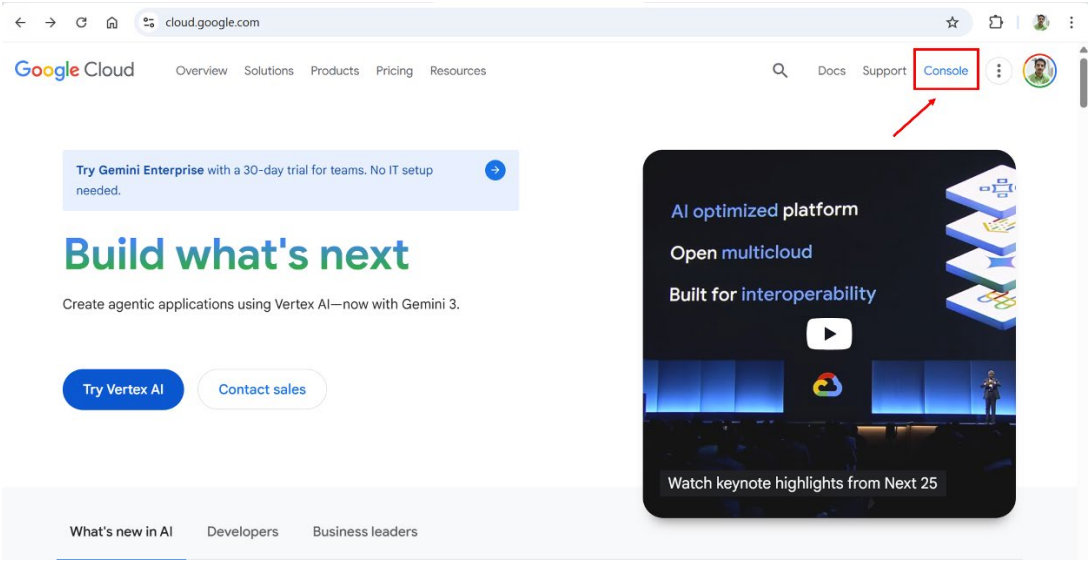
CLOUD COMPUTING LABORATORY

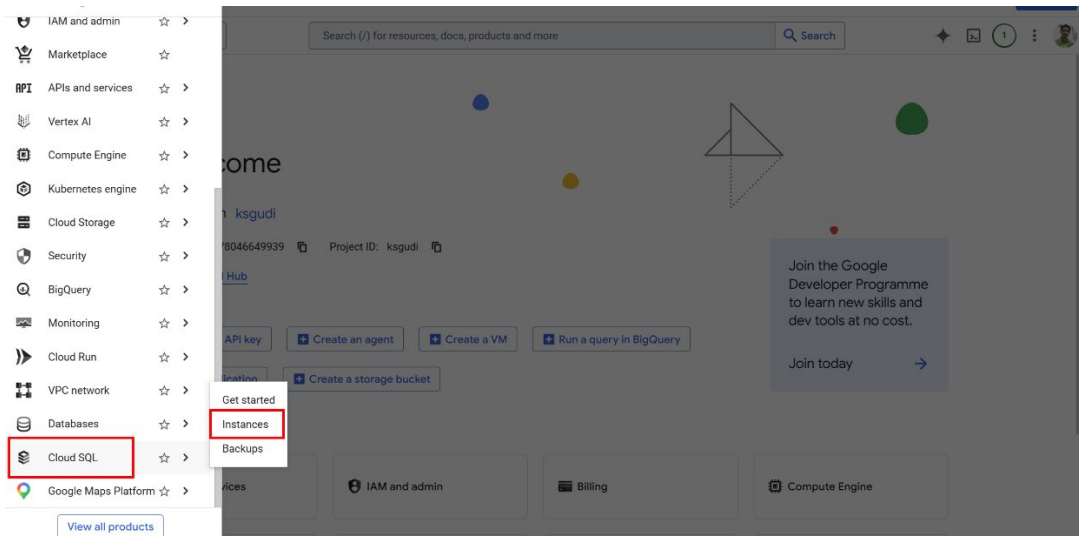
Experiment – 6:

Cloud SQL for MySQL: Discover how Google Cloud SQL for MySQL provide automated management and high availability for MySQL databases.

