

21.1 Web development layers

Syllabus 2026 - 2028

WHAT YOU NEED TO KNOW

- The three web development layers: content, presentation and behaviour
- The content layer enters the content and creates the structure of a web page
- The presentation layer displays and formats the elements within a web page
- The behaviour layer uses a scripting language to control elements within a web page

Why layers?

A web page is built in three layers. Keeping the layers separate makes a site easier to build, update and maintain. For example, the colours of a whole website can be changed by editing one stylesheet, without touching the content.

Layer	Purpose	Language	Example
Content layer	Enters the content (text, images, tables, links) and creates the structure of the page.	HTML	A heading, a paragraph and a table placed in the body of the page.
Presentation layer	Displays and formats the elements in the page: colour, fonts, size, borders, spacing and layout.	CSS (cascading style sheets)	Making every h1 blue, Arial and centred.
Behaviour layer	A scripting language controls elements within the page and responds to what the user does.	JavaScript	A button that shows a message, checks a form or changes an image when clicked.

How the layers work together

- HTML (content) decides **what** is on the page and how it is structured
- CSS (presentation) decides **how it looks**
- JavaScript (behaviour) decides **what it does** when the user interacts with it
- The browser reads the HTML file, loads the attached stylesheet, then runs the script

```

<html>
<head>
  <link rel="stylesheet" href="styles/style.css">    <!-- presentation layer -->
  <script src="scripts/main.js"></script>           <!-- behaviour layer -->
</head>
<body>
  <h1>Welcome</h1>                                <!-- content layer -->
</body>
</html>

```

Advantages	Disadvantages
+ Easier to update: change the look of many pages by editing one stylesheet	- Several files must be created and linked correctly
+ Different people can work on content, design and scripts separately	- A broken link or wrong file path means the styles or script will not load
+ Pages are consistent and load faster because the stylesheet is stored once	- More planning is needed for a small page

EXAM TIP

If a question asks which layer does a job, match the job to the layer: structure and content = HTML (content layer); colours, fonts and layout = CSS (presentation layer); user interaction and calculations = scripting (behaviour layer).

Key terms

Term	Meaning
Content layer	The HTML that holds the text, images and structure of the page.
Presentation layer	The CSS that formats and displays the elements.
Behaviour layer	The scripting language (for example JavaScript) that controls elements and responds to the user.
Scripting language	A programming language that runs inside the browser to control a web page.