Informatics 3/4 SAT

# Development Documentation

**MMOS** 

Jude Lowe

# **Table of Contents**

Table of Contents	2
Website Testing Table	3
Piece of Functionality	15
Radar Chart	15
Functionality	15
Technique	15
Parallax Scroll Effect	16
Functionality	16
Technique	16
Bar Charts	16
Functionality	16
Technique	17
Bar Chart Selection	18
Functionality	18
Technique	18
Navigation Bar Scroll to Effect	19
Functionality	19
Technique	19
Pick Music Function	20
Functionality	20
Technique	20
Other Functions and Techniques	21
Backup Strategy	23

# Website Testing Table

Section Tested	What's being Tested	Tested how?	Expected Outcome	Actual Outcome	How was it fixed?
Navigation	Study link in Nav bar	Link tested within Google Chrome and Safari	Page would jump to the study section in a slowed, scrolling style	As expected.	N/A
	The Findings link in Nav bar	Link tested within Google Chrome and Safari	Page would jump to the study section in a slowed, scrolling style	As expected.	N/A
	Pick Me Music link in Nav bar	Link tested within Google Chrome and Safari	Page would jump to the study section in a slowed, scrolling style	As expected.	N/A
	Resources link in Nav bar	Link tested within Google Chrome and Safari	Page would jump to the study section in a slowed, scrolling style	As expected.	N/A
	'Music Taste' home link in Nav bar	Link tested within Google Chrome and Safari	Page would jump to the study section in a slowed, scrolling style	As expected.	N/A
	Nav Bar staying fixed to the top of screen	The page was scrolled down, from top to bottom in Google Chrome and Safari	Nav bar will stay fixed to the top of the page as the user scrolls through.	As expected.	N/A

	Is the navigation bar flexible on smaller screen sizes?	The page was fiddled with in the Chrome inspect window.	The navigation bar will be changed into a clickable button that then displays the navigation to the user.	As expected.	N/A
Hero Image	Does the photo appear on the page?	The page was opened in Safari and Google Chrome.	Image will appear filling up the space.	As expected.	N/A
	Are the heading and subheading clearly distinguished and readable?	The page was opened in Safari and Google Chrome and shown to several peers.	The text will appear above the image in clear white text and be easily readable.	As expected.	N/A
	Are both headings clearly centred over the image?	The page was opened in Safari and Google Chrome.	The text will appear on the page centred on the background image.	As expected.	N/A
	Does the 'Learn More' button work?	The button was clicked in Google Chrome and Safari.	The page will scroll to 'The Study' section.	As expected.	N/A
	Parallax on the Hero Image.	The page as opened and scrolled through in Google Chrome and Safari.	The image will be scrolling at a much slower rate compared to the rest of the page giving it an almost 3 dimensional appearance.	As expected.	N/A
	Suitability for a screen-reader.	The page element was inspected in Chrome to ensure that the	The element will be inspected to reveal an Alt Tag that describes the image in such a	As expected.	N/A

Г	1	1	T	1	
		image had an Alt Tag.	way that it would make sense in a screen-reader.		
The Study	Does the image successfully load in.	The webpage was opened in Safari and Chrome.	The image will load in in a circular shape.	As expected.	N/A
	Does the image have an alt tag?	The webpage was inspected in Chrome.	The image will have an alt tag.	As expected.	N/A
	Is the heading and brief section overview aligned and grouped with the image?	The webpage was opened in Safari and Chrome.	All this text will appear grouped with the image and larger than other text on the page.	As expected.	N/A
	Are the image and section overview text flexible throughout screen sizes?	The page was fiddled with in the Chrome inspect window.	The image should jump to be above the text rather than beside it, and the text should become a bit smaller.	As expected.	N/A
	Does the section scale down well on smaller screens?	The web page's size was altered in Chrome and Safari to observed how the section may change.	The section will scale down the page and maintain their neat appearance.	As expected.	N/A
	Are the headings clear?	The webpage was opened in Chrome and Safari.	The headings will be larger than the normal text and clearly headings.	As expected.	N/A
	Spelling of the content.	All the section's content was passed into Google Docs	All text will be spelt correctly.	As expected.	N/A