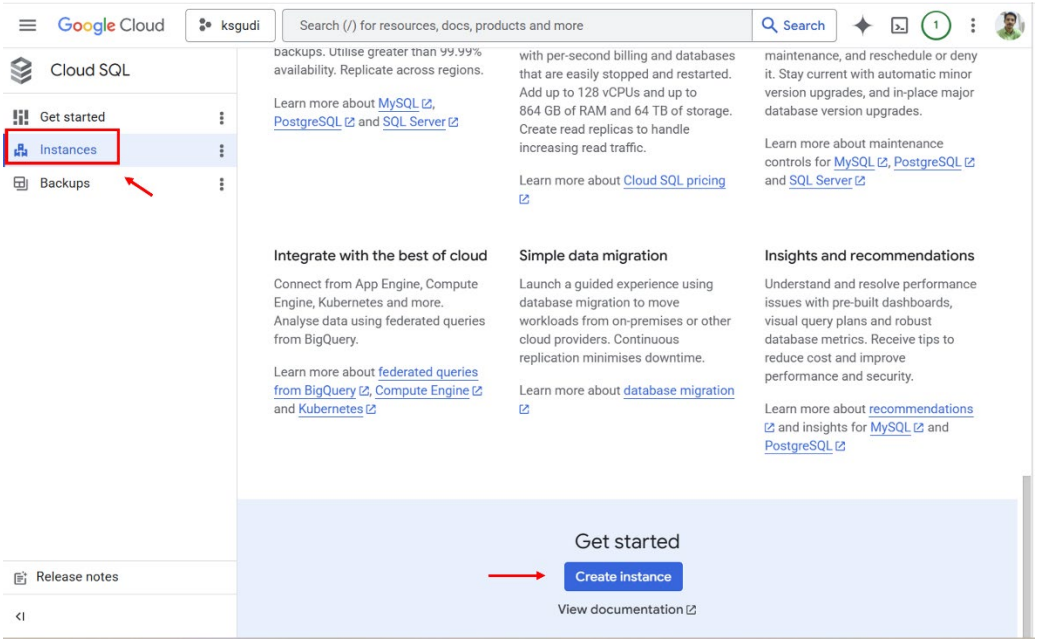
Step 1: From the Google Cloud homepage, click on **Console** to open the Google Cloud Console.



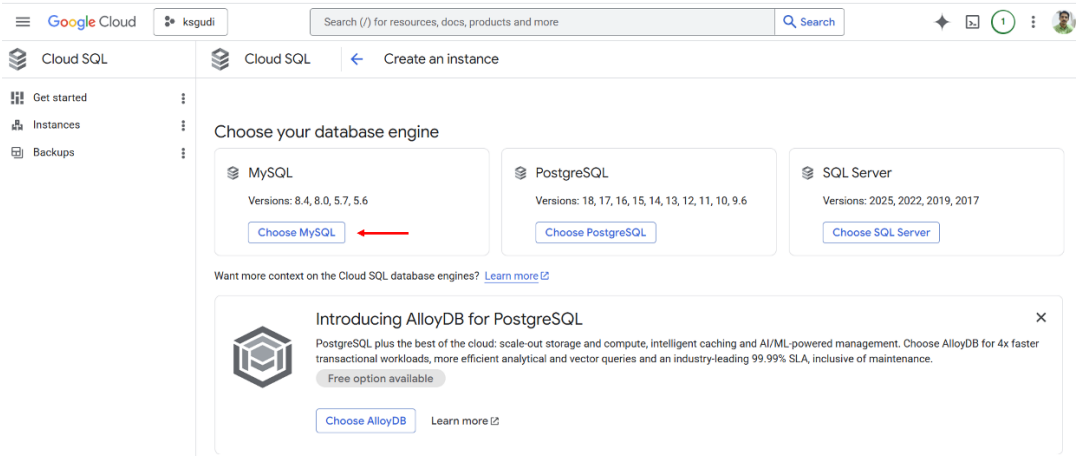
Step 2: From the Google Cloud Console, click on the navigation menu, select **Cloud SQL**, and then click on **Instances**.



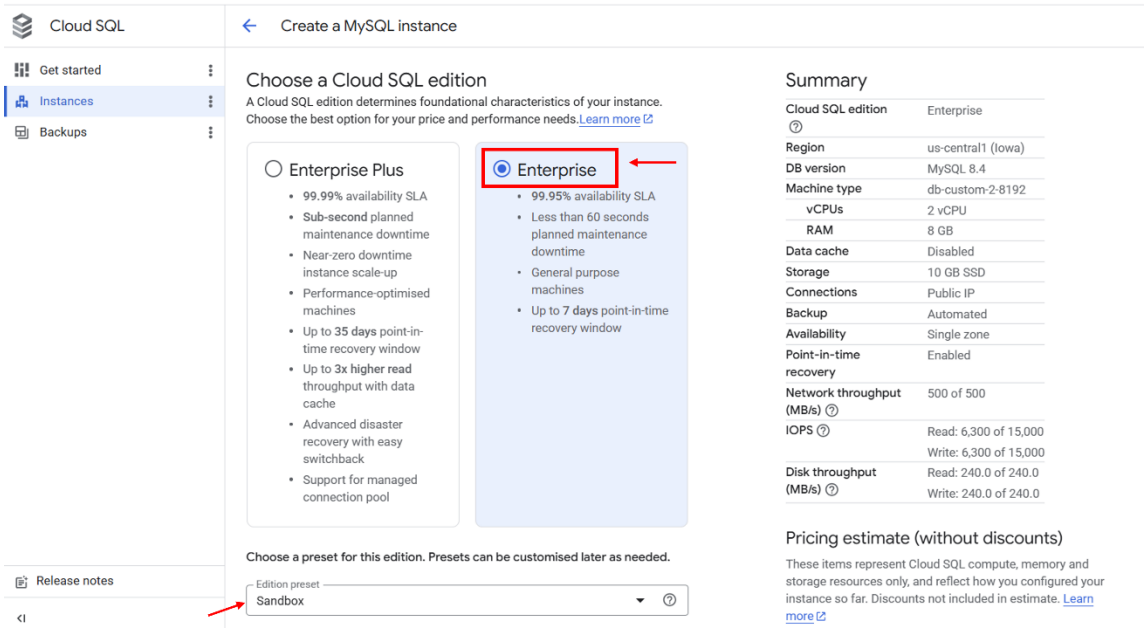
Step 3: Click **Create Instance** to start creating a new database instance.



