Lab 05

1. Tip Calculator: http://mumstudents.org/cs472/2019-03-RS/Lectures/js10/tip.html
    a. Download html, css and image files to your local drive
    b. Change calcTip() function to make it work correctly

2. **See next page for second lab details**

Maharishi University of Management, CS472

Lab 6: Decorate My Text

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Today's lab

Today you'll write a page where the user can type text into a box, and by clicking on UI controls, the user can decorate the text by giving it funny styling.

The HTML page `decoratemytext.html` contains a basic HTML shell and page header. This skeleton already links to a CSS file `decoratemytext.css` that defines all the styles you need. You do not have to write any CSS code today.

You will write a JavaScript file `decoratemytext.js` that will manipulate the text.

Download the HTML file below (right-click, Save Target As...) to get started:

- decoratemytext.html

Exercise : Create UI Elements (~15 min)

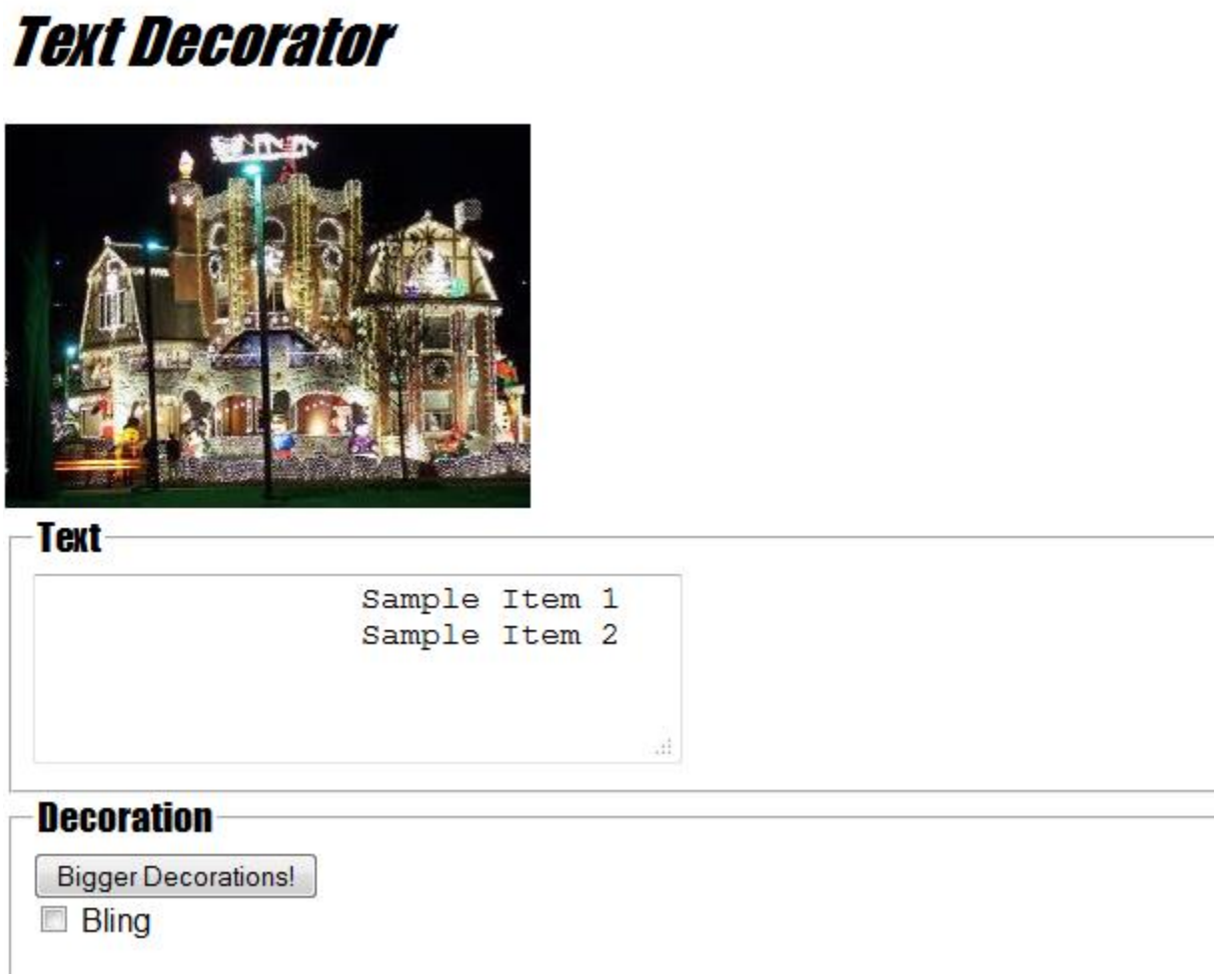
(See example screenshot on next slide.)

