

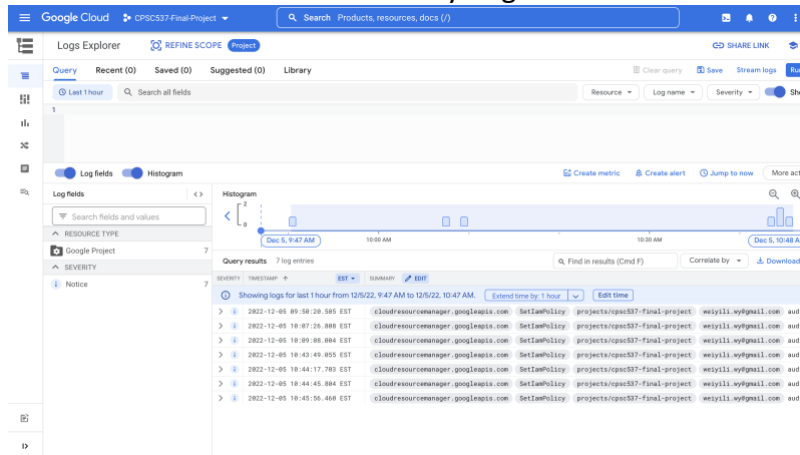
## Setup Guides

### BigQuery Console

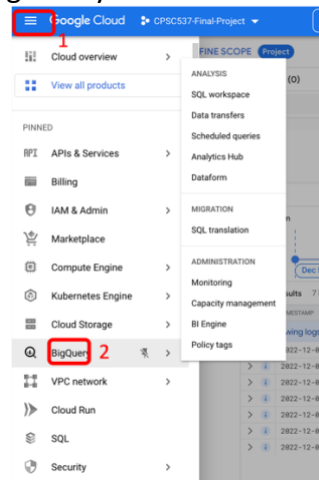
1. In Chrome, go to this URL:

<https://console.cloud.google.com/logs/query?project=cpsc537-final-project>

You should be able to see the page below. If permission denied, please check if Chrome was logged in with the same Gmail account you gave me.



2. Click: Navigation Menu -> Big Query



3. In BigQuery Console, left menu shows the database and tables. In the right, there is an Editor to edit queries. After running, results will be shown below. We may use this console to debug SQL queries. (BigQuery SQL syntax may has some differences with MySQL.)

The screenshot shows the Google Cloud BigQuery console interface. On the left, the 'Explorer' sidebar displays the project 'cp5c537-final-project' with a list of tables: 'music\_data', 'albums', 'artists', 'playlist', and 'tracks'. The 'music\_data' table is highlighted with a red box and labeled 'Tables'. The main area shows a query editor with a red box labeled 'Editor' containing the query: `SELECT * FROM music_data.albums LIMIT 10`. Above the editor, a red box labeled 'Run query' highlights the 'RUN' button. Below the editor, the 'Query results' section shows a table with 10 rows of album data, highlighted with a red box and labeled 'Results'.

Row	album_id	album_name	total_tracks	popularity	artist_id	release_date
1	5SloPTWdFLWghR7E4YSH	MotorSport	1	0	6oMumdp5SzcfhWPOESe6mG	2017-10-27
2	6Fm90PafY2Kd33J0m3UL	Ifyouhadaznehateyou	1	0	5v2WhpA59TJ5dPh7Lcx1IN	2015-09-01
3	4cqXEln3S9jYbMhGfML2	Stay Alive (From The Secret Lf...	1	0	6xrCU6adc5T6G2NurqpmI	2013-01-01
4	0l0NkQuhKwz2oUZZHboA	Attention	1	0	6VuMa0mHyPL1p4EHjYL7	2017-04-20
5	4RL8FEs8dRVYk8yYsQeJ	Adult Swim (feat. Tyga, Jeremi...	1	0	1qSJaft5aB2KtTg7LxvM	2014-08-26
6	2IS597VgU3pBGeMgJQZ1K	I Need A Doctor	1	0	6DPYiq5KwVQ54RGwzPC7	2011-02-01
7	4AabsQ6pH3OmDE6BW0d4	rockstar	1	0	246dkjStzLTThykXeSh60	2017-09-15
8	1BrNH0tUSAGb3NpDwbKz	Boys & Girls	1	0	085pc2PY0BzGKQDPNekA	2016-04-08
9	7MlGPy2mB8B8mY6f8dW8	Waves (Robin Schulz Radio Edit)	1	0	33W1m08BcGc7vT7aAaMh0T	2016-03-07