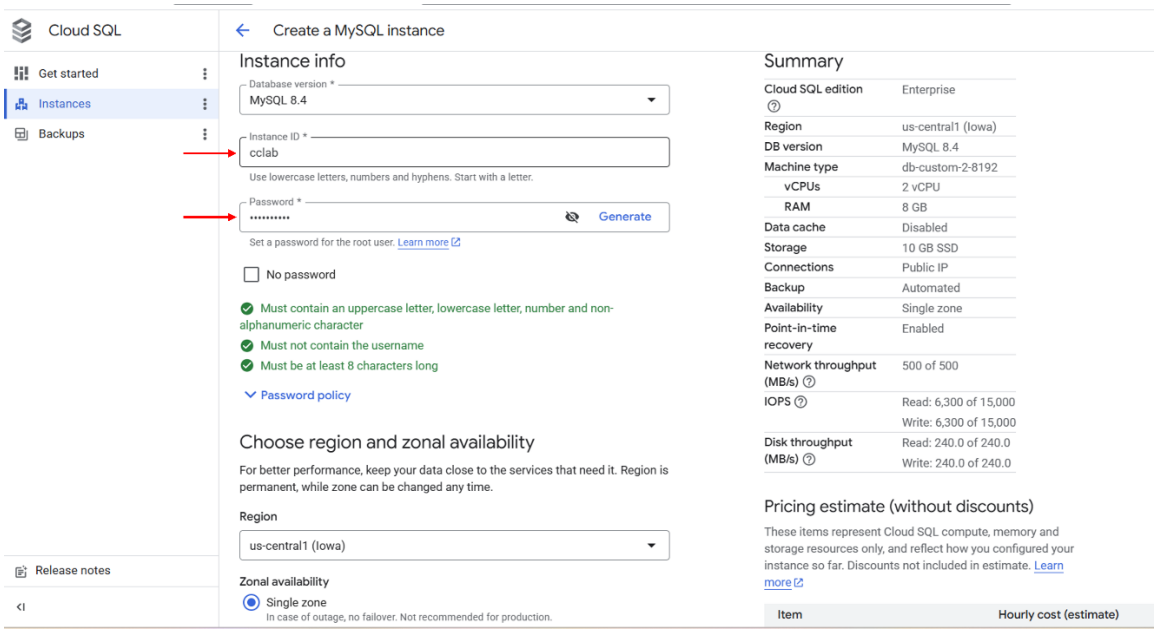
Step 4: Choose **MySQL** as the database engine.