	T	T	T	ı	T 1
		spells check and an online spell checker.			
	Grammar of the content.	All of the section's content was passed to an online grammar checker.	There will be no mistakes.	As expected.	N/A
	Readability of content.	All of the section's content was passed to an online readability tester.	It will score well, designed for the age of 15-20.	Ranked grade 13, and for the age of 18-19.	Actual result was acceptable .
Findings	Does the image successfully load in.	The webpage was opened in Safari and Chrome.	The image will load in in a circular shape.	As expected.	N/A
	Does the image have an alt tag?	The webpage was inspected in Chrome.	The image will have an alt tag.	As expected.	N/A
	Is the heading and brief section overview aligned and grouped with the image?	The webpage was opened in Safari and Chrome.	All this text will appear grouped with the image and larger than other text on the page.	As expected.	N/A
	Are the image and section overview text flexible throughout screen sizes?	The page was fiddled with in the Chrome inspect window.	The image should jump to be above the text rather than beside it, and the text should become a bit smaller.	As expected.	N/A
	Does the section scale down well on	The web page's size was altered in	The section will scale down the page and	As expected.	N/A

smaller screens?	Chrome and Safari to observed how the section may change.	maintain their neat appearance.		
Does the content text load in the right place?	The webpage was opened in Safari and Chrome.	All the text should appear grouped appropriately with some above the charts and some below.	As expected.	N/A
Content spelling check.	All the section's content was passed into Google Docs spells check and an online spell checker.	All text will be found to be spelt correctly.	A small spelling mistake was found.	The mistake was amended.
Content grammar check	All of the section's content was passed to an online grammar checker.	All text in the content will be grammatically correct.	One small mistake in the grammar was found.	The mistake was amended.
Online readability test.	All of the section's content was passed to an online readability tester.	It will score well, designed for the age of 15-20.	Ranked grade 12, and for the age of 17-18.	Actual result was acceptable .
Does the Radar Chart load to the page correctly?	The webpage was opened in Safari and Chrome.	The object will appear on the page.	As expected.	N/A
Does clicking on one of the datasets remove it from the chart?	A dataset would be clicked on within Chrome and Safari.	The dataset will disappear from the chart.	As expected.	N/A

	Does the image carousel load in?	The webpage was opened in Safari and Chrome.	The object will appear on the page.	As expected.	N/A
	Does the image carousel scroll through options?	The webpage was opened in Safari and Chrome.	The carousel will scroll through items on its own.	As expected.	N/A
	Does clicking on the arrows allow the carousel to move?	The side arrows of the carousel would be clicked on in Chrome and Safari.	The carousel item will scroll along to the next once clicked.	As expected.	N/A
	Does the image carousel allow a user to select a personality type?	The carousel will have one of its items clicked on in Chrome and Safari.	The selected personality type will load into the below chart.	As expected.	N/A
	Does the bar chart load correctly?	The webpage was opened in Safari and Chrome.	The object will appear on the page.	As expected.	N/A
	Does clicking on one of the datasets remove it from the chart?	A dataset would be clicked on within Chrome and Safari.	The dataset will disappear from the chart.	As expected.	N/A
Pick Music	Does the image successfully load in.	The webpage was opened in Safari and Chrome.	The image will load in in a circular shape.	As expected.	N/A
	Does the image have an alt tag?	The webpage was inspected in Chrome.	The image will have an alt tag.	As expected.	N/A
	Is the heading and brief section overview	The webpage was opened in Safari and Chrome.	All this text will appear grouped with the image and larger than	As expected.	N/A

