Advanced DOM Manipulation

DOM Events

- Events are everywhere
    - Clicking on a button
    - Hovering over a link
    - Dragging and Dropping
    - Pressing the Enter Key

The Process

- We select an element and then add an event listener.
  - "Listen for a click on this <button>"
  - "Listen for a hover event on the <h1>"
  - "Listen for a keypress event on text input"

The Syntax

- To add a listener, we use a method called *addEventListener*

```
element.addEventListener(type, functionToCall);
```

```
var button = document.querySelector('button');

button.addEventListener('click', function () {
    console.log('SOMEONE CLICKED THE BUTTON!');
});
```

An Example

- Let's display a message when a button is clicked.

```html
<button>Click Me</button>
<p>No One Has Clicked Me Yet</p>
```

```javascript
var button = document.querySelector('button');
var paragraph = document.querySelector('p');

button.addEventListener('click', function () {
    paragraph.textContent = 'Someone Clicked the Button!';
});
```

Another Example

- We could also rewrite it using a named function.

```
var button = document.querySelector('button');
var paragraph = document.querySelector('p');

button.addEventListener('click', changeText);

function changeText() {
    paragraph.textContent = 'Someone Clicked the Button!';
}
```

Assignment 12.1: Color Changer Exercise

- Toggle the body's background color between purple and white, when a button is clicked.

Starter Code:

```
<button>Click Me</button>
```

Click here for example.

Assignment 12.2: Score Keeper part 1

- Create a document that that keeps track of a score between 2 players.
- The document needs 2 buttons: Player One & Player Two.
- When a button is clicked, that players score is incremented by 1.
- First player to 5 wins the game.

Click here for example.

Assignment 12.2: Score Keeper part 2

- Add a reset button. When the button is pressed, both players scores are reset back to zero.

Click here for example.

Other types of Events

- Click [here](#) to view the many events that you can use.

Assignment 12.3: Counting Events Exercise.

- Write a script that counts the number of events listed on [this](#) page. It does not have to be exact but you should be able to get a rough estimate.
- You will have to complete this assignment inside of your JS console.
- Once you have the answer, upload the code you used in your console to GitHub.
- Hint: All you need is one line of code.