## Lab 3-06: Creating a Database and Table with Cloud SQL

### Introduction

Google Cloud SQL is a fully managed relational database service that provides a simple, secure, and scalable way to store and manage databases on the cloud. It supports popular database engines such as MySQL, PostgreSQL, and SQL Server and provides automated backups, replication, and patch management. Cloud SQL also integrates with other GCP services, allowing you to build and deploy applications easily and efficiently.

### Problem

A company is currently using an on-premises database to manage its customer data, but they are experiencing frequent downtime and performance issues. The company needs to find a more reliable and scalable solution that can ensure high availability and improve performance. By migrating to Google Cloud SQL, the company can benefit from a fully managed and scalable database service that provides automated backups, replication, and patch management, enabling them to focus on their core business operations.

### Solution

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| 1. From the search bar at the top of the console, search for Cloud SQL.    2. Click Create instance.    3. Choose MySQL.    4. Set the following values:  Instance ID: hello-instance  Password: 12345  Database version: MySQL 5.7  Choose a configuration to start with: Development  Choose region and zonal availability > SPECIFY ZONES > Primary zone: us-central1-a  Customize your instance > SHOW CONFIGURATION OPTIONS > Machine Type: Standard  Click CREATE INSTANCE. It can take up to 15 minutes for it to finish being created.            5. After the instance is up and running, scroll down on the dashboard to, “Connect to this Instance.”  Click, “OPEN IN CLOUD SHELL.”    6. Cloud shell will already be populated with a command, i.e.:  gcloud sql connect hello-instance --user=root –quiet  7. Enter your password.    8. You are now connected to the MySQL instance once you see the mysql> prompt.  9. Check out any databases that were created within your instance:  SHOW DATABASES;  10. Create a new database:  CREATE DATABASE gaming;    11. Verify that the database was created:  SHOW DATABASES;    12. Use the gaming database to create a new table within it:  USE gaming;  13. Create a table and structure the data within the table:  CREATE TABLE games (name VARCHAR(20), system VARCHAR(15), date DATE);  14. Verify the table was created within the database:  SHOW TABLES; |