



GCP Data Engineering

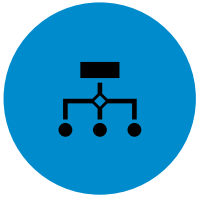
Sep 2023

Content

00 Commandments

01 GCP Basics

00 Commandments

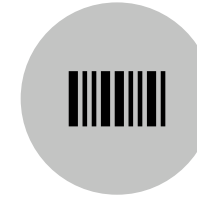


All code & commands need to be stored in **organized code repository**

<https://docs.github.com/en/get-started/quickstart/create-a-repo>



Create **Unit Tests** for your code



Evaluate your code on RRR (**readability**, **reusability**, **repeatability**)



Evaluate your code on **Error** and **Exception** handling.



Make sure you have **logging** enabled in your code and logs for each activity could be found through cloud logging and **monitoring**.

Refresh The Concepts

Reading & Reference Material

Read about Cloud Computing basics

- <https://searchcloudcomputing.techtarget.com/definition/public-cloud>

Reference sites for Python

- <https://www.tutorialspoint.com/python/index.htm>
- <https://realpython.com/tutorials/basics/>
- <https://docs.python.org/3/tutorial/venv.html>
- <https://www.python.org/dev/peps/pep-0008/>

SQL

- <https://www.tutorialspoint.com/sql/index.htm>
- <https://www.tutorialspoint.com/sql/sql-select-query.htm>
- <https://www.tutorialspoint.com/sql/sql-where-clause.htm>
- <https://www.tutorialspoint.com/sql/sql-group-by.htm>

Learn about GitHub

- [Git and GitHub for Beginners - Crash Course - YouTube](#)

01 **GCP Basics**

GCP Basics

Understanding IAM

- IAM overview

<https://cloud.google.com/iam/docs/overview>

- Read about basic roles

<https://cloud.google.com/iam/docs/understanding-roles/#basic>

- Read about Service Accounts

<https://cloud.google.com/iam/docs/service-accounts>

- Check IAM in your project

<https://console.cloud.google.com/home>

<https://console.cloud.google.com/iam-admin/iam>

- Create two service accounts from console
 - Google Cloud Storage Admin and name it as “gcsadminsa”
 - Bigquery Admin and name it as “bqadminsa”
- Use them in your subsequent activities for bootcamp.

GCP Basics

Activate Google Cloud Shell

<https://cloud.google.com/shell/docs>

<https://cloud.google.com/shell>

<https://cloud.google.com/compute/docs/regions-zones>

<https://cloud.google.com/about/locations>

Set up default project, region, zones.

Set up Environment Variables

PROJECT_ID = your_project_id,

ZONE = yourzone

GCP Basics

Cloud SDK – gcloud & python

- Install Python 3 on your Google Cloud Shell VM if its not already present.
- Setup gcloud & python sdk on your Google Cloud Shell VM
- Check & setup gcloud in your Cloud Shell

<https://cloud.google.com/sdk/docs/install>

<https://cloud.google.com/sdk/gcloud>

<https://cloud.google.com/sdk/docs/initializing>

GCP Basics

Cloud Logging and Monitoring

- Make sure all your Python Code has logging.
- For all activities that you performed on Google Cloud, find out your logs in cloud logging.
- <https://cloud.google.com/products/operations>
- <https://cloud.google.com/products/operations#section-6>
- <https://cloud.google.com/blog/products/management-tools/cloud-monitoring-improves-custom-dashboard-creation>