TT284

Welcome, Introduction and Block 1

Overview of TT284
Practical: HTML and CSS
Concepts: Standards, Usability, Accessibility

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RECORDED

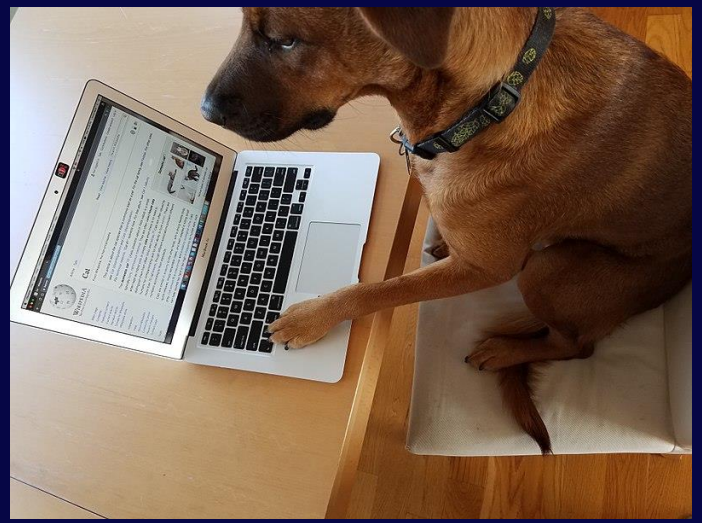
https://github.com/thebrentc-ou/tt284-intro

You can use chat for questions,
or 'raise hand' to speak.
Video is not needed
and audio is optional.

The Open University

Thanks and acknowledgements: Alan Wilson and other TT284 tutors

Welcome ...



Overview

- Block 1: Basic Web Technologies
  - TMA01
- Block 2: Web Architectures
  - TMA02
- Block 3: Mobile Content & Applications
  - TMA03
- Block 4: Managing Application Development
- EMA

Overview: Block 1

- Block 1: Basic Web Technologies
  - Standards, usability, accessibility
  - HTML and CSS, including forms
  - Case study: Open University Running Club (OURC)
  - TMA01

Overview: Block 2

- Block 2: Web Architectures
  - Architectures: client-server and variations
  - Client-side processing with JavaScript, and validation
  - Server-side processing with PHP, and databases and SQL
  - Case study: Open University Running Club (OURC)
  - A basic web application
  - Using TT284 Server (see Links)
  - TMA02

Overview: Block 3

- Block 3: Mobile Content & Applications
  - Not yet released
  - Mobile devices, responsive design, device capabilities, client and server storage
  - Case study: Open University Running Club (OURC)
  - TMA03

Overview: Block 4

Have a look at the OURC case study

- Block 4: Managing Application Development
  - Not yet released
  - Service availability, managing projects, managing assets, version control, testing and security
  - Case study: Open University Running Club (OURC)

Breakdown of marks

The three TMAs are equally weighted in their contribution to the continuous assessment score for the module [33% each]

The continuous assessment (TMAs) and the examinable component (EMA) are each worth 50% of your overall module score.

To be sure of a pass result you need to achieve scores of at least 40% in each component.

COMPONENT	WEIGHTING (%)
Continuous assessment	
TMA 01	33
TMA 02	33
TMA 03	33
TMAs Total	100
Overall assessment	
TMAs	50
EMA	50

General guidance

- Aim to keep up with the module schedule
- Look at assignments early
- Balance your time on module theory and practice
- Build references as you study and draft your assignments (OU, 2023)
- Iterate

References

The Open University (OU) (2023) *Quick guide to Harvard referencing (Cite Them Right)*. Available at: https://www.open.ac.uk/library/referencing-and-plagiarism/quick-guide-to-harvard-referencing-cite-them-right (Accessed: 10 October 2023).

