JAVASCRIPT SYNTAX

What is our GOAL for this MODULE?

We learned to program in javascript, focusing on the application of complex concepts. We used Visual Studio Code used by professional programmers thus learning higher-order programming skills.

What did we ACHIEVE in the class TODAY?

- Implemented arrays and Javascript methods.

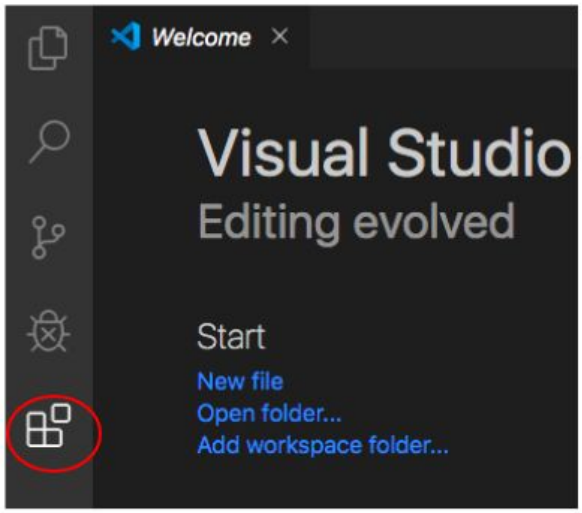
Which CONCEPTS/ CODING BLOCKS did we cover today?

- Console screen and why it is used
- The method used to print anything on the console screen
- The Concat function
- The replace function
- The sqrt function
- Min and max function
- Pow function

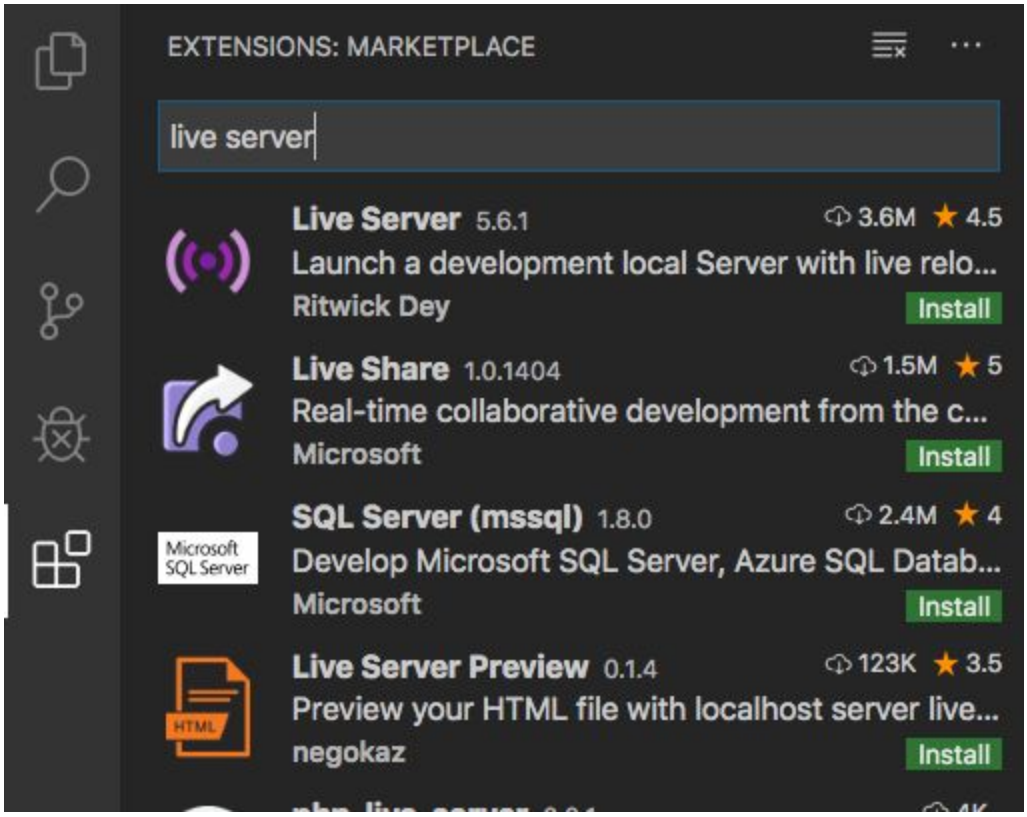
How did we DO the activities?