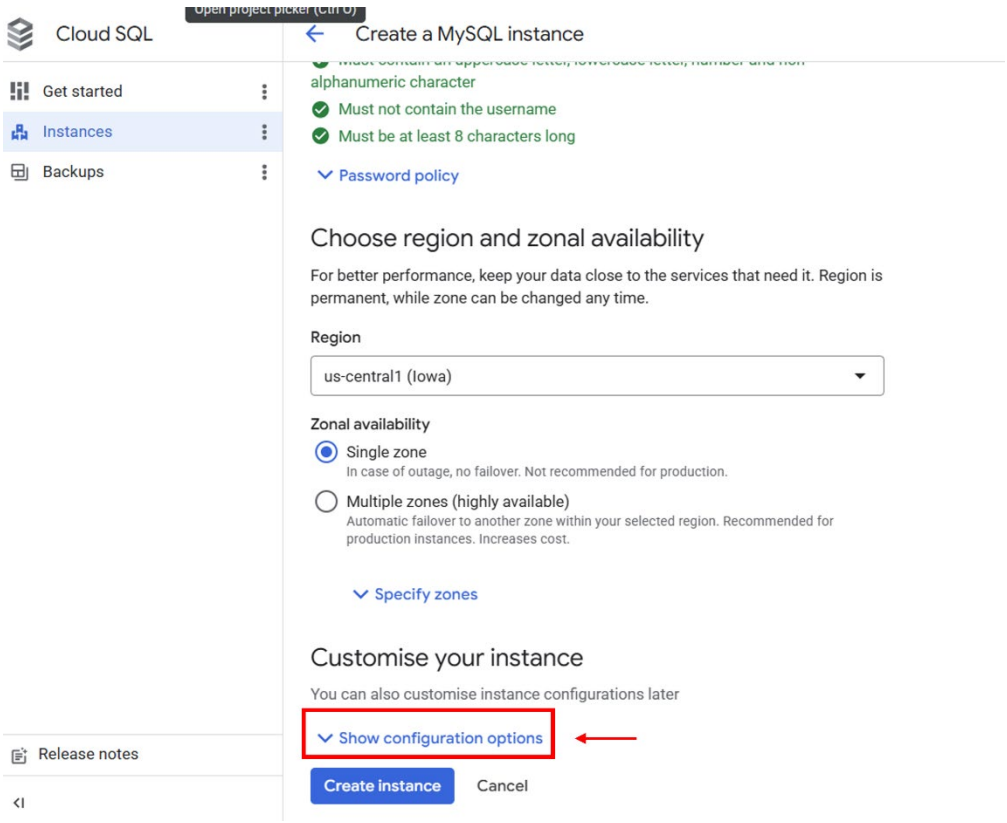
Step 5: Select **Enterprise edition with Sandbox preset**.



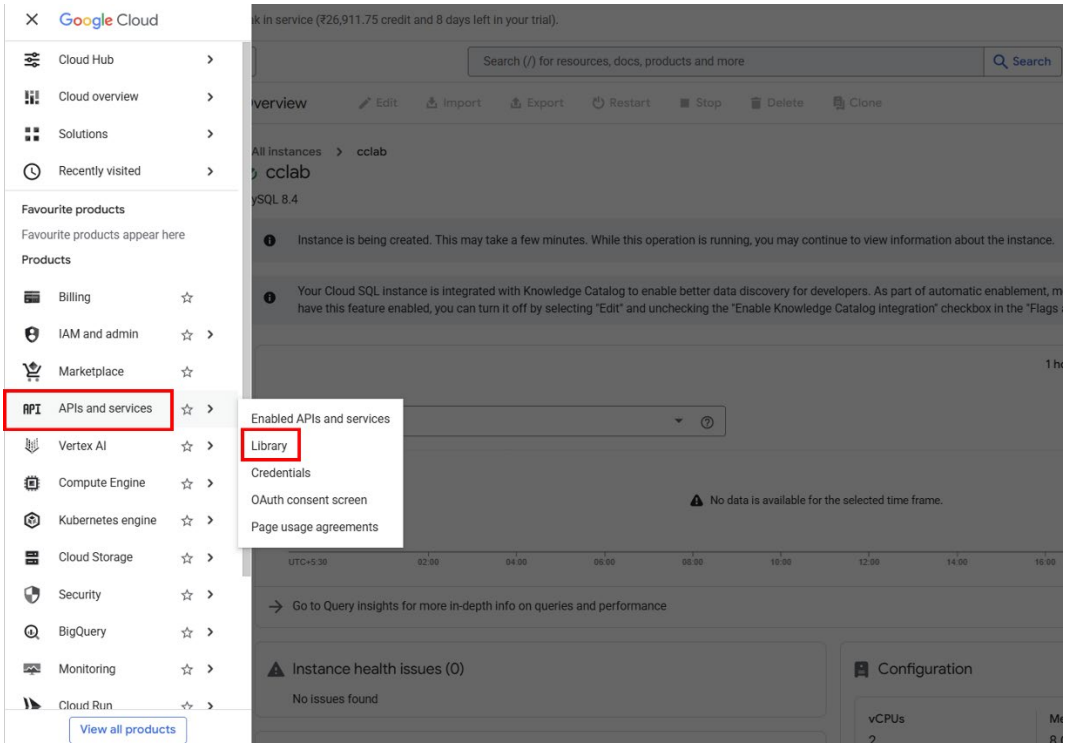
- Enter the **Instance ID (e.g., cclab)**, set a password (or select **No password**), choose **Region (us-central1 - Iowa)** with **Single zone**



