

**COMPSCI 120**  
**FALL 2017**  
**Professor William T. Verts**  
**Rubric for Grading Lab #2**

## The Web Site

The lab is worth 10 points. The grader should remove points for each of the following infractions, will enter the score in the LAB2 field and must record the letter(s) for the infraction(s) in the NOTES2 field.

- A. **FORMATTING:** The background must be cyan from the CSS file on Dr. Bill's site, and not from a left-over **<STYLE>** block. Check the HTML of the Web page. Remove 1 point if the style from Lab #1 is still present.
- B. **FORMATTING:** The two text boxes and the **! =** text must ALL be in 24-point. An error here is obvious when the two text boxes are not the same height. Remove 1 point if there are any discrepancies.
- C. **BUTTON:** The button must appear and vanish when the mouse is rolled onto and away from the region where it is defined, and be depressed and pop up when clicked and released. Remove 1 point if the button does not appear and vanish as required.
- D. **BUTTON:** The answer box must contain the computed factorial value of the input box (that is, clicking the button must compute the correct factorial). Remove 1 point if the source code contains an explicit copy of the Factorial JavaScript instead of a link to the **Factorial.js** file. Note that it is possible for the button to still work even if it doesn't appear and vanish as in part C.
- E. **POSITION:** The new factorial functionality must be below the title line and Dr. Bill button from Lab #1. Remove 1 point if the order is backwards (factorial above the Dr. Bill button) or if the Lab #1 code was removed entirely.
- F. **SYNTAX:** Check the HTML code, and remove 1 point for any and all syntax errors. These include unclosed tags or tag-pairs, broken tags, new code intermixed with old code, etc.
- G. **INDENTATION:** Check the HTML code, and remove 1 point if the indentation is wrong, or has not been corrected since Lab #1.

## Answers to the Questions turned in on paper

This 10-point homework is separate from and in addition to the Lab #2 Web page. Each of the five questions is worth 2 points. For each question, score as 2 points (fully correct), 1 point (some parts are correct), or 0 points (completely wrong). The total score should go into the slot for PAPERHW2.

1. Where is the body of the JavaScript `Factorial` function located?

The body of the `Factorial` function is on Dr. Bill's web site at <https://people.cs.umass.edu/~verts/Factorial.js> (NOT in the `<SCRIPT>` section at the top of the document - the link is there, but not the body of the function).

2. Why did the background color of the Web page stay cyan after all the changes?

The background stayed cyan because the `<STYLE>` block where it was defined in Lab #1 was replaced by a link to a style sheet file on Dr. Bill's Web site in Lab #2.

3. In many of the JavaScript functions there is a statement of the form:

```
document.MyForm.MyButton.src = "xxxxx"
```

What is the purpose of that statement? What does it do?

The purpose of the statements of the form `document.MyForm.MyButton.src = "xxxx"` is to assign different image files at different times to one image in the web page. In particular, that image is in the current `document`, in the form called `MyForm`, and in the `<IMG>` tag named `MyButton`. By assigning different image files to the `src` of the image on different events, we can get the image to simulate a button as it is being rolled over, clicked, and released.

4. What is the purpose behind the `<SPAN>...</SPAN>` tag as shown?

The `<SPAN>...</SPAN>` tag takes no action on its own - it inherently makes no changes to the appearance of the current document. However, it can be used to override the current styles of whatever tags are currently active. In this case, its purpose is to override the default font size of the text being displayed.

5. In `Factorial_Normal.gif` the transparent band of pixels (shown in cyan) is on the bottom and right sides of the button, but in `Factorial_Clicked.gif` they are on the left and top sides. Why? What effect does this cause?

The background color is also cyan; any transparent pixels in the images will let the cyan background color show through. By having the transparent pixels in **Factorial\_Normal.gif** on the bottom and right but in **Factorial\_Clicked.gif** on the top and left, the action of clicking the button causes it to apparently shift position "down", and shift back "up" when released. This greatly enhances the 3D effect over simply exchanging the black and the white edge pixels.