1. Download Visual Studio.
    - Click the link - https://code.visualstudio.com/Download
    - Choose your operating system and download the file

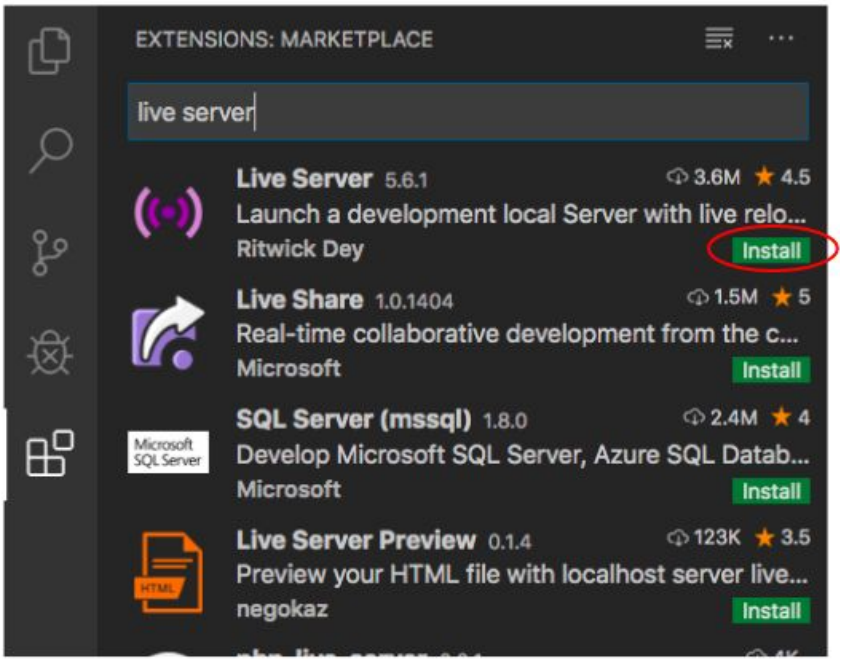
2. Setup Live server.
    - Click on the highlighted button in the following image:



- Then type live server in the search box.

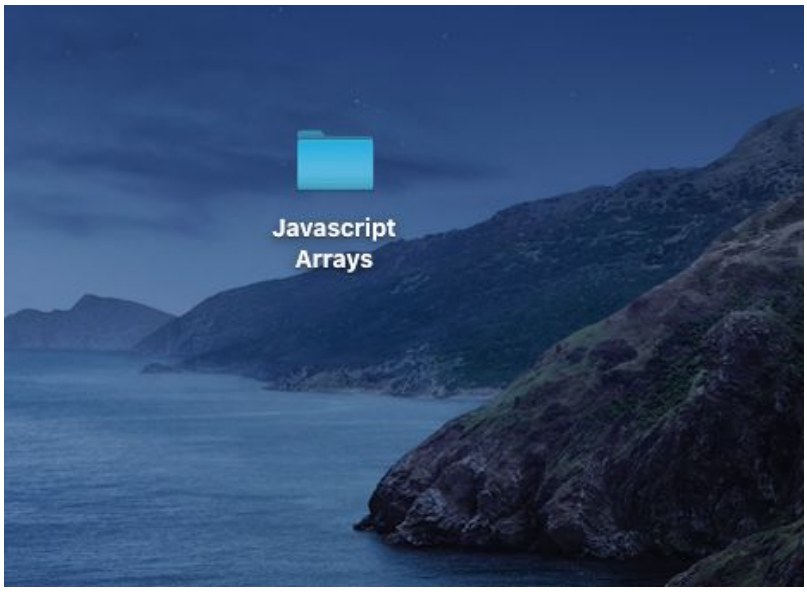


- Now install the first one by clicking the install button.



We have downloaded the live server.