aligned and grouped with the image?		other text on the page.		
Are the image and section overview text flexible throughout screen sizes?	The page was fiddled with in the Chrome inspect window.	The image should jump to be above the text rather than beside it, and the text should become a bit smaller.	As expected.	N/A
Content spelling check.	All the section's content was passed into Google Docs spells check and an online spell checker.	All content will be correctly spelt.	As expected.	N/A
Content grammar check	All of the section's content was passed to an online grammar checker.	All content will have correct grammar.	As expected.	N/A
Online readability test.	All of the section's content was passed to an online readability tester.	It will score well, designed for the age of 15-20.	Ranked grade 12, and for the age of 17-18.	Actual result was acceptable .
Are the heading and body text aligned to the left of the videos?	The webpage was viewed in Safari and Chrome.	The text will all be aligned down the left of the videos.	As expected.	N/A
Are the videos aligned correctly?	The webpage was viewed in Safari and Chrome.	The videos will appear one on top of the other, to the right of the page.	As expected.	N/A

Does the 'Here' link work correctly?	The link was tested in Safari and Chrome.	Once the link is clicked, the user should have a new tab open with the 16 Personalities test.	As expected.	N/A
Does the dropdown box align correctly with the text?	The webpage was opened in Chrome and Safari.	The dropdown box will be aligned with the text, being of equal width of the div it is inside of.	As expected.	N/A
Does the submit button align correctly with the text?	The webpage was opened in Chrome and Safari.	The submit button will be aligned with the text, being of equal width of the div it is inside of.	As expected.	N/A
Does the dropdown provide options of personality types?	The box was clicked on in Chrome and Safari.	The dropdown box will open up options of the four overarching personality types.	As expected.	N/A
Does the submit button correctly change the videos?	The button was clicked on in Chrome and Safari.	The videos to the right will change depending on the type selected.	As expected.	N/A
Do all the videos play correctly?	The play button for the videos was clicked in Chrome and Safari.	The videos will play, showing the song.	Some videos played correctly, whereas some would not play.	It was found that some videos do not play as they were uploaded not being allowed to have an embedded link. In light of this, a small

					sentence was added instructing users to click on the title of the song, which opens it in a new tab, also acknowled ging artists' rights to not have their work embedded if they so choose.
	Does the section scale down well on smaller screens?	The web page's size was altered in Chrome and Safari to observed how the section may change.	The section will scale down the page and maintain their neat appearance.	As expected. However, worth noting that when the page is shrunk to a size unrealistic ally small the text and videos are completel y neat.	N/A
Resources	Does the image successfully load in.	The webpage was opened in Safari and Chrome.	The image will load in in a circular shape.	As expected.	N/A
	Does the image have an alt tag?	The webpage was inspected in Chrome.	The image will have an alt tag.	As expected.	N/A

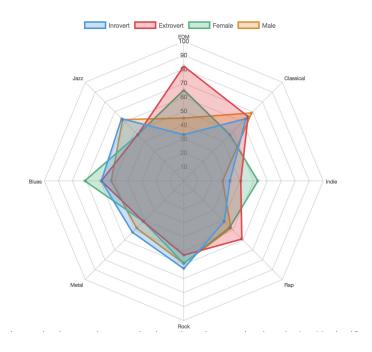
Is the heading and brief section overview aligned and grouped with the image?	The webpage was opened in Safari and Chrome.	All this text will appear grouped with the image and larger than other text on the page.	As expected.	N/A
Are the image and section overview text flexible throughout screen sizes?	The page was fiddled with in the Chrome inspect window.	The image should jump to be above the text rather than beside it, and the text should become a bit smaller.	As expected.	N/A
Does the section scale down well on smaller screens?	The web page's size was altered in Chrome and Safari to observed how the section may change.	The section will scale down the page and maintain their neat appearance.	The cards work scaled down, to a point. However at smaller sizes they do become unclear.	N/A
Content spelling check.	All the section's content was passed into Google Docs spells check and an online spell checker.	All content will be correctly spelt.	As expected.	N/A
Content grammar check	All of the section's content was passed to an online grammar checker.	All content will have correct grammar.	A single mistake was found in the grammar.	The mistake was amended.
Online readability test.	All of the section's	It will score well, designed for the	Ranked grade 12,	Actual result was