The first task is to expand `decoratemytext.html` by adding UI controls. Add HTML code for the following:

- A field for users to enter large (multi-line) amounts of text.
  - It should be 4 rows by 30 columns in size.
  - Wrap it in a bordered field set box with the label "Text".
- Add a second bordered field set box labeled "Decoration" that contains the following controls:
  - A button labeled: Bigger Decorations!
  - A checkbox labeled "Bling"
- **NOTE: Controls are sometimes used in forms; but you must not use the `form` tag on your page.**

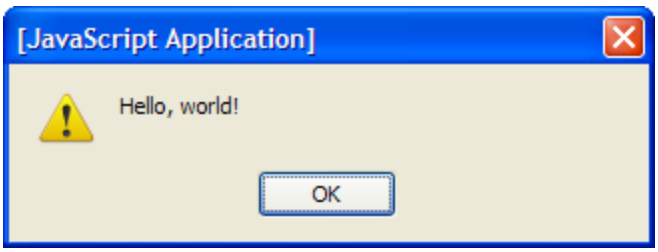
Exercise , output

Your page should look like this:



Exercise : JavaScript `alert` (~5 min)

Now you'll write a bit of JavaScript testing code that pops up an `alert` box. This is just a test to make sure that your browser is running your JavaScript file, before we move on to tougher exercises.



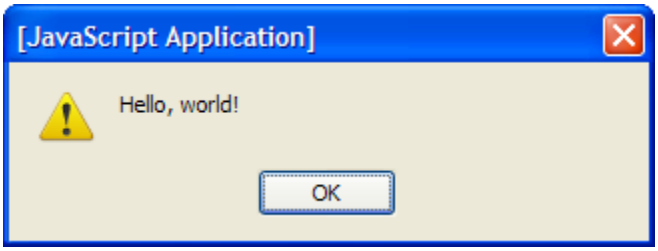
- Create a new file and save it as `decoratemytext.js`.
- Put the following line of code into the file:

```
alert("Hello, world!");
```

- Link your HTML page to your JavaScript file using a `script` tag.
- Refresh your page in the browser. Do you see the `alert` message?
    - If so, move on.
    - If not, double-check your `script` tag syntax or ask a TA for help.

Exercise : Hello World Button (~10 min)

Now let's set up a very basic JS event handler. Modify your JS code and HTML so that the "Hello, world!" `alert` message won't pop up until the user clicks the "Bigger Decorations!" button.



- Modify your JS file to wrap the `alert` into a function.
- Add an `onclick` event handler for the "Bigger Decorations!" button that calls your new function.
- Refresh your page in the browser. Click the button. Do you see the `alert`?
    - If so, move on.
    - If not, remember that the DOM may not be loaded yet, add an `onload` handler to the global `window` object.
    - Still not, double-check your `onclick` tag syntax and function, or ask a TA for help.

Exercise : Bigger Decorations Button (~15 min)

(See example screenshot on next slide.)

Modify your JS code so that when the user clicks "Bigger Decorations!", the text in the text area will get larger.

- Make sure your text area has an `id` attribute so your JS code can talk to it.
- Modify your JS function so that it now changes the text area's font size to **24pt** .
- Use proper units, such as "4em", and proper naming conventions.

Exercise , output

The text should look like this after the button is clicked:

Text

Sample Item 1
Sample Item 2

Decoration

Bigger Decorations!

Bling

Exercise : Bling Checkbox (~15 min)

(See example screenshot on next slide.)

Add an event handler so that when the user checks "Bling", the text area will receive some styles.

- Add an `onchange` on the checkbox that calls a function that pops up an `alert`.
- Modify your new function to set the text area's font weight to **bold**.
  - You can see if a checkbox is checked by examining its `checked` attribute. (Give it an `id`.)
  - When the box is unchecked, the font weight should go back to normal.
- Once the bold part works, add the following styles to the text when the box is checked:
  - change its color to green
  - underline the text (this is the CSS `text-decoration` property)

Exercise , output

Your page should look like this when the box is checked:

Text Decorator

Text

Sample Item 1
Sample Item 2

Decoration

Bigger Decorations!

☑ Bling

Exercise : Font Timer (~10-15 min)

- Make it so that when the "Bigger Decorations!" button is clicked, rather than setting the font size to 24pt, you'll make it **2pt larger** than its current size.
    - Read the font size such as "12pt" and change it to a larger one like "14pt".
    - You may want to use the `parseInt` function to help you solve this.
- Once that works, make it use a **timer**.
    - Now a single click should continually increase the font size by +2pt every 500 ms.
    - Use the `setInterval` function. The timer should call the function you just wrote.