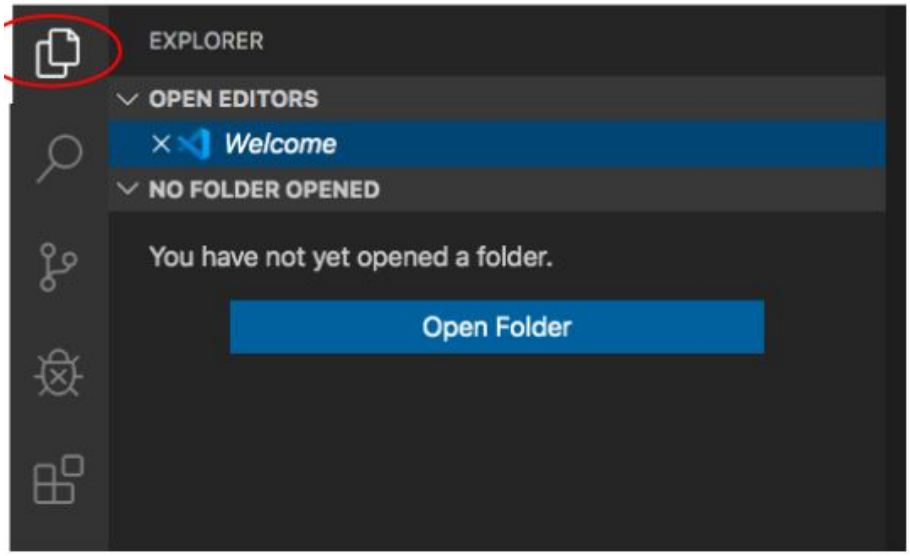
- Now create a folder anywhere on your system preferably on desktop with the name Javascript Arrays or any name.



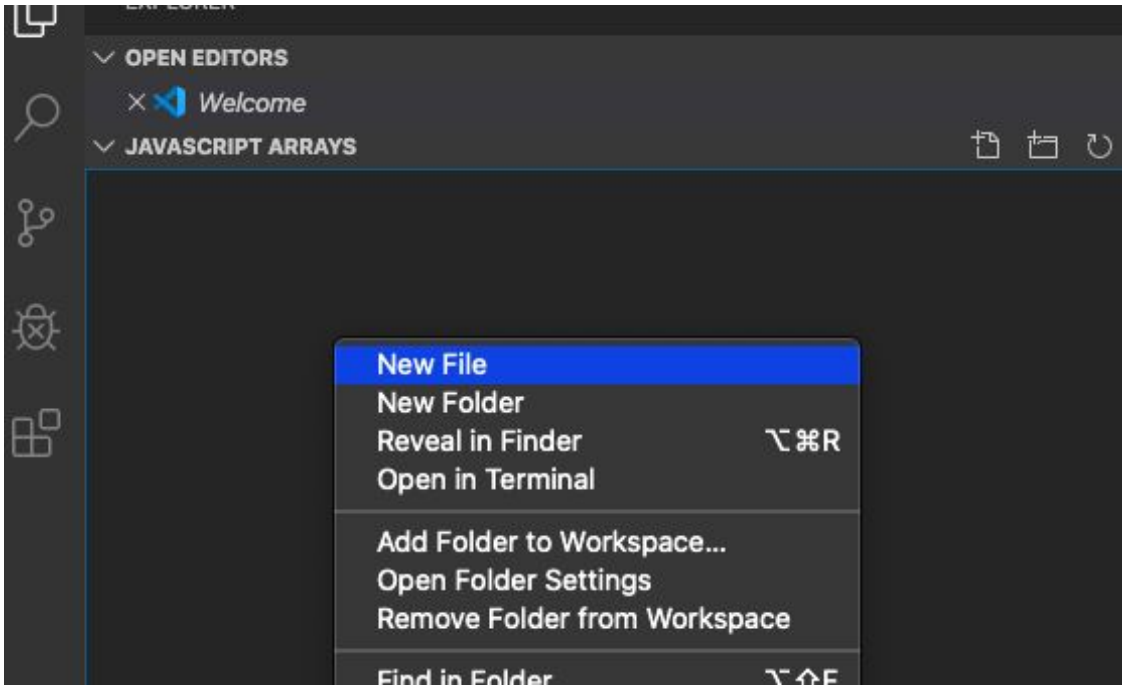
- Now we will open this folder inside visual studio.