		content was passed to an online readability tester.	age of 15-20.	and for the age of 17-18.	acceptable
	Do the Bootstrap cards properly align themselves in rows on the screen.	The webpage was viewed in Chrome and Safari.	The cards should line up in groups of three contained within the section.	As expected.	N/A
	Are all the card titles at the top of the card?	The webpage was viewed in Chrome and Safari.	All titles will be fixed to the top of the card.	As expected.	N/A
	Is the text content of the card spaced throughout the card?	The webpage was viewed in Chrome and Safari.	All content of the card will be equally spaced throughout the card.	As expected.	N/A
	Is the link to the source held at the bottom of the page?	The webpage was viewed in Chrome and Safari.	The link to other pages is fixed at the bottom of the card.	As expected.	N/A
	Do the links all work?	The link was tested in Chrome and Safari.	Clicking the link will bring the user to the page the reference refers to.	As expected.	N/A
	Do the links open in a new tab?	The link was tested in Chrome and Safari.	Clicking the link will bring the user a new tab with the page the reference refers to.	As expected.	N/A
Footer	Content spelling check.	All the section's content was passed into Google Docs spells check	All content will be correctly spelt.	As expected.	N/A

	and an online spell checker.			
Content grammar check	All of the section's content was passed to an online grammar checker.	All content will have correct grammar.	As expected.	N/A
Position at the bottom of the page?	Web page viewed in Chrome and Safari.	The footer will be at the bottom of the page when the user scrolls down to it.	As expected.	N/A
Copyright symbol appear?	Web page viewed in Chrome and Safari.	The copyright symbol will appear after the word "Copyright".	As expected.	N/A

# Piece of Functionality

### Radar Chart



### **Functionality**

This radar chart displays to the user the information about where some of the investigated demographics lie in relation to music genres. Further functionality this holds is the ability to make a variable disappear by clicking on it, as seen above.

### Technique

The technique used was Javascript, particularly arrays (shown right). The Javascript was obtained from Chart.js:

http://www.chartjs.org/docs/latest/charts/radar.html.

```
<div style="height:600px; width:600px; margin:0 auto;">
<cnnvas id="mgRadarChart2" width="400" height="400" x</cnvas>
<script>
var ctx = document.getElementById("myRadarChart2").getContext('2d');
var myRadarChart2 = new Chart(ctx, {
    type: 'radar',
    data: {
        labels: ["EDM", "Classical", "Indie", "Rap", "Rock", "Metal", "Blues", "Jazz"],
        datasets: [{
            label: 'Inrovert',
            data: [33, 63, 33, 41, 63, 52, 59, 63],
            backgroundColor: 'rgb66, 154, 234, 0.3)',
            borderColor: 'rgb(56, 154, 234)'
        },
        {
             label: 'Extrovert',
            data: [82, 65, 41, 59, 53, 41, 59, 47],
            backgroundColor: 'rgb2(24, 55, 74, 0.3)',
            borderColor: 'rgb(242, 55, 74, 0.3)',
            borderColor: 'rgb(242, 55, 74, 0.3)',
            borderColor: 'rgb3(31, 186, 129, 0.3)',
            borderColor: 'rgb3(31, 186, 129, 0.3)',
            borderColor: 'rgb3(31, 186, 129, 0.3)',
            borderColor: 'rgb2(27, 142, 9, 0.3)',
            borderColor: 'rgb2(27, 142, 9)'
        }
    }
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*
    /*

    /*

    /*
    /*
    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /*

    /
```

### Parallax Scroll Effect





### **Functionality**

This Parallax Scroll makes the page have a seemingly layered appearance to it. As shown above, it makes the background of the image scroll a slowed rate to the rest of the page, making it seem as though it is a distant layer behind the other divs that are moving more freely. Ultimately, this makes for a more 3 Dimensional appearing site.