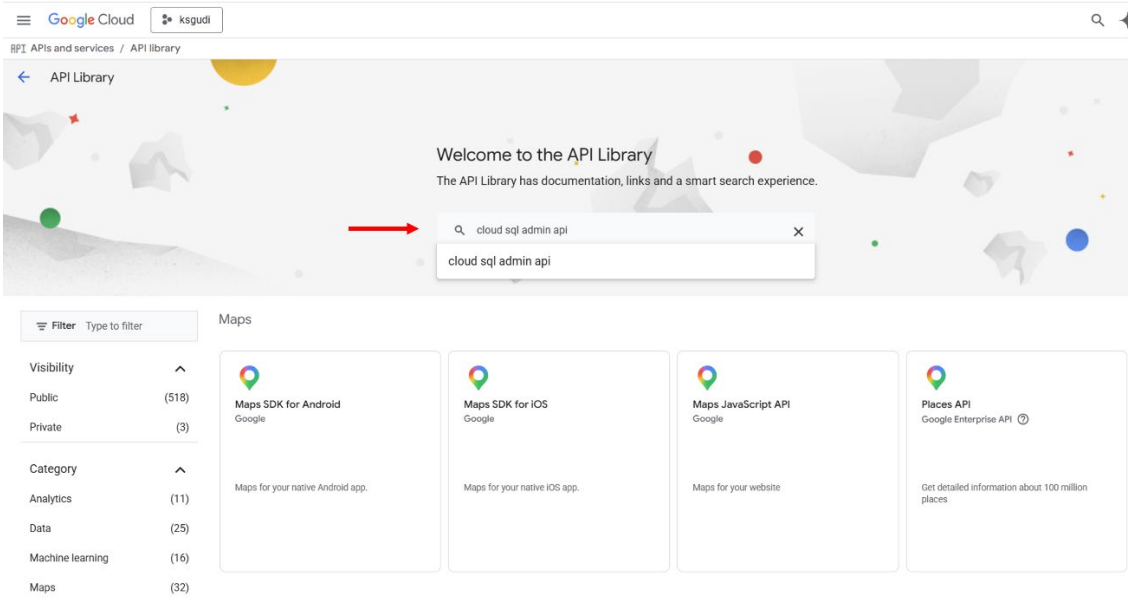
- Expand configuration options and keep default settings (including data protection), then click **Create Instance**.



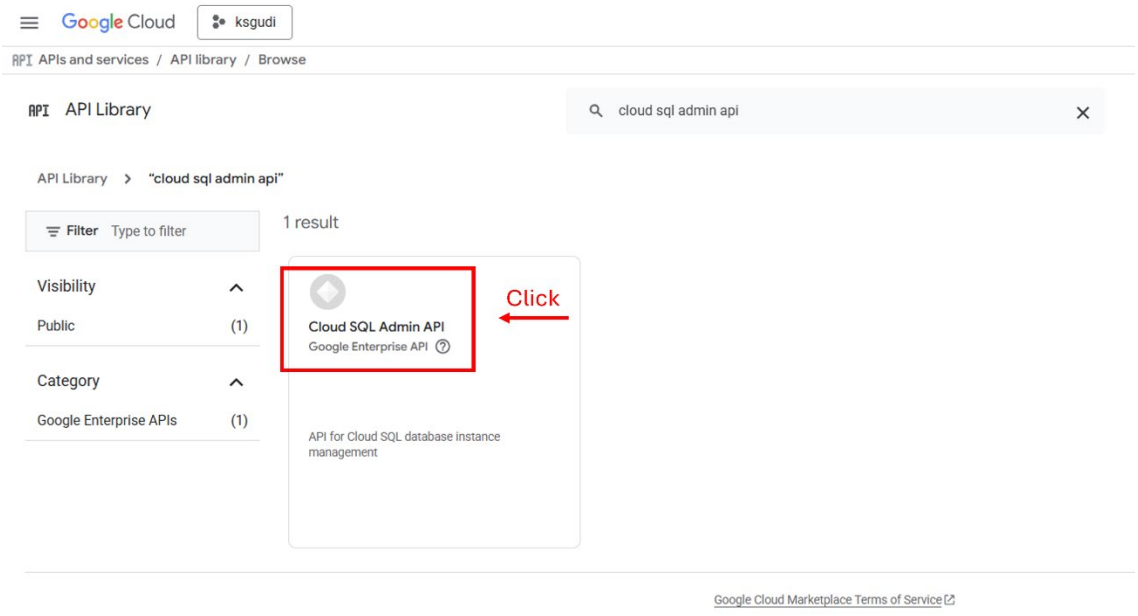
Step 6: Navigate to **APIs & Services → Library** from the navigation menu.



