Lab 05: DOM and JQuery

NOTE: Include jQuery to select the element(s) and manipulate the styles/events.

Option 1: Download a jQuery file and link to it locally:

Download link: https://jquery.com/download/

```
<script type="text/javascript" src="jquery-3.3.1.min.js"></script>
```

OR

Option 2: Link to a CDN file (a hosted copy)

```
<script src="http://code.jquery.com/jquery-3.2.1.min.js" ></script>
```

Task 1: Given the following HTML code:

```
<!DOCTYPE html>
<!DOCTYPE html>
<html>
<head>
<title>Apple Tours</title>
</head>
<body>
    <div id="main">
        <h1>Hello <span id="there">there</span></h1>
        <p>We provide the tours to these countries:</p>
        <ul>
            <li>France</li>
            <li>Spain</li>
            <li>Thailand</li>
        </ul>
        <a href="book.html" class="special">
            <button type="button">Book Tour</button>
        </a>
    </div>
</body>
</html>
```

(a) **Write JavaScript codes using DOM querySelector() and querySelectorAll() methods to:**

   i.   *Select* all **<li>** and print out the list items in the browser's JavaScript console

   ii.   *Select* the <a> with **class** "**specia**l" and print a pop-up message "Book a tour" when it is moused over

   iii. Define a new CSS class with the styles (i.e. blue font color and a dashed blue border). *Select* the <span> element with **id "there"** and toggle the new CSS class to manipulate the styles of the element.

(b) **Modify the statements written for part (a) using jQuery to select the element(s) and manipulate the elements.**

NOTE: Refer to lecture notes for the sample codes to SELECT an element and save it to a variable, then MANIPULATE the style

References:

DOM: https://www.w3schools.com/jsref/dom_obj_document.asp

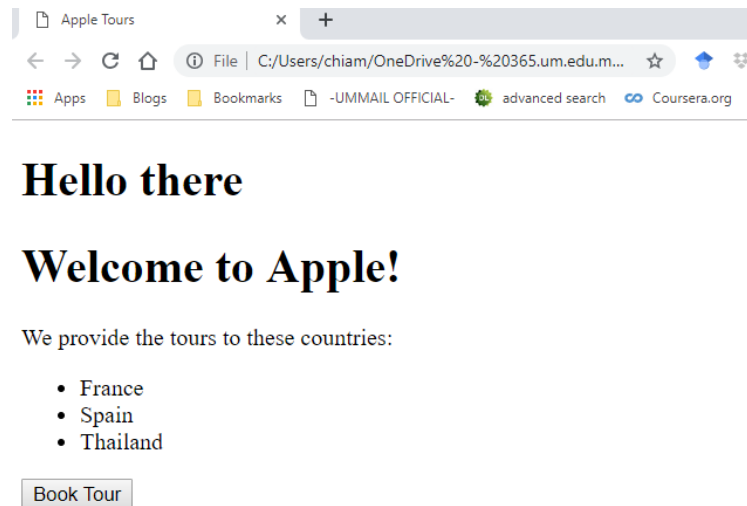**jQuery: https://www.w3schools.com/jquery/jquery_selectors.asp**
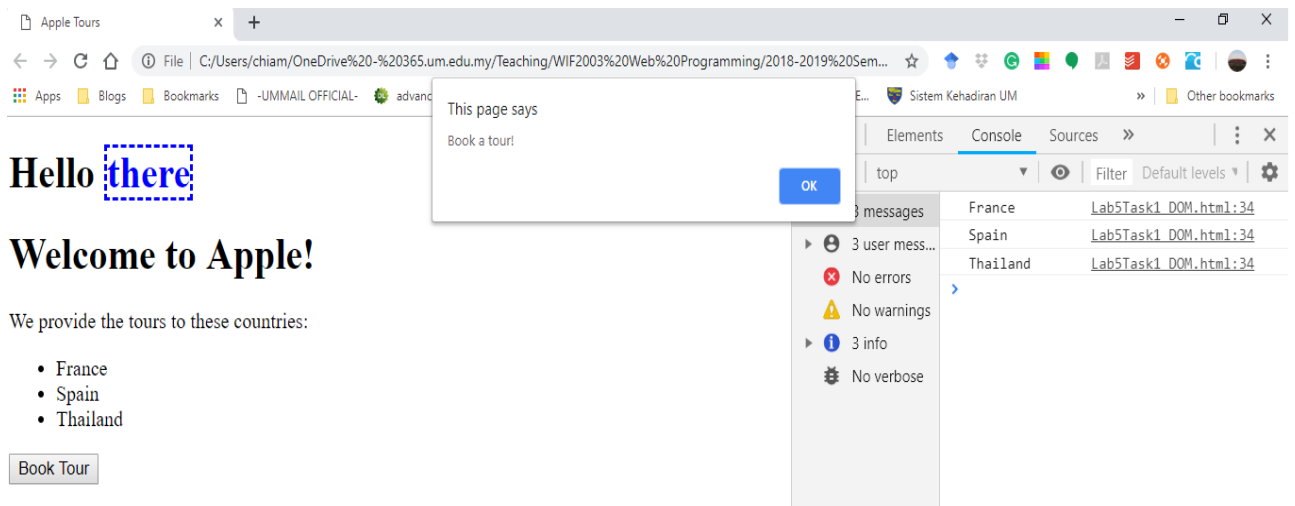