### Technique

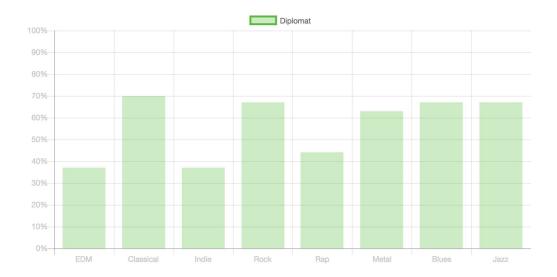
The technique involved here is using Javascript connections obtained from this website: <a href="http://pixelcog.github.io/parallax.js/">http://pixelcog.github.io/parallax.js/</a>

This was then utilised in the HTML by calling on the functionally thusly:

### **Bar Charts**

### **Functionality**

This bar chart displays to the user the information about how much each personality type tends to enjoy a genre of music. Based on the Javascript in use (see below) the chart has the added aesthetic of appearing somewhat fluid as it is loaded into the page or refreshed.



### Technique

The technique used was Javascript, particularly arrays (shown right). The Javascript was obtained from Chart.js:

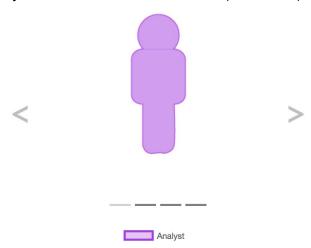
http://www.chartjs.org/docs/latest/charts/radar.html.

```
<div style="height:400px; width:800px; margin:0 auto;">
 <canvas id="myBarChart"></canvas>
  var ctx = document.getElementById('myBarChart').getContext('2d');
  var myBarChart = new Chart(ctx, {
       labels: ["EDM", "Indie", "Classical", "Rock", "Blues", "Metal", "Jazz", "Rap"],
       datasets: [{
           label: personalityType,
            backgroundColor: personalityData.bgColour.Analyst,
           borderColor: personalityData.borderColor.Analyst,
   options: defaultOptions
  function toggleInput(input) {
      personalityType = input;
      myBarChart.destroy();
      myBarChart = new Chart(ctx, {
          data: {
             labels: ["EDM", "Classical", "Indie", "Rock", "Rap", "Metal", "Blues", "Jazz"],
                 label: personalityType,
                 data: personalityData[input],
                 backgroundColor: personalityData.bgColour[input],
                 borderColor: personalityData.borderColor[input],
         },
         options: defaultOptions
```

### **Bar Chart Selection**

### **Functionality**

This piece of functionality allowed uses to select from an image carousel which personality type they wished to see on the bar chart (see above).



### Technique

The technique involved here was a Bootstrap carousel, with images to represent the different personality types placed into it. The images were themselves clickable, which triggered a Javascript function that would delete the current bar chart and replace it with the chart of the personality type selected.

### **Navigation Bar Scroll to Effect**

### **Functionality**

When a navigation link is clicked on my page it is not simply jump to, the page scrolls down/ up to it at a slowed pace. (It is difficult to show a screenshot of this in action).

### **Technique**

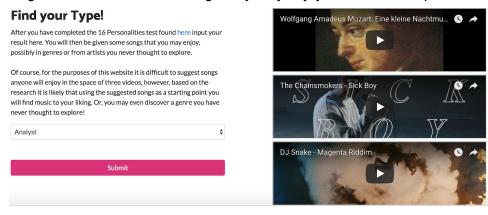
This is achieved by giving the "page-scroll" class to the navigation links.

```
<div class="collapse navbar-collapse" id="navbarResponsive">
 class="nav-item">
     <a class="nav-link page-scroll" href="#study">The Study</a>
   class="nav-item">
     <a class="nav-link page-scroll" href="#findings">The Findings</a>
   class="nav-item">
    <a class="nav-link page-scroll" href="#pickMusic">Pick Music</a>
   class="nav-item">
     <a class="nav-link page-scroll" href="#resources">Resources</a>
   </div>
```

### **Pick Music Function**

### **Functionality**

This functionality allowed users to input their personality type through a dropbox selection and be given a set of videos of songs they may enjoy based on their personality type.



