1. Note: put <script src=" "></script> at end of HTML document (or at end of a single form/button) to link it
2. Then one javascript file for all JavaScript.
3. Use different form access to access HTML code. I suggest ID one as you can do ID.

https://www.youtube.com/watch?v=mbkKbhSbWKA ← Watch for how to put JavaScript inside HTML

https://www.youtube.com/watch?v=whS3lulNwqU

Window object: (global object for html)

- Represents the windows in which the browser displays the document that contains/references that the javascript code
- Contains properties and methods in javascript core
    - ParseInt, Object, Array, String and method
- Contains properties and methods for the browser environment
    - Document, navigator, and location etc
- Properties and methods defined in the window object are available everywhere in script with or without object reference

Properties of Window Object (browser):

- Closed: Boolean value that is set to true if window is closed and false it is not
- Window: references itself
- Navigator: browser
- Screen: the computer screen
- Location: url of current page displayed
- History: browsing history
- Alert, confirm and prompt method
- Set Timeout and set interval method
- Document:
    - Most important object in window object
    - Represents html document displayed on current window. Consist of a tree of object, each representing on element of HTML page
    - Tree of object is known as the DOM tree for the html page. It is created by parsing html page.
    - Manipulating the DOM tree using DOM interface, we can dynamically change the look and behaviour of web page (think HTML structure CSS colour and JavaScript dynamic
        - Methods of document:
            - Write: is the generate output. But interpret as html so need html tags

Methods (functions) of Window Objects:

# Some Window Methods

| Method | Description |
|---|---|
| `open(`*`url, name, options`*`)` | Creates a new window with the URL of the window set to *url*, the name set to *name*, and the features set by the string *options*. |
| `close()` | Closes this window. |
| `focus()` | Gives the focus to this window. |
| `blur()` | Takes the focus away from this window |
| `print()` | Print the contents of this window. |

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# Window Methods (Dialog Boxes)

| Method | Description |
|---|---|
| `alert(string)` | Display a dialog box with the given *string* and an *OK* button. The method returns when the user clicks the *OK* button. |
| `confirm(string)` | Display a dialog box with the given *string* and an *OK* and a *Cancel* button. The method returns true if the user clicks *OK*, or false if the user clicks *Cancel*. |
| `prompt(prompt, default)` | Display a dialog box with the given string *prompt*, a textbox containing string *default* and an *OK* and *Cancel* button. Return the string the user entered if the user clicks the OK button, or null if the user clicks Cancel button. |

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Navigator Object:

- Holds information about the browser being used. The name navigator arose because the first browser from Netscape was named navigator. Mainly we use properties (Methods isn't used much)

# Some Navigator Properties

| Property | Description |
|---|---|
| appCodeName | The code name of the browser, eg Mozilla. |
| appName | The name of the browser, eg, Netscape |
| userAgent | The value of the user-agent header sent by the client to the server |
| appVersion | The version of the browser. |
| product | The browser engine, eg Gecko |
| platform | The platform on which the browser is running, eg, MacIntel. |
| onLine | Is the browser online? |
| cookieEnabled | is the cookie enabled in the browser? |

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Method to use Javascript in HTML

- <script> javascript code </script> (inside html document)
    - Javascript usually in <head> </head>
- JavaScript is in own file and referenced in html document (preferred way like external css)
- Javascript can be linked to html document if its not on same server/on url
- Event handler inside a html tag

HTML Forms:

<form> </form>

- Way of getting input from the user, which can be processed by the back-end program. There are three parts that are coded with forms:
    - Input screen:
        - This is the part that the users see like buttons, textbox, promps
    - Form validation:
        - This checks that the values the user has entered is valid and complete, before sending the user-input to back-end program. Usually written by javascript as event handler
    - Form processing:
        - this is the back end-program that accepts the user input and does something with it. Server side has program to process input
- There are many elements associated with form element (these are own tags inside form element (think inside head element)
    - <input>
        - type = "" attribute
            - Text = Textbox
            - Password
            - Radio : radio buttons
            - Checkbox
            - reset : reset button
            - submit: submit button
            - button: creates a button plain that can be linked for javascript
    - <select>: drop down list
    - <textarea>
    - <label>

Access HTML element in javascript:

- Each HTML element document has a → object in DOM tree
- Using form array
- Use the name attribute for form and form elements
- Use getElementByID ← we use this

Event-driven programming:

- Style of programming in which the piece of code, called event handler are to be activated when certain events occur
- So if user clicks element then piece of code is executed
- Event is a notification that something has occurred, either with the browser or due to an action of the browser user
- Event handler: a script that is executed in response to an occurrence of an event

- Registration: link of connecting an event handler to event (our job)

# Events and Event Attributes

More information are available from Table 5.1 and Table 5.2 of the textbook (pages 203 to 205)

| Event name (event attribute) | What triggers It |
|---|---|
| click (`onclick`) | The user clicks the mouse button on the object. |
| dbclick (`ondblclick`) | The user double clicks the mouse button on the object. |
| focus (`onfocus`) | The user moves to the object by clicking the object or tabbing into it. |
| blur (`onblur`) | The user moves off the object by clicking a different place, or tabbing away from it. |
| mouseover (`onmouseover`) | The user moves the mouse cursor onto the object. |
| load (`onload`) | The browser finishes loading a window. |
| unload (`onunload`) | The user exits the document. |
| change (`onchange`) | The user alters the content of an object. |
| submit (`onsubmit`) | The submit button in the form is pressed. |

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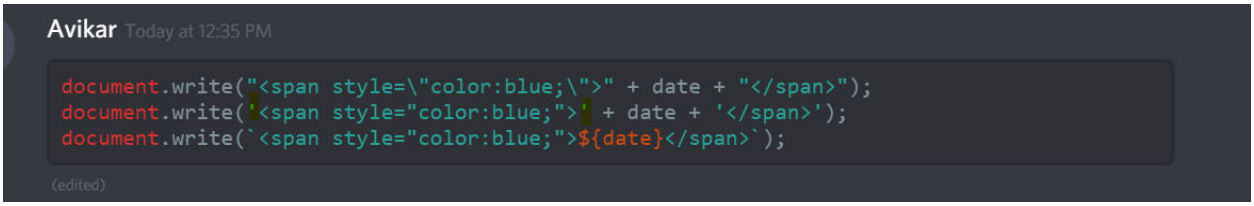
Registration of event handler:

Form validation:

- Putting together everything we have learnt about javascript to validate
- Each of the forms in HTML can be validated using javascript




How to individually colour. I used the second one with “ “ for attributes while the rest using ‘ ‘ (Notice how we need to separate them)

- Assuming the following element:

```
<input type="text"  id="Greeting">
```

- In JavaScript, you can access the DOM object using ID Greeting directly:

```
Greeting.value = "Type a message here";
```