

## Assignment 6 - Google Cloud

1) Setup Cloud SQL service for a managed MySQL instance and run a few SQLs from your local machine using MySQL workbench. **(20 points)**

- Download and install MySQL workbench on your computer (just the workbench, no need to install entire MySQL unless you want to).

<https://www.mysql.com/products/workbench>

I have downloaded MySQL Workbench on my mac os machine. Attaching below screenshot:

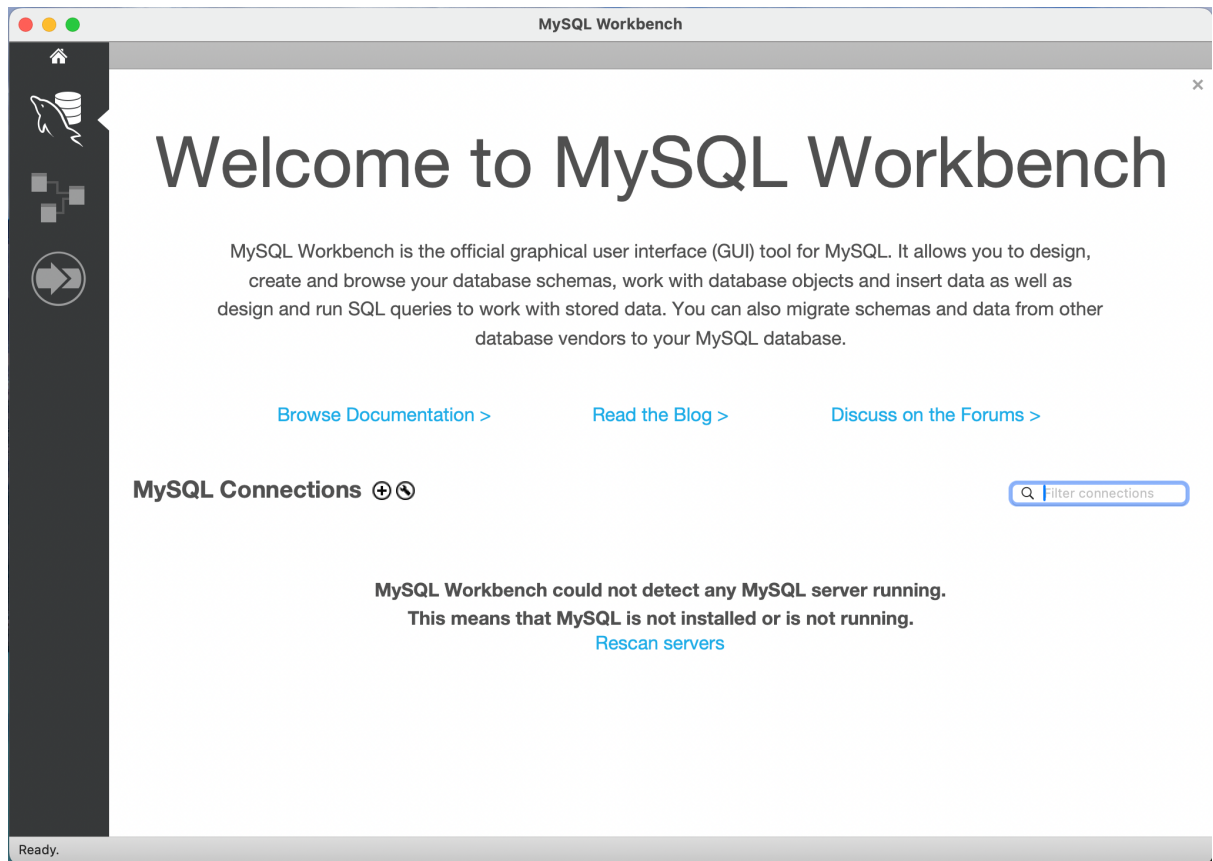


Fig 1: MySQL Workbench Dashboard

- Once workbench is installed, follow [GCP CloudSQL Service Setup](#) to setup your Cloud SQL managed instance.

