



BOOK DJ WEBSITE

A report covering the planning, construction,
accessibility and promotion of a website

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Introduction

The Book DJ website is imperative to the success of the Book DJ Company. All bookings, account creation, profile creation and hiring of equipment etc. will go through the site. In order for this venture to be a success, the website needs to be operational, viewable, usable, entice users to make frequent visits and easy to navigate. This report lays out the various stages and good practices in planning, constructing and publishing a website.

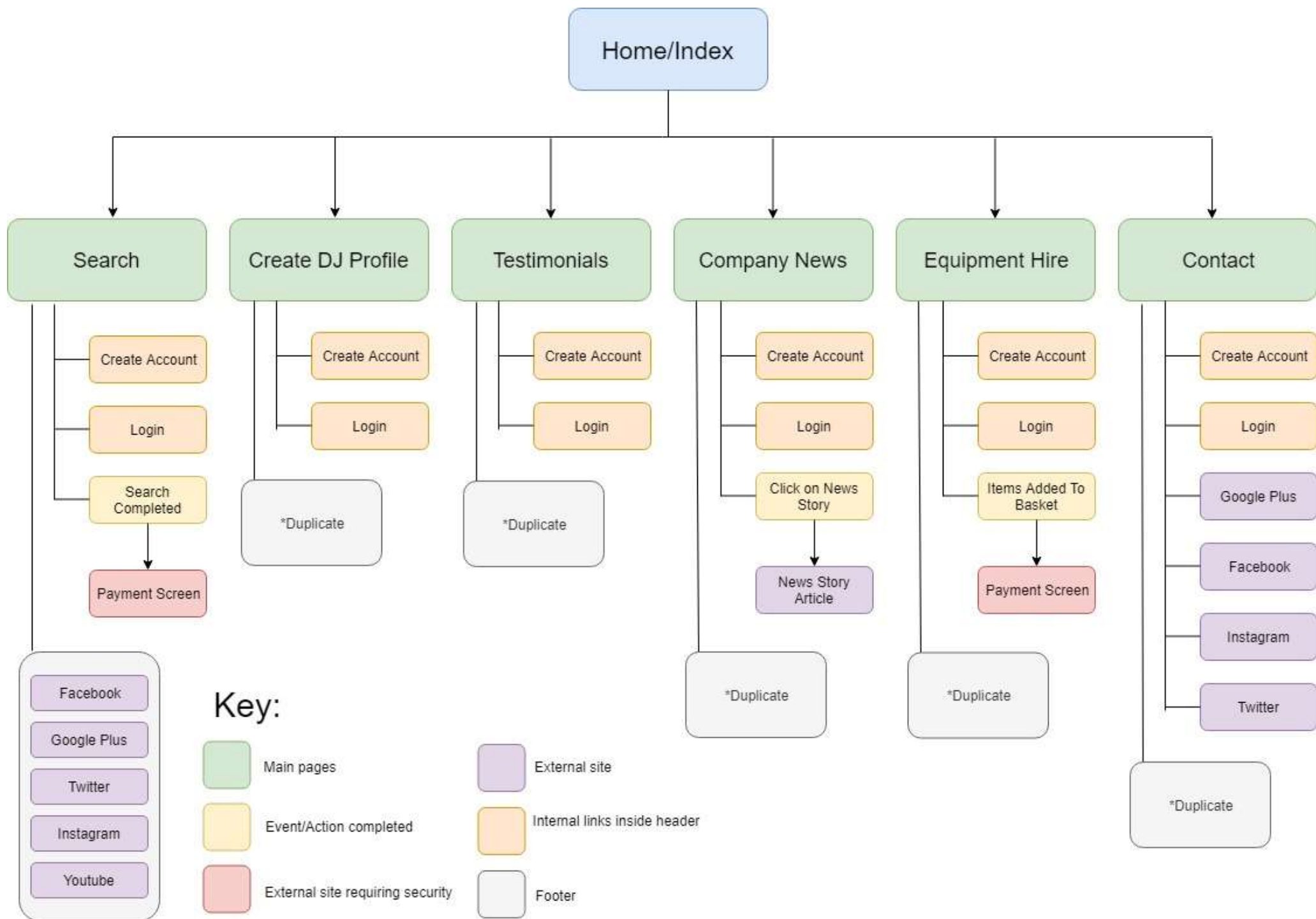
The first part of the report presents a sitemap of the Book DJ website, which shows how the pages of the site are linked together along with links to external websites. A key is included to identify the different links and any user actions required.

The next part looks at the actual construction of the site. The software that was used for image manipulation will be looked at, as well as explanations of how images were changed and the purpose for the changes. The software that was used for typing the code that makes up the website will also be reported on, covering why the software was chosen and some of the functions that were helpful and/or timesaving when coding the web pages.

HTML tags are next to be covered by the report. Ten individual tags are described, along with their use and any relative attributes associated with each tag. Each tag will feature an example piece of code, with some examples also showing how they affect the site visually or in usability terms.

The report then focuses on what is considered good practice when designing and developing a site, along with making the site user-friendly. This section covers the box model, using CSS to enhance pages, making sure tags are correctly nested, indenting code and making good use of a folder structure as well as integrating good navigation techniques. The section also includes an analysis of how the site has been coded to make it accessible and usable by as many users as possible, such as good use of white space, 'alt' text and making the most of the navigation bar etc.

The last part focuses on the process of publishing a website. The multiple steps involved in making a website viewable from anywhere in the world are listed and explained, such as registering a domain, FTP setup and testing etc., along with why each step in the process is required. A conclusion to the report is given at the end.



Website Construction

Two key pieces of software have been used in the construction of the Book DJ website. The first is a program called GIMP. This a free but powerful image editor, which has a number of tools which have been used for the construction of the site. The ‘hero’ images on the site needed to be blurred, as having the images retain their original focus is too distracting to the eye when text is overlaid on the image. A blurred effect could have been coded into the CSS (Cascading Style Sheet) part of the element, but different browsers interpret blur instructions differently, and some earlier versions of browsers do not support the effect at all.



Fig 1: The hero image in its original state (Simkus, 2017)

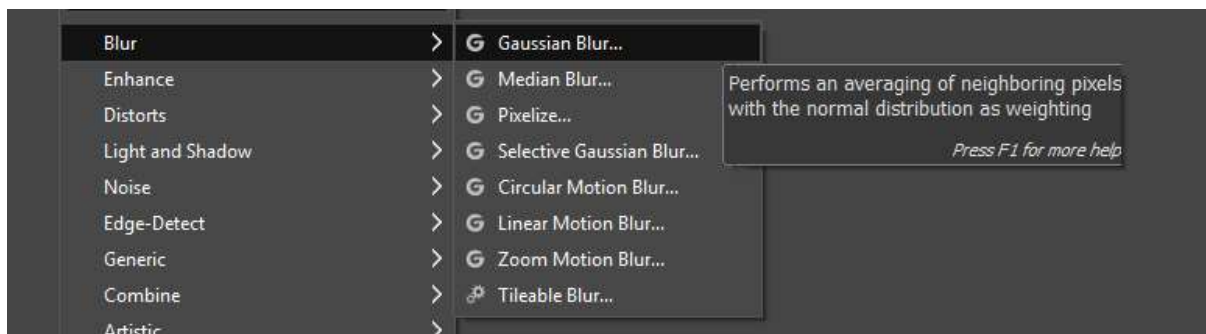


Fig 2: A Gaussian blur effect is used on the image in GIMP



Fig 3: The image as it appears after the blur effect is used (Simkus, 2017)

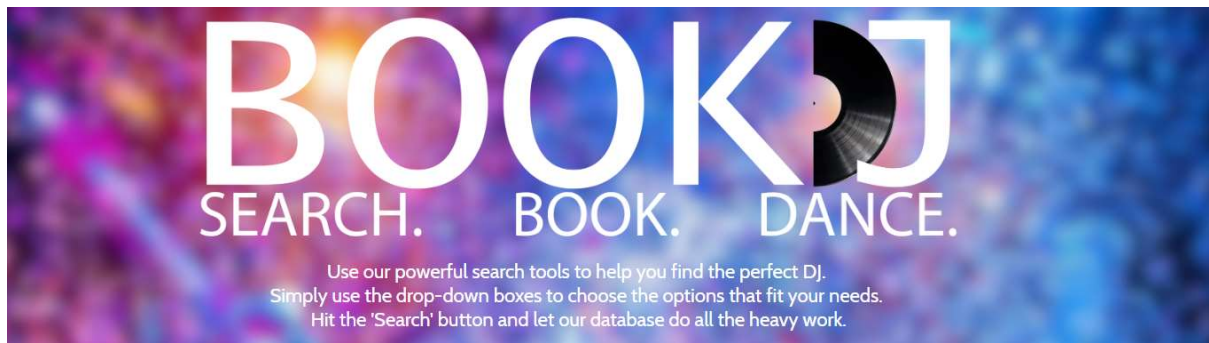


Fig 4: The image with the blur effect makes the stand out and become readable

Using GIMP, I was able to experiment with different types of blur and adjust the intensity of the effect until I was happy with the image and confident that text would stand out on it. The cropping tools have also been useful for the site. Other powerful tools that have been used include file type conversions and colour changers. The logo for the site was created using letters and an image of a vinyl record sliced in half.