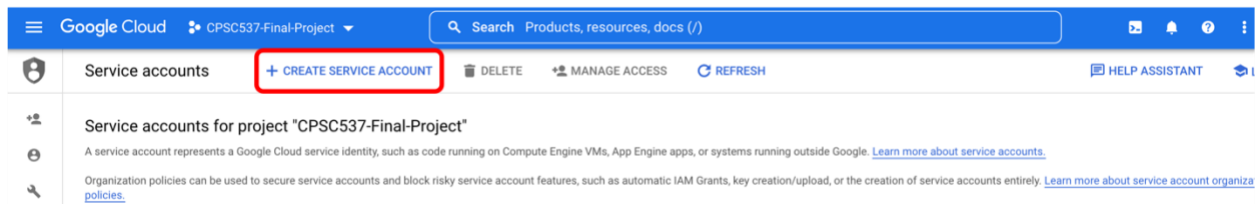
## Use Python Client to Interact with BigQuery

1. Create a service account
  - a. Click: Navigation Menu -> IAM & Admin -> Service Accounts

The screenshot shows the Google Cloud navigation menu. The 'Navigation Menu' icon (three horizontal lines) is highlighted with a red box and labeled '1'. The menu is open, showing various options. The 'IAM & Admin' option is highlighted with a red box and labeled '2'. The 'Service Accounts' option under 'IAM & Admin' is highlighted with a red box and labeled '3'.

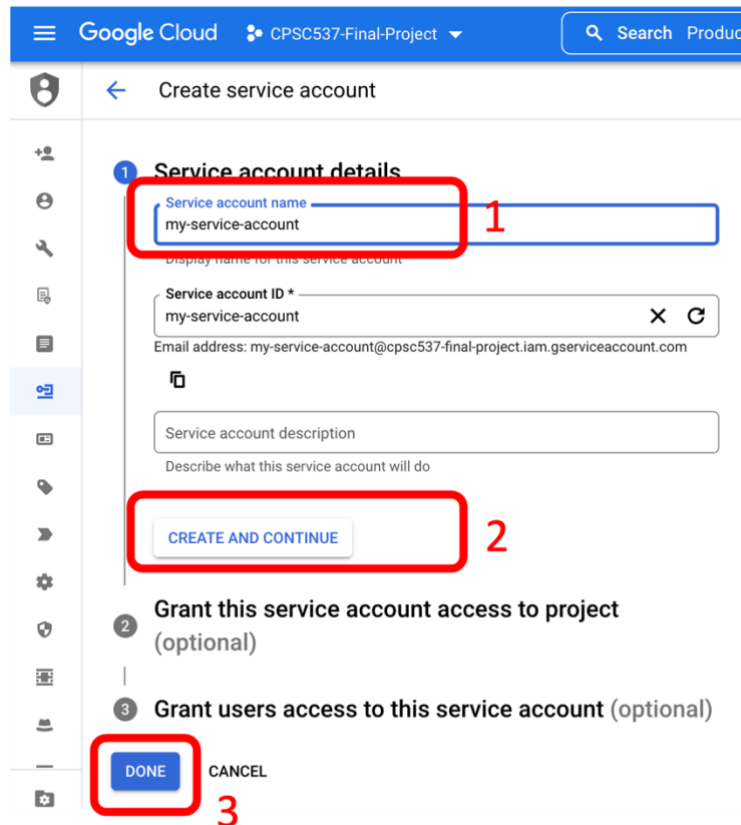
A service account has already been created, please skip to 2. Create a service account key