Iterate

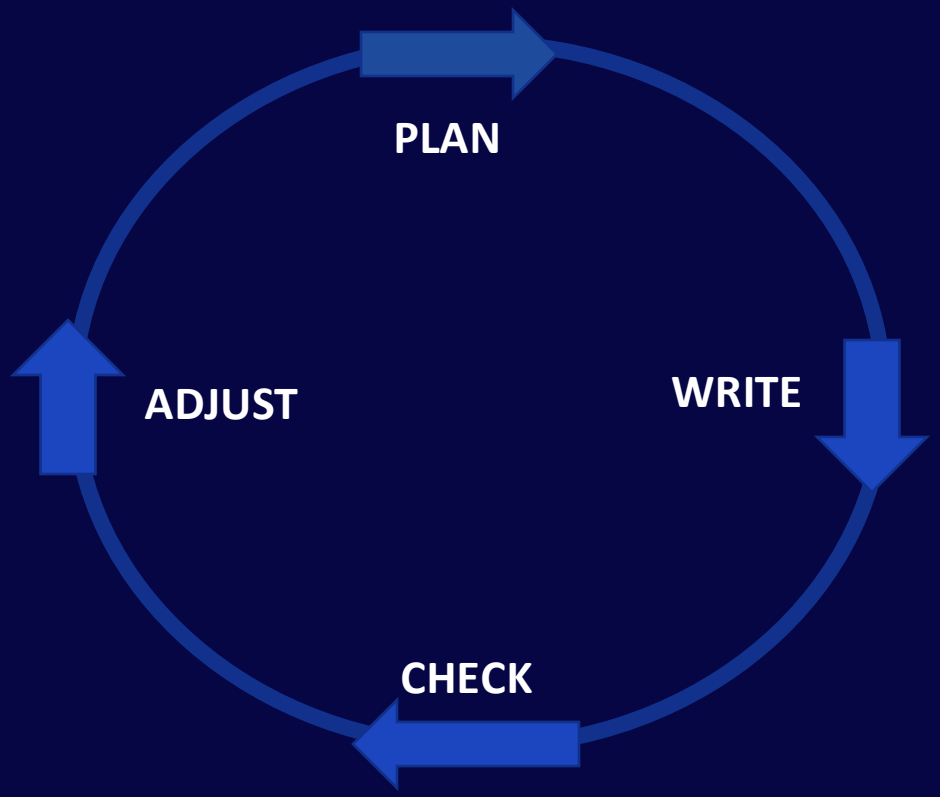


Figure 1: Adaptation of Plan-Do-Check-Adjust (PDCA)

For background on PDCA, see for example: Foresight University (2019)

Practical work

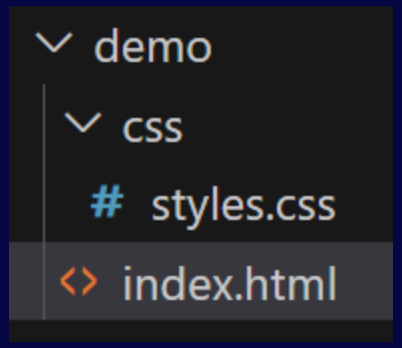
- Get set up
  - use a proper programming editor, for example Visual Studio Code (see Links)
  - use Chrome
  - work out folders and file storage and your personal 'workflow'
  - Keep backups (but keep private)
- Ensure you can use the TT284 server for Block 2 in good time
- Be aware that copying/pasting code can mess up the text format

Block 1...

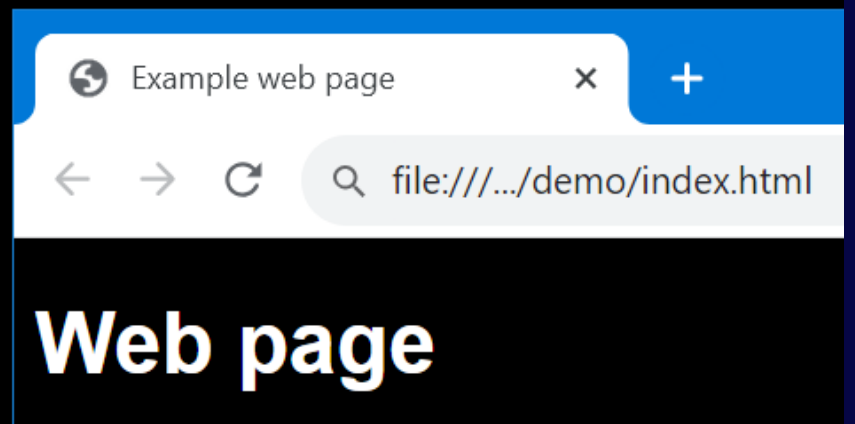
Basic web technologies
HTML and CSS, and forms
Standards, usability, accessibility

Practical: HTML and CSS ...