GIMP allows the background of the letters to be changed from the standard white to whatever colours or patterns I required. This can be evidenced in the changing colours of the logo within the hero image and also the different backing patterns of the logos that were created individually for each page. GIMP also allowed for the images to be converted to the PNG (Portable Network Graphics) format, where the blank space around an image is transparent, which is of great use when overlaying images on top of each other.

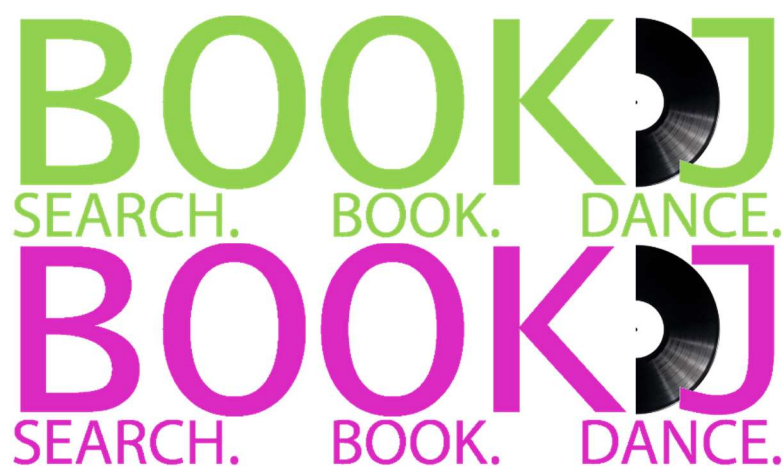


Fig 5: Two examples of changing the colouring of the lettering from white in the Book DJ logo



Fig 6: Two examples of patterns being used to replace the white lettering of the logo which were used on separate pages

The cropping of images is also a very useful tool that GIMP contains. Some images need to be square in shape (such as those which show in the DJ profiles on the index screen). They specifically need to be that shape to fit the aesthetic of the profile box, and, just as importantly, they need to be of the correct aspect ratio. This means that the image does not look squashed when the native image is changed.

GIMP has cutting/cropping tools to make this easy and can save the dimensions for use over and over again. GIMP also has image quality tools. Image files take up a lot more space than lines of text acting as HTML/CSS code. The file sizes of all the HTML, CSS and JavaScript pages added together is just 120KB, compared to just *one* of the hero images being 160KB in size. Images can take up a lot of server space that has to be rented on a monthly basis to keep the site available, so GIMP has a handy tool for reducing the image quality (within acceptable standards) in order to reduce file size.

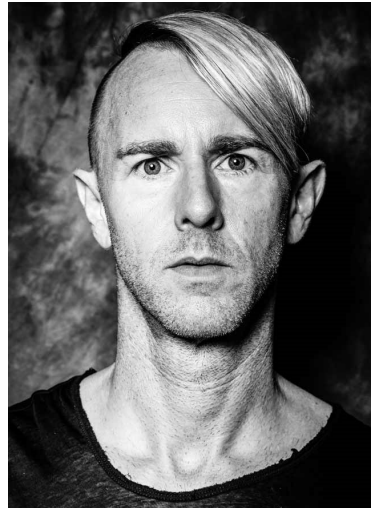


Fig 7: The original download photo of Richie Hawtin (Munar, 2015)



Fig 8: The photo after it has been cropped to a square shape. This shape is required for the photo to retain its aspect ratio once used on the website (Munar, 2015)

The software used for coding the Book DJ website is called Atom. It is a free program that has features that are specifically geared towards creating websites and have helped greatly in the creation of our website. Tags, id's, classes and keywords all have their own colours. Elements that require a start and a separate end tag are kept track of (this is especially useful when creating a lot of list items, or div tags inside of div containers).

Similar features are also in place for creating stylesheets and JavaScript pages. The website could even have been created in a simple text editor like Notepad, since the content (i.e. the *code*) would have been exactly the same, but it would have been a lot more time consuming and error-prone as none of the above helpful features are in programs like Notepad.

```

</li>
<li>
  <a href="http://www.twitter.com"></a>
</li>
<li>
  <a href="http://www.facebook.com"> Unordered List (requires a </ul> end tag)

This tag is used for letting a browser know that the items following this tag will be part of a list, or more specifically, an *unordered* list. This does not mean that the items you put in the list will just appear in a random order though. Items appear top to bottom in the order they were coded in the editor (e.g. Atom), it is just letting the browser know that the items do not need to be numbered, as would be the case with an ordered list. The tag is a block element, meaning that by using this tag, a new line on the website will be started, which by default will take up the full width of the page and has a line break before and after it.

```

 googleplus.com/BookDJ

 twitter.com/BookDJ

 facebook.com/BookDJ

 instagram.com/BookDJ


```

Fig 12: Website code showing the opening and closing <ul> tags at the top and bottom



Fig 13: How the code in figure 12 is interpreted by the browser on the page

### <li> List Item (requires a </li> end tag)

The list item tag is used to represent an item that will appear in an ordered or unordered list. The tag can be used to describe anything; there could be a list of images, a list of hyperlinks, a list of text etc. Once the </li> tag is used to close off a tag and new <li> tag is used, the browser knows to start the new item on a new line. List items have some useful attributes that have been used in the creation of the website. By default, list items will appear with bullet points (in unordered lists) or with numbers (in ordered lists). We can use styling to remove the bullet points if they are not required using the 'list-style-type' attribute, and setting this to 'none', as we do not want any kind of bullet points to appear at all

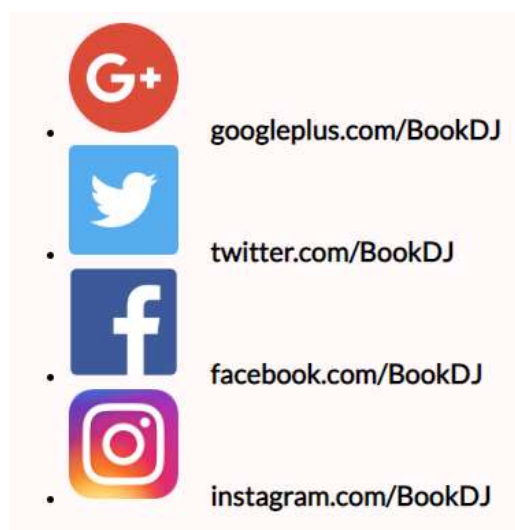


Fig 14: How list items appear in the browser with no styling applied to remove the bullet points

```


 googleplus.com/BookDJ

 twitter.com/BookDJ


```

Fig 15: Website code showing the items put in the separate opening and closing <li> tags

```

#contactSocialMedia li
{
 list-style-type: none;
}

```

Fig 16: CSS code used to remove the bullet points from the list

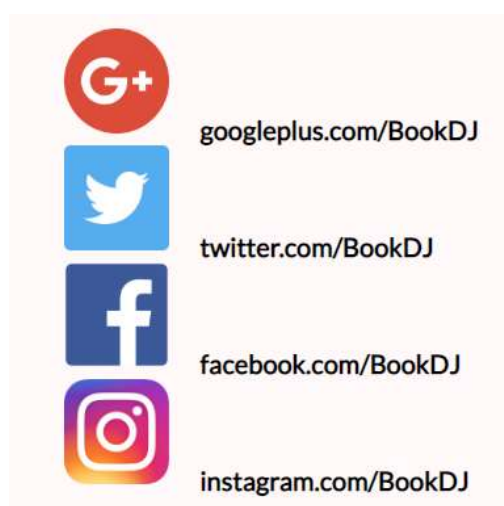


Fig 17: The bullet points no longer appear and the site looks more professional

## <img/> Image

The image tag on its own lets the browser know to show an image, but other parts are needed as well. Within an image tag, the source of the image (i.e. the file location) of the image needs to be declared (this includes adding the file type extension at the end). This is declared with the 'src' (source) attribute. Without this, an image will not be displayed, as the browser will have not been told the location.

Another attribute to add is the 'alt' text. This is simply a short but precise explanation of what the image displays. While this is not mandatory for a browser to show an image like the src attribute is, it is considered good practice to include as it is what will be displayed if the image

itself cannot be displayed (this is explored in more detail in the section covering the usability of the site).

The image tag is a self-closing tag, meaning that the tag itself has no content (the image itself is not stored in the tag, just the location of the image file). There are also a number of optional attributes that can be used for the image tag. These, such as the 'height' and 'width' attributes can be used to specify a set height or width of how an image appears on a page.

```
<div class="newsRelease">

 <h3>Happy 2019!</h3>
 <p> Book DJ was there for the new year fireworks display in London!

<div class="newsRelease">

 <h3>'Appy New Year!</h3>
 <p> DJ Booking website 'Book DJ' has launched a companion app for Android

<div class="newsRelease">

 <h3>Big Names Join Book DJ</h3>
 <p> Carl Cox became the latest major DJ to offer his services on Book DJ.

