**IS 312: Web Design and Programming**

**PE02: Programming Exercise**

**Revised: Fall 2022**

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**Objective:**

**Task #1: Setup UI in the HTML/CSS**

For this task, you will be modifying the HTML and CSS files you created last week, to create a lightbulb on the page that the user can turn on and off. You will need to use the following for this:

1. A HTML Form, with a button. The button should start with the text set to “OFF”.
2. Two images of a lightbulb, one in the ON state, and one in the OFF state.
3. For the image and the button on the form, you will need to use the id=““ attribute for the HTML elements.

At this point, you should have an HTML file, with an image of a lightbulb that is off, and a button that has “Off” as it’s text. Both the image and the button should have unique IDs (such as bulb and switch respectively).

**Task #2: “Wire” the switch to turn the light on and off.**

For this task, you will be wiring the switch to turn the light on and off. You will accomplish this by writing a JavaScript function, that produces results like: <https://www.w3schools.com/js/js_intro.asp> (Scroll down the page until you see the lightbulb image).

Graphical user interface, text, application

Description automatically generated

Unlike that demo, you should only have one button, and the bulb image.

To “wire” the switch button, you need to write a JavaScript that will process the button and call a function. That function should do the following:

1. Get the State of the Button (the label of the button).
2. Compare the returned label, and using an IF statement, determine what to do:
   1. If the label is “Off” then it should switch the image to the Lightbulb On image, and change the label on the button to “On”
   2. If the label is “On” then it should switch the image to the Lightbulb Off image and change the label on the button to “Off”.

This task is successfully completed once you can toggle the lightbulb image by clicking the button.

Some sections of your Collins Book that will help you complete this exercise:

*Chapter 18 – Page 342 – 349 – Basic DOM Manipulation*

You can use any public domain images for your exercise, but please remember to include them in your submission.

**Submission:**

Now that you have completed the above tasks, you need to zip your files (Executable and Source) and submit them via Brightspace.