




Welcome to the CoGrammar

Introduction to Web Development

The session will start shortly...

Questions? Drop them in the chat. We'll have dedicated moderators answering questions.



Cyber Security Session Housekeeping

- The use of disrespectful language is prohibited in the questions, this is a supportive, learning environment for all - please engage accordingly.
(Fundamental British Values: Mutual Respect and Tolerance)
- No question is daft or silly - **ask them!**
- There are **Q&A sessions** midway and at the end of the session, should you wish to ask any follow-up questions.
- If you have any questions outside of this lecture, or that are not answered during this lecture, please do submit these for upcoming Academic Sessions. You can submit these questions here: [Questions](#)

Cyber Security Session Housekeeping cont.

- For all **non-academic questions**, please submit a query: www.hyperiondev.com/support
- We would love your **feedback** on lectures: [Feedback on Lectures](#)
- Find all the lecture **content** in you [Lecture Backpack](#) on GitHub.
- If you are hearing impaired, please kindly use your computer's function through Google chrome to enable captions.

Safeguarding & Welfare

We are committed to all our students and staff feeling safe and happy; we want to make sure there is always someone you can turn to if you are worried about anything.

If you are feeling upset or unsafe, are worried about a friend, student or family member, or you feel like something isn't right, speak to our safeguarding team:



Ian Wyles
Designated Safeguarding
Lead



Simone Botes



Nurhaan Snyman



Rafiq Manan



Ronald Munodawafa



Tevin Pitts

Scan to report a
safeguarding concern



or email the Designated
Safeguarding Lead:
Ian Wyles
safeguarding@hyperiondev.com

Stay Safe Series:

Mastering Online Safety One week at a Time

While the digital world can be a wonderful place to make education and learning accessible to all, it is unfortunately also a space where harmful threats like online radicalization, extremist propaganda, phishing scams, online blackmail and hackers can flourish.

As a component of this BootCamp the ***Stay Safe Series*** will guide you through essential measures in order to protect yourself & your community from online dangers, whether they target your privacy, personal information or even attempt to manipulate your beliefs.

Security Tip

Close unused accounts

Delete old online accounts you no longer use. They may have weak passwords or poor data protection, making them easy targets for hackers. Clean up your digital footprint to protect your personal information.

CoGrammar

Introduction to Web Development

November 2024

Learning Objectives & Outcomes

- Explain the concept of the World Wide Web and describe the key processes that occur on the front-end and back-end during web interactions.
- Identify and explain the functional roles of front-end and back-end components in a web application.
- Construct basic web pages using HTML, organising content with semantic elements such as headings, navigation, images, and lists.
- Apply HTML best practices by writing clear, well-structured code to present formatted information, while utilising elements like navigation, links, and media integration.

Polls

Please have a look at the poll notification and select an option.

Given the URL `https://example.com:80/page?key=value`, what part represents the domain?

- A. `https://`
- B. `example.com`
- C. `:80`
- D. `/page?key=value`

Polls

Please have a look at the poll notification and select an option.

What do you think is the biggest difference between the early web (Web 1.0) and today's web (Web 2.0)?

- A. Speed of access.
- B. Amount of information.
- C. Interactivity and user-generated content.
- D. I'm not sure.

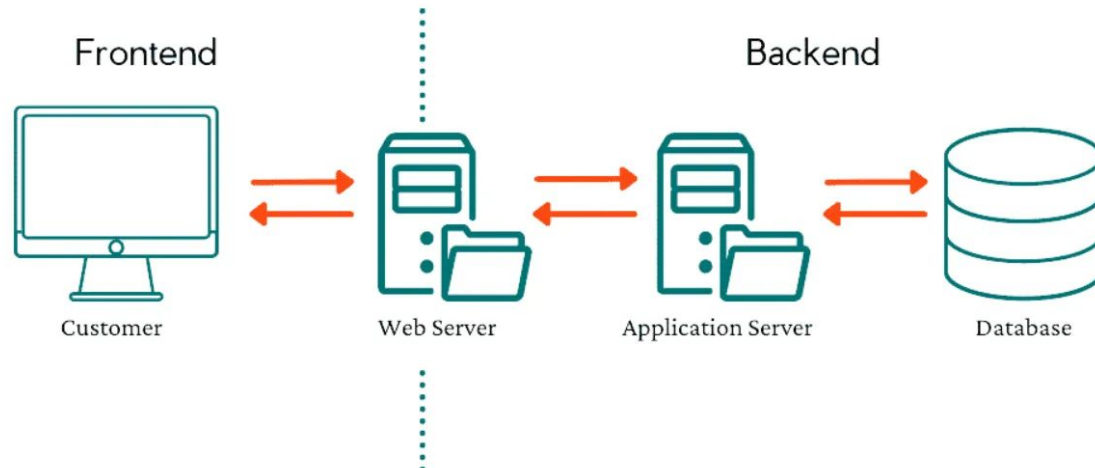
World Wide Web

- ❖ The **World Wide Web (WWW)** is a system of interlinked documents and resources that can be accessed through the internet.
- ❖ Users navigate between pages using **hyperlinks**.
- ❖ Understanding the fundamental concepts behind the web is essential for building effective web applications.