<div class="newsRelease">

 <h3>Pioneer Strengthens Ties</h3>
 <p> A world-leading DJ Equipment manufacturer has today announced they will
```

*Fig 18: Website code showing four examples of images with file paths and that have had alt descriptions inserted*

```
.newsRelease img
{
 width: 200px;
 height: 200px;
}
```

*Fig 19: CSS code from the site used to make sure the pictures are all displayed at the same size*

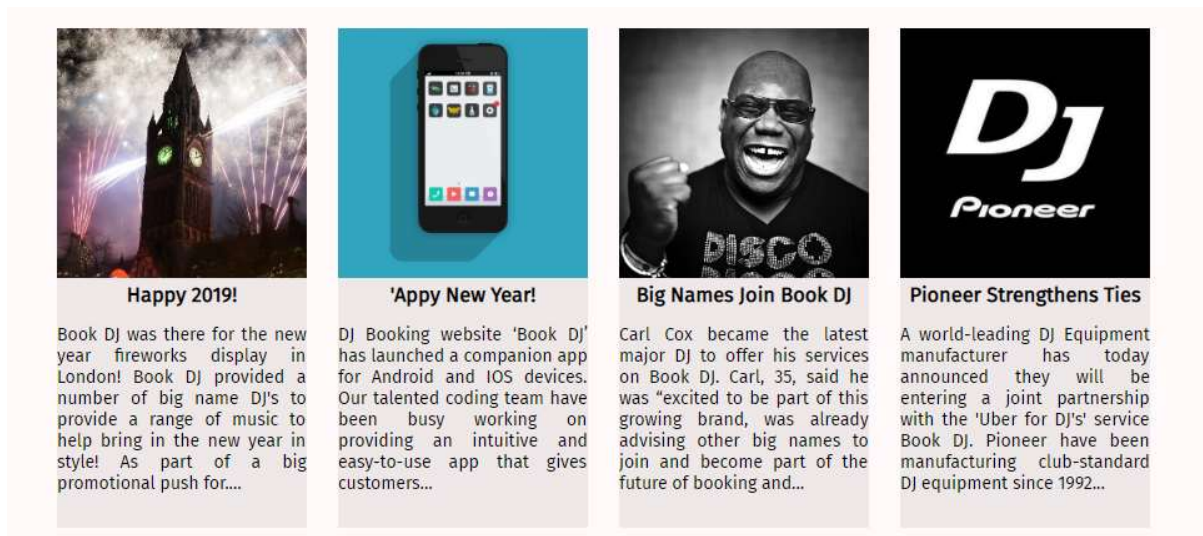


Fig 20: How a browser interprets the code from Figures 18 and 19 for the images

### <title> Title (requires a </title> end tag)

The title tag is used for declaring the name of an HTML page. While the title of a chapter of a book is the first piece of text that would appear on a page followed by the actual content of the chapter, this works slightly differently in HTML. Whatever is put between the opening and closing title tags does not appear within the page itself, but appears in the title bar of a browser. It is also the text that appears in browser bookmarks and search engine results.

```

4
5 <title>Search.Book.Dance.</title>
6 <meta charset="utf-8">
7

```

Fig 21: Code from the website which shows text entered between the opening and closing <title> tags

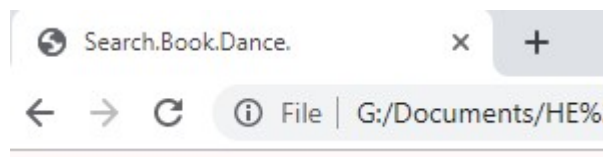


Fig 22: The code from Figure 21 interpreted in the browser

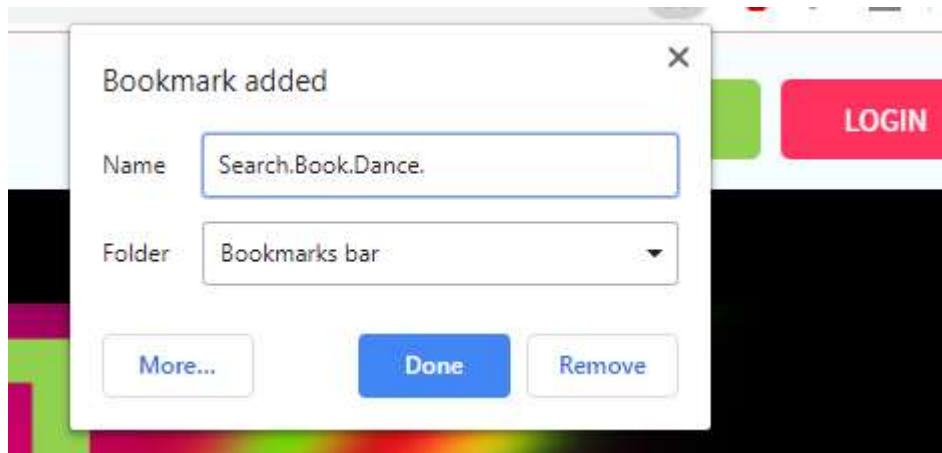


Fig 23: Bookmarks also use the text from the title tag

### **<meta/> Metadata**

The meta tag is used to indicate that the contents in the closing tag will contain 'data about data'. The data referred to can be multiple items. The metadata for the Book DJ website contains information about what character set to refer to, so that any character that has been input will be displayed correctly. It also contains information that is useful for search engines. In the metadata for our site, I have listed keywords that relate to the site, a description of what the site is, and who the author of the site is.

What is entered in the metadata does not appear on the page itself, but is vital for helping search engines to return our site in search results. *"The language, keywords, description...attributes contribute to more precise web searches by defining document language, the most relevant keywords, and a short description"* (Sikos:2011 p250) If a user types in words like 'clubs', 'talent', 'DJ' or 'booking', a search engine would return our page within the search results as a search engine like Google would have scanned all the metadata tags and found the words in our metadata tags which match the search query.

```

5 <meta charset="utf-8">
6
7
8 <!--=====Search engine result content=====-->
9 <meta name="keywords"
10 content="Book DJ talent, hire DJ talent, search for a DJ" />
11 <meta name="description"
12 content="Search for DJ's with set criteria"/>
13 <meta name="author"
14 content="Chris Hotten"/>
15
16
17 <meta charset="utf-8">
18
19 <!--=====Search engine result content=====-->
20 <meta name="keywords"
21 content="Book DJ talent, hire DJ talent, equipment hire" />
22 <meta name="description"
23 content="Equipment hire, Pioneer equipment, Pioneer DJ, Hire DJ equipment"/>
24 <meta name="author"
25 content="Chris Hotten"/>
26

```

*Fig 24: Two examples of metadata used in meta tags. The website code shows different words used for different pages*

## <link> Link

The link tag is used to specify a link to an external resource that will be used in the site. This can be a link to an external stylesheet or links to locations which store information about fonts. The Book DJ site makes use of these features. With linking to an external stylesheet (the sheet containing all the CSS code), this means that all the code that describes how an element should be *styled* (e.g. the height and width of pictures, how large text should appear etc.) appears in a separate sheet. This is very useful, as although all this information can appear in the HTML sheet if we so desired, it would make the HTML code page appear too large and difficult to navigate with any degree of convenience. In linking to locations that contain fonts that are different from the default 'Times New Roman' and 'Arial', we are able to use more visually appealing sans-serif fonts to help make our website stand out and look more professional, or even use text icons instead of having to source images that take up more room on a server.

```

<!--=====Font-family source links=====-->
<link href='https://fonts.googleapis.com/css?family=Lato' rel='stylesheet'>
<link href='https://fonts.googleapis.com/css?family=Noto+Sans+JP' rel='stylesheet'>
<link href='https://fonts.googleapis.com/css?family=Cabin' rel='stylesheet'>
<link href='https://fonts.googleapis.com/css?family=Fira+Sans&display=swap' rel='stylesheet'>

<!--=====Google font icon source links=====-->
<link rel="stylesheet" href="https://fonts.googleapis.com/icon?family=Material+Icons">

<!--=====Stylesheet Location=====-->
<link href="styles.css" rel="stylesheet" />

```

Fig 25: Code from the website showing links inserted that refer to Google fonts in order to load font data

```

text-decoration: none;
padding: 15px;
font-family: 'Lato', "Arial Black", 'Gadget', sans-serif;
font-size: 22px;
}

```

Fig 26: CSS code from the website that enables the desired fonts to be changed to the Google font 'Lato', with backup fonts stated in case the link does not function



Fig 27: How a browser interprets the code with the Google font applied



Fig 28: How the code is interpreted with the link does not function



Fig 29: The link is used for the font in the footer as well as the navigation bar

## <button> Button (requires a </button> end tag)

The Book DJ website uses a number of buttons. Clicking on a clickable button will start the login process, submit a form and add an item to a basket. The point of the button is that the browser knows that when it is clicked, a process is expected to follow. The button can contain text or even an image, and CSS has been used to style the buttons to give an appearance in keeping with the look of the site.

There are a couple of attributes for the button tag that are relevant to our site. The first is the type of button, since we need to declare whether the button will just be a standard button that when clicked, redirects to somewhere else.

The second type of button is a submit type, which is used in forms to tell the browser to submit information that has been entered in fields identified with the form. The 'name' attribute is used to name the button (note this is different from the text that is displayed in a button), which is useful if there are multiple buttons on a page which require different styling, or different forms on a page which require different submit buttons. There is also the 'onclick' attribute, which refers to processes stored in the JavaScript page.

