Class 2 Recap

Please refer to the **"main.js"** file posted in the **#class2** Discord channel

More HTML Tags

We learned a bit more about HTML tags:

- **<a>** tag is for putting in hyperlinks that when you click leads you to a website

```
<a href="https://www.youtube.com/channel/UCX6OQ3DkcsbYNE6H8uQQuVA">Mr.Beast</a>
```

- **<style>** is for embedding CSS into your HTML code

```
<style>
    body {
       background-color: lightgreen;
    }
</style>
```

This code changes the background colour of your code. You can put the <style> within your <head> tags.

- **Comments** in the code can be made by example below. Comments can be put to make your code more organized and label things you might forget.

```
<!-- This is a comment, type whatever you want here! -->
```

CSS vs HTML comparison

HTML is all the tags we have learned in class like <a> and <p>, CSS is the stuff we put in the <style> tags that changes the "prettiness/beauty" of your website such as changing the colors or font-sizes. See this webpage on W3Schools for more details: https://www.w3schools.com/html/html_css.asp. A website with no CSS would be not visually appealing but a website cannot exist without HTML. So HTML is **necessary** but CSS is optional to make a website (although your website may not look very good).

Introduction to Javascript (JS)

We learned that JS (Javascript) is a complementary programming language alongside HTML and CSS (which is what we have been building our website with)

We learned how to assigned variables to values by using the var or let keyword.

```
var x = 1;
var y = 2;
```

We learned how to print to console (which can be opened by right-clicking anywhere on your page and hit **Inspect -> Elements**)

```
console.log(x+y)
console.log("hello")
```

We learned the existence of **functions** which is a concept in coding which takes in input values and outputs a result. Below is an example of a simple add function that adds two numbers. Note that we need to use the **return** keyword to indicate what the function is supposed to give back.

```
function add(num1, num2){
    return num1 + num2;
}
```

We learned how to **call a function** which just means to run the function, we can even print the result of the function to console.

```
console.log(add(5,4))
```

CONDITIONALS

Conditionals uses **if, else if,** and **else** keywords and are used in coding when you have to make a logical decision. Be careful of using the curvy and the curly brackets.

```
function between10And20(num1){
    if(num1 < 10) { // checks if num1 < 12
    return num1 + 1
  } else if (num1 < 20) {
    return num1 + 2
  } else {
    return num1 + 3
  }
}
```

We learned that there are various **data types** in coding which are the building blocks to writing any type of code, the main ones being:

Integer/numbers: 0, 1.3, 190

Strings: “hello”

Boolean: True or False

List: *to be covered next class*

Function: see examples in the class3.js on functions we have covered in class

We also tried to start the **reportCard** function which uses various conditions to produce the right letter grade for a given number percentage grade. Please complete this function before next class.

Code testing which is the act of testing functions to ensure our code behaves exactly as it should and produce the right results can be done just by calling a function and console logging the answer.

```
// Test cases for reportCardBetter function
console.log(reportCard(86)) // B
console.log(reportCard(80)) // C
console.log(reportCard(60)) // D
console.log(reportCard(72)) // C
console.log(reportCard(100)) // A
console.log(reportCard(0)) // F
```

CHALLENGE TASK:

A reminder that challenge tasks are optional and available for those that want to practice more coding.

Given the reportCard function, add checks (if statements) to ensure invalid inputs are detected and rejected. For example, feeding the number 120 should result in it being rejected since in school you cannot get above 100 in exams or homework. Likewise, inputting the function negative numbers like -5 should not work either because the lowest a student can get in school is a 0 not negative numbers.

Create another check to reject letters (i.e. “hello”) and symbols (i.e. $ % # @)