# HELLO WORLD!
# INTRODUCTION TO ACCESSIBLE WEB DESIGN

*Module 1: Advanced Creative Coding*

*Session 1*

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*prepared using materials from*
*“Designing Accessible Interfaces” course*
*by UAL Creative Computing Institute*

*Peckham Digital Accelerator Zone*

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# *WHAT WE WILL COVER TODAY - ACCESSIBILITY*

- what is **accessibility**
- **who is affected** by accessibility issues
- UK **Government guidelines** on accessibility on the Web
- examples of **good accessibility practice** in Web and Digital Design

# *WHAT WE WILL COVER TODAY - TECHNICAL TOOLS*

- introduction to **HTML** (HyperText Markup Language)
- introduction to **CSS** (Cascading Style Sheet)
- introduction to the **MIMIC platform** and coding environments
- introduction to **Figma**, an online digital design tool

# WHAT IS ACCESSIBILITY?

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# *WHAT IS ACCESSIBILITY?*

- the fact of being able to **be reached or obtained easily**

- the quality of being able to be **entered or used by everyone**, including people who have a disability

- the quality of being **easy to understand or enjoy**

Cambridge English Dictionary

# *WHAT IS ACCESSIBILITY?*

- Accessibility (...) is concerned with whether **all users are able to access an equivalent user experience***, however they encounter a product or service (e.g., using assistive devices).

Interaction Design Foundation - IxDF. 2016. What is Accessibility?
Retrieved July 5, 2024 from https://www.interaction-design.org/literature/topics/accessibility

*an approach aiming to design for everyone is called universal design and comes with a set of its own issues important to consider.

# *WHO IS IMPACTED BY ACCESSIBILITY ISSUES...*

- in general?
- on the Web?

# *WHO IS IMPACTED BY ACCESSIBILITY ISSUES?*

- **1 out of 5** people in the world live with a disability.
- 2.2% have very significant disabilities.
- This statistic is true at any point in time, which means, **many more people will experience a disability at some point in their lives**.

# WHO IS IMPACTED BY ACCESSIBILITY ISSUES?

- Globally, there are around 285 million people experiencing a visual impairment. 39 million people are blind.

- 466 million people in the world live with hearing loss. This is 6.1% of the total population.

- It is estimated that 1 out of 10 people have dyslexia.

# *WHAT HEALTH CONDITIONS MAY IMPACT A PERSON'S USE OF DIGITAL APPLICATIONS?*

- visual or hearing impairments,
- dyslexia,
- Autism Spectrum Disorder (ASD),
- physical disabilities (e.g. motor neurone disease),
- Alzheimer's,
- ADHD,
- fatigue,
- mental health conditions,
- This is by no means an exhaustive list, and **different users with similar issues might have different needs.**

# WHY IS IT IMPORTANT TO DO DIGITAL DESIGN WITH ACCESSIBILITY IN MIND?

- If your apps, websites etc. aren't accessible, you are excluding a lot of people from using the tools they need.

- This can limit access to services, information, knowledge, entertainment, etc., and seriously impact people's lives.

- There are groups of people in intersectional categories (e.g. they have a learning difficulty and a visual impairment). The impact of inaccessible technology is much stronger for them.

- Designing accessible interfaces is not just a choice, but **a legal requirement in the UK** (to an extent).

# DESIGNING TECHNOLOGY WITH ACCESSIBILITY IN MIND - FROM THE START

- When we consider accessibility from the beginning of design, we can ensure that barriers are minimised or removed (for the users we consider).

- There are other factors that might impact a user's ability to engage with something, for example: wealth/socioeconomic status, discrimination as part of being a member of a minority or oppressed group (of which being disabled is one!), physical location, cultural context.

- While we've been primarily discussing disability here, many of the other categories may intersect with it.

# *ASSUMPTIONS WHILE DESIGNING A PRODUCT*

**Imagine designing a Match-3 phone game. What assumptions do the designers make about the users?**

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# ASSUMPTIONS WHILE DESIGNING A PRODUCT

**Imagine designing a Match-3 phone game. What assumptions do the designers make about the users?**

- Users will find this game enjoyable.
- Users have a mobile phone.
- Users' phones will be able to play this game.
- Users are able to operate the mobile phone.
- Users are able to tap the screen.
- Users are able to see the game on the screen.

# *HOW CAN WE MITIGATE THESE ASSUMPTIONS?*

**Imagine designing a Match-3 phone game. What assumptions do the designers make about the users?**

- Users will find this game enjoyable.
- Users have a mobile phone.
- Users' phones will be able to play this game.
- Users are able to operate the mobile phone.
- Users are able to tap the screen.
- Users are able to see the game on the screen.