A web site

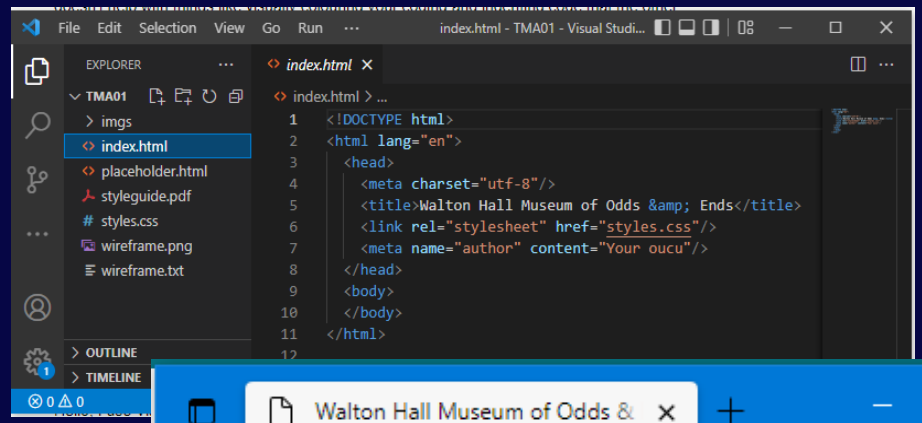



```
<!doctype html>
<html lang="en">
    <head>
        <meta charset="utf-8">
        <title>Example web page</title>
        <link rel="stylesheet" href="css/styles.css">
    </head>
    <body>
        <h1>Web page</h1>
        <section id="main">
            <p class="featured">Welcome to my web page.</p>
            <!-- Link to portfolio -->
            <a href="portfolio.html">See my portfolio</a>
        </section>
        </body>
</html>
```

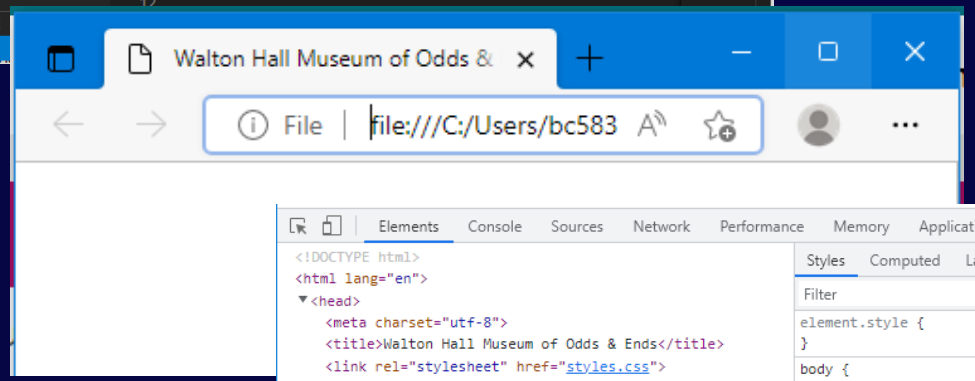


Web development

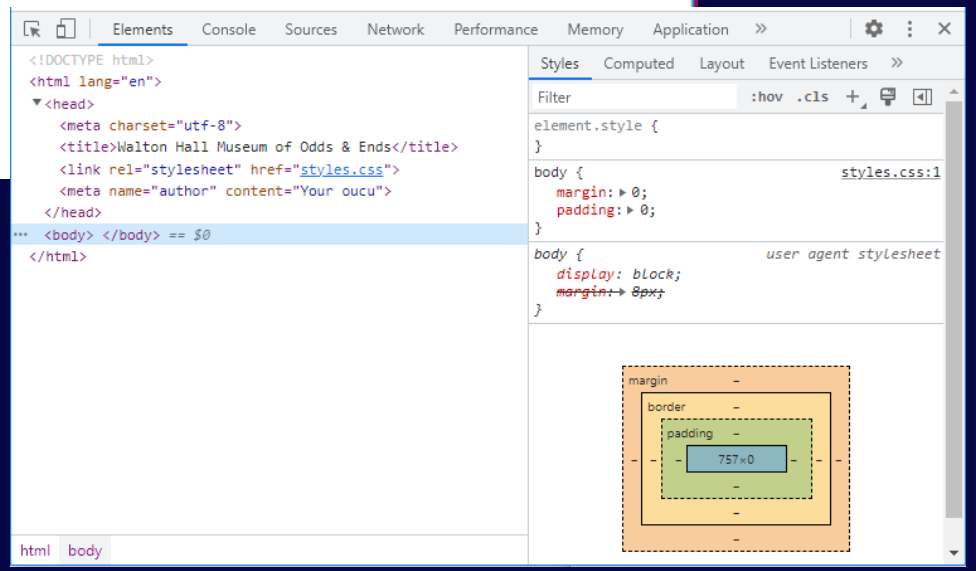
1. Code editor



2. Running



3. Developer tools



Right-click, Inspect..

