CSCI 3287 Design and Analysis of Data Systems

Homework # 7 -- Cassandra Lab

April 16, 2020

Overview

This Project is worth 100 points (out of 1000) toward your final grade. It is due on Sunday, April 26 at 11:59 p.m. Your assignment submission should be a document saved and submitted as a PDF file via the link found in the assignment section of "Week 14" in Moodle which is the same place where you found this file.

This assignment will give you hands-on practice in working with the Apache Cassandra "NoSQL" database software.

Objectives

- Students will deploy and run the Apache Cassandra NoSQL database engine

- Students will gain exposure to CQL – Cassandra Query Language

- Students will experience deployment of Apache Cassandra in GCP (the Google Cloud Platform)

- Students will launch and use the Cassandra CQL Shell in GCP

Sections

This assignment has been broken into FOUR sections so that instructions for each part can be posted when ready. This allows students to begin work on Parts One and Two before Part Three is posted.

Part One   Students sign up with GCP (Google Cloud Platform) and obtain free credits

Part Two   Students use free QuikLabs credits to complete QuickLabs course "GSP704 - Deploying an Open Source Cassandra™ Database using the GCP Marketplace"

Part Three   Students use GCP credits to spin up a VM, install Cassandra, create a Keyspace, Create a Table, load it with data, and run CQL queries to access that data

Part Four   Students assemble results in a final document and submit via Moodle link

Part One Instructions:

When signing up for your free GCP & Quicklabs credits, you must use your email address that is composed of your identikey ID (for example, mine is "alpa4161") followed by "@colorado.edu".

This is a valid Google account through which the GCP folks will verify that you are indeed a CU student and are therefore authorized to receive free GCP/QuikLabs credits.

Step 1 - Navigate to the following page and enter in your student credentials

https://edu.google.com/programs/students/benefits/?modal_active=none

Click on the "Access Benefits" button and follow the instructions.

User = *identikey*@colorado.edu

Pass = Identikey password

Get credits and discounts

Explore what you can do in Google Cloud with credits and certification discounts — **no credit card or other payment instrument required**. *If you're a higher education student in one of these countries, you may be eligible for benefits.*

Access benefits

200 Qwiklabs credits

Get access to the Google Cloud catalog in Qwiklabs for hands-on practice using interactive labs.

On-demand training courses

Gain a deeper understanding of Google Cloud with 13 professional-level fundamental courses on Coursera at no cost.

$50 in Google Cloud credits

Receive $50 in Google Cloud credits for career development in your courses and clubs. Credits expire 12 months after activation.

Step 2 – Verify your student status

EDU VERIFICATION FORM

Verify your education credentials

This form will collect your email address based on the Google Account you are signed in to. Before proceeding, ensure you are signed in with the account you want your edu benefits applied to. You can change accounts by selecting the profile picture in the top right corner of your screen.

* Required Fields.

First name *

Sam

Legal name registered with your institution

Last name *

Stone

Legal name registered with your institution

Role *

Student

Email address

YourIdentiKey@colorado.edu

Country *

United States

Academic institution *

University of Colorado Boulder (Boulder, CO)

Begin typing and select institution from the provided list

Date of birth *

August

27

1954

How did you hear about us? *

A faculty or professor

Sign up for Google Cloud emails with news, product updates, event information, special offers, and more. You can unsubscribe at any time. *

◯ Yes

◉ No

Information on this form, as well as your Google Account email address, will be sent to SheerID to verify your student or faculty status. Information provided will be processed by SheerID in accordance with their privacy policy. Your information is also governed by the Google privacy policy and any redemption of credits will be governed by the Terms of Service for each respective program. *

☑ I agree

Submit

Step 3 - Redeem your $50 in Google Cloud Credits and 200 Quiklabs Credits

Here are your student benefits.

Redeem the benefits that are right for your current cloud journey. There is no
need to select all at once - most have an expiration date once redeemed and
you can always return to this page to access more benefits in the future.

$50 in Google Cloud credits

Receive $50 in Google Cloud credits for career development in your courses and clubs. Credits expire 12 months after activation.

Redeem credits   *Automatic redemption*

200 Qwiklabs credits

Get access to the Google Cloud catalog in Qwiklabs for hands-on practice using interactive labs.

Redeem access   *Automatic redemption*

On-demand training courses

Gain a deeper understanding of Google Cloud with 13 professional-level fundamental courses on Coursera at no cost.

Request courses   *Additional application required*

$1000 in research credits

PhD candidates are eligible to receive up to $1000 in Google Cloud credits per research proposal.

Apply for credits   *Additional application required*

Now google will ask you for more information so that they can verify your student status

for your free credits.

We need your ID & class schedule

Documents will be reviewed in a few minutes by staff at SheerID, a trusted partner. How does verifying work?

Upload your school-issued document that shows:

- Your full name
- Your school
- Date proving enrollment for the current term (or within the last 3 months)

Acceptable examples include:

- School ID card with expiration date
- Class schedule
- Tuition receipt

Drag & drop your files here or browse

File must be .jpg .png .pdf .gif or .bmp. You can upload multiple files together and extraneous information can be redacted.

Your information will be transferred to the United States and will be treated according to SheerID's privacy policy.

Verification services powered by SheerID SheerID FAQs

Once you hear back from their verification process, they will provide you with a key code that you must enter in order to activate your credits.