### **Technique**

The technique involved here was HTML form functionality, including a drop down box and button to submit. Other than this, Javascript arrays and functions were used to change the videos depending on the selection of the user.

```
We personality is = {
    video1: ["https://www.youtube.com/embed/htm20bt", "https://www.youtube.com/embed/ELB09BRyf10", "https://www.youtube.com/embed/Bisc10213cbt",
    video2: ["https://www.youtube.com/embed/scandWyf0c", "https://www.youtube.com/embed/Bisc10213cbt",
    video3: ["https://www.youtube.com/embed/scandWyf0c", "https://www.youtube.com/embed/Bisc10213cbt",
    // Analyst: ["https://www.youtube.com/embed/scandWyf0c", "https://www.youtube.com/embed/Bisc10213cbt",
    // Analyst: ["https://www.youtube.com/embed/scandWyf0c", "https://www.youtube.com/embed/scandWyf0c", "https://
```

# Other Functions and Techniques

Function/ Technique	Description/ How it was used	
Atom: Save	Saves the code documents state and any progress you have made. Used to save the code document.	
Google: Inspect element	Allows you look at the code live in the web browser and look at each individual element. Used to troubleshoot much of the code in the browser.	
Google: Inspect Console	Allows you to see any and all errors occuring in the Javascript. Used to troubleshoot the Javascript of the web page.	
HTML	HTML is a basic coding language that provides the skeleton for the vast majority of websites. It was used in this way for my site, giving a skeleton to be altered in Javascript and Bootstrap.	

CSS	Cascading Stylesheets are external documents that connect to HTML to provide greater formatting and appearance options for the somewhat bear HTML. CSS was used in my page to do this formatting.
Bootstrap 5.1	An online/ downloadable stylesheet with hundreds of preset classes in it. Used for virtually all of the page formatting and content organisation.
Bootstrap template: One Page Wonder	Bootstrap templates provide a strong starting point for a developer, including the required stylesheet. It was used as a starting point before expanding.
Google Docs spell check	This spell check checks all content against its dictionary to see if it is spelt correctly. It was used for checking all of the content on the page.
Online spell and grammar check: https://www.online-spellcheck.com/	This online checker is similar to the Google Docs functionality, however, it is more sophisticated and checks grammar. This was used to further validate all content of the page.
Online readability test: http://www.readabilityformulas.com/free-read ability-formula-tests.php	This online checker scans through text given to it and conducts 20 different test to determine its readability. It comes up with a final difficulty level, education grade it is appropriate for, and age level it is appropriate for. It was used in my development for testing the readability of my content.
Spreadsheet analysis COUNTIF function.	To get the datasets to put into the Radar chart (see above section) some re-analysis of the data was required. COUNTIF was used to count how many individuals of each demographic indicated they enjoy a type of music. This was done both Male/ Female and Introversion/ Extroversion.

## **Backup Strategy**

During the development, three versions of the development work were kept. One was kept on Google drive, which was a zip file of the entire website updated once a week. On the hardisk of the computer used for development, two copies were kept of the working HTML file. One was a backup made at the end of every session (as recommended by my instructor) and one was a working file where changes would be made. This ensured that if a change was made that caused serious issues on the page a recent version was available. The Google Drive version provided a cloud backup of the entire site in case of serious data loss.

Fortunately, through the course of this development process the backups were not required at all as no serious issues occured.

Below is a photo of the local copy (left) and the cloud copy (right).

