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Advanced Web Technologies

Coursework 1

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# Introduction

For my assignment I was asked to create a web-app which will hold an online catalogue of a topic of my choice. The web-app is required to meet a set of requirements and constraints which are:

* The web-app has to be made using Python and Flask and must run within levinux.
* It must have a well-designed URL hierarchy and needs to make use of templates to create pages.
* It must make use of routing, static files, templates, redirects, requests and responses.
* It has to be all within a Git repository.

For my web-app I decided to make it a collection of some of the images my brother has taken during his photography course.

# Design

For the design of the web-app I made sure that it used static files for anything which wasn’t going to change such as the images on the site, I also ensured the website handled requests properly and would also redirect from some pages. The site also made use of templates to hold the main contents and the base layout.

The web-app was made so that going to localhost:5000/ would instantly redirect you to the proper site which was at localhost:5000/gallery.

It was also made so that if you tried typing anything else which wasn’t part of the site it would give a custom 404 error which says the page cannot be found and would also provide a link to the homepage so that people could quickly find the site again.

When you request a site from the server it combines two templates together to give the main layout of the page and then within that it would contain the actual contents which changed depending on what page you were on.

All the images on the site are located in folders within the static folder and display on the correct pages.

# Enhancements

An ‘enhancements’ section explaining what features you would add or improve

If I was to make a web-app like this again there are a few improvements I would add and a few additions I would like to make to it.

* Image info page

I originally wanted to add a page which would have the information about the picture at the top and then below it would have a scaled down version of the image which when clicked would pop out and go full-size.

* Admin page

I wanted to be able to add new content and update the original content from a page which would let you choose a certain picture or create one and add details about it and then be able to press a button which would push the data to a json file and then the server would create the page for the picture and add its link into the correct sub-category.

* Login for users and admins

I would like to allow for users to login, this would allow me to make the admin link be available to only admin ranked users and would also allow me to add some nice features to the site.

* Comments, rating and customization

To go along with the login I wanted users to be able to comment and rate images and be able to change their settings which would change how the site would render the links to either bigger or smaller links.

* Finish About and Contact

I wanted some pages which would have details about my brother and his cameras and also a contact page where people could send messages to him from.

# Evaluation of Web-App

During the development of my Web-app I came across some flaws with my app which I never got sorted out, these flaws were: occasional slow loading, web-app goes unresponsive, unfinished buttons.

* Slow loading:

This issue I’ve come across multiple times after I added all my images to the pages and I believe it’s due to the web-app trying to process all the images. I am unsure of how to fix this as the issue comes and goes seemingly randomly.

* Unresponsive:

This issue normally appears when you start up the web-app after not running it for a while and will allow one page to load but after that it just hangs and never lets you do anything else and the only way to solve this problem I’ve found is to just restart the web-app.

* Unfinished buttons:

Originally I wanted the View image info buttons to take you to another page which has details of the picture and a full-sized image, however due to issues with trying to upload the images to the web-app I could only get it to upload 50% of the images and then just fail and it would create 0KB files which had nothing in, if I had more time I would’ve tried to find a solution for it but as of right know the cause is unknown as it had enough space to save them.

The site could also do with a better colour scheme as right now it is just a bland black and white site which doesn’t look all that bad on the gallery page as the icons I used for navigation are also in black and white so it fits, but the rest of the pictures are coloured and seem out of place.

# Personal evaluation

From doing this assessment I have learnt that sometimes simple ideas don’t work out properly when you try and do things in ways which you haven’t been taught, for me that was trying to make my web-app be able to generate all the webpages at the click of a button.

The idea originally seemed like it would be fairly simple and I could get around writing much html code but quickly became increasingly difficult as I was trying to just make the app write all the html files and save them to the server and then later try and make it call certain files. I had decided to go with that approach because when I was learning html previously I was taught that all pages were their own html page so I tried to do that when instead I could have just done it all with templates.

I eventually abandoned that app and started again but this time using templates which I at the beginning struggled to understand but after careful reading of multiple guides on them I learnt how they worked and managed to implement them into my app fairly easily.

Personally I think I could’ve avoided all the hassle of trying to do the web-app in a hard way by just talking to the lecturer about how I wanted to do it. I did learn a lot more about python by doing it the wrong way such as learning how to write to files correctly or integrating json into my app to generate some files based on the contents of the json file, I also learnt how hard it can sometimes be to debug some code in python as if you look online there are multiple ways to do the same code for example when I was trying to fix reading the json file I had with open('data.json') as f:

data = json.load(f.read())

and some places would say you use json.loads, others said just json.load and all said (‘data.json’) but the problem was I had to use (‘data.json’, ‘r’).

# References/Resources

*Stack overflow*. (2016). Retrieved from Stack overflow: http://stackoverflow.com/

(Stack overflow, 2016) I used this site a lot to try and fix bugs with my programming.