# HOW CAN WE MITIGATE THESE ASSUMPTIONS?

- Making these assumptions explicit.
- Referring to them during the whole design process.
- Understanding which of these assumptions are potentially making it harder for certain users.
- Making design decisions to mitigate those problems.

# *WHAT FORMAL GUIDELINES SHOULD WE USE WHILE DESIGNING TECHNOLOGY?*

- **Web Content Accessibility Guidelines (WCAG)** - we'll get back to these later! https://www.w3.org/TR/2008/REC-WCAG20-20081211/

- UK Government's **"Dos and Dont's"** - more guidelines than regulations https://accessibility.blog.gov.uk/2016/09/02/dos-and-donts-on-designing-for-accessibility/

- UK Government's regulations for public sector websites: https://www.gov.uk/guidance/accessibility-requirements-for-public-sector-websites-and-apps

- The Equality Act and the UN Convention protect the rights of disabled users: https://www.gov.uk/rights-disabled-person

- Bottom-up initiatives, such as the style guide by the British Dyslexia Association: https://www.bdadyslexia.org.uk/advice/employers/creating-a-dyslexia-friendly-workplace/dyslexia-friendly-style-guide







https://accessibility.blog.gov.uk/2016/09/02/dos-and-donts-on-designing-for-accessibility/

# THE UK GOV DOS AND DONT'S

- As you go through this document, you'll see it tells you how to design for those with low vision and those with visual impairment.
- Use good contrast and readable font size. It tells you to publish all information on web pages in HTML.
- It tells you to use a good combination of colour, shape and text, to follow a linear, logical layout and ensure text flows and is visible when text is magnified 200 percent.
- Put buttons and notifications in context.
- Don't use low colour contrast and small font sizes.
- Don't bury information in downloads.
- Don't only use colours to convey meaning.
- Don't force users to scroll horizontally.
- Make sure text is easy to find.

# TECHNOLOGICAL STANDARDS - W3C

- https://www.w3.org/standards/

  These standards ensure the technology is unified and transferable between different systems, browsers, and geographic locations.

# *WHAT IS HTML?*

## HYPERTEXT

It allows for creating connections (Hyperlinks) between different elements of the text.

