'Javascript and the DOM'

Your First Homework Assignment for COIN 71

Due: **5:00 pm,** Monday, 16 April

Objectives: Install your development environment
             Follow Program Guidelines for this course
             Review JavaScript and how to access the DOM

Material from handouts:
             Development Environment
             template_Transitional
             Program Guidelines
             Crane and Pascarello: chapters 1 & 2 to page 53

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Create a web page that allows the user to convert from kilometers to miles. In order to become accustomed to accessing the DOM elements of your web page from JavaScript, your page will be created entirely using JavaScript. In order to receive full credit for this assignment, your html <body> tag will contain just <p> or <div> tags, and nothing else. All other html tags will be created by your external JavaScript file.

This assignment may also be different from other web page design projects you have worked on, because you must follow all of the guidelines in the handout "Program Guidelines." For example, all JavaScript code will be in file(s) separate from your html document. Also, any styles will also be in a separate file. Your JavaScript must be well organized into logical functions that may be reused.

Every student's html document will look like this, except with the boldface parts personalized:

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

<html xmlns="http://www.w3.org/1999/xhtml">

<!--
Author: Put your name here
Class: COIN 71
Assignment: #1
Date Created: date goes here
type comment here telling WHAT this web page does
-->

<head>
   <title> Your title goes here </title>
   <meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1" />
   <script language = "JavaScript" type = "text/javascript" src="yoursource.js" >
   </script>
   <link rel="stylesheet" href="yourstyles.css" type="text/css" />
</head>

<body>
   <!-- You can decide how many p or div tags to have,
        and give them appropriate names and id's -->
   <p id = "p1" name = "p1"> </p>
   <p id = "p2" name = "p2"> </p>
   <p id = "p3" name = "p3"> </p>
   <p id = "p4" name = "p4"> </p>
</body>
</html>
```

Steps:

1. Install your development environment, as listed in handout.

2. Sketch out the user interface on a piece of paper. Make sure that the information on the screen always makes sense.

3. Write the JavaScript that builds the web page by creating DOM elements.

4. Thoroughly test your page, and review it to make sure that it follows the Program Guidelines for this course, and that it meets the requirements for this assignment.

5. Upload all of your code files to the CTIS webserver called losaltos.fhda.edu. Then submit a link to your html file through the assignment submission in our Etudes ng website.

Hint:
You may find the following JavaScript function useful in your solution

```
// Creates a new node of type "element", appends it to "parent".
// Sets the name and id attributes of the new node to "nameId".
// If "text" is present, this also creates a text node with
// "text" in it and appends it to the new node.
// Returns the new node.
// Adapted From page 48 of Crane and Pascarello.

function addNode(parent, element, nameId, text)
{    var newNode = document.createElement(element);
     parent.appendChild(newNode);
     newNode.setAttribute("id", nameId);
     newNode.setAttribute("name", nameId);
     if (text != "")
     {    var textNode = document.createTextNode(text);
          newNode.appendChild(textNode);
     }
     return newNode;
}
```