JS 1 & 2

A website is great because it allows us to place data and then change data using Javascript. The foundation of web programming is based on storing and then changing data using JS.

Next, we focus on using conditional statement to detect special events and send an alert

1. HTML   2. JS Code 3. special conditions for alerts

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1. What is HTML

HTML stands for Hyper Text Markup Language. The purpose of HTML is to acts as a marker for future substitution of data. HTML is composed of tags and each tag has a different purpose.

1.1. **By default, each HTML tag is also a storage element.**

The most basic is the **paragraph tag**, which is ** .** Notice that we have an open paragraph tag, ** **, and then a closing paragraph tag, ** **. Remember, if we open something, we must always close it. Below, the paragraph tag is a marker for the data "**Hello World**".

```
<p> Hello World </p>
```

Static
A static webpage is a webpage whose content **DOES NOT** change. By default, webpages are static.

Dynamic
A dynamic webpage is a webpage whose content **DOES** change. How can we make a dynamic website? The answer is to use Javascript for event detection and handling.

`.innerHTML`

We can change the content of an HTML element, in this case, the ** ** tag, by using the **`.innerHTML`**. We are basically changing the content of the element by putting in new data and we do so by using **`.innerHTML.`** In the example below, the old data is "**`Hello World`**" and the new data is "**`03/14/20`**".

Where do we put Javascript code?
Javascript code is written in between the open `<script>` and closing `</script>`

2. Write HTML Code in Between <body> </body>

```
<p id = "date" >Hello World </p>
```

Explanation
Remember that the ** is the paragraph tag.**

Notice that the ** ** tag has an id named "**date**". Giving an "id" to an HTML element allows Javascript code to identify it and then modify the content of that HTML element. The id is important because it is the name of the paragraph tag. In the code above, we have **one** paragraph tag whose name is "**date**"

When Javascript code runs, it will look for the id of "**date**". So, an id allows HTML to link up with Javascript code.

If an HTML element **DOES NOT HAVE** an id, then Javascript code **CAN NOT** identify and then modify the content of the HTML element. **So always remember to give your HTML element an id.**

3. Write JS Code in Between <script> </script>

```
function main()
{
	var date = "01/01/20";

	document.getElementById("date").innerHTML = "my first dynamic website";


}
```

Explanation
Notice that the   tag and JS code both have one thing in common and that is the word "**date**". This commonality allows HTML and JS to link up with each other.

In the JS code above, we use **document.getElementById("date")** to search for and link up with the HTML element with id "**date**".

In our case, JS is able to find "**date**" and see that it is ** Hello World .**

Next, we use **.innerHTML** to change the content of the paragraph tag ** **. We change the content from "Hello World" --> "my first dynamic website".

4. Test The Code

1. click on the green "**Run**" button on the top left.
2. go to the right side and click on the button "**Press Me**" and you will see the data change from "**Hello World**" ➔ "**my first dynamic website**".

Challenge - More Mark Up
1. add header 1 tag **<h1>** sample task **</h1>** to the HTML
1.1. the id of the **<h1>** tag is "task"

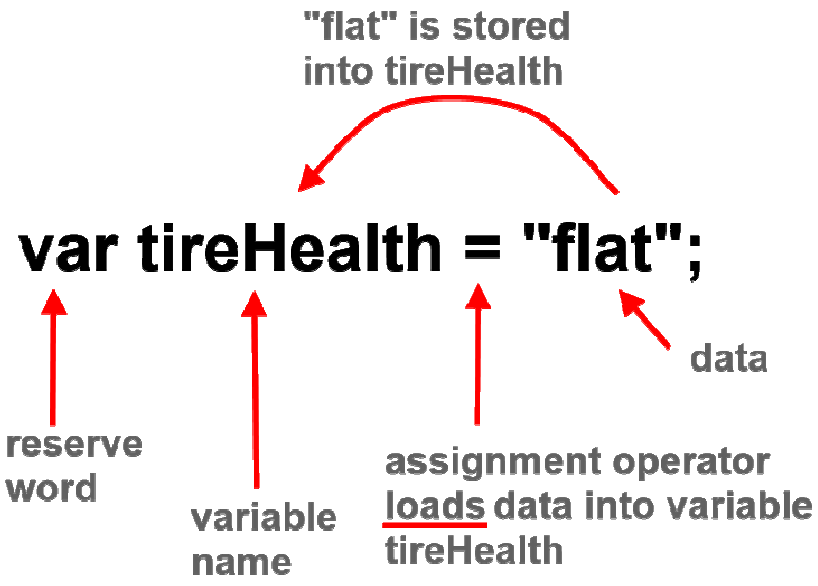
2. in between the **<script> </script>** tags, update the JS code to make the website dynamic
2.1. when the button is clicked, the content of **<h1>** should change from "**sample task**" into "**work on JS project**"
2.2. remember to get the id of the **<h1>**
2.3. next, assign the new data to **.innerHTML**

5. Storing Data Using Variables

A variable is used to store data. In JS, we declare a variable by using the format "var varName". For example,

```
var date = "01/01/20";
```

How do we load new data into a variable? In Javascript and other programming languages, we use the assignment operator, which is the single equal sign (=). The data flows from right to left. The code that was just written loaded the data "**01/01/20**" into the variable named "**date**".



Fix The Code. Does it need a delimiter (semi-colon) at the end? Does it need a variable? Does it need an assignment operator?

1. myName "Vuong";
2. myName var = "Vuong";
3. "Vuong"
4. "Vuong" = var;

Ch. 6 Conditional Statements

How can a calendar alert us of a special event, like a birthday, or a holiday, or that a test is approaching? Special events are special conditions. In computer programming, special conditions can have two values (either TRUE or FALSE).

In computer programming, a TRUE or FALSE result is used to make a decision. We combine decision making AND action together into a conditional statement. In computer programming, the "if" statement is one of the most basic ways to make a decision.

The format of an "**if**" statement is below. The "statement" is usually a question that is either TRUE or FALSE.

```
if( statement )
{
     // -- true statement
}
else
{
     // -- false statement
     }
```

If the statement is **true**, we execute the block of code inside the **FIRST curly braces**. Curly braces are used to group together related lines of code.

However, if the statement is **false**, then we execute the block of code inside the **SECOND curly braces.**

Ch. 7 Write JS Code In Between <script> </script>

```
function main()
{
      var date = "01/01/20";

       document.getElementById("demo").innerHTML = "my first dynamic website";

       if( date == "01/01/20" )
       {
            alert( "It's New Years!!!" );

       }

}
```

Explanation

Notice that we are using a double equal sign (**==**), which is **NOT THE ASSIGNMENT OPERATOR.**

***** **Remember, the assignment operator is a single equal sign (=) and is used to load data into a variable from right to left.**

***** **The double equal sign (==) is called the comparison operator. It compares two things and will return TRUE of they are BOTH HAVE THE SAME VALUE and FALSE if they DO NOT have the same value**

How can a calendar alert us of a special event, like a birthday, or a holiday, or that a test is approaching? We use alerts.

We declared a variable called "**date**" and put the data "**01/01/20**" inside of it. Next, we check if the date is "01/01/20" using the double equal sign. If both have the same value, then the "if" statement is true and we send an alert.

Click on the green "Run" button and click on "Press Me!!!" on the right hand side.

JS Challenge

1. write the code that will set an alert for your birthday, your mother's birthday, and your father's
birthday.

2. since all 3 birthdays are different days, do we need to declare 3 different variable?

3. do we need to use 3 "if" statements?