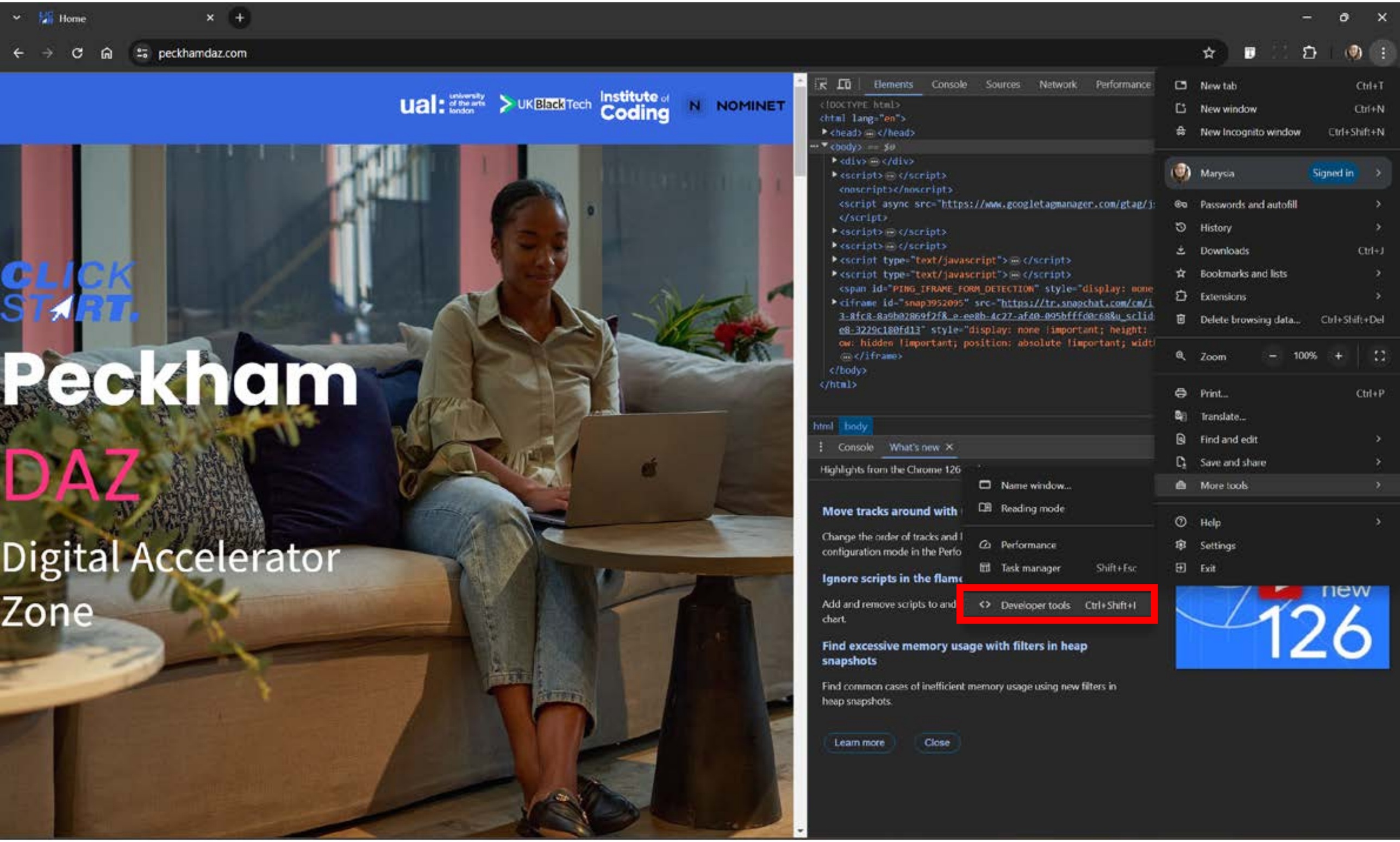
## MARKUP LANGUAGE

A type of coding language that is used for displaying or formatting the data, not for processing it. It does not include algorithms or complex logical operations.

HTML can include scripts in other languages for operations on data.

# *YOU CAN ACCESS THE HTML CODE OF ANY WEBSITE!*

## How do you do that?


Home
peckhamdaz.com
ual: university of the arts london
UKBlackTech
Institute of Coding
NOMINET
CLICK START.
Peckham
DAZ
Digital Accelerator Zone
Elements
Console
Sources
Network
Performance
<!DOCTYPE html>
<html lang="en">
<head> </head>
<body> == $0

<script> </script>
<noscript></noscript>
<script async src="https://www.googletagmanager.com/gtag/j
</script>
<script type="text/javascript">
<span id="PING_IFRAME_FORM_DETECTION" style="display: none
<iframe id="snap3952095" src="https://tr.snapchat.com/cm/i
3-8fc8-8a9b02869f2f&_e=ee8b-4c27-af40-095bfffd0c68&u_sclid
e8-3229c180fd13" style="display: none !important; height:
ow: hidden !important; position: absolute !important; widt
</iframe>
</body>
</html>
html
body
Console
What's new
Highlights from the Chrome 126
Move tracks around with
Change the order of tracks and
configuration mode in the Perfo
Ignore scripts in the flame
Add and remove scripts to and
chart.
Find excessive memory usage with filters in heap snapshots
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Delete browsing data... Ctrl+Shift+Del
Zoom 100%
Print... Ctrl+P
Translate...
Find and edit
Save and share
More tools
Help
Settings
Exit
Name window...
Reading mode
Performance
Task manager Shift+Esc
Developer tools Ctrl+Shift+I
new
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# HOW IS AN HTML DOCUMENT BUILT?

## TAG

An element in an HTML document is called a tag. Tags form the structure of documents such as web pages. They can be nested. Nested tags usually have larger indents for readability.

**Some tags do not need to be closed.**

```
<img src=”myImg.jpg”>
```

**Some tags need to be opened and closed.**

```
<p>This is my paragraph.</p>
```

List of HTML tags: https://www.w3schools.com/tags/

# *HOW IS AN HTML DOCUMENT BUILT?*

## PROPERTY

Properties describe the features of an HTML element.

```
<img src=”myImg.jpg” width=”1000”>
```

Some properties can be included either inside the HTML tag or a CSS styling sheet. It is usually good practice to include styling properties in the CSS files.

We will get back to CSS later.

# *HOW IS AN HTML DOCUMENT BUILT?*

HTML tags are often be nested. Nested tags usually have larger indents for readability.

**Readability** is an important to consider whenever you write code.

index.html +

```
<!DOCTYPE html>
<html>
    <head>
    </head>
    <body>
        <p>Hello World!</p>
    </body>
</html>
```

# *CODING AND GOOD PRACTICE*

## Why is it important?

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# WHAT CAN YOU DO WITH HTML CODE?

- create and format websites and text documents
- read, using your eyes and assistive technology
- scrape and analyse (we'll be doing this in Module 2)
- make art with
- anything else?

# WHAT IS CSS?

- Cascading Style Sheet

- It lets you style the text while keeping the code neat in a separate file.

- How to use it embedded in HTML: https://www.w3schools.com/css/tryit.asp?filename=trycss_syntax_element

- How to include a separate file: https://www.w3schools.com/CSS/css_howto.asp