

Announcements

- ❖ Check class announcements daily
- ❖ You must implement programming projects by yourself

RESET

- ❖ The functionality of the Reset button is already provided by HTML. You don't need to add any JavaScript or define a button
- ❖ You can change the text associated with the Reset button by using the value attribute
- ❖ **Example:** Reset.html

Accessing Data ASSOCIATED WITH HTML

- ❖ As we saw we can access data in forms by using
document.getElementById("elementId") ;
- ❖ getElementById returns a reference to an element that we can use to:
 - ❖ Retrieve the value of the element (e.g., text field in a form)
var login = document.getElementById("loginId").value;
 - ❖ Set the function to call when an element is clicked on (e.g., button)
**document.getElementById("processButton").onclick =
functionDoesProcessing;**
 - ❖ Get/Set Attributes
**var imageElement = document.getElementById("myImage");
var imageName = imageElement.getAttribute("src");
imageElement.setAttribute("src", "imageFile.jpg");**
- ❖ **Example:** AssociateButtonWithFunction.html
- ❖ **Example:** GetValueInTextField.html
- ❖ **Example:** UpdateValueInTextField.html
- ❖ **Example:** GetSetAttribute.html

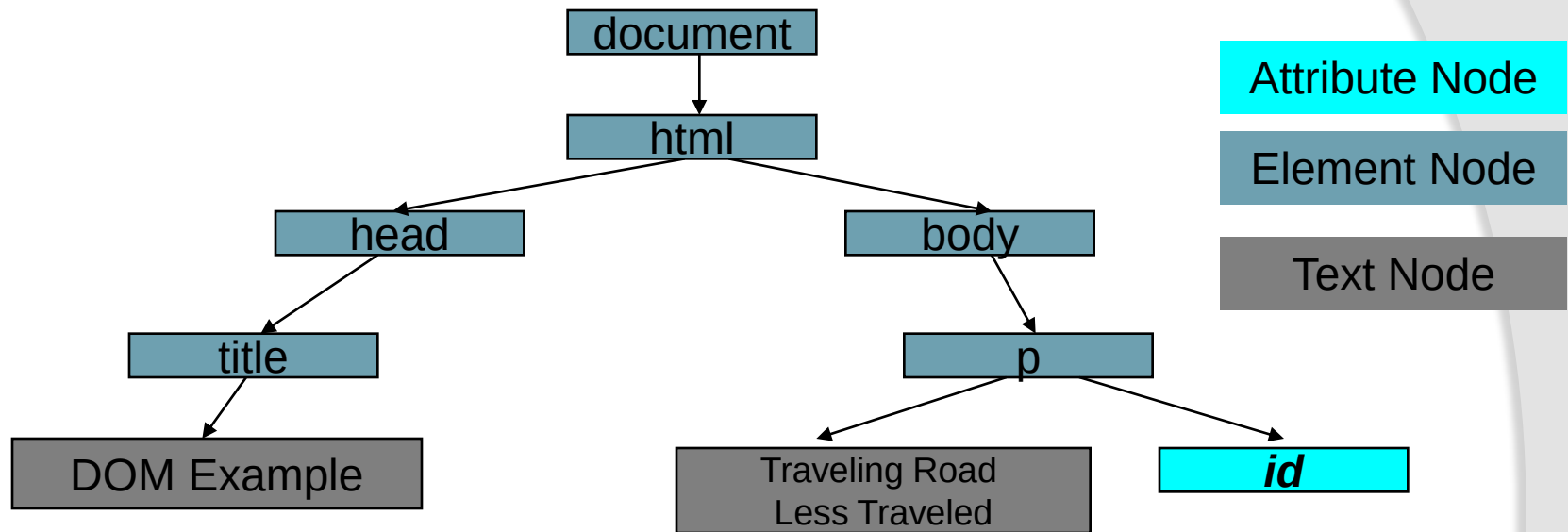
DOM (Document Object Model)

- ❖ **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** → Allows JavaScript programs to **dynamically** access and update the content, structure, and style of documents
 - ❖ From a JavaScript program you can control the image displayed in your page every hour
 - ❖ From a JavaScript program you can let users decide what background color to use
 - ❖ You could add/remove new items from a list
 - ❖ Others

DOM (Document Object Model)

- ❖ DOM represents elements of a web page as a tree structure consisting of nodes
 - ❖ Each pair of tags (.e.g, <p>,</p>) is represented by a node
 - ❖ Three types of nodes
 - ❖ text nodes
 - ❖ element nodes
 - ❖ attribute nodes
- ❖ Manipulation of these nodes allows a JavaScript program to access any information present in a web page

Example DOM for HTML File



```
<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 method
 - ❖ Returns element with specified id
 - ❖ getElementsByTagName method
 - ❖ Can be used with document and every single element node
 - ❖ Returns a list of nodes

DHTML

- ❖ **DHTML (Dynamic HTML)** – It is a combination of HTML, CSS, and JavaScript where scripts dynamically alter the style of a document.

Project #3

- ❖ Any questions?
- ❖ Remember to test your functions individually

One-Dimensional Arrays

- ❖ **Problem** → You need to keep track of the scores of students in a class
 - ❖ Declaring and handling 50 variables is not an easy task
 - ❖ Arrays come to the rescue
- ❖ **Array** → Collection of values that can be treated as a unit or individually

```
var a = new Array(4)
```
- ❖ You can visualize an array as a set of variables one after another
- ❖ **Indexing** → We access an element using []
 - ❖ First element associated with index 0 (e.g., a[0])
- ❖ An element of an array can be of any type and an array can hold different types of elements
- ❖ The length property represents the length of the array (e.g., a.length)
- ❖ We can print the contents of an array by using alert
- ❖ **Example:** ArrayEx.html
- ❖ **Example:** FriendsArray.html