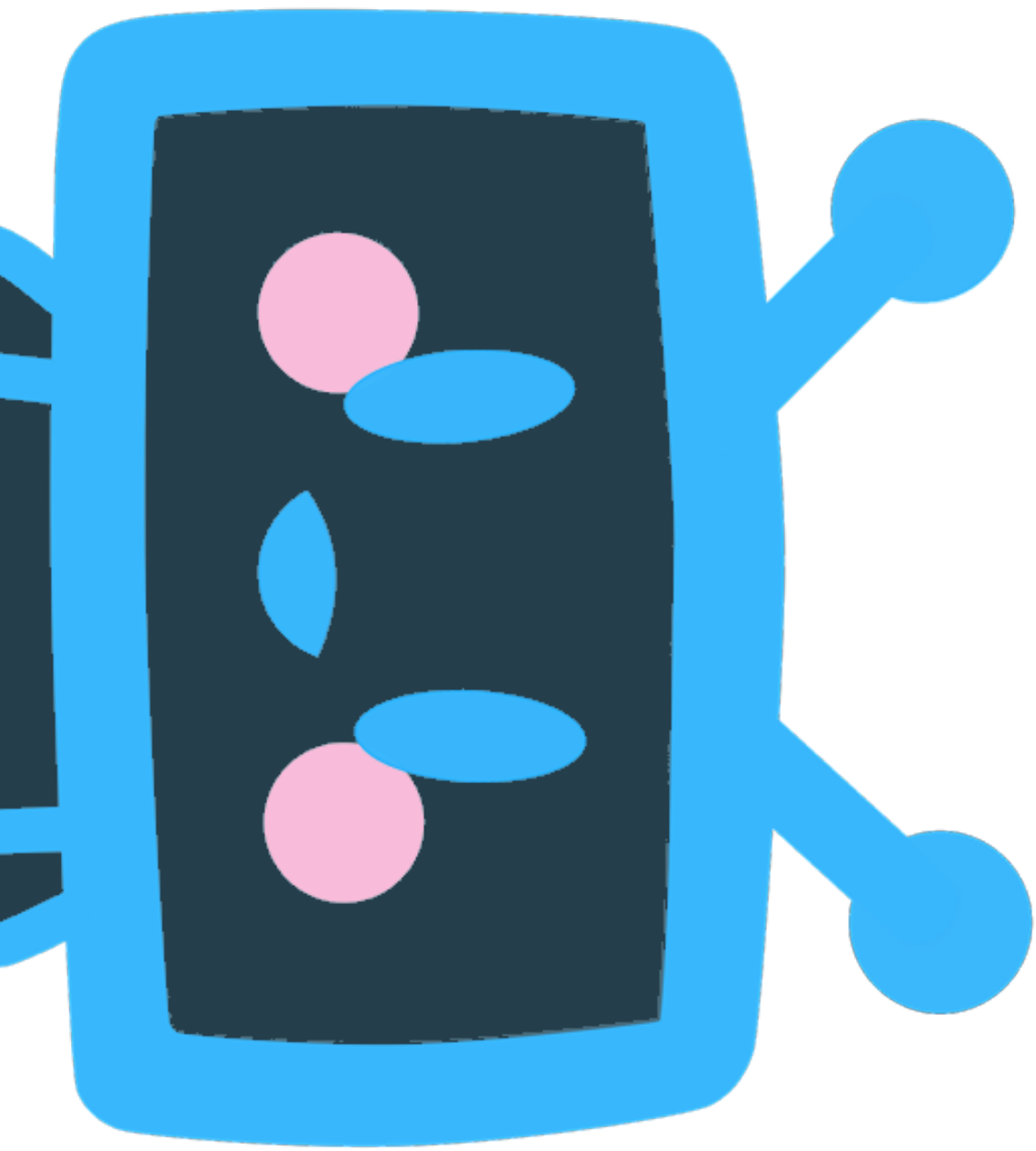
WOW! Neat...

Let's apply styling!

roadmap.sh/frontend

What next?

Let's Connect!

Email
adasteam@ualberta.ca

Website
www.adasteam.ca

Sources

- **Wikipedia:** https://en.wikipedia.org/wiki/Web_development
- **HTML Basics:** https://developer.mozilla.org/en-US/docs/Learn/Getting_started_with_the_web/HTML_basics