Chapter 23

The DOM and Events

Chapter Breakdown

23.1 Javascript and the Browser

NOT BOWSER

Javascript and the Browser

Taking Javascript on the Web
The ‹script› tag
Javascript Console
Inline Javascript
External Javascript

- Websites that can change after loading are called Dynamic.

- <script> tag can either have Javascript inside it or a reference to an external style sheet.

- Utilize your developer tools to access the Javascript Console! Have some fun with it.

- Inline Javascript - Javascript code that is directly inside the <script>

- External Javascript - <script src = 'myjs.js'></script>

23.2 The DOM

The DOM

The DOM
Global DOM Variables
Dynamic Web Page Using the DOM
Where to Put the ‹script›

- DOM - Document Object Model

- Global DOM Variables

  - window

  - document

- In order to add or edit an HTML element we need to access it.

  - document.getElementById will search for a matching element and return a reference to it

  - Element.append will add whatever you want to append to the element

- The <script> tag must come after any other elements that will be affected by the code inside the script. We will talk about another way to handle this later.

23.3 More DOM Methods and Properties

More DOM Methods and Properties

Window
Document
Element

- Window
  - alert
  - confirm
  - location
  - console
- Document
  - getElementById
  - querySelector
  - querySelectorAll
- Element
  - getAttribute
  - setAttribute
  - style
  - innerHTML

23.4 Events

EVENTS

Javascript and Events
DOM Events
Handling Events

- Javascript is event driven language

  - Event-Driven is a programming pattern where the flow of the program is determined by a series of events

- Javascript in the browser requires a specific set of events that relate to loading, styling, and displaying HTML Elements

  - Objects in the DOM have event handling built into them.

- First way to handle events is an inline event handler.
- <button onclick='console.log('you rang...')>Ring Bell</button>
- Any Javascript function can be used as the event handler
- When defining handlers via HTML be careful with function names. The event will not be handled and no warning will be given.

23.5 Event Listeners

Event Listeners

Add Event Handlers in Javascript
Event Details
Event Bubbling

- A listener is another name for an event handler
  - addEventListener is used add an event handler- aka listener
  - Its a method available on all instances of Window, Document, and Element classes
  - Be sure to use the correct event name
    - No error will be thrown if an invalid name was given
- You can pass an event parameter to the event handler function.
  - This allows to see methods and events that are related to that event.
- Bubbling refers to an event being propagated to ancestor elements.
- Handlers for parent elements will not be triggered if a child element calls .stopPropagation()

https://www.w3schools.com/JSREF/tryit.asp?filename=tryjsref_event_stoppropagation

23.6 Event Types

EVENT TYPES

Load Event
Mouseover Event

- A load event is triggered when the window/elements/resources have been loaded into the browser
- Using a load event on window is an alternative to <script> placement
  - This waits for the window to load so all the elements will be ready to use
- Another mouse event is the mouseover event.
  - This will trigger when your cursor enters the element.
  - Has similarities with the CSS property Hover