CSE2201 Lab 7

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Description:

Now that we've looked at the fundamental building blocks of JavaScript, we'll test your knowledge of loops, functions, conditionals and events by getting you to build a fairly common item you'll see on a lot of websites — a JavaScript-powered image gallery. HAVE FUN!.....or not

Starting Point:

To get this assessment started, you should go and grab the raw text you need to mark up, and the CSS you need to include in your HTML. These assets are available at: https://bitbucket.org/ChrisIsKing/cse2201/src in the lab 7 folder.

Lab Brief:

You have been provided with some HTML, CSS and image assets and a few lines of JavaScript code; you need to write the necessary JavaScript to turn this into a working program. The HTML body looks like this:

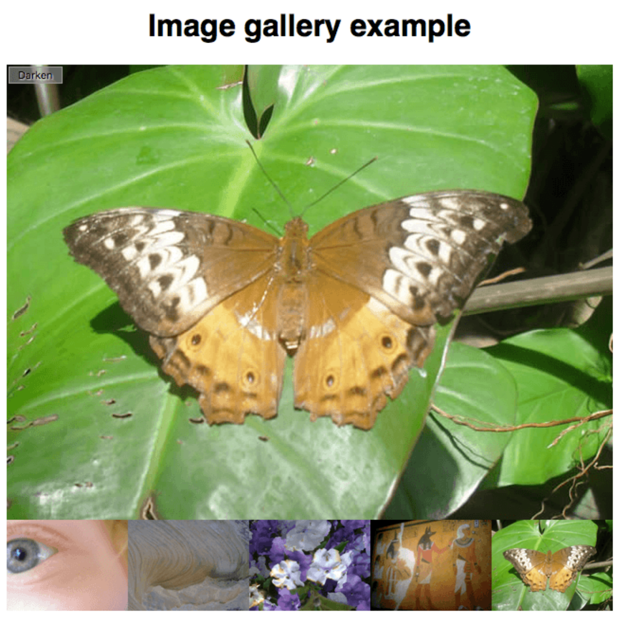
```html
<h1>Image gallery example</h1>

<div class="full-img">
  <img class="displayed-img" src="images/pic1.jpg">
  <div class="overlay"></div>
  <button class="dark">Darken</button>
</div>

<div class="thumb-bar">

</div>
```

The example looks like this:



The most interesting parts of the example's CSS file:

- Absolutely position the three elements inside the full-img <div> — the <img> in which the full-sized image is displayed, an empty <div> that is sized to be the same size as the <img> and put right over the top of it (this is used to apply a darkening effect to the image via a semi-transparent background color), and a <button> that is used to control the darkening effect.
- Set the width of any images inside the thumb-bar <div> (so-called "thumbnail" images) to 20%, and float them to the left so they sit next to one another on a line.

Your JavaScript needs to:

- Loop through all the images, and for each one insert an <img> element inside the thumb-bar <div> that will embed that image in the page.
- Attach an onclick handler to each <img> inside the thumb-bar <div> so that when they are clicked, the corresponding image will be displayed in the displayed-img <img> element.
- Attach an onclick handler to the <button> so that when it is clicked, a darken effect is applied to the full-size image. When it is clicked again, the darken effect is removed again.

To give you more of an idea of how this should work, you lab tutor will show you a live example.

Steps:

Looping through the images:

We've already provided you with lines that store a reference to the thumb-bar <div>inside a variable called thumbBar, create a new <img> element, set its src attribute to a placeholder value xxx, and append this new <img> element inside thumbBar.

You need to:

1. Put the section of code below the "Looping through images" comment inside a loop that loops through all 5 images — you just need to loop through five numbers, one representing each image.
2. In each loop iteration, replace the xxx placeholder value with a string that will equal the path to the image in each case. We are setting the value of the src attribute to this value in each case. Bear in mind that in each case, the image is inside the images directory and its name is pic1.jpg, pic2.jpg, etc.

Adding an onclick handler to each thumbnail image:

In each loop iteration, you need to add an onclick handler to the current newImage — this should:

1. Find the value of the src attribute of the current image. This can be done by running the getAttribute() function on the <img> in each case, and passing it a parameter of "src" in each case. But how to get the image? Using newImage won't work, as the loop is completed before the event handlers are applied; doing it this way would result in the src value of the last <img> being returned in every case. To solve this, bear in mind that in the case of each event handler, the <img> is the target of the handler. How about getting the information from the event object?
2. Run a function, passing it the returned src value as a parameter. You can call this function whatever you like.
3. This event handler function should set the src attribute value of the displayed-img <img> to the src value passed in as a parameter. We've already provided you with a line that stores a reference to the relevant <img> in a variable called displayedImg. Note that we want a defined named function here.

Writing a handler that runs the darken/lighten button:

That just leaves our darken/lighten <button> — we've already provided a line that stores a reference to the <button> in a variable called btn. You need to add an onclick handler that:

1. Checks the current class name set on the <button> — you can again achieve this by using getAttribute().
2. If the class name is "dark", changes the <button> class to "light" (using setAttribute()), its text content to "Lighten", and the background-color of the overlay <div> to "rgba(0,0,0,0.5)".
3. If the class name not "dark", changes the <button> class to "dark", its text content back to "Darken", and the background-color of the overlay <div> to "rgba(0,0,0,0)".

The following lines provide a basis for achieving the changes stipulated in points 2 and 3 above:

```
btn.setAttribute('class', xxx);
btn.textContent = xxx;
overlay.style.backgroundColor = xxx;
```

Hints & Tips:

- You don't need to edit the HTML or CSS in any way.