```
===when button clicked alert pops up, see js sheet line 13===-->
<button type="submit" onclick="enquiryConfirmation();">SUBMIT</button>
```

*Fig 30: The button tag contains the type of button and the script referral when pressed, as well as the text that appears in the button when displayed in the browser*

Forename:  
Chris

Surname:  
Hotten

E-mail address:  
hottstuff@freeserve.co.uk

Phone number:  
07845258961

Enquiry:  
Hi there, I was just wondering if you will be making an app that works on Windows Mobile?

SUBMIT

*Fig 31: How the button appears on the website (after CSS styling has been applied)*



*Fig 32: The 'onclick' script referral brings up an automated message when the button is clicked*

A contact form on a light pink background. It contains five input fields: "Forename:", "Surname:", "E-mail address:", "Phone number:", and "Enquiry:". The "Enquiry:" field is a large text area. At the bottom center, there is a blue button with the text "SUBMIT" in white.

*Fig 33: Because the button type was set at 'submit', the form data is automatically cleared after the button is pressed*

```
#contactPage button
{
 font-family: 'Lato', "Arial Black", 'Gadget', sans-serif;
 color: white;
 background-color: #5054FA;
 color: white;
 padding: 10px 32px;
 border-radius: 5px;
 text-align: center;
 font-size: 14px;
 width: 15%;
 margin-left: 40%;
 border-width: 2px;
 border-color: transparent;
}

#contactPage button:hover
{
 border-width: 2px;
 border-color: black;
 background-color: #070DEF;
 transition: all 0.2s;
}
```

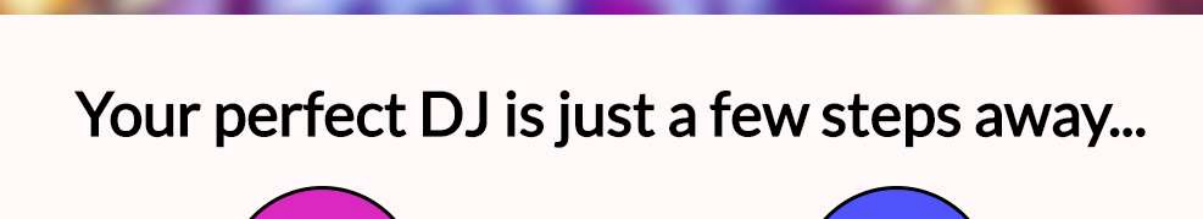
Fig 34: CSS code from the website that shows the styling applied to the button, and also tells a browser what to show when a mouse hovers over the button

### <h1> Heading (requires a </h1> end tag)

Heading tags range in number from h1 to h6. Headings that are given the h1 tag are defined as the 'most' important, while h6 is defined as being the 'least' important. Although this at first can just appear to be about the size of the text generated (by default, text between h1 tags appears much larger than text between h6 tags), it is also vital for search engines when they are structuring the content of webpages. The Book DJ website has been created with this in mind, so different numbered heading tags have not been used just for the convenience of size (since CSS can be used to make text larger or smaller as desired anyway), they have been used with search engine structuring in mind.

```
<h1>Your perfect DJ is just a few steps away...</h1>
```

Fig 35: Code taken from the website showing text input between the opening and closing heading tags



# Your perfect DJ is just a few steps away...

Fig 36: As the text has been put between <h1> tags, the text is automatically set to appear much larger than standard text

```
/*title*/
#fourstepguide h1
{
 text-align: center;
 font-family: 'lato', "Arial Black", 'Gadget', sans-serif;
 font-size: 50px;
 font-weight: bold;
 margin-top: 50px;
 margin-bottom: 30px;
}
```

Fig 37: Code from the website showing CCS code applied to change the size of the font

```

<h3>Happy 2019!</h3>
<p>Book DJ was there f
```

Fig 38: Data deemed to have lower importance has been inserted in between heading tags with higher numbers. This code is referring to a news story in the Company News page

## <p> Paragraph (requires a </p> end tag)

This tag is used for specifying that a paragraph of text that will appear on the page. The paragraph does not have to be of a set length, a paragraph could be one line of text or could be 30 if so required. The paragraph tags are useful for telling a browser that a set of lines of text have finished and that a new set of lines are to be treated as different so that paragraphs do not all appear as one large wall of text.

```


<p>
 "I've only been using Book DJ a couple of weeks but it's already become my
 go-to site for hiring talented DJ's. No more having to deal with unresponsive
 agencies and rude managers. The search function is easy to use and also gives
 enough options so I can find the ideal DJ"

 Stuart Little, Promoter
</p>

```

Fig 39: Website code showing text that has been inserted between opening and closing <p> tags. Note that a new line has been started in the code for code reading convenience, but this makes no difference to how the code is interpreted by the browser



Fig 40: How a browser interprets the code from Figure 39. Note that a new line is only started when room has run out within the red box

### **<script> JavaScript (requires a </script> end tag)**

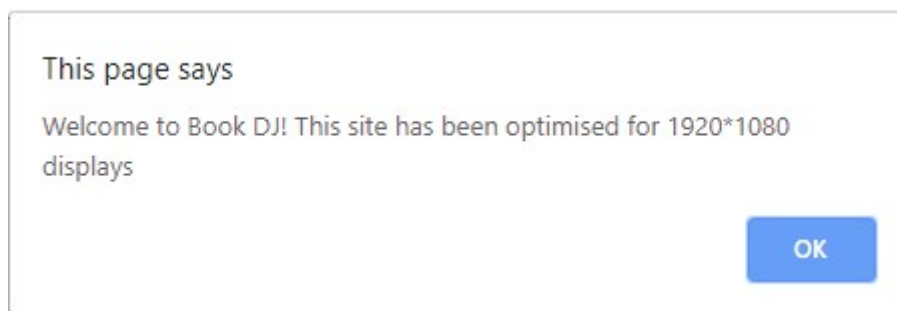
The script tag is used for declaring to a browser that a scripted event using the ECMAScript (much more commonly referred to as JavaScript) programming language is to take place when a certain condition is met. The script tag either contains an instruction within it, or the tags can be used to declare the name of a sheet that should be referred to, which

contains the instructions of what to do when conditions are met. The Book DJ Website makes use of both of these features.

The index page contains a pop-up letting users know what monitor resolution the site has been optimised for. This a very small piece of code, and so can easily fit on the HTML page. The JavaScript that is used on the page where a user can create their own personal DJ profile requires a lot more lines of code though, so a separate JavaScript sheet is created, and the script tags are used to let the browser know to refer to instructions on the separate sheet.

```
<script>alert ("Welcome to Book DJ! This site has been optimised for 1920*1080 displays")</script>
```

*Fig 41: Code from the website showing a piece of JavaScript used to create a pop-up message when the page is landed on*



*Fig 42: A browser is able to interpret the JavaScript code and automatically shows the pop-up message*

```
<script src="javascript.js"></script>
```

*Fig 43: Code from the website in the HTML page declaring that a separate JavaScript needs to be referred to for instructions*

```

//code for checking inputs on 'create a profile page' and returning the results//
function returnResults() {
 var title = document.getElementById("inputTitle").value;
 var forename = document.getElementById("inputForename").value;
 var surname = document.getElementById("inputSurname").value;
 var address1 = document.getElementById("inputAddLine1").value;
 var address2 = document.getElementById("inputAddLine2").value;
 var town = document.getElementById("inputTown").value;
 var postcode = document.getElementById("inputPostcode").value;
 var phone = document.getElementById("inputPhoneNumber").value;
 var email = document.getElementById("inputEmailAdd").value;
 var djName = document.getElementById("inputDJName").value;
 var aboutYou = document.getElementById("aboutYou").value;

 //checks whether each checkbox has been checked or not//
 //refers to value set in html sheet if checked//
 //if checkbox not checked, set to display anything//
 {if (document.getElementById("checkEdinburgh").checked) {
 cityAvaliabilityE = document.getElementById("checkEdinburgh").value;
 }
 else {
 cityAvaliabilityE = " ";
 }}
}

```

Fig 44: The JavaScript shown here would be too long to try and insert into the HTML code, hence the creation of the JavaScript sheet

## Good Practice

*“While proper coding practice is widely applied in programming, web developers and people without the proper backgrounds do not take mark-up practices seriously. “It also works this way – why bother with standard compliance?” This is the approach serious web developers would be best to forget” (Sikos:2011 p22) The Book DJ website has been created with the intention of following good practice in relation to a number of design and development principles.*

## Box model

The site shows different examples of using the box model to achieve desired effects in presentation. Margins have been used to create space between different objects on the screen, such as creating space between the displayed items on the equipment hire page. The

same effect could have been achieved by using large borders and making them transparent, but that shows bad practice, especially if in the future a design choice would be made to have coloured borders.

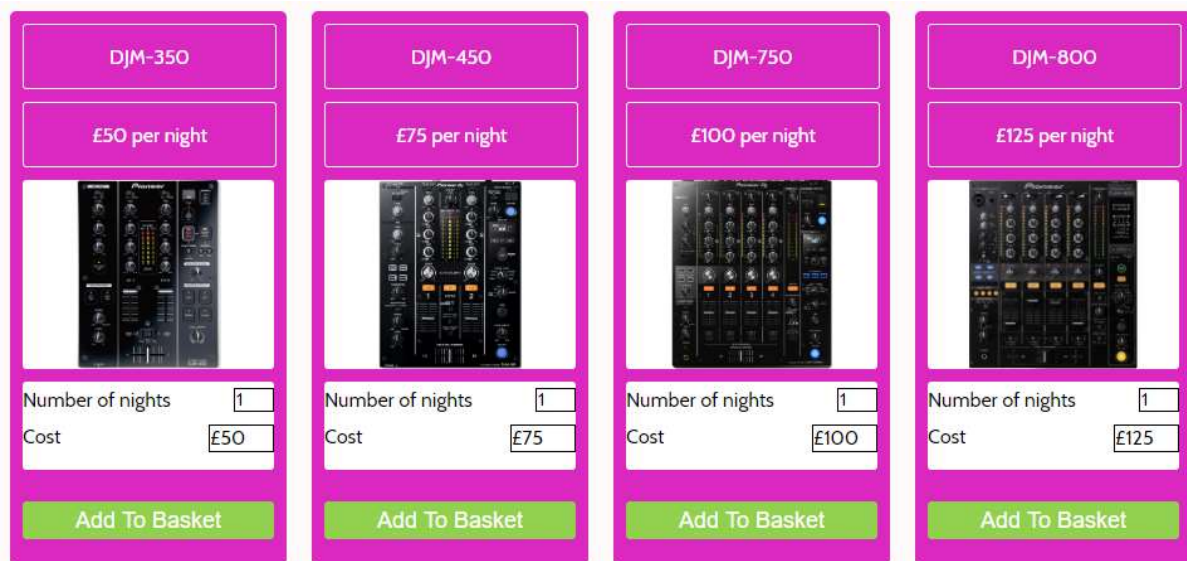


Fig 45: Each box in the Equipment Hire page is given a border

Border properties are only used for displaying borders, and any padding that has been applied has been used as part of a presentation choice. On the testimonials page for instance, padding is used to keep the edges of written text away from the edge of the box, which looks nicer to the eye and will be more enticing to read. For the stories on the company news page though, no padding is applied, and the text appears right up to the edge of the box. This has been a deliberate choice as this section is meant to feel somewhat more 'dry', as it presents information for staff and investors, and is not trying to be enticing to customers.





*Fig 46: Two examples where padding has been applied so that the text does not run to the edge of the box*