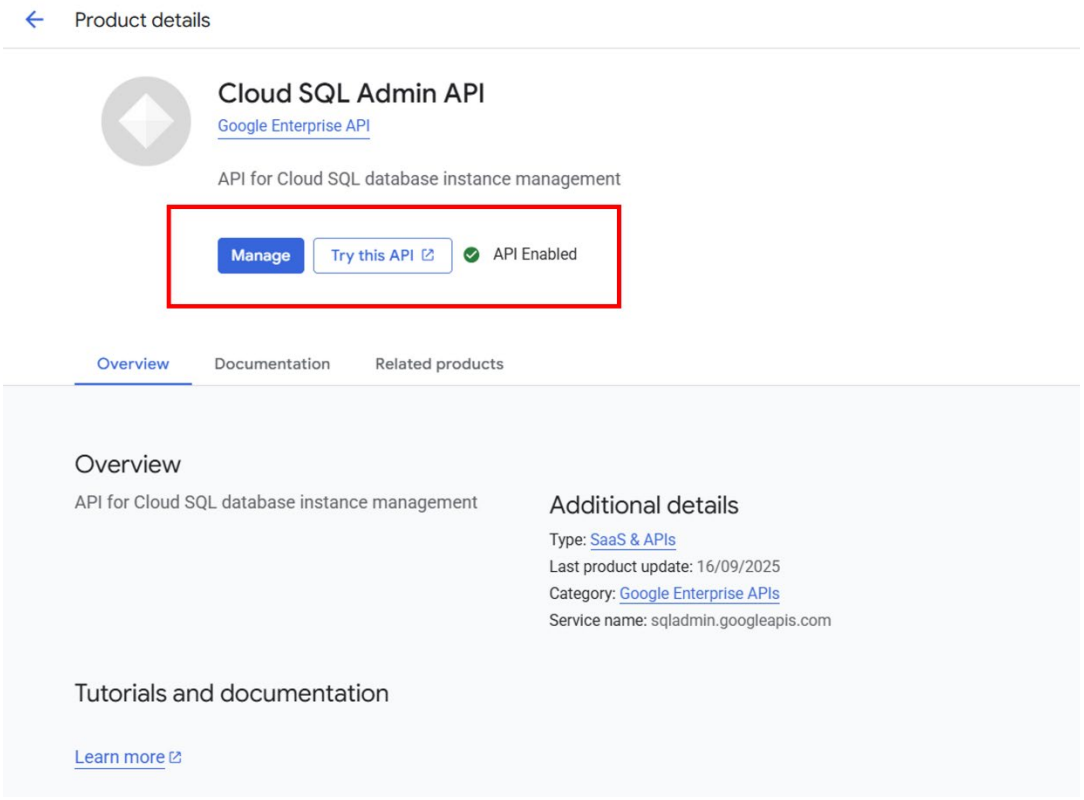
Step 7: Search for "**Cloud SQL Admin API**" in the API Library search bar.



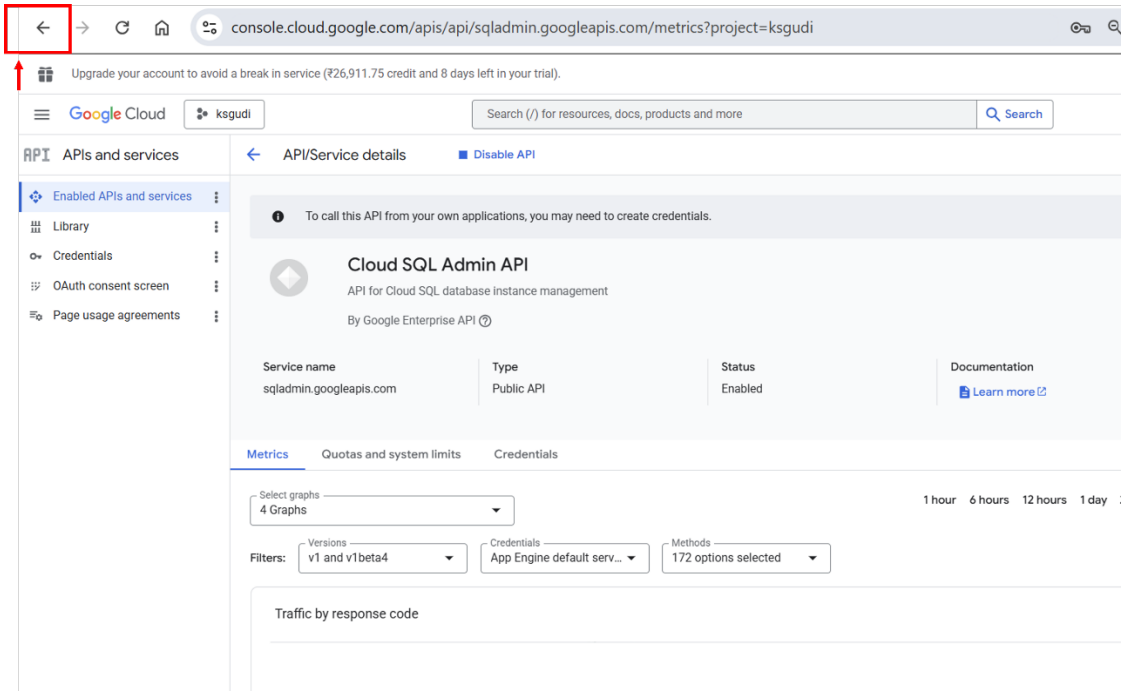
- Click on **Cloud SQL Admin API** from the search results.