Figure 1: Screenshot before using DOM and jQuery

Figure 2: Screenshot after using DOM or jQuery

Task 2: Using DOM and jQuery in SE Club website:

NOTE: Create a folder

Create two folders on your hard drive or portable storage device (USB or SD card) called "**seclub5-dom**" and "**seclub5-jquery**" to contain your SE Club website files. Copy **all** the files from your Lab 2's folder (seclub3) or Lab 4's folder (seclub4) into the "**seclub5-dom" and "seclub5-jquery"** folder.

a) **Write JavaScript codes using DOM to select an element and manipulate it for the following web pages. Save all the files in the "seclub5-dom" folder.**

   i. **Home Page:** Define a new id named "item1" for the first event in the list "Talks by industry professionals and SE experts". *Select* the **id**, and then *manipulate* the element using the **dblclick event handler** to *change the text* of the first event (e.g. "Next talk is related to Software Testing") when the user double clicks the list item. The sample browser screenshot should look like Figure 3.
Use your creativity to come up with another way to select and manipulate another element on Home Page.

   ii. **About Page:** *Select* the **"SE Club Committee Organisation Chart" image**, and then *manipulate* the image element. **Firstly,** using the **mouseenter event handler** to *change the image* from ochart.jpg to selogo.jpg when the user moves the mouse pointer onto the image**. Next,** using the **mouseleave event handler** to *change the image back to the original* one when the mouse pointer is moved out of the image. The sample browser screenshot should look like Figure 4.
Use your creativity to come up with another way to select and manipulate another element on About page.

   iii. **Event Page:** *Select* the **<body> tag**, and then *manipulate* the web page using **keypress event** handler to *display an alert box with the text: "Come and join our events!"* immediately when the user is pressing a key. The sample browser screenshot should look like Figure 5.
Use your creativity to come up with another way to select and manipulate another element on Event page.

b) **Modify the statements written for part (a) using jQuery to select the element(s) and manipulate the elements. Save all the files in the "seclub5-jquery" folder.**

References:

HTML DOM Events: https://www.w3schools.com/jsref/dom_obj_event.asp

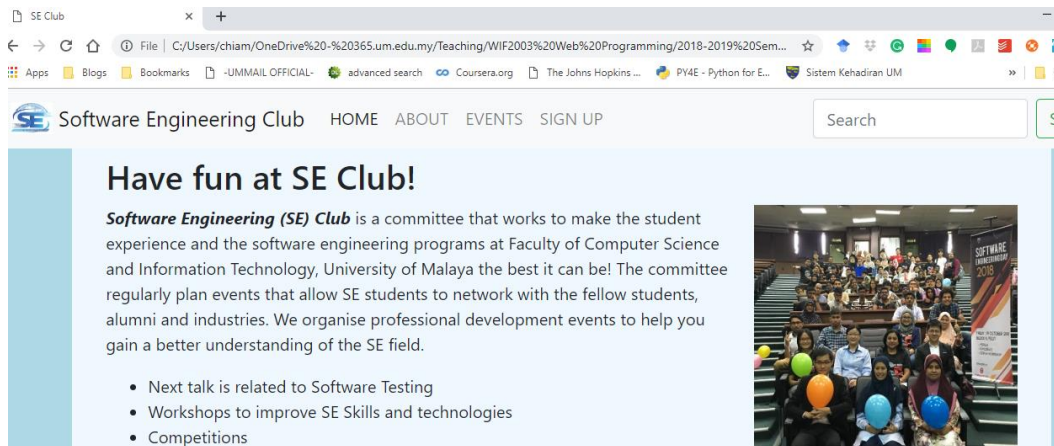**jQuery Event: https://www.w3schools.com/jquery/jquery_events.asp**

Figure 3: Screenshot of Home Page after changing the text of the first event (e.g. "Next talk is related to Software Testing") when the user double clicks the list item.
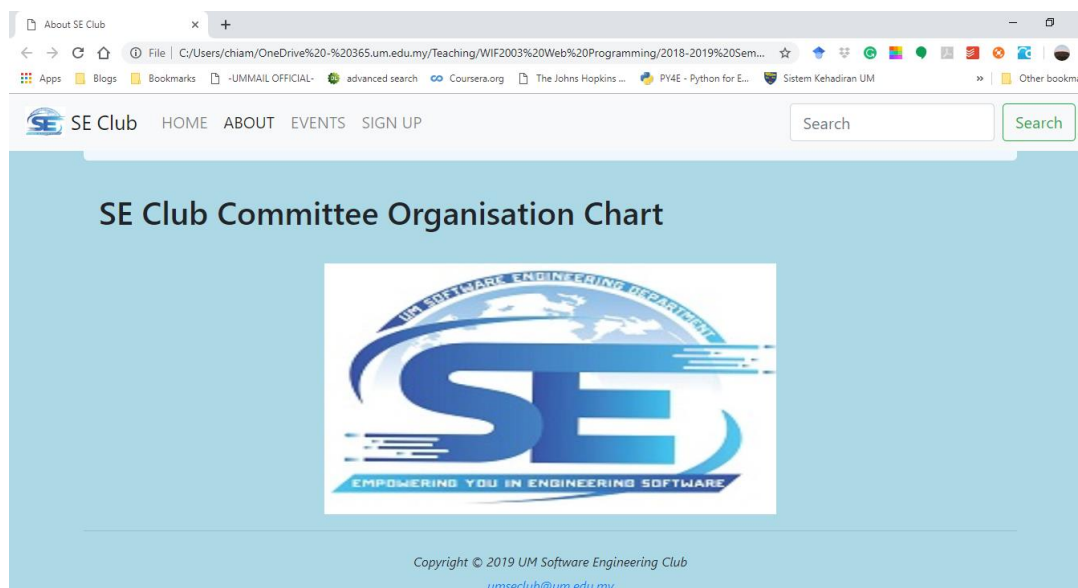