```
.twitterTestimonial
{
 width: 200px;
 height:auto;
 padding: 10px;
 margin-bottom: 10px;
}

.googlePlusTestimonial
{
 width: 200px;
 height:auto;
 padding: 10px;
}
```

*Fig 47: The CSS code used for Figure 46, with the padding value stated*

### **Use of CSS (Cascading Style Sheet)**

The site makes use of a large amount of CSS, but this has been with the intention of following good design and development principles. Items that are will only be referred to once on a page are given ID's, whereas items that appear multiple times and follow the same design rules are given classes. Using classes helps save a lot of time, as all the relevant items can quickly be changed as required with just a couple of lines of code, compared to having to write individual lines of code for each item, even though they will all follow the same design.

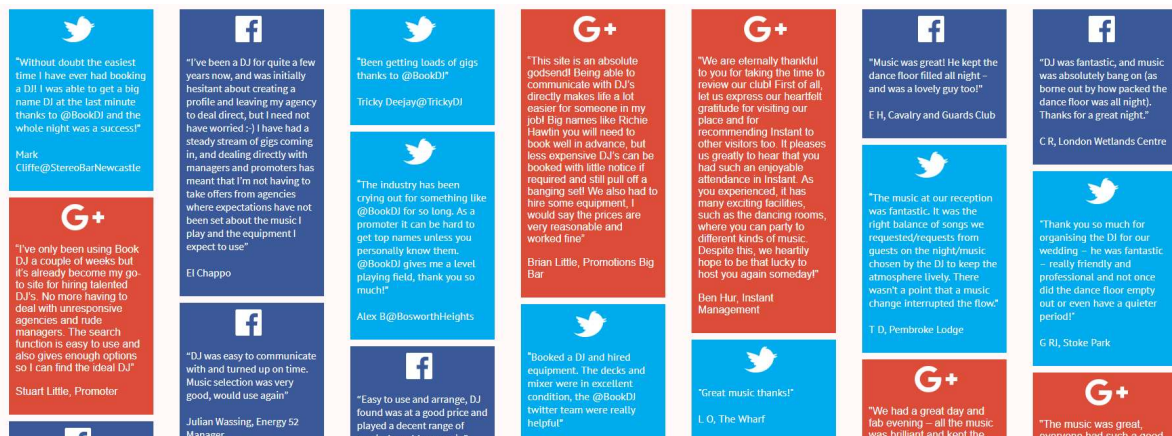


Fig 48: The Testimonials page consists of many different testimonials that have been sourced from Facebook, Twitter or Google Plus. To style each of these boxes individually would be time-consuming

```
<div class="twitterTestimonial">

<div class="googlePlusTestimonial">

<div class="facebookTestimonial">
```

Fig 49: Using classes, each piece of feedback shown in a Facebook box will have the same colour and font used (this also applies for the Twitter and Google Plus boxes)

Sign up for our newsletter:

Your email here

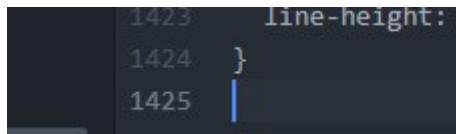
Subscribe

Fig 50: This newsletter subscribe email entry only appears in the footer and nowhere else

```
id='footerSubscribeForm'>
```

Fig 51: As it will only appear once, it is given its own id

The site has also been designed and coded to use only a few web fonts. This doesn't just help with loading and rendering times, but is important for maintaining a consistent look across the site. Another piece of good development practice is the non-use of inline styles. Although CSS code can be coded on HTML sheets and work just the same as if the code was on a separate stylesheet, the HTML sheet will just be far too cluttered and unwieldy, making navigating the HTML sheet a chore and too time consuming, so none of the HTML sheets used for the site contain any CSS code.



*Fig 52: In the CSS sheet there are nearly 1,425 lines of code. This would have been far too much to use with any convenience in the HTML sheet*

The CSS code on the stylesheet has been moved, edited and changed multiple times, but the effort has been worth it to make sure the stylesheet shows evidence of good development principles. Header, navigation and footer elements all appear at the top of the stylesheet. These are the only elements which will be displayed on every page and in the same place. The code that then follows has been structured based on the sitemap of the site itself. Elements relating to the index page are shown first, then the search page, followed by the page for creating a DJ profile and so on. Elements that are linked but use separate brackets to define rules are stacked together to aid navigation and when monitoring the effects of changing CSS code.

```
#contactPage button
{
 font-family: 'Lato', "Arial B1
 color: white;
 background-color: #5054FA;
 color: white;
 padding: 10px 32px;
 border-radius: 5px;
 text-align: center;
 font-size: 14px;
 width: 15%;
 margin-left: 40%;
 border-width: 2px;
 border-color: transparent;
}

#contactPage button:hover
{
 border-width: 2px;
 border-color: black;
 background-color: #070DEF;
 transition: all 0.2s;
}
```

*Fig 53: Code for what happens when a mouse is hovered over a button needs to be input separately from the button code, but are kept near to each other for finding code with ease*

The CSS code is also commented throughout as well. This is not just useful for the author of the code to identify elements or why certain pieces of code have been inserted. It is likely the site will need multiple coders to work on the code over different periods of time. With no commentating for explanation, this hugely increases the chances of CSS code becoming broken and the site itself will suffer with poor presentation as a result.

```
/*code to change placeholder text colour in Chrome & Firefox for email input*/
::placeholder
{

/*background images in hero space*/
.index
{

/*==area created so equally spaced box can be inserted to ensure
circles stay central=====*/
#areaForCircles
```

Fig 54: Examples of commented code. Note the use of the ‘/\*’ and ‘\*/’ to start and end commented code, which a browser knows to ignore when loading a page

Lastly, the presentation of the code itself has been ordered to follow the same rules throughout. Each element is followed on a separate line by an opening curly bracket, the lines of required code and then finished with a closing curly bracket on a separate line. This gives consistency to the stylesheet and also helps make the code readable and easier to navigate.

```
.profilePre
{
 height: 1
 float: le
}

.artistName
{
 height: 1
 width: 18
 background
 float: le
}
```

```
.starRatin
{
 height:
 width: 1
 backgrou
 float: 1
}
```

Fig 55: Curly brackets are used on separate lines in the code for the website

### Nested Tags

Good practice has been observed with regards to going through every line of code and making sure that tags are correctly nested. Correctly nesting tags means that when a tag is declared inside a tag that has already been created, the tag which is inside another tag needs to be closed off first. This follows a simple rule of LIFO (Last In, First Out). List items need to be opened and closed between the opening and closing tags for an unordered list. If this is not done, the browser does not know to separate the items, and so all the text will just appear in one line against a single bullet point.

