

CS580 Advanced Software Engineering

Assignment 9 - Logging and Metrics

Due Date

Wednesday, December 3, 2014

Score

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Questions and Directions

In this assignment, you will be adding logs and metrics to your iphoto-web project for maintenance and tracking purposes.

1. Logging

Please choose 5 of the APIs in your WebController to add necessary logging information at the appropriate log levels such as debug, info, warn, error. In addition, choose another major class (e.g., PhotoManager, UserManager, etc.) to add logs in the key methods.

Your logs should not only capture the regular execution information, but more importantly capture the errors and exceptions. You should configure the log level and log file path in `application.properties`.

A brief overview of logging used in Spring can be found at:

<http://docs.spring.io/spring-boot/docs/current/reference/html/boot-features-logging.html>

The sample code we demoed in the class is located at:

<http://cs580.yusun.io/slides/log-metrics.zip>

Please check in your code to GitHub and deploy it to your EC2 server.

2. Metrics

Please choose 5 of the APIs in your WebController to send metrics to CloudWatch. You can reuse the CloudWatchFactory provided at: <http://cs580.yusun.io/slides/log-metrics.zip> to record the API name, response time, and success/failure count.

In order to use the CloudWatch client in your program, you need to:

- 1) Include AWS SDK Maven dependency.

- 2) Add a new user in AWS IAM console and attach the permission policy (power user access) to the user. You need to record the Access Key and Secret Access Key and put the keys in the CloudWatch client in Java. Some of the related instructions provided by AWS are:

- a) http://docs.aws.amazon.com/IAM/latest/UserGuide/Using_SettingUpUser.html
- b) <http://docs.aws.amazon.com/IAM/latest/UserGuide/ManagingCredentials.html>
- c) <http://docs.aws.amazon.com/IAM/latest/UserGuide/ManagingPolicies.html>

You should be able to see the metrics published to CloudWatch once you hit the APIs in your running server. **One thing to note is that the default CloudWatch client publishes the metrics to US East (N. Virginia) region, so you will need to switch to that region in your AWS console in order to see the metrics in CloudWatch console.**

Please check in your code to GitHub and deploy it to your EC2 server.