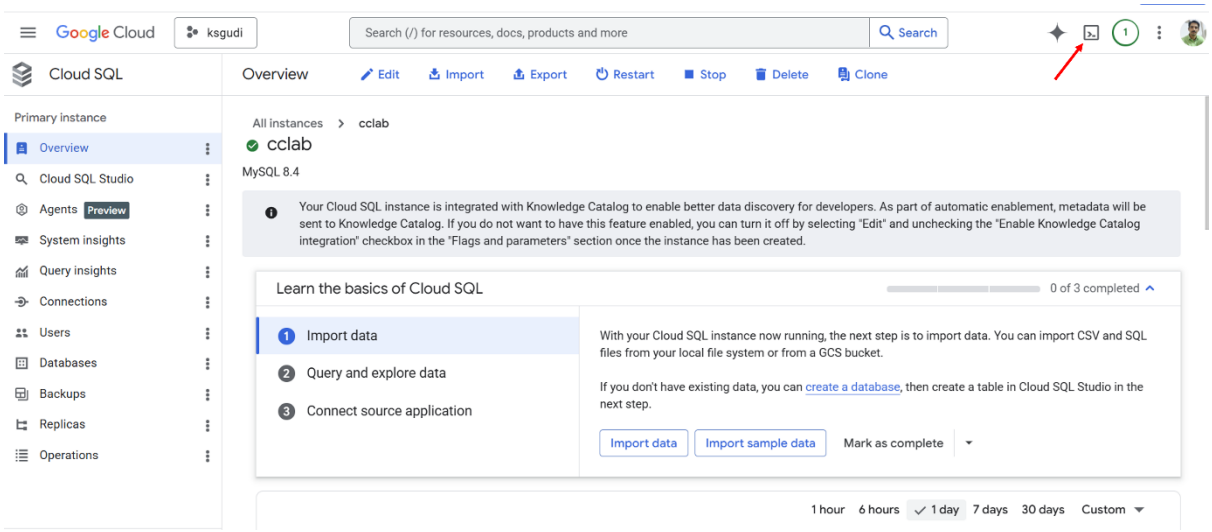
- Click **Enable** (if not already enabled) or verify that the **Cloud SQL Admin API is enabled**.



- Go to **Cloud SQL → Instances** and verify that the instance is created successfully. Click the **Back arrow** to return to the **overview page**



Step 8: Open **Cloud Shell Terminal** from the console.

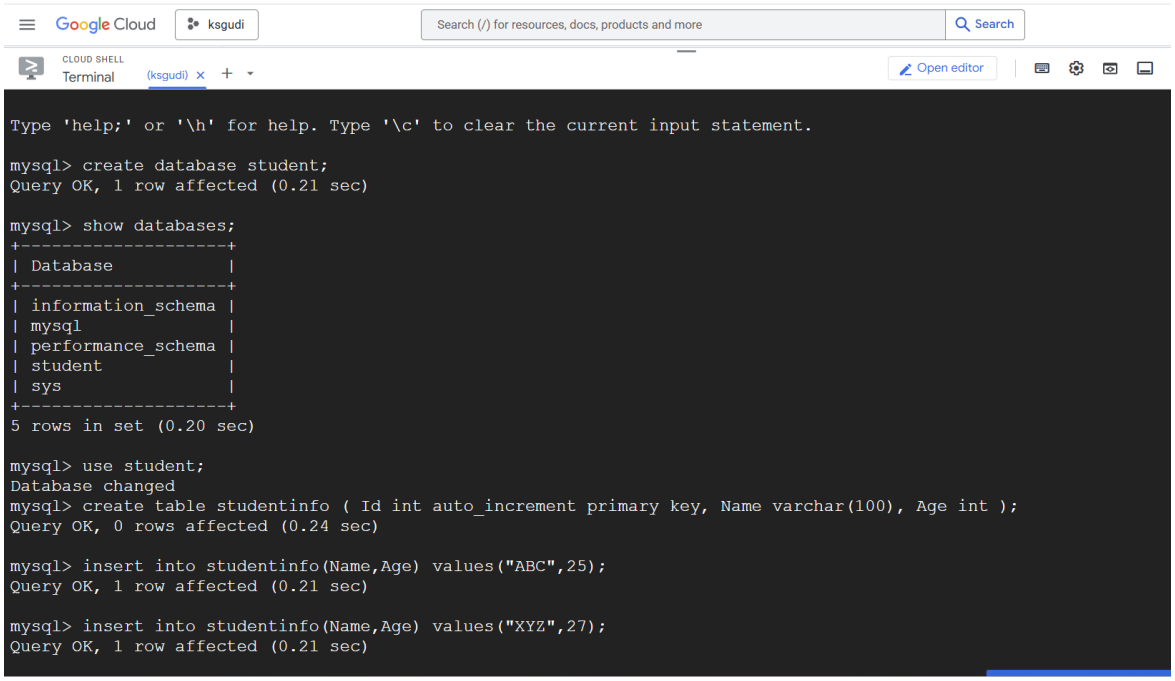


Step 9: Connect to the MySQL instance using:

```
gcloud sql connect <instance-name> --user=root
```

