

Open-Source Report MariaDB

An Overview of the MariaDB Database
Structure

Student Group:

Jesse Clapper, Joseph Naro, Matthew Wiewiorski

Teacher:

Jesse Hartloff

Course:

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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 runs over port 3306 by default. We access it in our Flask web application by using the 'mysql.connector' module.

What does this do for us?

The purpose of MariaDB in our application is to handle most of the persistent data storage (users, images, comments, directmsg, messages, followers, likes) for our web application.

We connect to the database by using the 'connect' function defined in 'mysql.connector's 'connection.py' file:

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

The 'connect' function generates a 'MySQLConnection' object that represents our web application's connection to the MariaDB database server using the provided host, user, password, and database name. The connection itself uses Python's built-in 'socket' library.

After connecting, we can use the connection object to generate a database "cursor" which is used to execute SQL queries and return any results (if applicable). The connection object is also used to commit any changes that were made to the database.

When executing SQL queries, we use the '%s' placeholder followed by a tuple with data in order to create and execute a prepared statement. This is done to prevent any SQL injection attack.

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mysql.connector is licensed under the version 2 of the GNU General Public License (GPLv2). The GPLv2 license is a protective license that prevents proprietization and requires derivative works to be released under a nearly identical license.

<https://github.com/mysql/mysql-connector-python/blob/master/LICENSE.txt>