We have created a new project in GCP (Assignment6). Attaching below screenshot:

Google Cloud

Search (/) for resources, docs, products, and more

Q

Search

New Project

Project name \*

Assignment-6

?

Project ID: assignment-6-423308. It cannot be changed later. [EDIT](#)

Billing account \*

My Billing Account

▼

Any charges for this project will be billed to the account you select here.

Organization \*

northwestern.edu

▼

?

Select an organization to attach it to a project. This selection can't be changed later.

Location \*

Student Projects

BROWSE

Parent organization or folder

CREATE

CANCEL

Fig 2: Creating new project in GCP

Created a VM (Virtual Machine) in GCP:

Google Cloud

Assignment-6

Search (/) for resources, docs, products, and more

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Search

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Compute Engine

VM instances

CREATE INSTANCE

IMPORT VM

REFRESH

Virtual machines

VM instances

Instance templates

Sole-tenant nodes

Machine images

TPUs

Committed use discounts

Reservations

Migrate to Virtual Machin...

Storage

Disks

Storage Pools

Snapshots

Marketplace

Release Notes

INSTANCES

OBSERVABILITY

INSTANCE SCHEDULES

VM instances

Filter Enter property name or value

Status	Name ↑	Zone	Recommendations	In use by	Internal IP	External IP	Connect
		assignment6-instance	us-west4-b		10.182.0.2 (nic0)	34.16.220.195 (nic0)	SSH

Related actions

Explore Backup and DR NEW

View billing report

Monitor VMs

Explore VM logs

Set up firewall rules

Patch management

Load balance between VMs

Fig 3: Created Virtual Machine in GCP

Created SQL Instance:

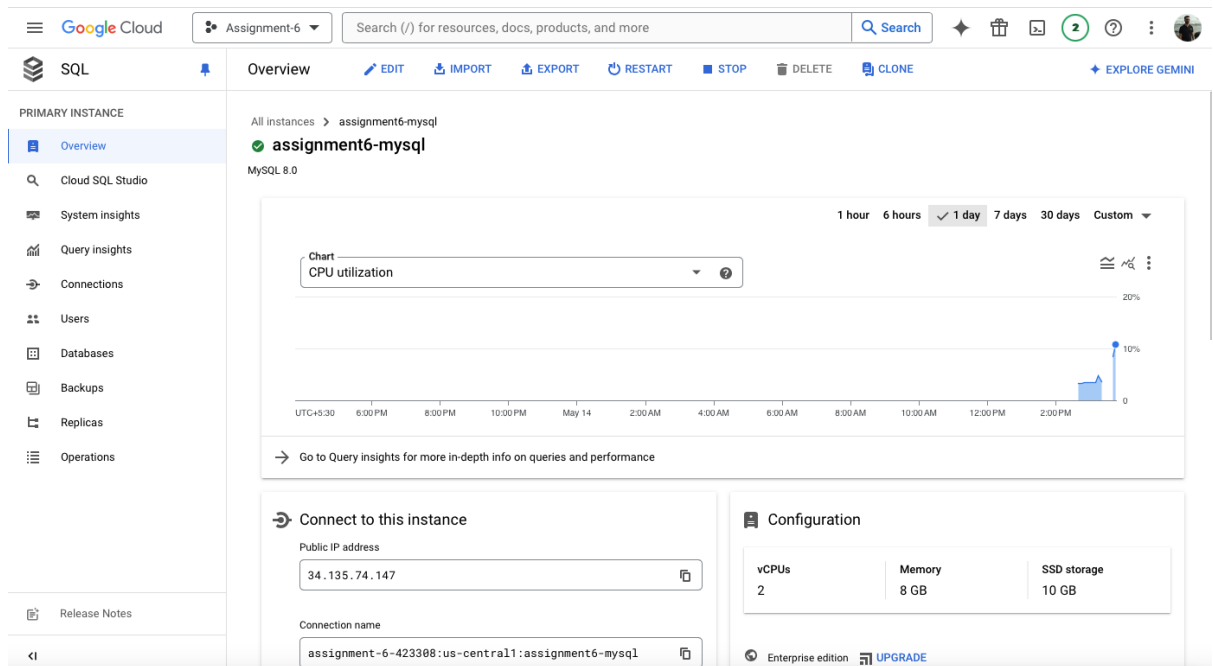


Fig 4: GCP SQL Server

Connected to Cloud SQL DB using MySQL workbench connection:

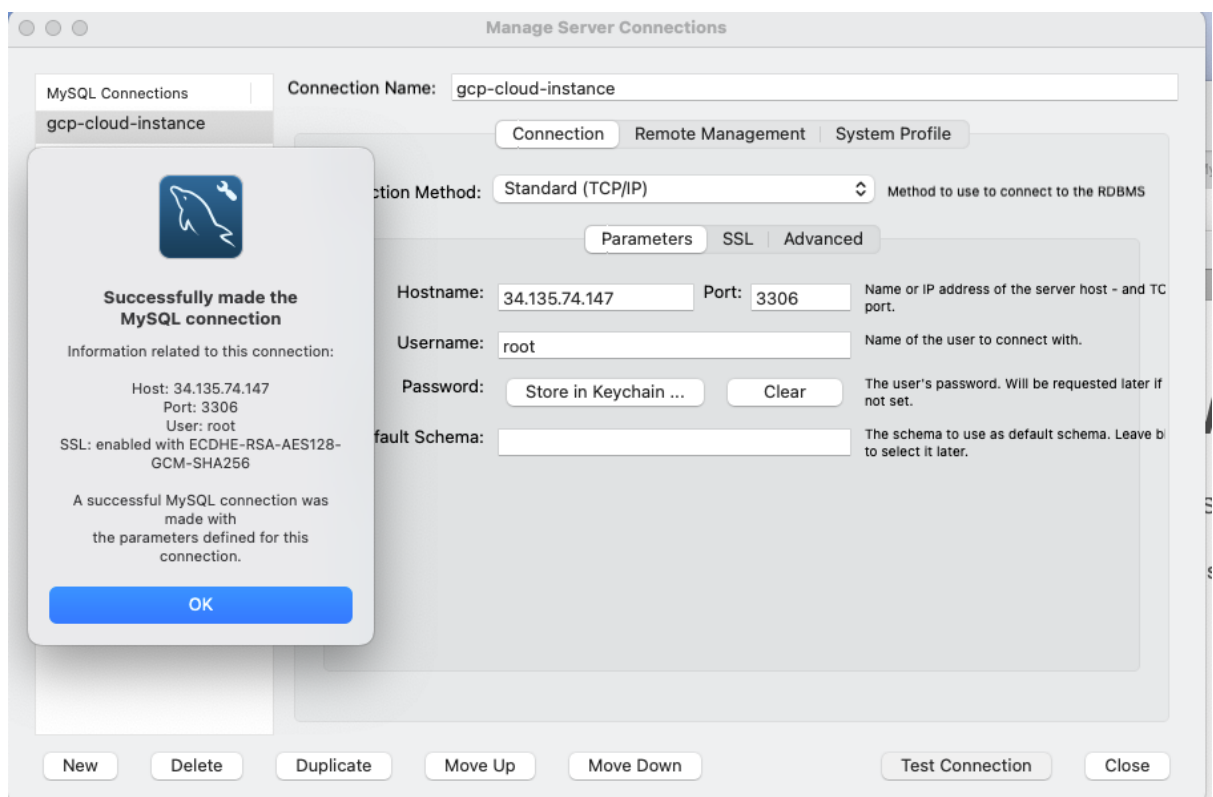


Fig 5: Screenshot of successful connection test with MySQL workbench and cloud sql server.