HTML: Hyptertext Markup Language

```html
<!doctype html>
<html lang="en">
    <head>
        <meta charset="utf-8">
        <title>Example web page</title>
        <link rel="stylesheet" href="css/styles.css">
    </head>
    <body>
        <h1>Web page</h1>
        <section id="main">
            <p class="featured">Welcome to my web page.</p>
            <!-- Link to portfolio -->
            <a href="portfolio.html">See my portfolio</a>
        </section>
        </body>
</html>
```

- nested tags
- with attributes
- Linking stylesheet
- using id and class
- linking to other files

CSS: Cascading Style Sheets

```css
/* styles.css */
body {
    font-family:Arial, Helvetica, sans-serif;
    background-color: black;
    color: white;
}
h1 {
    margin-bottom: 1.6em;
}
#main {
    width: 75%;
}
.featured {
    font-weight: bold;
}
section#main a {
    color: lightblue;
}
```

- box model
- selectors
- rules
  properties and values
- using id (#) and class (.)
- cascading
- combinator selectors

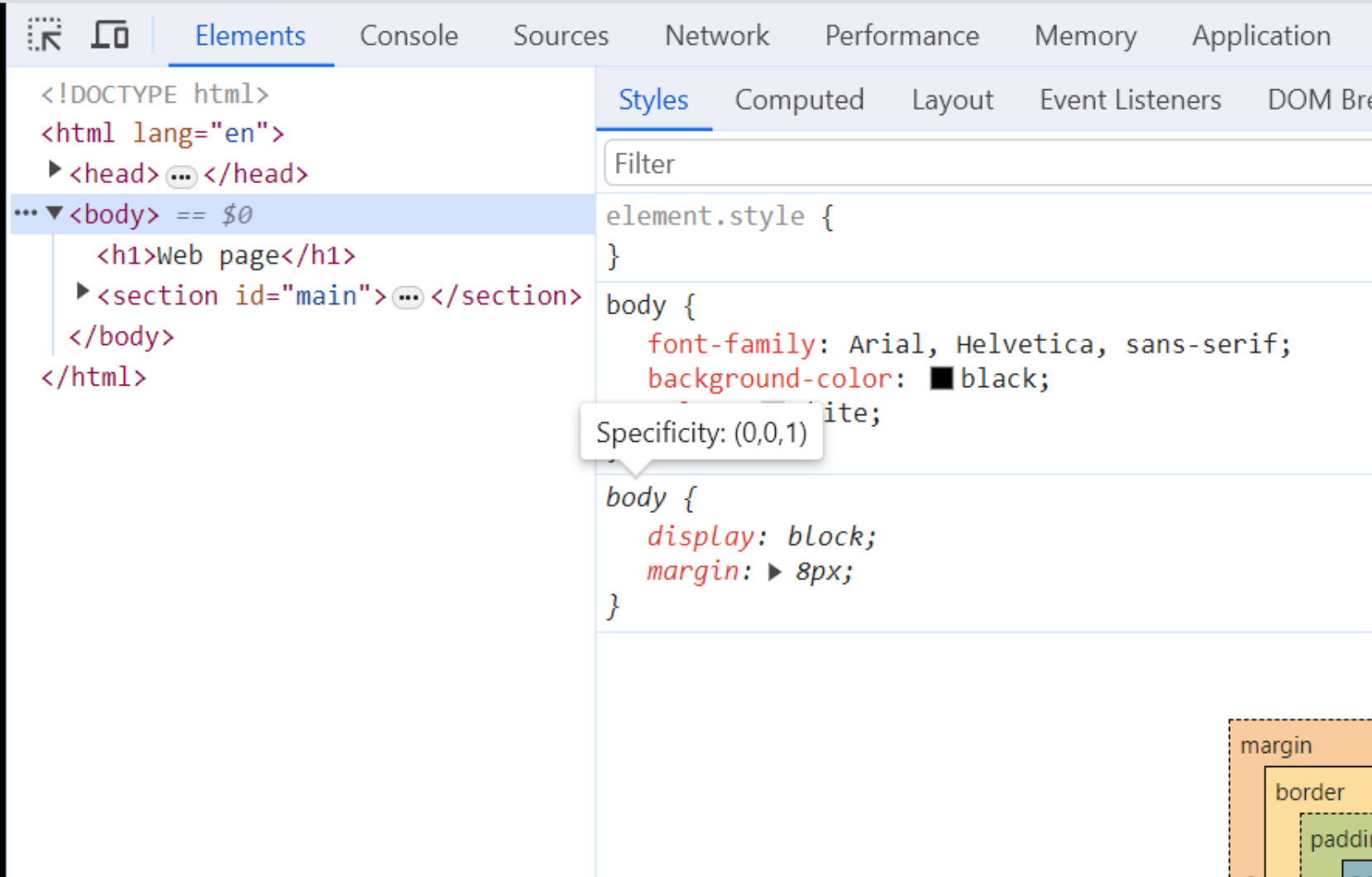
Developer tools

Right-click, Inspect..

Web page

Welcome to my web page.