Figure 4: Screenshot of About page after changing the image from ochart.jpg to selogo.jpg when the user moves the mouse pointer onto the image.
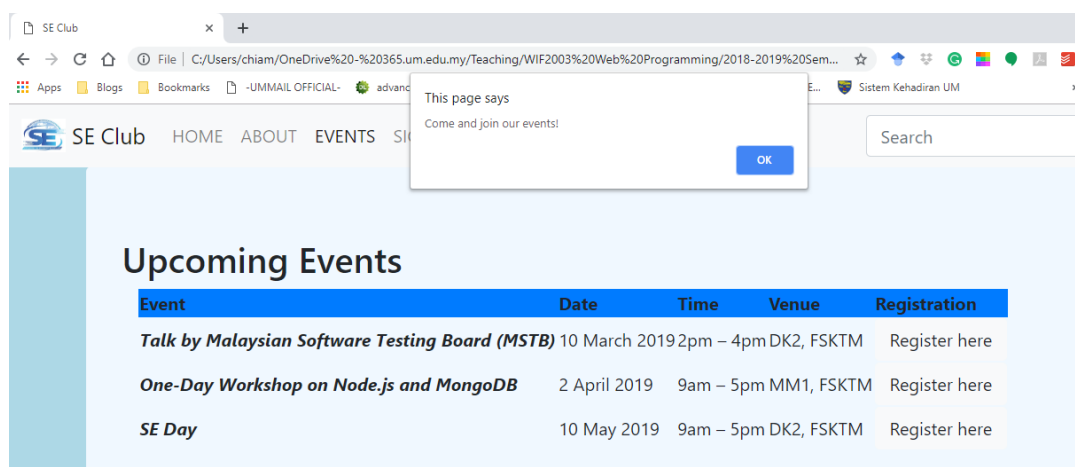

Figure 5: Screenshot of Events page that display an alert box with the text: "Come and join our events!" immediately when the user is pressing a key

Task 3: Using DOM or jQuery in SE Club website's Sign Up page

Open the signup.html file to modify the dropdown list codes *("Select your most favourite event")*.

Write JavaScript codes to do the following tasks:

a) Define an array of five `event` objects (see Table 1). Each `event` object should have `code`, `name`, and `venue` properties.

Table 1: Five `event` objects with `code`, `name` and `venue` properties

code	name	venue
WS	*Workshop*	*MM1*
TA	*Talk*	*DK2*
SE	*SE Day*	*The Cubes*
CO	*Competition*	*MM3*
GA	*Gathering with alumni*	*Student Centre, Block B*

b) Given the provided array of countries, using a loop to generate a drop-down list that display the **event** `name`. The `value` attribute for each item in the list should be the **event** `code`. The sample browser screenshot should look like **Figure 6**.
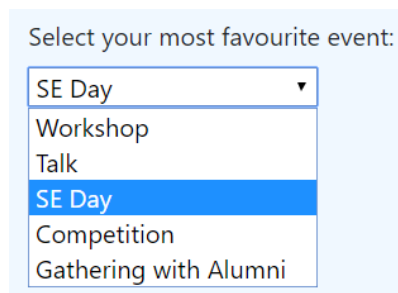

Figure 6: Screenshot for the drop-down list that display the favourite events

c) Add an **event listener** to handle the **change event** of the drop-down list. This event handler should **display the venue** of the currently **selected event** within the `<p id="eventvenue"></p>` element that is after the `<script>` element. The sample browser screenshot should look like Figure 7.

Hint: Your event handler will need to use the `value` property of the drop-down list, the `textContent` or `innerText` property of the `<p id="eventvenue">`.
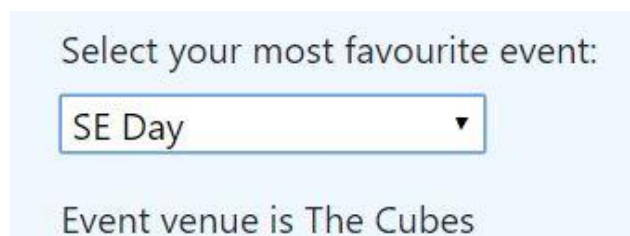

Figure 7: Screenshot when "SE Day" is selected, the browser should display the "Event venue is The Cubes".