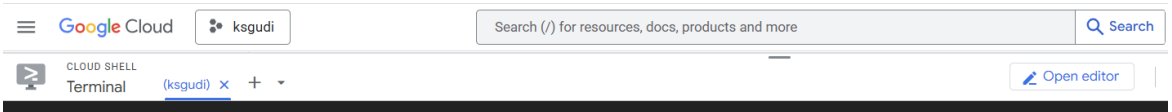
- Enter the password (if set) and confirm successful connection to the MySQL prompt.

Step 10: Execute SQL commands to create a database, create table, and insert records.



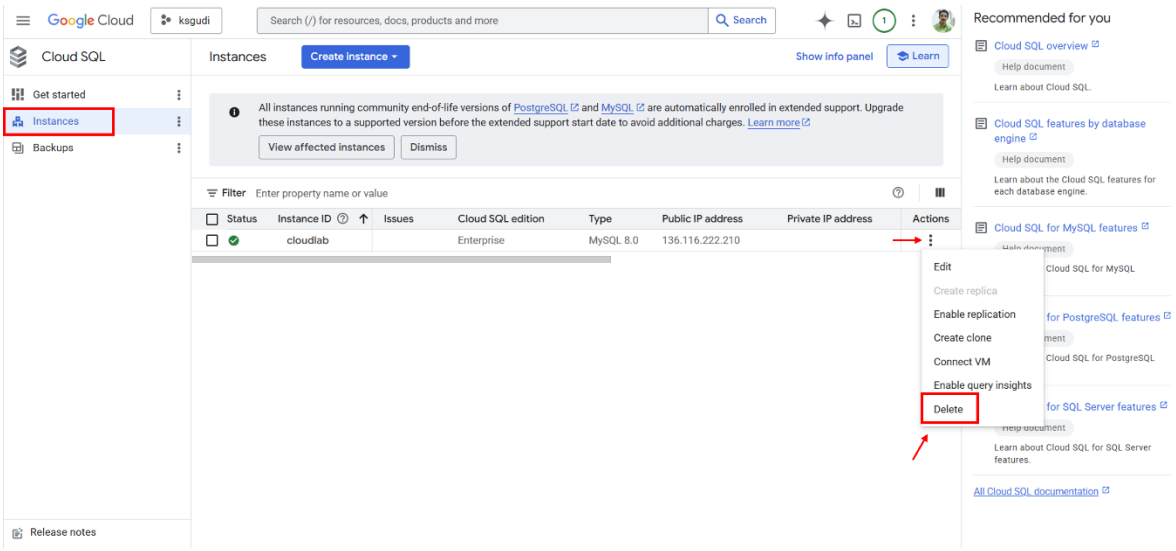

```
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> create database student;
Query OK, 1 row affected (0.21 sec)

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| performance_schema |
| student            |
| sys                |
+--------------------+
5 rows in set (0.20 sec)

mysql> use student;
Database changed
mysql> create table studentinfo ( Id int auto_increment primary key, Name varchar(100), Age int );
Query OK, 0 rows affected (0.24 sec)

mysql> insert into studentinfo(Name,Age) values("ABC",25);
Query OK, 1 row affected (0.21 sec)

mysql> insert into studentinfo(Name,Age) values("XYZ",27);
Query OK, 1 row affected (0.21 sec)
```

Step 11. Verify that the changes are reflected in the database.




```
mysql> insert into studentinfo(Name,Age) values("ABC",25);
Query OK, 1 row affected (0.21 sec)

mysql> insert into studentinfo(Name,Age) values("XYZ",27);
Query OK, 1 row affected (0.21 sec)

mysql> select * from studentinfo;
+----+------+------+
| Id | Name | Age  |
+----+------+------+
|  1 | ABC  |   25 |
|  2 | XYZ  |   27 |
+----+------+------+
2 rows in set (0.21 sec)

mysql> delete from studentinfo where Id=2;
Query OK, 1 row affected (0.21 sec)
```

Step 12: Navigate back to **Cloud SQL → Instances**, open the options menu **(three dots)** for the instance. Click **Delete** and confirm to remove the instance.



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