**Questions for Week 10:**

**What is your project about (in 1 or 2 words)?**

* Renewable energy

**What is the data you plan to use?**

Global energy consumption patterns and sources - “Energy consumption by source, Singapore”:

<https://ourworldindata.org/energy/country/singapore#what-sources-does-the-country-get-its-energy-from>

(I filtered the data to only reflect Singapore’s consumption levels)

Infographic for pie chart - “Distribution of Solar Panels in Singapore”:

<https://www.ema.gov.sg/singapore-energy-statistics/Ch06/index6>

Excel spreadsheet with the tabular data:

<https://www.ema.gov.sg/assets/stat_table/SES_Public_2022.xlsx>

(I used data from Section 6 of this spreadsheet, as it corresponds to solar energy usage)

Number of EV charging points as of 2022:

<https://paultan.org/2022/09/05/singapore-now-has-over-3000-public-ev-charging-points-with-more-to-be-installed-says-countrys-lta/>

| Week | Concept | How I've used it | Line number | Filename |
| --- | --- | --- | --- | --- |
| 2 | HTML element tags | Examples of tags used:  <h1></h1> to <h6></h6>, <p></p>, <br>, etc  I used these element tags to visualise the structure of my data story, indicating which lines and segments are the headers, sub-headers and main content. As the default format of the headers were not to my liking, I altered the font, colour and size in the css folder. | 26, 34, 54 | For website structure:  NM2207\_finalproject > index.html  For format of headers:  NM2207\_finalproject > css > appstyle.css |
| 2 | HTML Tables | To present the different definitions of renewable energy, green energy and clean energy, I used a table to organise them. | 37 to 48 | NM2207\_finalproject > index.html |
| 4 | Lists in HTML | Examples of list elements used:  <ul></ul>, <li></li>  When listing the 5 pillars and key targets of the SG Green Plan, I had to use lists in the HTML file.  In addition, I used subpoints, which allowed me to further elaborate on the main points.  Code:    Result: | 82 to 94 | NM2207\_finalproject > index.html |
| 2 | Form elements | Examples of form elements used:  <form></form>, normal buttons and radio buttons  At the sidebar of the data story, I added a small quiz section to test users on their knowledge regarding renewable energy. This requires radio buttons for users to choose the correct option.    For one of my interactive charts on the energy consumption levels based on various energy sources, I inserted radio buttons for users to choose which individual energy source they would like to see, such as solar, wind, hydro, coal or gas. For example, if they want to see only the consumption levels from solar energy, they can click on the button corresponding to solar energy, and an area chart will appear with the relevant data. If they would like to see the total consumption levels from all the sources, they can click on the corresponding button and a stacked area chart will appear.  For another interactive chart on the distribution of solar panels across Singapore, I inserted radio buttons for users to choose how they would like the data to be represented - either in a pie chart or a map of Singapore which, when a certain region is clicked on, it will show how many solar panels have been installed in that region. | 213 to 221,  180 to 187 | NM2207\_finalproject > index.html |
| 4 | addEventListener | In order for the aforementioned charts to be interactive, the radio buttons in the list must be connected to a function in Javascript, which will be executed when an event happens, such as the button being clicked.  For example, when the button to view the pie chart is clicked, addEventListener will receive that and execute the function that presents the pie chart on the data story.  For the quiz section, when the user clicks on an option and then clicks submit, addEventListener will pick up that event and run it through a function with an if-else loop to determine if the answer is correct or wrong.  (The functions have not been written yet, but the placeholders are in the Javascript file) | 168, 346 | NM2207\_finalproject > appscripts > main.js |
| 4 | document.getElementById.innerHTML() | For the interactive charts, document.getElementById will be used together with the addEventListener method. When the option to show the pie chart is clicked on, the canvas element will be selected and changed to the canvas element with the pie chart. | 346 | NM2207\_finalproject > appscripts > main.js |
| 4 | Window.alert() | This event will appear as part of a function in the Javascript file.  In the quiz section, if the user selects the correct answer, a window alert will pop up to congratulate the user. Once the user clicks ‘Ok’, the question will change to the next one.  However, if the user selects the wrong answer, a window alert will pop up to notify the user. Once the user clicks ‘Ok’, they can attempt the question again until they get it correct. | 348, 349 | NM2207\_finalproject > appscripts > main.js |
| 6 | If-else conditional loop | The if-else loop will be used in a function to determine if the user has chosen a correct or wrong answer, and notify the user accordingly.  If the user chooses the correct answer, the window.alert() will be executed to notify the user that they have gotten the question correct. Else (i.e. the user chooses the wrong answer), another window.alert() with a different message will appear, encouraging the user to try again. | 347 | NM2207\_finalproject > appscripts > main.js |
| 5 | Bar charts | The bar charts are used to reflect   1. The number of installations of solar panels in Singapore across the years 2. The total solar panel capacity in MWp across the years 3. A comparison between the targeted number of Electric Vehicles charging points and the actual number of charging points installed thus far | 190 to 192,  199 to 201,  234 to 236 | NM2207\_finalproject > index.html |
| 5 | Pie charts | The pie chart used in the data story reflects the distribution of solar panels installed in Singapore. I used a pie chart as it can display relative proportions of the number of solar panels in each region. | 173 to 176 | NM2207\_finalproject > index.html |
| 5 | Line charts | The area chart used in this data story reflects energy consumption levels based on various energy sources, such as solar power, gas, or coal, over many years. | 142 to 151 | NM2207\_finalproject > index.html |