



1.3.4 HTML, CSS & JavaScript

1. A website contains the following HTML:

```
<html>
  <head>
    <title>Boris' Cake Shop</title>
    <link rel="stylesheet" type="text/css" href="style.css">
  </head>
  <body>
    <h1>Boris' Cake Shop</h1>
    <p id="intro">
      Welcome to Boris' cake shop.
      <script>
        var hour = new Date().getHours(); // gets the hour value
of the current time
        if (hour>9 && hour<17)
        {
          document.write("We are currently open");
        }
        else
        {
          document.write("We are closed, come visit us when we
are open (9.00 - 17.00).")
        }
      </script>
    </p>
    <div class="customerQuote">
      Boris makes the best cupcakes I have ever tasted.
    </div>
  </body>
</html>
```

a) Explain the difference between a HTML id attribute and a HTML class attribute.

[2 marks]

- Only one element can have a given id/id is unique
- Class can be assigned to multiple elements





- b) The html file is linked to the CSS file style.css.
Text between h1 tags should be in the font Arial.
The customer quote should be on a background with the colour E8C3E1.
The introduction text should be dark red (using the named colour darkRed).
Write the code that should go in style.css to give this formatting.

[6 marks]

```
h1 {  
    font-family:Arial;  
}  
.customerQuote {  
    background-color: #E8C3E1;  
}  
#intro {  
    color: darkRed;  
}
```

- c) The code between the script tags is supposed to display a different message during the shop's opening hours of 09:00 and 17:00.

- i. State the name of the language used between the script tags.

[1 mark]

- JavaScript

Some users have reported that there is a bug, and the site says the shop is closed when they log on between 9 and 10 in the morning.

- ii. Explain how this bug can be fixed.

[1 mark]

- Change line `if (hour>9 && hour< 17)` to `if (hour>8 && hour< 17)`





2. A website contains the following HTML:

Features

The new OCR Smart Watch:

1. Uses the CB2 RISC processor for long battery life
2. Stores up to 20hrs of music
3. Tracks fitness

[Download The Factsheet](#)

- a) Write the HTML to produce the extract from the webpage above. You can assume it will be placed within the tags of a pre-existing page. You do not need to specify the font.

[2 marks]

```
<h1>Features</h1>
<p>The new OCR Smart Watch: </p>
<ol>
  <li>Uses the CB2 RISC processor for long battery life</li>
  <li>Stores up to 20hrs of music</li>
  <li>Tracks fitness</li>
</ol>
<a href="factsheet.pdf">Download The Factsheet</a>
```

- b) Part of a website's code is shown below.

```
<head>
  <title>Orville's Oranges</title>
  <link rel="stylesheet" type="text/css" href=mainStyle.css">
</head>
```

Explain the meaning of the code.

[2 marks]

- Only The head contains information about the page and needed to set the page up
- Orville's Oranges is displayed in the title bar/tab of the page.
- The page is linked to the style sheet mainStyle.css





c) The site also contains the following code.

```
<div class="offer">All oranges 50% off.</div>
```

Complete the CSS code that would make any div elements of the class offer have an orange border.

```
_____ {  
    border-style: solid;  
    _____  
}
```

[2 marks]

- **.offer**
- **border-color: orange;**

3. A web development company makes its money building websites for other companies.

The web development company is looking to recruit a programmer to build websites.

Discuss the technologies the programmer would need to know and use and the importance of each one.

[9 marks]

- **HTML**
- **..they understand how to write (i.e. define the structure of) web pages.**
- **CSS**
- **... they understand how to define the formatting of websites.**
- **JavaScript**
- **...they understand how to write client side code**
- **...allowing them to add interactivity to the website**
- **Understanding of HTML/CSS and JavaScript is essential for the role. Without knowing HTML it is impossible to handcode webpages.**
- **Whilst WYSIWYG tools exist these often produce inefficient code and at any rate it will be necessary at some point to hand tweak the code. (As the role is 'programmer' it is reasonable to expect that the site will be coded.)**





- CSS is nearly as essential. Whilst HTML can be used for a lot of the formatting, this is considered bad practice. CSS will allow them to make consistent looking sites.
- JavaScript is also essential as most websites have an interactive element (e.g. validation of forms)
- Knowledge of Server-side processing/PHP/ASP etc
- ...allowing them to write dynamic websites.
- This is important if the company wants to produce websites with content that changes
- Databases
- ...allowing them to allow websites to store and retrieve data.
- Some knowledge of databases will be useful if writing dynamic sites. This will largely be focussed around SQL.
- Photo editing
- ...allowing them to prepare images for the website.
- This is less essential as in many cases the assets will be pre-prepared. A basic knowledge (e.g. resizing would be expected).
- Knowledge of software engineering practices
- ...allowing them to work as part of a team when building the website.
- The importance of this will depend on the size of the team working on the site.
- May mention more advanced technologies e.g. AJAX, SOAP, JSON etc.