b. Click: CREATE SERVICE ACCOUNT



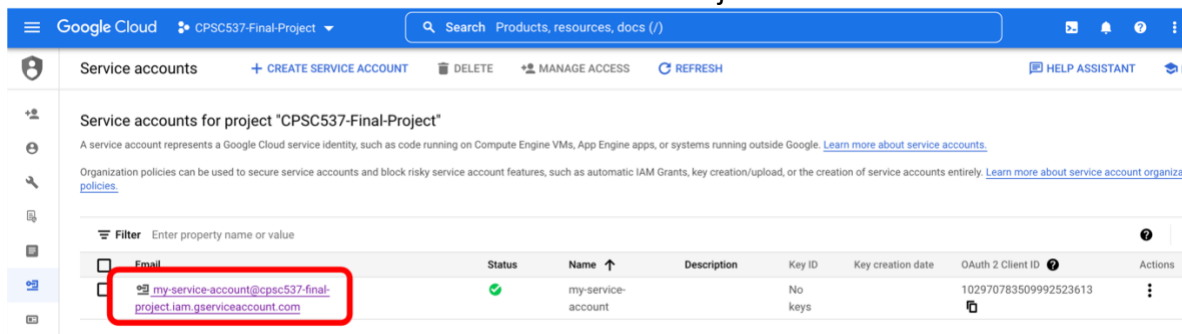
c. Fill: Service account name

Click: CREATE AND CONTINUE -> DONE

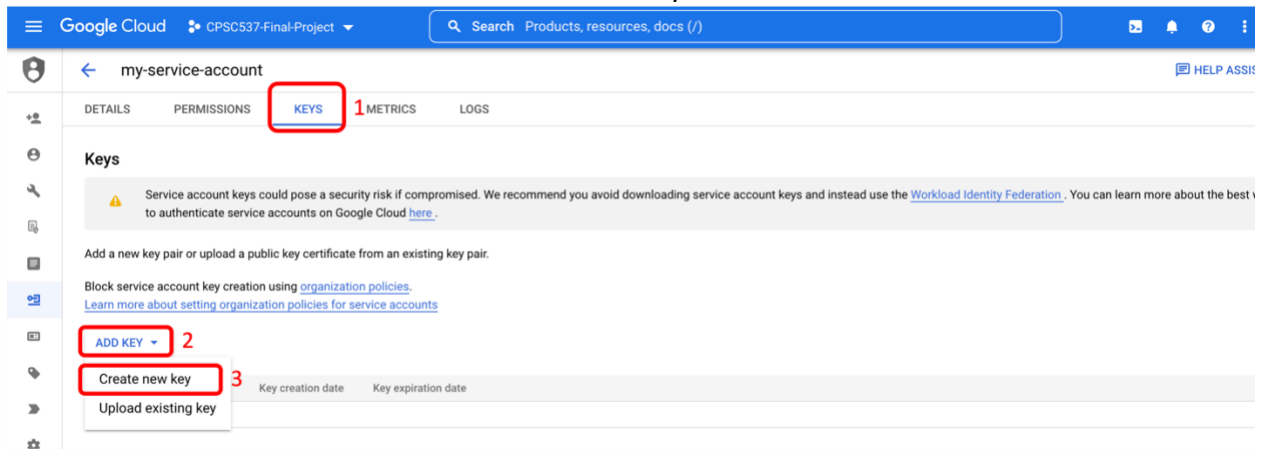


2. Create a service account key

a. Click: email address for the service account just created



b. Click: KEYS -> ADD KEY -> Create new key

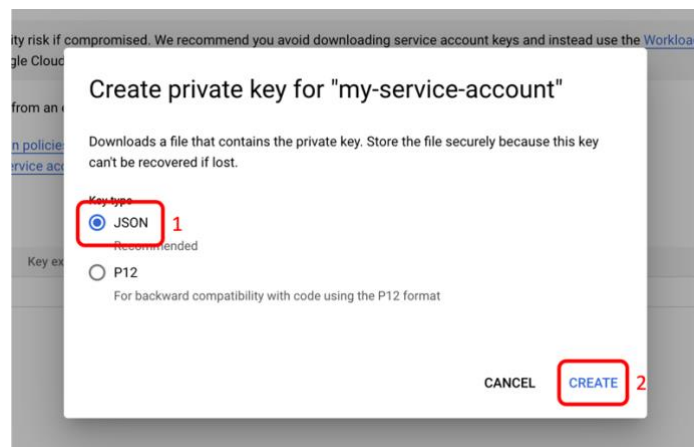


c. Choose: JSON (default)

Click: CREATE

JSON file will be automatically downloaded. Save it in a proper folder.

**BE CAREFUL!! Never push this JSON file to GitHub or any other public link. Otherwise our Google Cloud account might be hacked and cause loss of money.**



3. Install the client library and query dataset

Please refer to "537\_MUSICREC/setup/setup.ipynb".

Reference:

<https://cloud.google.com/bigquery/docs/quickstarts/quickstart-client-libraries>