

## Questions 6 - DOM

1. **Make examples of how HTML elements can be accessed and their properties changed using methods `getElementsByClassName`, `getElementsByTagName` and `getElementById`?**

Examples in the file DOM-task1.html

2. **What is the navigator object and how it can be utilized? Write the user agent recognition code on your web page.**

Navigator object is a JavaScript object contains information about the browser. No public standard exists for it, but all major browsers support it.

Navigator object can be used to obtain information about the browser such as the name and the version of the browser, language of the browser and the location of the user. This information is of course useful for customizing the user's experience on a webpage. Knowing the browser and the browser version allows addressing possible compatibility issues while information and location can be used for displaying the page in appropriate language (on pages that have been written in multiple languages) and so on. In short, knowing more about the user and the browser they are using, allows the developers to better customize the website to meet the user's needs.

*User recognition code can be found in the file **DOM-task2.html**.*

3. **What does event handling mean? Give an example.**

JavaScript can "react" to different events on an HTML page. This so called event handling means that a piece of JavaScript code is executed when either browser or user does something, aka an event happens. Examples of such events are user clicking or hovering over an element, web page finishing loading or user changing the contents of an input field.

*A piece of example code which can also be found in the file DOM-task3.html*

```
<button onclick="showAlert()">Show Alert</button>

<script>
  function showAlert(){
    window.alert("This is a meaningless alert.");
  }

  function init(){
    console.log("Document has finished loading.");
  }

  // DOMContentLoaded is an event that fires when the document has finished loading
  document.addEventListener("DOMContentLoaded", init);
```

4. You have previously written a web page containing a form. Add now JavaScript code which will validate user input on that form. Validation should be event triggered.

Added validation & filling aids

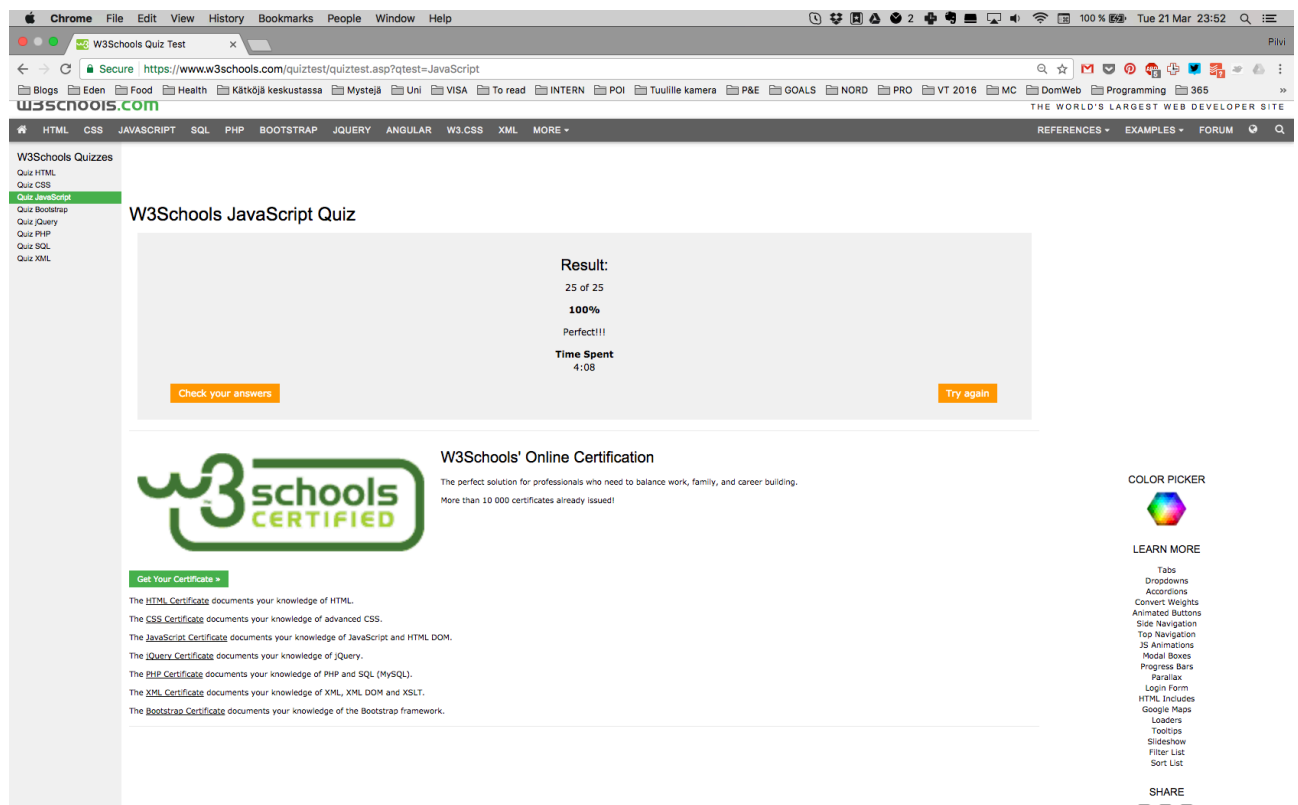
### Departure and return date validation