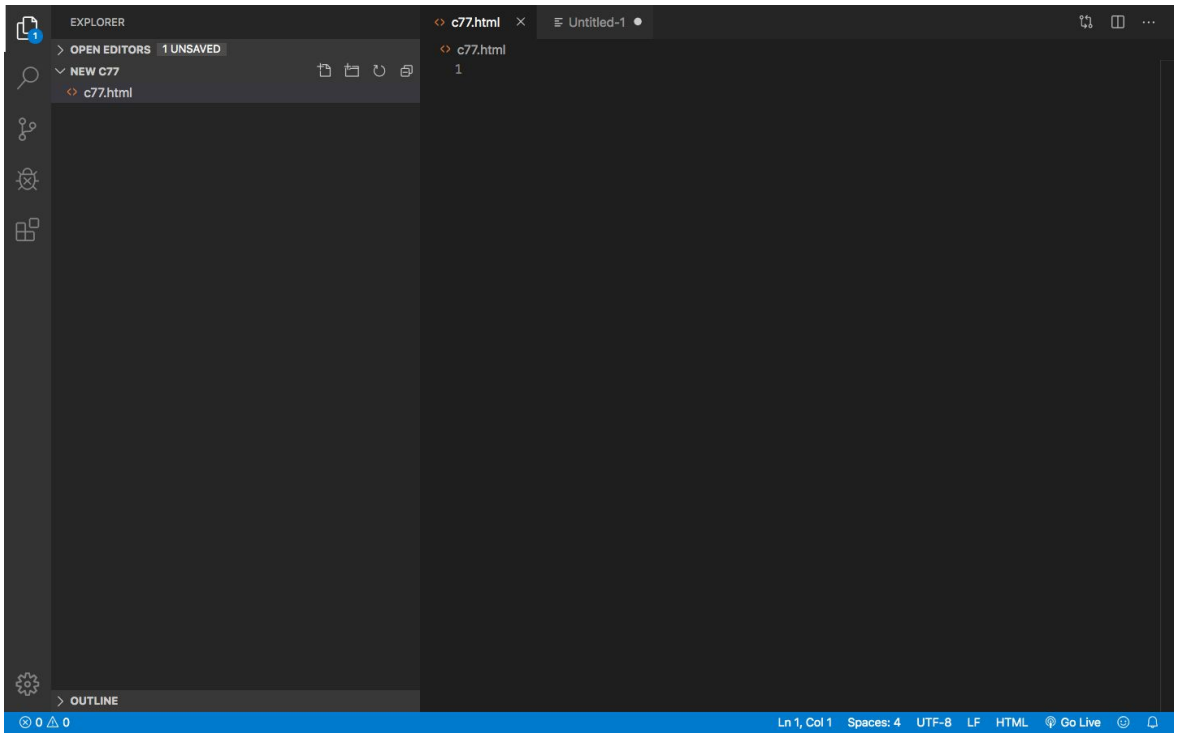
***NOTE: if we only open the file the live server will not work. We need to open the whole folder in vscode.**

- Steps to open the folder -
    - Click on the highlighted button.

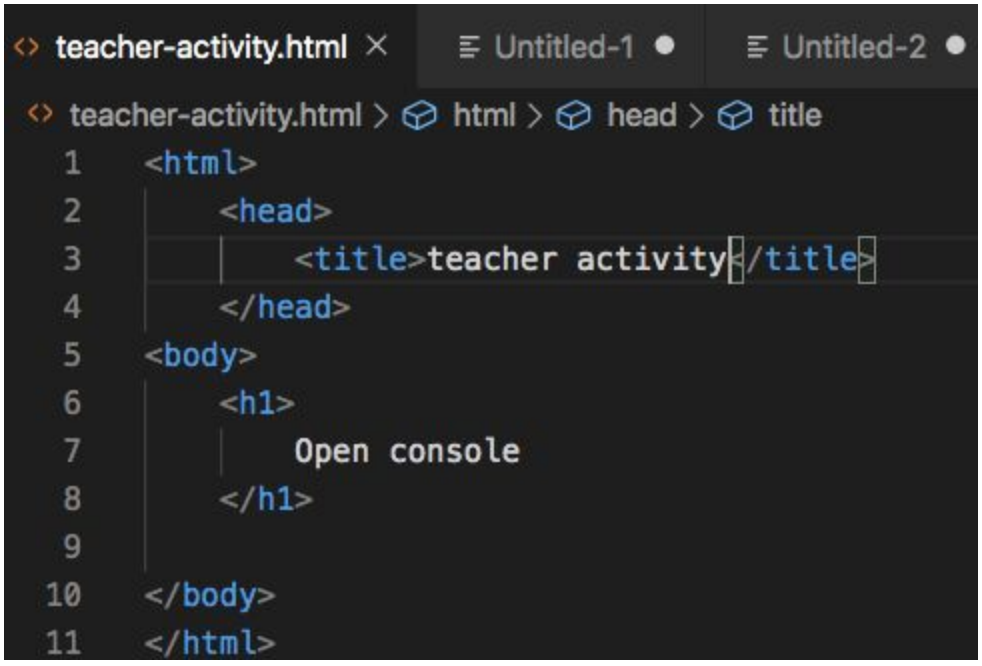


    - Then click on **open folder,** locate and open the folder you just created.
    - Create New File named anything (eg. C77.html) and press Enter.

