Project 4 Task 2 – Event Search App

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Description:

My application takes a search string from the user and uses it to search for events from TicketMaster.com.

1. Log useful information

   From the request and response with Android app, I logged request device, request keyword, request host, request connection, response code.

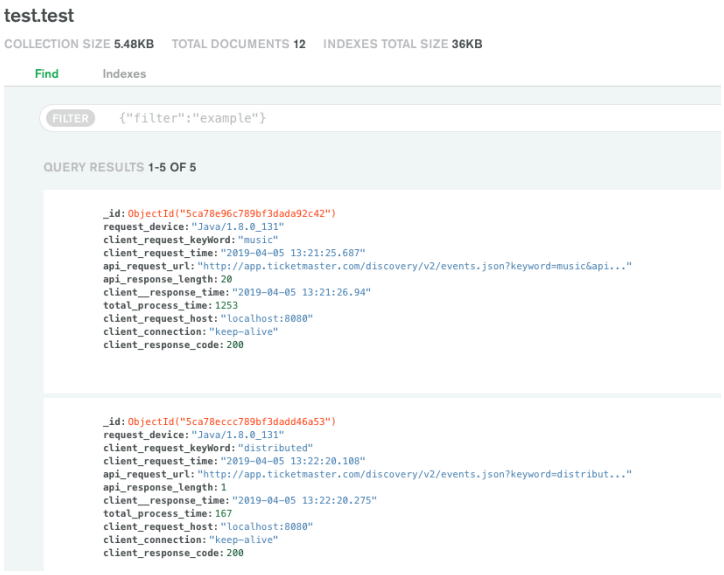
   Within the servlet, I also recorded request timestamp, response timestamp, and I calculate the total processing time.

   From the request and response with third party API, I logged the request URL and results length.

2. Store the log information in a database

   MongoDBClient.java keeps the servlet connected to the MongoDB database when the server is running. It stores the logging data with method collection.insertOne() to the database collection, and it retrieves data from database collection with collection.find() method.

   Here's a screenshot of the data stored in my MongoDB database.



3. Display operations analytics and full logs on a web-based dashboard

Created a .jsp file that forms as the web-browser dashboard to display data. Retrieve all the logging data from database in MongoDBClient.java to proceed the data.

3.1. A unique URL addresses a web interface dashboard for the web service

https://evening-ravine-18159.herokuapp.com/dashboard

3.2. The dashboard displays at least 3 interesting operations analytics

It displays total visits so far, the device type that visits the server the most, the amount of visits by that device type, average request processing time in seconds, shortest request processing time in seconds, the search word that is used the most, and the amount of searches using that word.

Here's a screenshot of data analytics.

App Data Analytics

Total Visits	5
Top Device	Dalvik/2.1.0
Top Device Visits	3
Average Process Time	0.716s
Shortest Process Time	0.167s
Top Search	music
Top Search Amount	2

3.3. The dashboard displays the full logs.

It prints out all logging data after the data analytics. Here's a screenshot of the partial log information.

All Log Information

Document{{_id=5ca78e96c789bf3dada92c42, request_device=Java/1.8.0_131, client_request_keyWord=music, client_request_time=2019-04-05 13:21:25.687, keyword=music&apikey=rVfSV9ULmq3KvikDfbyws8eRKIhnJrWF, api_response_length=20, client__response_time=2019-04-05 13:21:26.94, total_process_t client_response_code=200}}

Document{{_id=5ca78eccc789bf3dadd46a53, request_device=Java/1.8.0_131, client_request_keyWord=distributed, client_request_time=2019-04-05 13:22:20. keyword=distributed&apikey=rVfSV9ULmq3KvikDfbyws8eRKIhnJrWF, api_response_length=1, client__response_time=2019-04-05 13:22:20.275, total_proc client_response_code=200}}

Document{{_id=5ca78fcac789bf3dad46c512, request_device=Dalvik/2.1.0 , client_request_keyWord=sport, client_request_time=2019-04-05 13:26:33.127, api keyword=sport&apikey=rVfSV9ULmq3KvikDfbyws8eRKIhnJrWF, api_response_length=20, client__response_time=2019-04-05 13:26:34.059, total_process_ client_response_code=200}}

Document{{_id=5ca78fe3c789bf3dad46c513, request_device=Dalvik/2.1.0 , client_request_keyWord=music, client_request_time=2019-04-05 13:26:59.219, ap keyword=music&apikey=rVfSV9ULmq3KvikDfbyws8eRKIhnJrWF, api_response_length=20, client__response_time=2019-04-05 13:26:59.498, total_process_ client_response_code=200}}

Document{{_id=5ca79485c789bf3dad6af657, request_device=Dalvik/2.1.0 , client_request_keyWord=dashboard, client_request_time=2019-04-05 13:46:44.49 keyword=dashboard&apikey=rVfSV9ULmq3KvikDfbyws8eRKIhnJrWF, api_response_length=5, client__response_time=2019-04-05 13:46:45.449, total_proce client_response_code=200}}

4. Deploy the web service to Heroku

   Heroku url:
   https://evening-ravine-18159.herokuapp.com

   The project directory:
   https://evening-ravine-18159.herokuapp.com/AppServer

   The dashboard directory:
   https://evening-ravine-18159.herokuapp.com/dashboard