See my portfolio



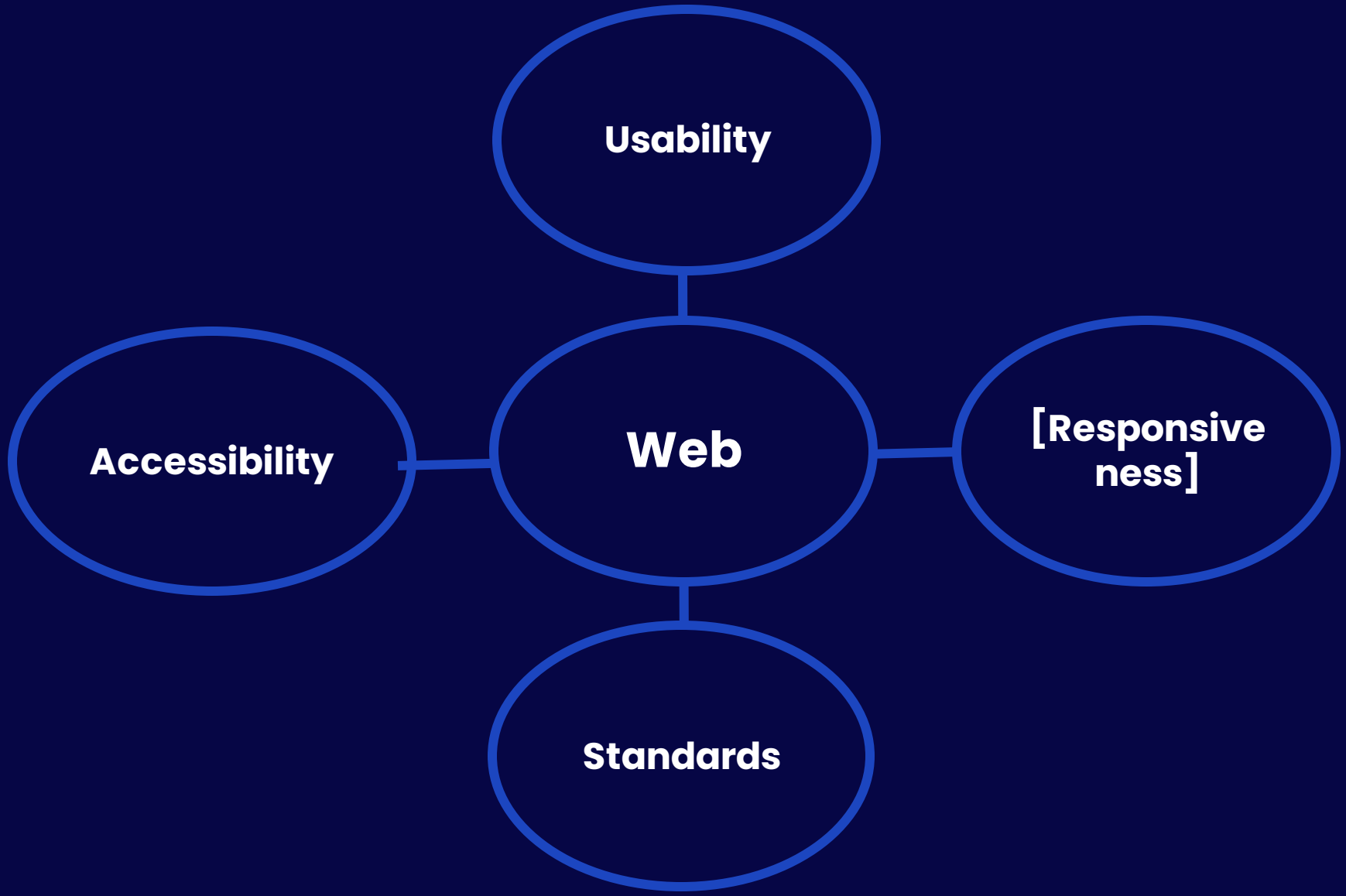
Layout and positioning

HTML and CSS

- HTML creates nested elements
- Elements follow 'normal flow' unless changed
- defaults to 'block' display; to 'inline' display
- HTML elements are given id's and/or classes for CSS to reference
- Some CSS layout-related properties:
    - display: block | inline | ...
    - position: static | relative | absolute | fixed | ... (with top | left | ...)
    - float: left | right
    - text-align: left | center | right
    - margin: ...
    - width / height: ...
- CSS values can be relative (e.g. 33% or 1em) or absolute (e.g. 0px) or keyword (e.g. auto)
- Tables are for information presentation, not layout (cf. Accessibility)
- More advanced options [optional]: Flex, Grid
- For info: Responsive design uses CSS @media 'queries' to target different screen sizes [coming later]
- Other points?

