ANNOUNCEMENTS

- No posting of code in the forum
- Check class announcements daily
EVENTS

- **Event** → Notification that something has occurred

- Example of situations that make the web browser generate an event
  - Browser finishes loading a document
  - When the user clicks on a button
  - When the user moves the mouse
  - Others

- **Event handler** (also known as event listener)
  - JavaScript function or code fragment that is executed when a particular event occurs

- **Event handler registration**
  - Associating an event handler with a particular event
EVENT-DRIVEN PROGRAMMING

- Normal (control flow-based) programming
  - Approach
    - Start at main()
    - Continue until end of program or exit()

- Event-driven programming
  - Start at main()
  - Register event handlers
  - Await events & perform associated computation

- GUIs (Graphical User Interfaces)
  - Example of event-driven software
EVENT HANDLER ATTRIBUTES FOR MOST HTML

- **Mouse Related**
  - `onclick` → mouse button is pressed and released
  - `ondblclick` → mouse button is double-click over element
  - `mouseover` → mouse moves over element
  - `mouseout` → mouse moves off element
  - `mousemove` → mouse pointer is moved
  - `mousedown` → mouse is pressed down while cursor is over the element
  - `mouseup` → mouse is released while the cursor is over the element

- **Keyboard Related**
  - `keypress` → key pressed and released
  - `keydown` → key is pressed
  - `keyup` → key is released

- **Other**
  - Keep in mind that there additional handlers that are specific to certain tags. We will address those later on
DOM (DOCUMENT OBJECT MODEL)

- DOM → representation of the elements of a web page (e.g., headings, lists, paragraphs, styles, etc.) used by a JavaScript program to manipulate web page elements.
- DOM represents elements of a web page as a tree structure consisting of nodes (next slide).
**EXAMPLE DOM FOR HTML FILE**

```html
<html>
  <head>
    <title>DOM Example</title>
  </head>
  <body>
    <p id="message">Traveling the road less traveled. </p>
  </body>
</html>
```
DOM (DOCUMENT OBJECT MODEL)

- To access any element of your web page you could traverse the tree

- Easier approach:
  - `document.getElementById` function
  - `getElementsByTagName` function
PROJECT #3

- Let’s talk about the project
  - Overview of what you need to do
  - How to test each function (using separate main function)
IN-CLASS LAB (20 MINUTES)