```
<ul id=siteLinksList>
 Home
 Search
 Create DJ Profile
 Testimonials
 Company News
 Equipment Hire
 Contact

```

Fig 56: An example of nested tags. The <li> tags are opened and closed before the <ul> tag is closed. The <a> tags are closed inside of the <li> tags

### Indented Code

Keep track of tags is greatly helped by indenting code. Indenting code by itself does not make a difference to how a browser reads and interprets the code, but it is very useful for

helping make code easier to read to human eyes. A tag that is within another tag needs to be indented, so that a coder can see that a tag is operating inside of another tag. This is usually done by using the Tab key to indent the tag one space to the right. If there are any tags that are then inside the tag which is already inside the original tag, this needs to be indented one space further. This can process can carry on as far as required.

One of the reasons that Atom was used in the construction of the site is that multiple pieces of code can be easily indented at the same time. It also displays though where which closing tag is related to which opening tag. This is hugely useful for identifying any tags which have not been closed off correctly.

be entering a joint partnership with the Oberlin College DJ. Pioneer have been manufacturing club-standard DJ equipment since 1992...

*Fig 57: An example of nested tags, where tags that are contained within other tags are indented across one space*

```
33 <body>
34 <!--=====Header=====
35 <div id="headerplusnavbar">
36 <header>
37 <section id="header">
```

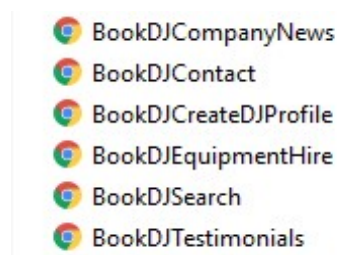
*Fig 58: The body tags is not indented as it is the first tag that appears that is related to viewable on-page content. All other tags that appear within the body will therefore be indented at least once*

## Folder Structure

The Book DJ website has seven pages, one CSS sheet and one JavaScript sheet. This is not considered too unwieldy to contain in one folder. Having the pages and sheets in one folder helps when coding the HTML sheets to refer to a CSS or JavaScript sheet. Folder directories do not need to be input, just the filename of the CSS and JavaScript sheets, as, by

default, a browser will try to find the sheets in the same folder which contains the HTML sheets when no folder path is declared. It is a different case for images. The site makes use of multiple images, which if they are all contained in the same folder as the HTML, CSS and JavaScript files will soon make navigating the folder a chore and time-consuming.

All the images are contained in a subfolder simply called 'Images'. If the number of HTML pages and CSS/JavaScript sheets need to rapidly expand, then good folder practice would be used and the different sheet types would be placed into their own folders. The filenames themselves have been created with browser support in mind. All HTML filenames are written in upper camel case (every first letter of a new word in a filename with no spaces starts with a capital letter). All id's and classes in the CSS sheet are written in lower camel case (the first letter of the first word is in lowercase, all following words are in uppercase).



*Fig 59: Filenames of the HTML pages are written in upper camel case*

```
<ul id=siteLinksList>
```

*Fig 60: Classes and id's in code are written in lower camel case*

## **Navigation Techniques**

The Book DJ website is a new site that is trying a new idea. This means that it does not yet have a loyal audience who are willing to overlook disruptive annoyances when visiting the site for the first time. The navigation of the site has been heavily taken into consideration. Although the navigation bar would have had a more symmetrical feel if every option was just a one word description, this does not help with user navigation. In an article on website navigation, Crestodina highlights the importance of descriptive navigation over generic navigation

*““What we do” doesn’t actually say what you do. Neither does “Products,” “Services” or “Solutions.”... Your navigation bar is visually prominent, so it communicates instantly. When it lists your main products or services, it will be obvious, at a glance, what your company does up front, so they’ll know they’re in the right place....If you have one page listing all of your services, it will never rank. That’s because it’s not focusing on one topic. Every page on your website has a chance of ranking, as long as it’s focused on a topic, on a keyphrase....No one is searching for “products” or “services,” so these labels don’t help your rankings.” (Crestodina:2016)*

Keeping the above quotes in mind, this is why the navigation bar of the Book DJ website is set the way it is, and why the pages have been split as they are. Something like ‘Contact’ is fine, it is an understood term that what is on the page will be methods of getting in touch with the company.

The ‘Create DJ Profile’ option was deliberately set to be more identifying. It could have been tempting to simply use ‘Create’ or ‘Profile’ but this would have been too generic and not descriptive enough, either for visitors to the site or for search engines. It is for the same reason that ‘Equipment Hire’ was used instead of something like ‘Equipment’, ‘Hire’ or ‘Services’. Drop-down menus have not been used on the site. This is deliberate decision, as the aim of the site is to make users want to explore, not provide annoyances that may drive them away. Crestodina shows the importance of this

*“Drop down menus can be difficult for search engines to crawl. Depending on how they’re programmed, they may lead to problems...Usability studies show that dropdown menus are annoying. Here’s why: visitors move their eyes much faster than they move their mouse. When they move their mouse to a menu item, they’ve likely already decided to click... and then you gave them more options. It’s a hiccup in the mind of the visitor.” (Crestodina:2016)*

## Usability Design

The web site implements multiple aspects of what is commonly considered good design and making a site accessible.

### Navigation

Chambers (2013) identifies that *“Primary navigation should stand out and be consistent throughout the site. Typically, a main menu will sit along the top of the page in the centre”*. The Book DJ website follows the same principles, as shown in the image below. The navigation bar is in the same place in all the pages and uses the same colour scheme throughout (white text on black background, blue to highlight the current page)