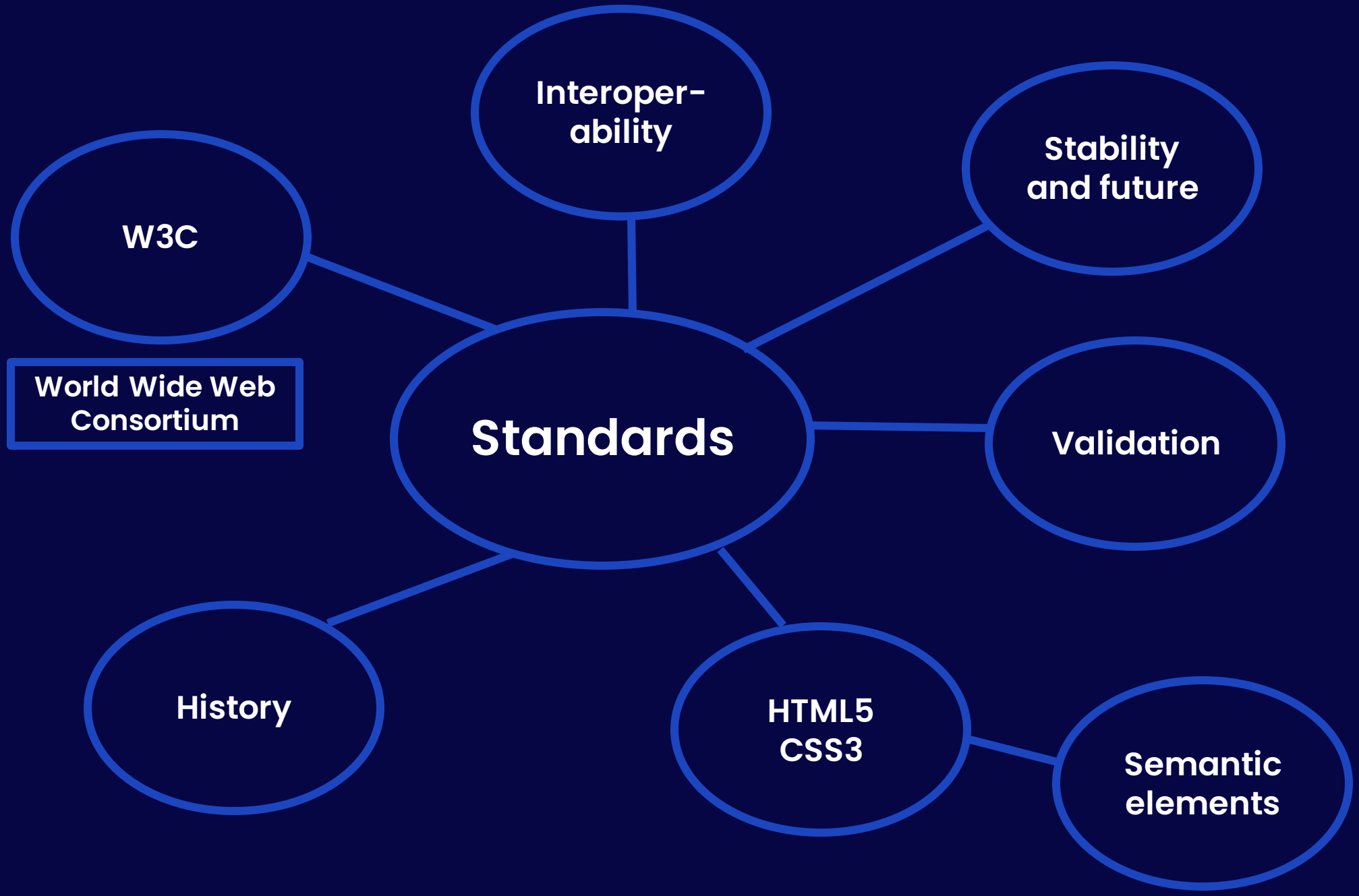
Keep it simple

Block 1 concepts



Block 1 concepts

Standards	"protocols and guidelines ...of the Web" (W3C, 2023)
Usability	"How easy user interfaces are to use" (Nielson, in Briggs and McIntyre, 2023a)
Accessibility	Web technologies made "so that people with disabilities can use them" (W3C, in Briggs and McIntyre, 2023b)
[Responsiveness]	"The scalability and responsiveness of any web application" (Briggs and McIntyre, 2023c)


Interoper-
ability
W3C
Stability
and future
World Wide Web
Consortium
Standards
Validation
History
HTML5
CSS3
Semantic
elements

