Lab 6: Media Management

There will be times when rendered HTML isn't the right solution to a particular problem. Maybe your users need a downloadable PDF, or maybe you need to dynamically generate images. In this lab you will manipulate non-HTML media from your server-side application.

Objectives & Outcomes

Successful completion of this activity will show that you can:

- Generate raster image files from both PHP and ColdFusion.
- Generate PDF files from both PHP and ColdFusion.

Level of Effort

This activity should take approximately 4h to complete. It will require:

- 45m Research
- 5m Prep & Delivery
- 3h Work

If you find that this activity takes you significantly less or more time than this estimate, please contact me for guidance.

Reading & Resources

Web link

Demotivators at Despair.com
These demotivators are some of the most popular, although the meme can be found in many other places.

Instructions

Even with client-side advances such as the HTML5 `<canvas>` tag, there are times when you're going to need to perform media manipulation on the server. For example, this is often the case in mobile environments where the browser doesn't get upgraded after the device is released.

Development

For this assignment you **are not** required to solve the problem in both PHP and CFML—just choose one solution for each of the tasks. You may complete all of the tasks in one language or a combination of the two.

Implement the following server-side media generation features:

- **A "demotivator" generator:** This should be a form to upload an image and some text. The image will get resized and centered on a black matte with a white border, while the text will get placed below the image. For examples, see the Demotivators site. Save the generated image to a folder and provide the user with a usable `<img>` tag that they could copy and paste elsewhere.
- **A CAPTCHA authenticator:** This should generate CAPTCHA images of at least 6 characters. The solutions to the CAPTCHA should be salted (via a Session key) and hashed and stored in hidden form fields for verification. Your app should be able to detect correct and incorrect answers!

Above and Beyond

One option for additional practive might be to implement those features in both languages.

Another option would be to figure out how to provide a downloadable PDF version of any page on your site. As a hint: it would probably involve subclassing your `SiteView` to create a `PDFSiteView` that called the `SiteView.show` method to generate the content, but then wrapped it in a PDF instead of leaving it as HTML.

Git Commits & Video Reflection

The same rules about Git Commits and Reflection Videos apply for this Lab as for previous labs. Review the Lab 1 documentation to ensure you meet all of the required points. Your required questions are mostly the same, with small differences:

1. What didn't go as well as you had hoped? Where did you run into problems with the lab?
2. What went better or was easier than you expected? What went right?
3. **Think of a project you've done already or would like to do in the future. (Or make one up that isn't a lolcat or demotivator generator.) Give a *specific* example of how you could add in some kind of server-side media generation to enhance this project.**
4. How do you think what you did in this lab is going to help you in your future school work, career, or life?

Where should you be?

You aren't expected to memorize all of the media generation functions, as both languages have a metric ton of them. But since those functions mirror the types of tasks you are already very familiar with in Photoshop, you should be able to take a series of steps from Photoshop and figure out how to code them in PHP or ColdFusion. Maybe not perfectly or quickly, but it should be doable.

Deliverables

Make sure your source code, assets, and reflection video URL are committed to the repository. Push your changes to the server before the start of the next lecture.