Front-end and Back-end

- ❖ Web applications are typically divided into two key components: the **front-end** and the **back-end**.
- ❖ The **front-end** is responsible for everything users see and interact with in their browser, such as text, images, and buttons.
- ❖ The **back-end**, on the other hand, handles the server-side logic, database management, and processing requests.

Front-end and Back-end



HTML

- ❖ **HTML (HyperText Markup Language)** is used to structure and format the content of websites on the World Wide Web.
- ❖ In simple words, HTML is the primary building block to create and structure website content.
- ❖ Web Developers use it to create a skeleton of modern websites and web apps.

HTML

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <title>Hello CoGrammar</title>
  </head>
  <body></body>
</html>
```

HTML

- ❖ **<html>** is the root element of the DOM, and it contains all of the other elements in the code.
- ❖ The **<head>** tag contains metadata about the web page, such as the title and any linked CSS or JavaScript files.
- ❖ The **<body>** tag contains the main content of the web page, which will be displayed in the web browser's window.

HTML: Elements

- ❖ HTML elements consist of several parts, including the **opening and closing tags**, the **content**, and the **attributes**.
- ❖ **Opening tag**: consists of the element name, wrapped in angle brackets (< or />). It indicates the start of the element and the point at which the element's effect begins.

HTML: Elements

- ❖ **Closing tag:** same as opening tag, with a forward slash before the element name. Indicates the end of the element.
- ❖ The **content** of the element can be text, other elements, or a combination of both.
- ❖ The opening tag, the closing tag, and the content together make up the element.

HTML: Comments

- ❖ HTML comments are used to insert notes to a web page.

```
<!-- You can't see me -->
<p>
  You cannot see the comment above because it's not supposed to be visible
</p>
</body>
```

Hi, I am a paragraph.

You cannot see the comment above because it's not supposed to be visible

HTML: Headings

- ❖ The HTML heading tags (<h1> to <h6>) are used to add headings to a webpage.

```
<h1>Heading 1.</h1>
```

```
<h2>Heading 2.</h2>
```

```
<h3>Heading 3.</h3>
```

```
<h4>Heading 4.</h4>
```

```
<h5>Heading 5.</h5>
```

```
<h6>Heading 6.</h6>
```

Heading 1.

Heading 2.

Heading 3.

Heading 4.

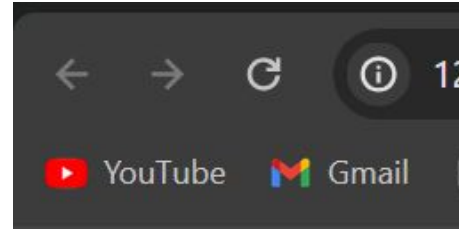
Heading 5.

Heading 6.

HTML: Paragraphs

- ❖ The HTML `<p>` tag is used to create paragraphs.

```
<body>  
  <p>Hi, I am a paragraph.</p>  
</body>  
</html>
```



Hi, I am a paragraph.

HTML: Images

- ❖ We can add images to our website using the **** element.

```

```

HTML: Lists

- ❖ Lists can either be **ordered lists** `` or **unordered lists** ``. An ordered list is numbered.
- ❖ An **ordered list is numbered**, i.e. 1, 2, 3, etc., whereas an **unordered list uses bullet points**.

```
<ol>
  <li>Student 1: Here</li>
  <li>Student 2: Absent</li>
</ol>
```

```
<ul id="Agenda">
  <li>Terminal</li>
  <li>Dev Environment</li>
  <li>HTML</li>
  <li>JavaScript</li>
</ul>
```

HTML: Links

- ❖ The **<a> element** stands for “anchor” and is used to add **links** on a web page.
- ❖ The **href** attribute stands for “hypertext reference”.

```
<a href="https://www.google.com">  
  Let's have a look together!  
</a>
```

HTML: Attributes

- ❖ HTML elements can have **attributes**, which provide additional information about the element.

```
<p name="new_paragraph">Hi, I am a paragraph.</p>  
</body>  
</html>
```

Polls

Please have a look at the poll notification and select an option.

When a browser sends an HTTP request, what response code indicates that the requested page was not found?

- A. 200
- B. 301
- C. 404
- D. 500

Polls

Please have a look at the poll notification and select an option.

In the URL <https://example.com/page?search=html&sort=asc>, what is **sort=asc** called?

- A. A file path.
- B. A query parameter.
- C. A URL fragment.
- D. A port definition.

Questions and Answers



Thank you for attending



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