Name _____ Period _____ Role (Circle one) Programmer/Driver

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Document Object Model Part 2

Your Tasks (Mark these off as you go)

- ☐ Write code to insert and create elements
- ☐ Write code to remove or hide an element
- ☐ Write code to modify an attribute
- ☐ Have Ms. Pluska check off the above tasks
- ☐ Receive credit for the group portion of this lab

☐ Write code to insert and create elements

In our previous lesson about the DOM we learned how to select and modify existing elements on our webpage. But, Just as the DOM allows scripts to modify existing elements, it also allows for the creation of new ones. The *.createElement(tagName)* method creates a new element based on the specified tag name. However, it does not append it to the document. It creates an empty element with no inner HTML.

In order to create an element and add it to the web page, you must assign it to an element that already exists on the DOM. We call this process appending. The *.append* method will add the element as the last child node.

The following code creates a new paragraph element, adds text to the new element's *innerHTML*, and appends it to the body of the document:

```
var paragraph = document.createElement('p');
paragraph.innerHTML = "The text inside paragraph";
document.body.append(paragraph);
```

In our previous lessons we have learned how to control elements on the page by accessing their id's. In the previous example, the paragraph we created does not have an *id* associated with it. To specifiy an id we can use the id property as follows,

```
paragraph.id = "p1";
```

Now that we have associated an *id* to our new element, we can modify it using the same techniques we learned before. In the below example, the background of the new paragraph we created is changed to seagreen.

```
document.getElementById("p1").style.backgroundColor = "seagreen";
```

Write code to, (a) Create a variable called "anotherParagraph" and assign a new paragraph to this variable (b) Add text to the paragraph (c) Assign the id "p2" to the paragraph. (d) Append the paragraph to element id = "p1" (e) Change the border color of the new paragraph to "tomato" (f) Change the border style of the element to "dotted" (g) Draw a picture of the output. Indicate the colors with appropriate labels
Code
Output

☐ Write code to remove or Hide an Element

In addition to modifying or creating an element from scratch, the DOM also allows for the removal of an element. The *.remove* method removes a specified element.

```
var e = document.getElementById("nav");
e.remove();
```

If you want to hide an element because it does not need to be loaded initially, the *.hidden* property allows you to hide it by assigning it as true or false,

```
var e = document.getElementById("nav");
e.hidden = true;
```

Write code to,
(a) remove the element id = “about”
(b) hide the element id = “sport”
(c) hide the entire contents of the page

Index.html

```
<!DOCTYPE html>
<html>
  <head>
  <script src = "App.js" defer></script>
  <title>About Me</title>
  </head>
  <body>
    <h1 id = "about"> About Me </h1>
    <h2 id = "sport"> Soccer </h2>
    <h4 id = "time"> 5 years </h4>
    <h2 id = "hobbie">Baking</h2>
    <h4 id = "time"> 10 years </h4>
    <h2 id = "pet">Cat</h2>
    <h4 id = "time"> 6 years </h4>
  </body>
</html>
```

App.js

☐ Write code to modify an attribute

Attributes are values that contain additional information about HTML elements. They usually come in **name/value** pairs, and may be essential depending on the element. Consider the *img* tag below. The image tag below requires the *src* attribute to indicate the location of the image.

```
<img id= “myImage” src = “path/to/my/image.jpg”>
```

The *a* tag below is another example. In this example, the *href* attribute indicates the path to the link and the target attribute indicates where the link should open – in this case, “BLANK” indicates the page should open in a new page.

```
<a href = “path/to/my/page.html” target = “_BLANK”>
```

The code below could be used to modify the *img* tag above,

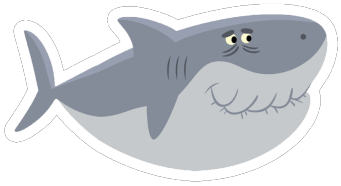
```
var img = document.getElementById('myImage');

img.getAttribute('src');    // returns path/to/my/image.jpg
img.removeAttribute('src'); // removes the src attribute
img.setAttribute('src', 'diff.jpg'); // changes the src attribute
```

The code below displays the output shown. Write code to
(a) Swap the images, so that the image with id = “img1” displays image2.jpg and the image with id = “image2” displays image1.jpg
(b) Change the reference of the link with id = “link1” to go to “youtube”

Index.html

```
<!DOCTYPE html>
<html>
<head>
<script src="App.js" defer></script>
<title>DOM 2</title>
</head>
<body>
<img src = "image1.png" id = "img1">
<img src = "image2.jpg" id = "img2">
<a href = “myPage.html” id = “link1”>Go to page 1</a>
</body>
</html>
```

Output



Go to page 1

App.js

☐ Receive Credit for the group portion of this lab

- Make sure both you and your partner have completed the above tasks
- Indicate the names of all group members.
- Have Ms. Pluska check off the group tasks
- Submit your lab to the needs to be graded folder to receive credit for the group portion of this lab.
- Do not submit your lab until you have Ms. Pluska’s (or her designated TA’s) signature

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