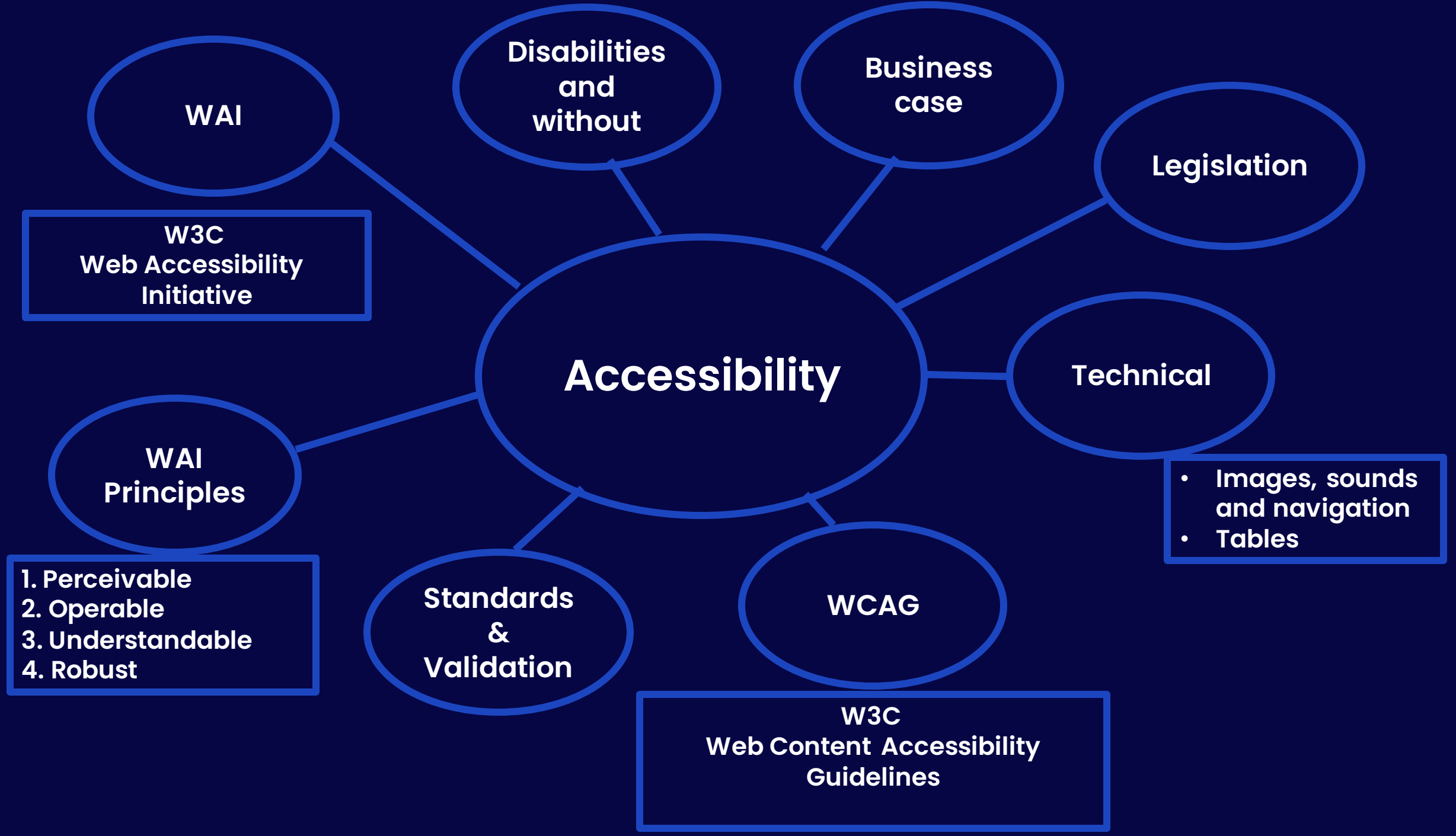
Pencil

Usability

- Design
- Site planning
- Site structure
  - linear
  - tutorial
  - web
  - hierarchical
  - cluster
  - catalogue
  - hybrid.

Site structures (OU, 2022d)

- Quality attributes (Nielson, 2012)
  - Learnability
  - Efficiency
  - Memorability
  - Errors
  - Satisfaction
- Visitors
- Browser real estate


Accessibility
WAI
W3C
Web Accessibility
Initiative
Disabilities
and
without
Business
case
Legislation
Technical
• Images, sounds and navigation
• Tables
WAI
Principles
1. Perceivable
2. Operable
3. Understandable
4. Robust
Standards
&
Validation
WCAG
W3C
Web Content Accessibility
Guidelines

Links

- TT284 Module website
  - Material, Resources, Assessments, Forums, Tutorials
  - Block 1, Part 2: 6.1 Web Developer tools for Google Chrome
  - Guide to TT284 Server Accounts
    - https://oucu.tt284.open.ac.uk with your ‘oucu’ from your profile
- Visual Studio Code - https://code.visualstudio.com
- Slides and files: https://github.com/thebrentc-ou/tt284-intro

Tutorials

- See Tutorials tab on module website

- Recommended:
  Report writing, references and study skills [Recorded - Live Event]
  16 Oct - 19:30 – 21:00

References and further reading

- Foresight University (2019) *Shewhart-Deming's Learning and Quality Cycle.* Available at: https://www.foresightguide.com/shewhart-and-deming/ (Accessed: 10 October 2023).