Fig 61: The Book DJ website navigation bar

Another common use principle employed in the site is using the logo to redirect to the homepage.

*“This might seem obvious, however it's not uncommon to find sites that fail to implement this function. The common convention for logo placement is the top left hand corner or centred along the top and the logo is also known as a link back to the homepage. This is a convention that is best followed as it is so widely implemented”*  
(Chambers:2013)

Every page in the site uses this principle (image shown below), this is common across many sites. This can also act somewhat as a ‘safety’ button – if the user wants to get back to the homepage, they will not want to be endlessly clicking the ‘back’ button to get back to the home page.



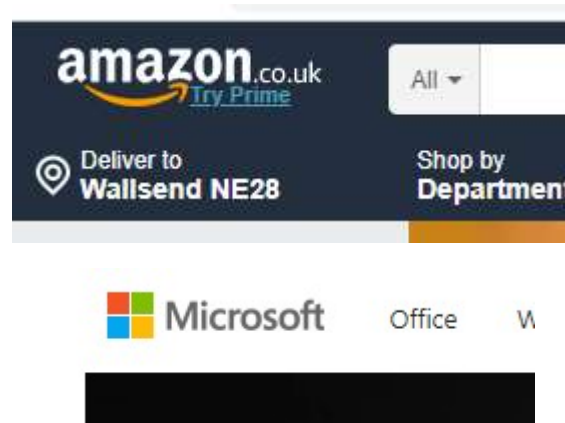


Fig 62: Examples of a logo in the top left also acting as homepage link

The Book DJ site has been designed with the intent to use ‘fat footers’, whereby a number of links are displayed and functions included, rather than just used for stating who the site was created by or any text declaring copyright “...it has also become quite standard to display email sign up fields, address details and social links” (Chambers 2013) The footer of the Book DJ follows the same design principle, and uses adapted social media icons so that they follow the colour scheme used for the footer.

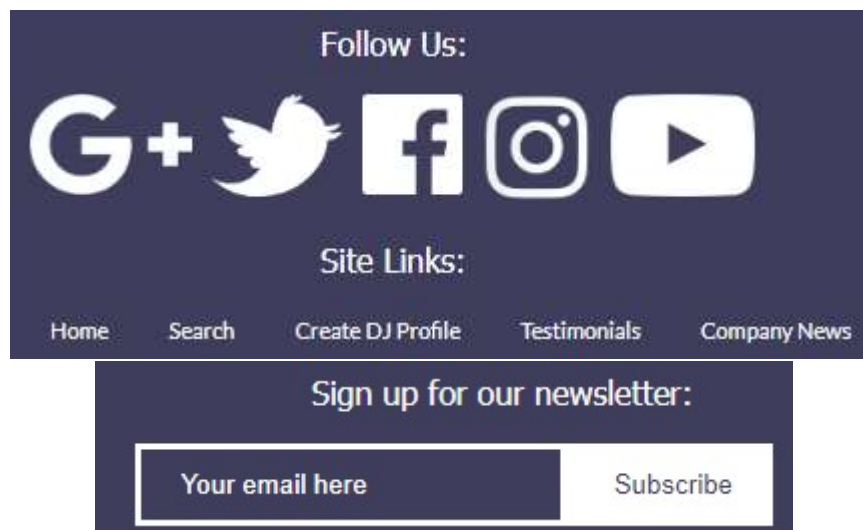


Fig 63: Examples of social media and site links, with a subscribe email form all in the footer of the Book DJ site

## Sticky Navigation

It was deemed important that the website used sticky navigation, and for this reason the navigation bar was kept deliberately small and non-intrusive. Sticky navigation is the process of enabling a part of a page to stay visible even when the user scrolls down the page. The site needed to be easy to use, so not having the navigation visible at all times could potentially mean users get frustrated with using the site and leave. The sticky navigation works well on the site as the navigation bar does not take up a lot of room.

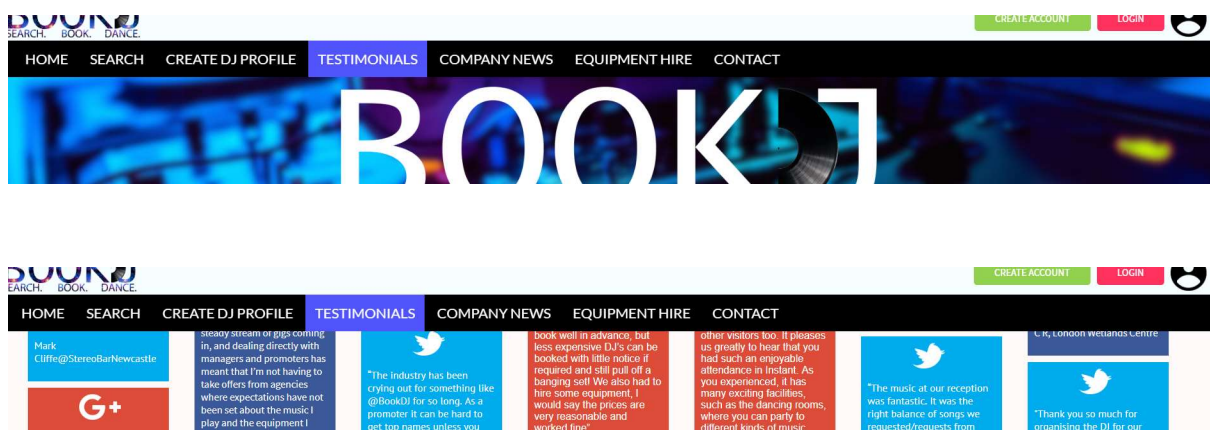


Fig 64: An example of the header and navigation bar being visible at the top of the page when the user lands on the page, and still being visible as the user scrolls down the page

## Active Page Indication

The navigation bar was also designed to show which page the user was on at any time (by the use of the blue colour on the 'active' page). It may seem obvious that a user would know which page he or she has clicked on, but as this is a new site trying to present a new idea, a first time visitor will certainly not be familiar with the site, so anything which aids navigation is vital so that the user does not feel lost and not want to visit again.



Fig 65: Example of a navigation bar using 'active' page indication, by highlighting the current page in a different colour to that used for the rest of the bar

### Limited Menu Items

*“Some websites have hundreds of links on the home page. That’s bad”* (Crestodina 2016) The Book DJ site has deliberately limited the navigation bar to contain just seven links. Any more this and there is a risk of flooding the user with too many options (especially if they are visiting the site for the first time). Crestodina (2016) also points out that limiting the options has two benefits. Firstly, to make sure a user does have to try and remember too much at once, and secondly, search engines are more likely to link to a homepage than different pages (the homepage is what the user should ideally see first)

### ‘Hero’ Image

This is an image that can also be described as ‘large attractive headers’. It needs to be an image that has prominent placement and will be the first thing a visitor to the site sees. For the Book DJ site, the hero image needed to be something to visually excite the eye but also get across what the site or page is about. The images could not carry too much detail that would not focus eye attention though. Some of the hero images may have looked ‘busy’, but they were put through a blurring filter so that the text that would go on top looked like it was at the ‘front’ of the image



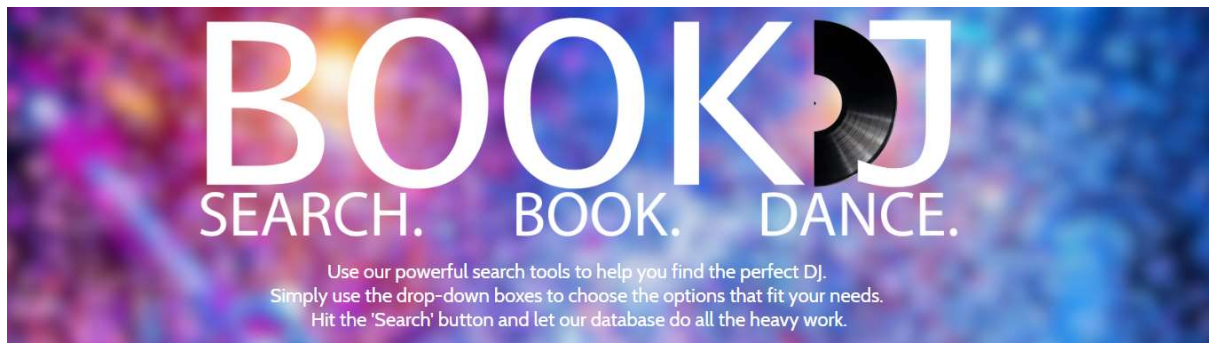


Fig 66: The process of selecting a an image suitable to be used for a hero image, applying a blur filter to make the image less 'busy', which means text applied on top 'pops' out of the image

## Whitespace

*"We need to remember that going for a simple layout instead of a complex one is the key to keeping readers interested. A lot of elements, images, colours and different shapes in a page can make your site look more like an infomercial and causes your readers to leave because they're uncomfortable."* (Muller 2012) This quote helps to illustrate the design choices made for the Book DJ website. The use of white space helps to direct attention to the items that we want a user to look at. Making the website 'cluttered' or too 'busy' would mean that the user may lose overall interest from a sense of too many things trying to grab attention. Giving space around items lets them stand out. For instance, in the site, there is an always deliberately blank space below the hero image. There is deliberate space around and inside items so that the user does not feel bombarded with information.



Fig 67: Examples from the site of using whitespace around items to enhance readability for the user and to avoid the site feeling too cluttered

## Inclusive Usability

The site has also been coded in mind with help for those with impairments. All the images use 'alt' text - a description of what the picture is. This is useful for a few reasons, but one of the most important is for those with visual impairments. Users with visual impairments may be using screen readers software, which gives feedback on what is displayed on the page. For users with visual impairments, the 'alt' text is vital in order for the software to declare what the image is of. Every image in the Book DJ website has an alt text to improve usability.

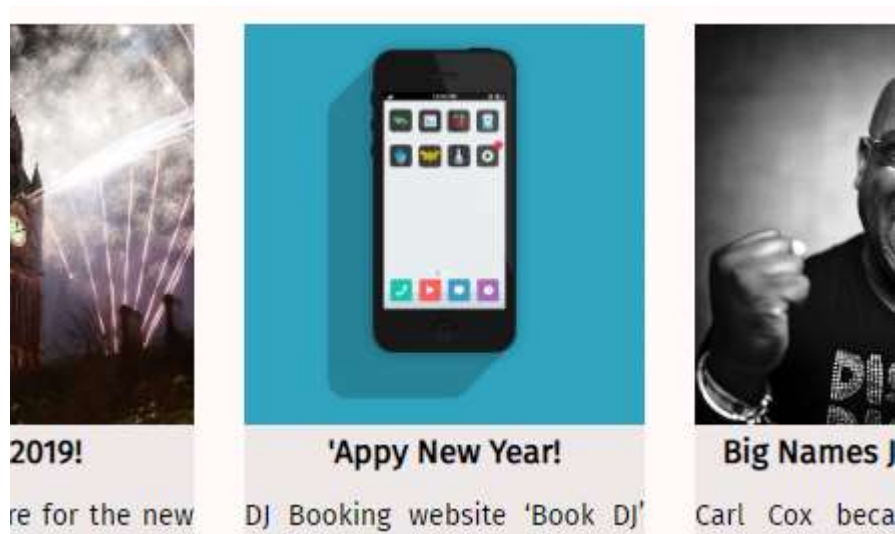


Fig 68: Examples from the Company News page of a story with an accompanying image