- Once all done, run a few SQL commands i.e. create a database, some tables, insert some data, sample SQLs can be found here <https://dev.mysql.com/doc/refman/8.0/en/sql-statements.html> or you can download and play with the sample Sakila database <https://dev.mysql.com/doc/sakila/en/sakila-installation.html>

We have downloaded and run different operations with sample Sakila database which we will explore in Panopto recording.

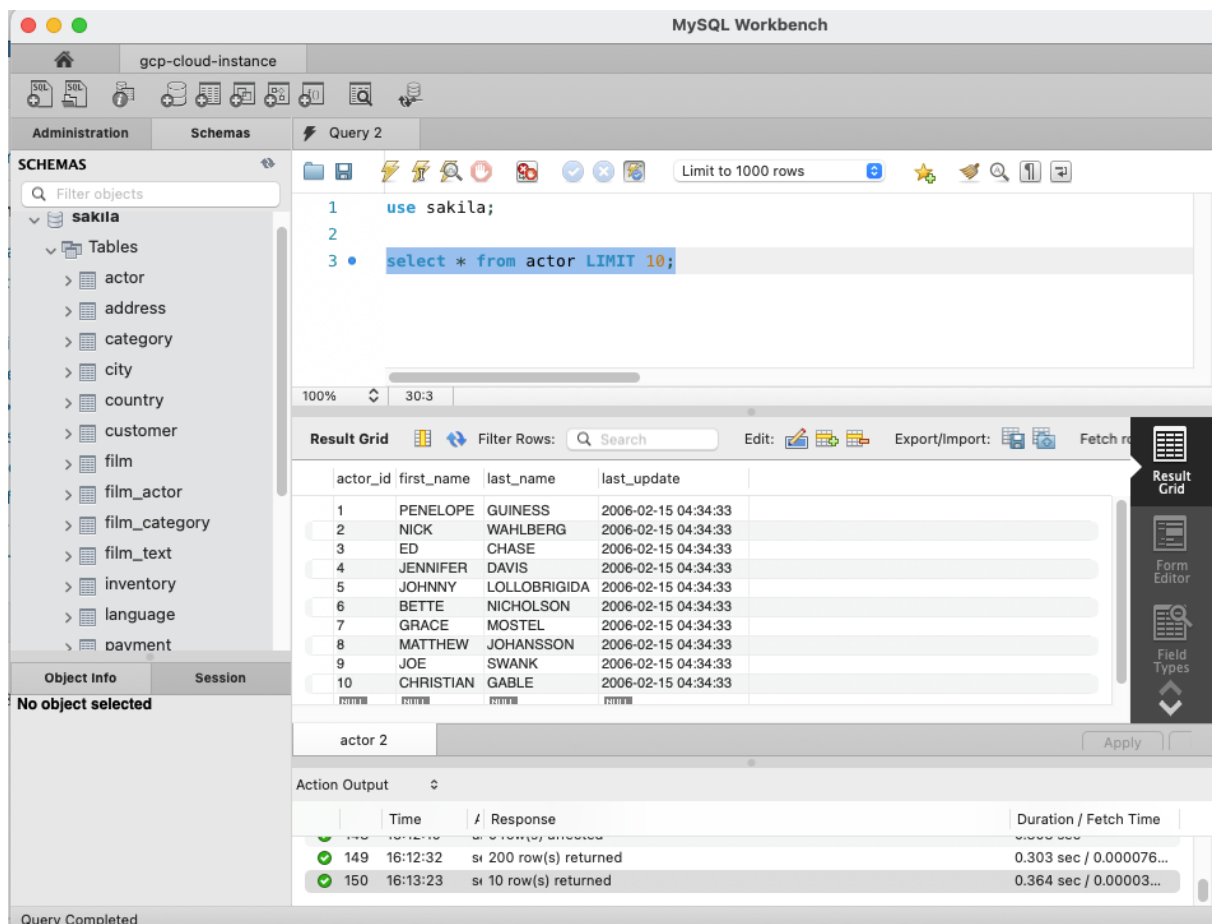


Fig 6: Running SQL Commands on MySQL Workbench

## 2) Complete one of the following GCP labs (20 points)

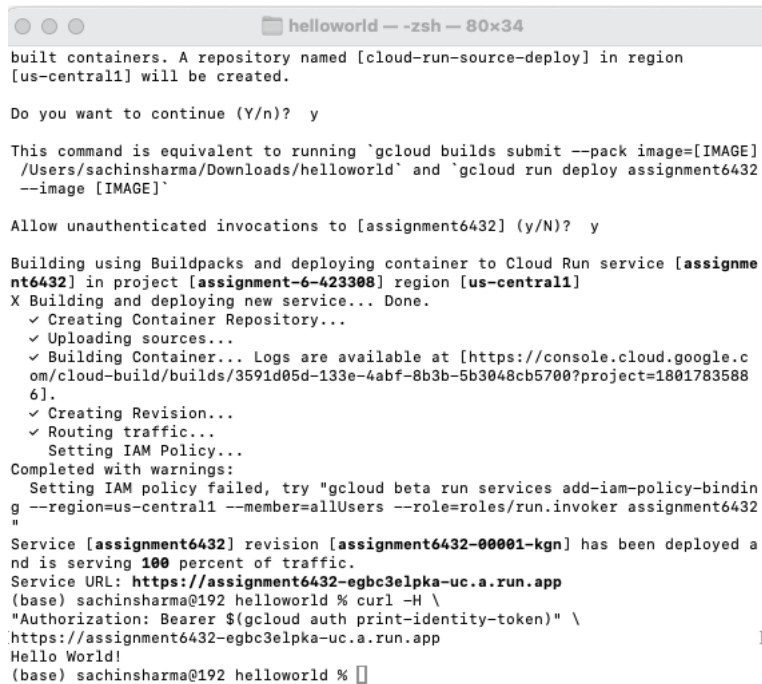
- <https://cloud.google.com/run/docs/quickstarts/build-and-deploy/deploy-go-service>

We have completed the above lab and deployed a sample 'helloworld' go application. Attaching the below screenshot of terminal of successful deployment.

Our app has authentication required as a part of security so we have to send a bearer token to access the app.

Below command is used to access the app:

```
curl -H \
"Authorization: Bearer $(gcloud auth print-identity-token)" \
https://assignment6432-egbc3elpka-uc.a.run.app
```



```
helloworld -- -zsh -- 80x34
built containers. A repository named [cloud-run-source-deploy] in region
[us-central1] will be created.

Do you want to continue (Y/n)? y