- Nielsen, J. (2012) *Usability 101: Introduction to Usability*. Available at: https://www.nngroup.com/articles/usability-101-introduction-to-usability/ (Accessed: 10 October 2023).
- Briggs, D. and McIntyre, D. (2023a) '3 Usability of websites – Survival of the easiest'. *TT284: Web technologies*. Available at: https://learn2.open.ac.uk/mod/oucontent/view.php?id=2185741&printable=1#section2 (Accessed: 10 October 2023).
- Briggs, D. and McIntyre, D. (2023b) '3 The Web Accessibility Initiative'. *TT284: Web technologies*. Available at: https://learn2.open.ac.uk/mod/oucontent/view.php?id=2185742&printable=1#section2 (Accessed: 10 October 2023).
- Briggs, D. and McIntyre, D. (2023c) '5.2 Dynamic web content'. *TT284: Web technologies*. Available at: https://learn2.open.ac.uk/mod/oucontent/view.php?id=2185739&printable=1#section4.2 (Accessed: 10 October 2023).
- Briggs, D. and McIntyre, D. (2023d) '8 Different site structures': TT284: *Web technologies*. Available at: https://learn2.open.ac.uk/mod/oucontent/view.php?id=2185741&printable=1#section7 (Accessed: 10 October 2023).
- W3C (2023) *Our mission*. Available at: https://www.w3.org/mission/ (Accessed 10 October 2023).

Thank you

Questions?

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