



# COS30045 Data Visualisation

## Task 1.1 Technology Fundamentals HTML and CSS Review

<b>ILO</b>	Create web-based interactive visualisations using real-world data sets.
<b>Aim:</b>	Demonstrate basic familiarity with HTML and CSS coding. Set up a client-server environment Upload webpage to server and view through web client Create a webpage with the following features: HTML code demonstrating the use of > 5 different tags Use CSS to style html elements on webpage
<b>Resources:</b>	<i>Textbook:</i> Murray Ch 3 <a href="#">Murray on ProQuest</a> <a href="#">Murray on Safari</a> <i>Web Resources:</i> <a href="#">W3Schools</a> <a href="#">Mozilla Developer Network</a> <a href="#">codeacademy</a> <a href="#">W3Schools HTML Quiz</a> <a href="#">W3Schools CSS Quiz</a> <i>Videos:</i>
<b>To be marked as Complete your submission must:</b>	Submit working code that meets the requirements specified in document below. Demonstrate appropriate use of HTML and CSS. Properly formatted code Well commented code with references to code sourced from web, stack overflow etc. where appropriate. Demonstrate and explain code to tutor in class.
<b>Submission</b>	Submit to Doubtfire <ul style="list-style-type: none"><li>• screenshot of final webpage</li><li>• code</li></ul> Bring code to class to demonstrate to tutor

## Overview

In this unit you will learn to use D3 to create web-based visualisations. D3 is a JavaScripting library that is used in conjunction with HTML and CSS. Therefore, before starting with D3 you will need to review the basics of HTML and CSS coding.

**Tip:** If you have done COS10011 Creating Web Applications, it might be worth going back and reviewing your notes. We expect that the good practices you learnt in CWA are continued in this unit.

**Note:** This Task Guide is not meant to be fully explanatory. If you haven't done any web programming before you will need to do extensive self study to catch up with the basics. W3Schools has excellent tutorials and examples that will help you get through these basic exercises. There is also a chapter on basic HTML and CSS in the text book Interactive Data Visualisation for the Web by Murray.

## Step 1: Start a basic HTML template

In this unit we will be using the programming text-editor Atom to write our code. Feel free to use other text-editors of your choice. Set up a basic HTML template. There is an example below in case you have forgotten how.

### Requirements 1

Make sure you include:

- language and charset
- informative meta data
- a title for your web page

```
1  <!DOCTYPE html>
2  <html lang="en">
3
4  <head>
5      <meta charset="UTF-8"/>
6      <meta name="description" content="Data Visualisation Exercise 1"/>
7      <meta name="keywords" content="HTML, CSS"/>
8      <meta name="author" content="Your name here"/>
9
10     <title>Task 1.1 HTML and CSS Demo Page</title>
11
12 </head>
13
14 <body>
15
16     <!-- Code goes here! -->
17
18 </body>
19
20 </html>
```

**Note:** This example makes use of place holder text known as “Lorem ipsum”. You can use your own or take a look at the data we going to display and write your own description of it for your web page.

## Step 2 Demonstrate your knowledge of basic HTML tags

Take a look at the following screen shot. Build a similar web page of your own.

### Requirements 2:

Make sure you include examples of:	<ul style="list-style-type: none"> <li>• bolding</li> <li>• italics</li> </ul>
<ul style="list-style-type: none"> <li>• heading levels</li> <li>• paragraphs</li> <li>• ordered list</li> <li>• footer</li> </ul>	

The screenshot shows a web page with the following elements and callouts:

- Title of Article about Interesting Visualisation**: A large heading at the top.
- Author of Interesting Article**: A heading below the title.
- Level 1 Heading**: A callout pointing to the title.
- Level 2 Heading**: A callout pointing to the author's name.
- bold**: A callout pointing to the word **inventore** in the first paragraph.
- italic**: A callout pointing to the word *quoniam* in the first paragraph.
- Paragraph**: A callout pointing to the first paragraph of text.
- Unordered List**: A callout pointing to a bulleted list of four items.
- Footer**: A callout pointing to the text 'COS30045 Data Visualisation' at the bottom.

