Open-Source Report

MariaDB

An Overview of the MariaDB Database Structure

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# What is MariaDB?

MariaDB is an open source relational database software that functions as an advanced, drop-in replacement for MySQL. It is accessed using via the mysql.connector library’s .connect function on the standard port 3306.

## What does this do for us?

The purpose of MariaDB in our application is to handle all of the generated data (users, images, comments, directmsg, messages, followers, likes) created by our website. After receiving information sent by the client forms, and after it is parsed by our Flask code, it stores them in MySQL tables for easy lookup and access later. The code we specifically use for this is located entirely within connection.py

<https://github.com/mysql/mysql-connector-python/blob/master/lib/mysql/connector/connection.py>

The connect() constructor we call generates a MySQLConnection object that represents our applications connection to our MariaDB database using our past in our host, user, password, and database name. When required, this object can call on the get\_database function and generate a database “cursor” which we use to navigate our and return database information.

Using a for loop we navigate our cursor for on specific rows and columns, which we then process into a template using Flask and output to the client. The main function we use to do this is cursor.execute, which performs the given database operation (a query or a command) and can either insert or receive information. This is capable of performing multiple operations at once.

As of Phase 2, whenever form information including user id’s, image titles, the image file itself, the image description, and the image likes, is received and parsed out by Flask, we use cursor.execute to INSERT INTO the data into our database. We then call commit on our MySQLConnection object to actually perform the operation.

When we need to pull from the table we use the same cursor.execute command to perform a SELECT statement on our image data. This information is placed within the cursor and is used as needed.

This is the extent of our MariaDB functionality. Just simple database storage and retrieval over port 3306.

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