This command is equivalent to running `gcloud builds submit --pack image=[IMAGE]
/Users/sachinsharma/Downloads/helloworld` and `gcloud run deploy assignment6432
--image [IMAGE]`

Allow unauthenticated invocations to [assignment6432] (y/N)? y

Building using Buildpacks and deploying container to Cloud Run service [assignment6432] in project [assignment-6-423308] region [us-central1]
X Building and deploying new service... Done.
  ✓ Creating Container Repository...
  ✓ Uploading sources...
  ✓ Building Container... Logs are available at [https://console.cloud.google.com/cloud-build/builds/3591d05d-133e-4abf-8b3b-5b3048cb5700?project=18017835886].
  ✓ Creating Revision...
  ✓ Routing traffic...
  Setting IAM Policy...
Completed with warnings:
  Setting IAM policy failed, try "gcloud beta run services add-iam-policy-binding --region=us-central1 --member=allUsers --role=roles/run.invoker assignment6432"
Service [assignment6432] revision [assignment6432-00001-kgn] has been deployed and is serving 100 percent of traffic.
Service URL: https://assignment6432-egbc3elpka-uc.a.run.app
(base) sachinsharma@192 helloworld % curl -H \
"Authorization: Bearer $(gcloud auth print-identity-token)" \
https://assignment6432-egbc3elpka-uc.a.run.app
Hello World!
(base) sachinsharma@192 helloworld %
```

Fig 7: Golang lab code deployment using GCP CLI