1. When one way is selected as the trip type, the return date field will be hidden and hence not required.
2. The user can't select a departure or return date that is in the past
3. If user selects a departure date that is after the selected return date, the return date will be changed to the same date as the departure.
4. The user can only select dates one year from the current date

### Departure and destination city validation

1. Only cities that the airline operates in are accepted as departure and destination cities
2. After the user types 2 or more characters, the form will offer possible cities (if either matching cities or countries can be found)
3. Departure and destination city can't be the same

5. Run JavaScript quiz. Show your result.



W3Schools JavaScript Quiz

Result:  
25 of 25  
**100%**  
Perfect!!!  
Time Spent  
4:08

Check your answers Try again

W3Schools' Online Certification

The perfect solution for professionals who need to balance work, family, and career building.  
More than 10 000 certificates already issued!

Get Your Certificate >

The [HTML Certificate](#) documents your knowledge of HTML.  
The [CSS Certificate](#) documents your knowledge of advanced CSS.  
The [JavaScript Certificate](#) documents your knowledge of JavaScript and HTML DOM.  
The [jQuery Certificate](#) documents your knowledge of jQuery.  
The [PHP Certificate](#) documents your knowledge of PHP and SQL (MySQL).  
The [XML Certificate](#) documents your knowledge of XML, XML DOM and XSLT.  
The [Bootstrap Certificate](#) documents your knowledge of the Bootstrap framework.

COLOR PICKER

LEARN MORE

Tags  
Dropdowns  
Accordions  
Convert Weights  
Animated Buttons  
Side Navigation  
Top Navigation  
3D Animations  
Modal Boxes  
Progress Bars  
Parallax  
Login Form  
HTML Includes  
Google Maps  
Loaders  
Tooltips  
Slideshow  
Filter List  
Sort List

SHARE

## Sources

- W3School. The Navigator Object [online tutorial]. Retrieved 2.4.2017 from [https://www.w3schools.com/jsref/obj\\_navigator.asp](https://www.w3schools.com/jsref/obj_navigator.asp)
- JavaTPoint. JavaScript Navigator Object [article]. Retrieved 2.4.2017 from <http://www.javatpoint.com/javascript-navigator-object>
- Using the navigator object to detect client's browser. JavaScript Kit [article]. Retrieved 17.4.2017 from <http://www.javascriptkit.com/javatutors/navigator.shtml>
- JavaScript Browser Detection – Navigator User Agent. Surfing Success [article]. Retrieved 17.4.2017 from <http://www.surfingsuccess.com/javascript/javascript-browser-detection.html#.WPUIV1N9527>
- HTML DOM Events. W3School [online reference]. Retrieved 17.4.2017 from [https://www.w3schools.com/jsref/dom\\_obj\\_event.asp](https://www.w3schools.com/jsref/dom_obj_event.asp)
- JavaScript Date Reference. W3School [online reference]. Retrieved 17.4.2017 from [https://www.w3schools.com/jsref/jsref\\_obj\\_date.asp](https://www.w3schools.com/jsref/jsref_obj_date.asp)
- Awesomeplete. Leaverou Github [online code documentation]. Retrieved 17.4.2017 from <http://leaverou.github.io/awesomeplete/#events>