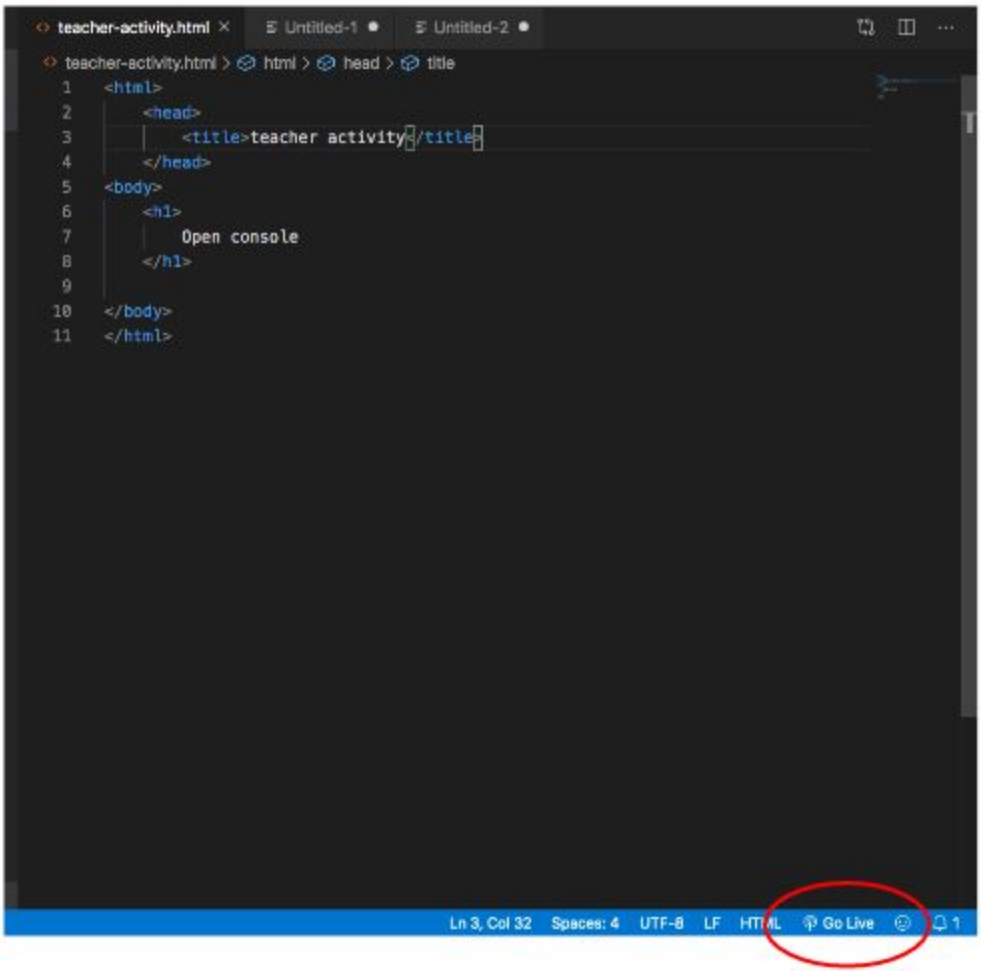




- Now write a basic HTML code in this file like:



- Now click on Go live button on bottom right.



- As you saw it automatically opened the web browser, and displayed the output.

3. Open console on the browser. Steps are there in the CODE DIAGRAM for this class.

4. Printing first name and last name on console:

```
var first_name = "Rocky";
console.log(first_name);

var last_name = "singh";
console.log(last_name);
```

5. Merging first name and last name and consoling it.
    - **Concat** method is used for merging 2 strings.
    - Output will be 'Rocky singh'.

```
var full_name = first_name.concat(last_name);
console.log(full_name);
```

6. Finding the length string.
    - **Length** method is used to find the length of the variable.
    - Output will be 10.

```
var length_of_full_name = full_name.length;
console.log(length_of_full_name);
```