```
<11>
<div class="newsRelease">

 <h3>'Appy New Year!</h3>
 <p> DJ Booking website 'Book DJ' has launched a companion app for Android
```

Fig 69: HTML code from the website showing the file path to the image and the alt text describing what the picture shows



Fig 70: How a browser displays the story if the image is removed or deleted in error. Note the alt text still appears

The text is also useful for those who are using browsers which do not display images. This can be because a user has a very slow internet connection (images take longer to load than text) or the user simply does not wish to see images in order to make pages load faster generally. The text is also useful here as it means a user will still be able to identify the layout of the site. The alt text is also important in case of file structure changes.

Images will be coded with a path which identifies where the source file is held. If that path changes or the filename is changed, then the image will no longer be displayed, so it is vital to at least have text that describes what would have been there. Alt text should not be too long but not be too short that an accurate description is not given at all, as search engines like Google will use alt text when returning search results.

### **Visual Complexity**

When reporting on complexity in terms of good practice and usability, this should not be taken as a negative. An aim of a site should be that it is simple to use, but this does not mean that its *design* should be basic. The Book DJ website could have been visually designed just using simple boxes with primary colours, images with no overlaid text, the equipment for hire could have just had text descriptions with no images showing the product and used just web safe fonts instead of google fonts for example. This would have actually driven potential customers away though. King et al. (2019) conducted experiments which measured the effect of website visual complexity on initial user impressions, which was concluded with:

*“Overall, visual complexity predicted user perceptions of the informativeness and the opportunities for engagement of websites. In turn, those perceptions influenced user evaluations and intentions related to the website. The overall model tested suggests that objectively-modified features, such as complexity, can have both a direct and indirect impact on user evaluations and information seeking related to website content. Theoretically, results provide evidence in support of propositions posited by the persuasive model of web design.” (King et al.:2019 p9)*

It is important to note that users were presented with two websites which were exactly the same content-wise, but differed greatly in terms of presentation and the amount of CSS used, with users reporting much better initial impressions of the more CSS-heavy site. Deliberate

effort has gone into making the Book DJ website easy to use and present information simply, while making sure it does not look *basic* and leaving a negative first impression.

## **Publishing a Website**

Unfortunately, the Book DJ website cannot just be ‘put on the web’, there a number of stages to follow in order to make the site visible to anyone in the world with a browser. After the site has effectively become ‘live’, promotion of the site then needs to be looked at in order to draw attention to it.

### **Domain Registration**

Registering a domain is the process of reserving a name on the internet that will belong to the Book DJ website. Since the team is based in the UK, an obvious choice would be something like ‘www.bookdj.co.uk’. The name will stay with the owners for as long as the name is rented. No company holds all the possible domain names on the internet, as multiple domain registration companies (domain name *registrars*) exist who will register the domain for the owner for a fee. As every domain name is unique, it means no one else can register the domain name bookdj.co.uk. The fee for annual registration is quite low. Popular registrars such as 123Reg would rent the domain out for around £10 per year.

### **Acquiring Server Space**

The next step is to arrange for the Book DJ site to have space on a server. Although the domain will have been registered, that would simply be an address that people would have to type in to be able to access our site. Server space needs to be acquired so that when a user types in our domain name, the server will be able to send the data to the user’s browser. Dedicated space on a server for the hosting of our website costs around £100 per

month. There are companies who can host and give us server space for free, but this comes with the drawbacks of the lack of security and help that comes with paid-for companies.

### **FTP Setup and Publishing**

File Transfer Protocol (FTP) refers to the protocol that computers use for transferring files between each other over the internet. The protocol enables a computer to send website files to the dedicated server so that anyone in the world is able to view the website pages via the internet. For the file transfer to take place, an FTP client needs to be used. The client is a piece of software that enables login into our dedicated server, view file structure, and let files be added and removed as desired. Some versions of the software can cost money, but there are also free applications like FileZilla which do the same tasks. Once the client has been setup, the files can be uploaded to the host server.

When all the files have been added into the folder that has been created for making the website available to the public, this means that our website has now been published to the web. If someone types in the domain name that has been chosen for Book DJ into their browser, the index.html page will be the first page the user sees. As long as the CSS, JavaScript and all images files have been uploaded as well, the page will look exactly as intended.

### **Testing**

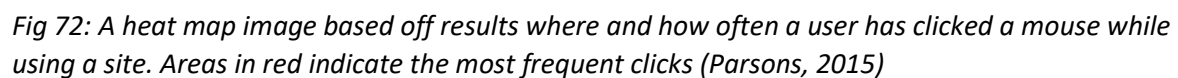
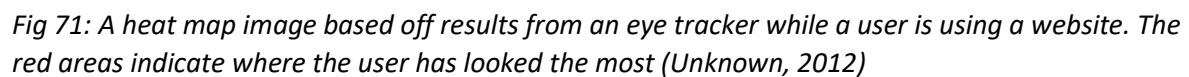
A website will need to undergo different kinds of tests before any kind of promotion of the site can be started. The first test is in regards to browser compatibility. Different users will be using different browsers (or even different editions of browsers) across different operating systems (e.g. Windows, MacOS, Linux etc.). The Book DJ site has been created using a Windows 10 computer and checked locally mostly in Chrome, but it may be the case that most of the visitors to the site are not using this setup. To check compatibility without having to purchase several computers and download multiple versions of browsers, we can use sites

that take screenshots of how a website looks in lots of different browsers (sites like [browsershots.org](https://browsershots.org) do this)

The next test is checking for vulnerabilities. The Book DJ site takes payments, lets users create logins and uses JavaScript. These are all areas that could be exploited if care has not been taken to code properly. There are multiple companies who offer the service of scanning a website to detect vulnerabilities, who then compile a report on areas that need strengthening and the likeliness of exploitation if this is not done.

The last test revolves around usability. An author of a website will have spent a long time constructing the site, so will be aware of every element on a page, but this will be the opposite for someone who is visiting the site for the first time.

Usability tests need to be carried out in order to gauge how someone visiting the site for the first time responds to it. This could be something as simple as using a paper questionnaire and asking subjects to write down their experiences, but the testing can go deeper than this. Eye-tracking devices can show where a user has looked at a site and the amount of time that a user was looking at particular areas, or 'heat maps' that show what users have clicked on the most. Tests like this can help to identify where content should be put that the user needs to look at the most.



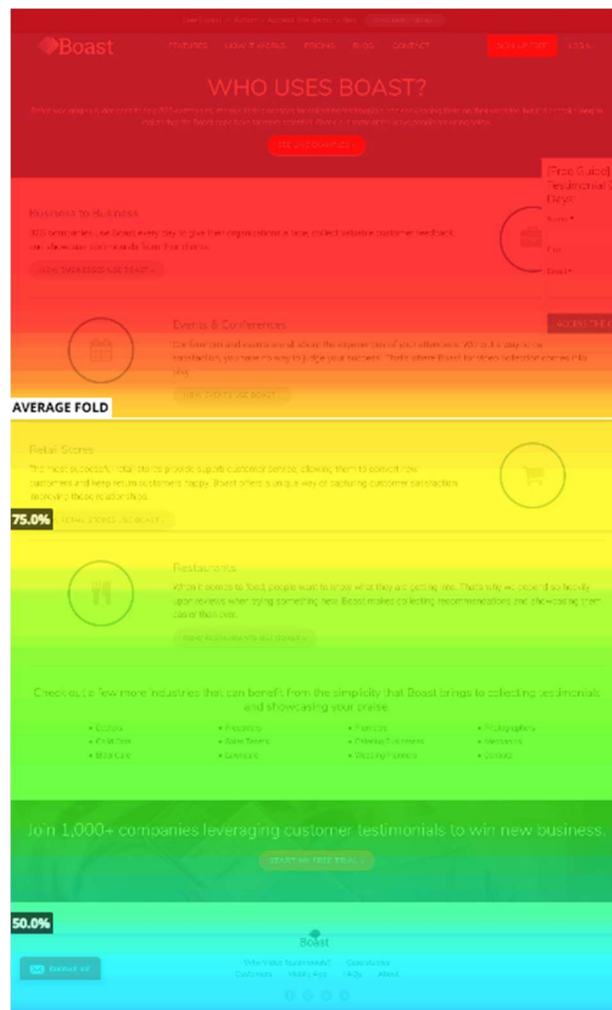


Fig 73: A heat map image which splits a website into heat sections based on how far users were typically scrolling down a page. Areas in blue were rarely scrolled down to (Klug, 2017)

## Promotion

Promoting a website means being able to take opportunities to promote the site while people are using the internet and helping to make the Book DJ website visible when people may not even be aware it exists. One of the primary ways this can be done without needing to spend any extra money is by using the HTML code itself that was used to build the pages. Metadata was covered in the section concerning HTML tags, but the promotional aspect of it will be covered here, in relation to Search Engine Optimisation (SEO).

*“At the heart of SEO is the idea of working out which terms people are likely to enter into a search engine to find your site and then using these terms in the right places ...to*

*increase the chances that search engines will show a link to your site in their results”*  
(Duckett:2011 p479)

Users do not necessarily have to be searching just for Book DJ for it to be visible in search results. Using keywords like ‘DJ’, ‘Search’ or ‘Talent’ etc. can mean that if a user is simply searching for services which offer DJ’s at short notice, the Book DJ will possibly show in the first page of results.

There are SEO (Search Engine Optimisation) companies whose services revolve around making sure that the Book DJ site is returned in the first page of results of search requests. This is vital, as the websites which appear on the second page receive only 6% of the total clicks<sup>1</sup>. This could be by making the best use of metadata tags, making changes to the design and content of the site so that search engines are able to interpret data about the site faster and easier. Atkinson (2019) identifies that while the basics of SEO remain the same, the tactics of SEO will need constant monitoring

*“In 2018, Google reported an incredible 3,234 improvements to its algorithm. The good news is that many of the SEO tactics that worked over 10 years ago are still relevant today...there are plenty of additional factors to consider to help improve rankings further”* (Atkinson:2019 p36)

Atkinson goes on to write about two factors that could be useful in the future – submitting sitemaps to Google Search Console to enable indexing of the pages for searches via Google, and secondly to mark with pages are for contact, which contain products for hire etc. to make use of better AI that Google will be using.

With search engines like Google, payments can be made to them direct via their Google Ads service to ensure that the website always appears at the top of page one of search results when users are searching for services that are relevant to the Book DJ website.

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<sup>1</sup><https://www.forbes.com/sites/forbesagencycouncil/2017/10/30/the-value-of-search-results-rankings/#4d5a4d6c44d3>

## **Conclusion**

Planning, coding, construction, good practices and publication are all vital elements in making a website useful and visible. Trying to code a website without any plan of how many pages there will be, what content the pages will contain or what links (both internal and external) the pages will consist of will be an almost impossible job. Coding web pages involves typing in code that browsers will recognise. The more a site grows, the more code is required. This is why specialist software is so vital.

Specialist software for the use of coding websites goes a long way towards making the task easier. Mistakes are easier to highlight, classes and id's are easier to keep track of and key phrases are easier to recognise. The code produced using specialist software will be exactly the same if it was produced in a simple text editor, but can be done so much faster and with less errors involved. There are many different types of HTML tags, but all come with their own separate purpose. Getting to grips with the large amount of tags available and what they can do is vital for making website construction as stress-free as possible. The attributes associated with tags can be changed to suit a website, which is so useful for the Book DJ website, as it means the site can look colourful and modern, while still retaining all the required functionality.

This report shows the hard work that has gone into make sure that what are considered good practices have been observed and followed, not just for coding, but for presentation and usability as well. Publishing the Book DJ website will cost money, this is inevitable. The company can be in control of how much money is spent though. While there is little choice with domain registration, there are free and paid for options when it comes to acquiring space on servers, uploading the necessary files and, lastly, making sure users can actually find our site using search engines.

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