The web page content includes:

# Title of Article about Interesting Visualisation

## Author of Interesting Article

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## Step 3 Add an image and html link

Add the charts to article. At the moment the charts are static png files made in Excel. You can find the files on Doubtfire (NT\_Naplan\_Reading\_Results\_2017.png and NT\_Naplan\_Reading\_Results\_2017.png).

### Requirements

#### Title of Article with Interesting Visualisation

#### Author of Interesting Article

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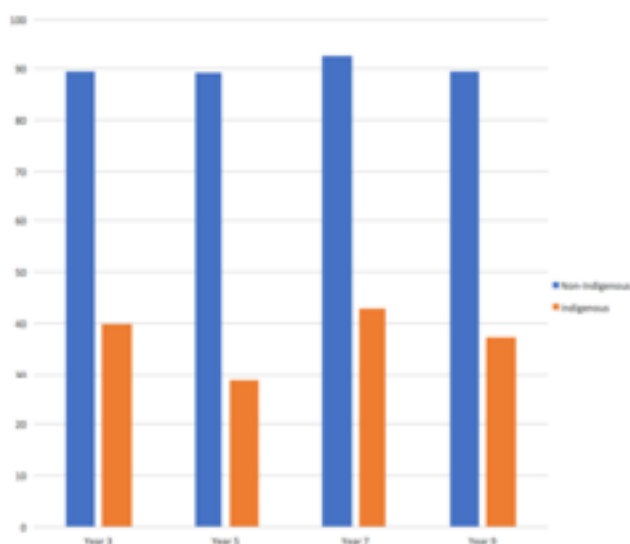


Fig 1. Percent of children above national minimum standard in reading in 2011 for Year 3, 5, 7 and 9 for Non-Indigenous and Indigenous children in the Northern Territory. Data Source: [NAPLAN results](#)

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**Tip:** The figure in this webpage is tagged with <figure>, and the caption with <figcaption> This gives you a little more control over these elements later.

## Step 4 Add some Cascading Style Sheet (CSS) styles

At the moment the webpage is displayed using default styles. Make it look a bit better by using CSS.

### Requirements

Make sure you include:	<ul style="list-style-type: none"> <li>prevent figure caption from extending past image</li> <li>styling to Footer</li> </ul>
<ul style="list-style-type: none"> <li>styling to Header 1 and 2 (e.g., change colour, font, size, weight, margins...)</li> <li>italicise figure caption</li> </ul>	

Your styling does not need to be the same as the example, but try to make it look elegant!

## Title of Article with Interesting Visualisation

Author of Interesting Article

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- Nulla facilisi. Curabitur scelerisque.
- Donec ac tristique ipsum.
- Pellentesque vitae nulla.

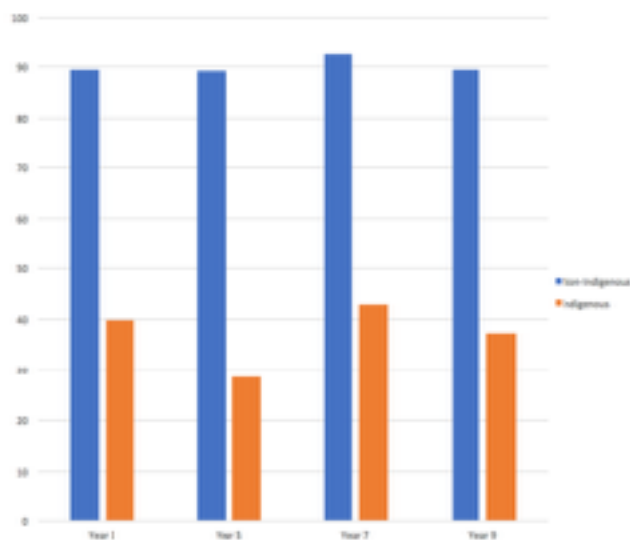


Fig 1. Percent of children above national minimum standard in reading for 2011 Year 3, 5, 7 and 9 for Non-Indigenous and Indigenous children in the Northern Territory. Data Source: [NAPLAN results](#)

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