7. Replacing word from the string.
    - Syntax of **replace():** the_variable_the_holds_the_whole_string.**replace**("the_word_needs_to_be_replaced", "the_word_that_will_take_place_of_the_replaced_word")
    - **Replace** method is used for replace a word from the string.
    - Output will be 'I am John Cena'.

```
var name_one = "I am John Rathord";
console.log(name_one);
var replace_name = name_one.replace("Rathord","Cena");
console.log(replace_name);
```

8. Convert string to lowercase.
    - We will see how to make words or sentences in lower case. Javascript has a predefined function for this which is - **toLowerCase()**
    - Syntax of toLowerCase(): **name_of_the_variable_we_want_to_make_small.toLowerCase()**
    - First we will define a variable with string, and this string will be holding a word which is in CAPITAL letters.

```
var capital_name = "ROCKY";
```

- Now we will convert this CAPITAL letter word to a small letter word.

```
var making_lower_case = capital_name.toLowerCase();
```

- We will define a variable and assign the lower case function to it
- Output will be 'rocky'.

9. Convert string to uppercase.
   - We will see how to make words or sentences in Upper case. Javascript has a predefined function for this which is - **toUpperCase()**
   - Syntax of toUpperCase(): **name_of_the_variable_we_want_to_make_small.toUpperCase()**
   - First we will define a variable with string, and this string will be holding a word which is in small letters.

```
var small_name = "john";
```

   - Now we will convert this small letter word to CAPITAL letter word.

```
var making_lower_case = small_name.toUpperCase();
```

   - We will define a variable and assign the upper case function to it.
   - Output will be 'JOHN'.

10. Finding square root of the number
    - A square root of a number is a value that, when multiplied by itself, gives the number.
      For example: 2 × 2 = 4, so a square root of 4 is 2.
    - Javascript has a predefined function for this which is - **Math.sqrt()**
    - Syntax of **Math.sqrt():** Math.sqrt(the_number)
    - We will define a variable and assign the sqrt function to it.
    - Output will be 4.

```
var square_root = Math.sqrt(16);
```

11. Finding maximum the number
    - Javascript have a predefined function for this which is - **Math.max()**
    - Syntax of **Math.max(): Math.max(**number1, number2**)**
    - You can give as many numbers as you want to.
    - We will define a variable and assign the max function to it.
    - Here the output will be 15.

```
var maximum_number = Math.max(15, 10);
```

12. Finding minimum the number
    - Javascript has a predefined function for this which is - **Math.min()**
    - Syntax of **Math.min(): Math.min(**number1, number2**)**
    - You can give as many numbers as you want to.
    - We will define a variable and assign the min function to it.
    - Here the output will be 10.

```
var minimum_number = Math.min(15, 10);
```

13. Explaining pow() function
    - Javascript pow predefined function for this is - **Math.pow()**
    - Syntax of **Math.pow(): Math.pow(**number1, number2**).**
    - **Math.pow()** will give the value of the number number1 to the power of number2 - (number1 * number1 * number1)
      For example: **Math.pow(**2, 3**)** means $\mathbf{2^3}$ which is = 2*2*2
    - We will define a variable and assign the pow function to it.

```
var power_eg_1 = Math.pow(4, 2);
```

    - Here the output will be 16 because 4 * 4 = 16

    - Using **pow** function again for better understanding

```
var power_eg_2 = Math.pow(4, 3);
```

    - We will define a variable and assign the pow function to it
    - Here the output will be 64 because 4 * 4 * 4 = 16

What's NEXT?

Data Structures are one of the most applied concepts of software engineering. We will understand the concept of one of the most common data structures - Arrays and apply associated methods.

EXTEND YOUR KNOWLEDGE

Here are some Best References we've compiled together to enhance your knowledge and understanding of the concepts we learnt today in the class. This will help you become pro at coding and creating industry-grade tech products!

Short Videos: Watch these Short Videos to understand the application of the concepts learned in class in real-world applications.

1. Basic JavaScript - console.log: https://www.youtube.com/watch?v=z5g78hPmQM4
2. Basic JavaScript - Function Parameters: https://www.youtube.com/watch?v=WDkHBBWvabQ
3. JavaScript Snippets - Capitalize First Letter: https://www.youtube.com/watch?v=8IEI-7fj2j4

Coding Playground: Try out these code examples to get more practice making Websites and Playstore ready apps.

1. 

: https://www.w3schools.com/jsref/met_console_log.asp
2. 

: https://www.w3schools.com/js/js_functions.asp
3. 

: https://www.w3schools.com/jsref/jsref_touppercase.asp