

# OCR Computer Science AS Level

## 1.3.3 Web Technologies

### Concise Notes



## Specification

### 1.3.3 a)

- HTML
- CSS
- JavaScript

### 1.3.3 b)

- Lossy Compression
- Lossless Compression



## Web Development

### HTML

- The **language / script** that **web pages** are written in
- Allows a browser to **interpret** and **render** a webpage for the viewer by describing the **structure and order** of the webpage
- Uses tags written in **angle brackets** (<tag>, </tag>)
- There are two main sections of a webpage, a body and head

### HTML Tags

- **<html>** : All code written within these tags is interpreted as HTML
- **<body>** : Defines the content in the main browser content area
- **<link>** : This is used to link to a css stylesheet (explained later in the notes)
- **<head>** : Defines the browser tab or window heading area
- **<title>** : Defines the text that appears with the tab or window heading area
- **<h1>, <h2>, <h3>** : Heading styles in decreasing sizes
- **<p>** : A paragraph separated with a line space above and below
- **<img>** : Self closing image with parameters (img src = location, height=x, width = y)
- **<a>** : Anchor tag defining a hyperlink with location parameters (<a href= location> link text </a>)
- **<ol>** : Defines an ordered list
- **<ul>** : Defines an unordered list
- **<li>** : Defines an individual list item
- **<div>** : Creates a division of a page into separate areas each which can be referred to uniquely by name, (<div id= "page">)

### Classes and Identifiers

- Class and identifier selectors are the names which you style, this means groups of items can be styled, the selectors for HTML are usually the **div** tags
- Identifiers are defined with a hash symbol and must be unique to each webpage
- Classes are defined with a full stop as a prefix to the class name and can be used multiple times on a webpage

### CSS

- CSS is a **script / language** like HTML except is used to **describe the style** of a webpage
- CSS can be used to specify the way HTML elements look, they can be applied to whole tags such as <h1>, <p> or <div>
- CSS can be used using two different form, internal / embedded or external CSS the internal CSS is when the style is placed
- The **internal / embedded CSS** is placed inside the style tags and is **entered directly** within the HTML document



- The external css is placed inside an external style sheet. A link is created in an external sheet can be paged

### JavaScript

- JavaScript is a language which has a similar layout to languages like [python](#). The main function of JavaScript is to add [interactivity](#) to websites
- JavaScript isn't [compiled](#), instead it is [interpreted](#), this is so it can be interpreted in the browser every time the webpage is displayed
- Javascript be used to [input data](#) on the [client's computer](#), this may change the local page interactively or post data to a server. The advantages:
  - The local computer can fix invalid data before sending it off to the servers
  - It can ease the traffic off of busy servers

### **Lossy vs Lossless Compression**

- Lossy compression [reduces the size of a file](#) while also [removing some information](#)
- Lossless compression [reduces the size](#) of a file [without losing any information](#)

