



waldo.photos

Software Engineering test



Problem Statement

Using any language and data-store of your choice, write an application that reads a set of photos from a network store (S3), parses the EXIF data from the photos and indexes the EXIF key/value pairs into a query-able store by unique photo.

Dates	
Taken on	August 6, 2010 at 7.38pm PDT
Posted to Flickr	August 17, 2010 at 4.21PM PST
Exif data	
Camera	Pentax K200D
Exposure	0.006 sec (1/180)
Aperture	f/11.0
Focal Length	300 mm
Focal Length	300.0 mm
ISO Speed	100
Exposure Bias	-2 EV
Flash	On, Fired
X-Resolution	0 dpi
Y-Resolution	0 dpi
Orientation	Horizontal (normal)



Problem solution

- I used a simple approach to solve this problem, using python language and Django framework.
- Why I used Python and Django and not Java ?
R: Well, I used it because Python is a modern and dynamic language, that's simple to use and faster to build one application. Django, is a simple web framework with a bunch of components that helps us to delivery more fast a web app and also enables an easy stagger the app in the future.
- This solution was built using sqlite as a persistence tier.



Future developments

- We'll need to change the persistence layer for another like MongoDB that it will fit better.
- Another task it will be change the download service to a REST Api, applying the microservice approach, isolating the tiers of the application.
- On the front-end we need to build a css, adding a javascript framework or API, like angular, backbone, react and others, to put more interaction on the page and build a cool experience for the users.
- Another tip is to build a bunch of test cases to ensure that the code do the expected thing we want.



Considerations

1. It was a great challenge to me because it excited me to continue evaluate this solution to a final product, including a lot of new awesome features for the users, like the possibility for consulting photo metadata, show the most popular photo counting the clicks and downloads.
2. I know that my biggest fault it was to miss my deadlines, ignoring the instructions to think in a simple and fast solution. Sincerely, I tried to do my best and I ended up spending more time than I expected and to help me, but the most important is following the instructions and keep thinking simple. managed my time to solve this test. Unfortunately, my last two weeks were a busy and stressful in my job, impacting directly in my daily tasks and in my life.



Instructions to install

Please, follow these steps below:

1. You need to install Python 2.7.x and Django 1.9.7
2. I suggest to you use pip to download the used libs. You can do it access the this web site: *<https://pip.pypa.io/en/stable/installing/>*
3. After you installed pip we need to install now the JSONField. This component it will used to save exif data in a JSON format on the data base, in this case sql lite.
For instance: type in your command line *pip install JSONField*
4. You need to install too the xmljson lib, that I was used to parse the xml received data. Like the same instruction showed above. So, You need to type in your command line: *pip install xmljsonl*



Thanks for this opportunity