



MariaDB Connectivity with Python/Flask

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MariaDB connectivity with Python/Flask

MariaDB is an open source database management system, that manage the data and the way to access to it. It is a fork of MySQL, the main goals of this software is to be compatible with MySQL, but including new features focused in performance. MariaDB is rapidly increasing its market share due it is totally free and open source and its compatibility with MySQL. We chose MariaDB because is really easy to work with it if you have worked with MySQL and because probably MariaDB will take advantage over MySQL shortly

Flask is a web framework. This means flask provides you with tools, libraries and technologies that allow you to build a web application. This web application can be some web pages, a blog, a wiki or go as big as a web-based calendar application or a commercial website.



Solutions:

Note:In this document we explain step by step Integration between Python/flask and MariaDB (To Insert data and display data into MariaDB) using MySQL connector.

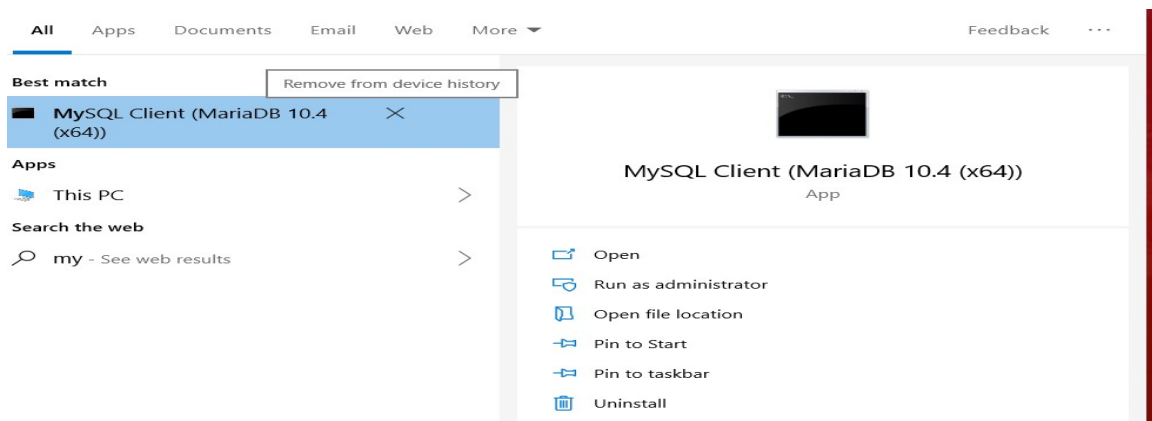
Steps :

Download MariaDB

We can download MariaDB from below URL-

Link:<https://downloads.mariadb.org/mariadb/10.4.7/>

Once its successfully downloaded installed it and after installation go to your system click on start button and search MySQL client its look something like this.



Open it and enter the password.If your screen loos like this congratulation you have successfully connected with MariaDB

```
MySQL Client (MariaDB 10.4 (x64)) - "C:\Program Files\MariaDB 10.4\bin\mysql.exe" "--defaults-file=C:\Program Files\MariaDB 10.4\data
Enter password: ****
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 45
Server version: 10.4.7-MariaDB mariadb.org binary distribution
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
MariaDB [(none)]> _
```

1) Create a database called test using the following command.

```
>> create database bisp;
```

2) In order to use the Database type

```
>>use bisp;
```

You will enter into the Database called Test.

3) Now create a table named test with parameters as Name and Roll Number.

```
>> create table student(name varchar(20) not null,roll varchar(20) not null);
```

varchar(20) means string of size 20 characters

4) To see the format of the fields in student.

```
>>desc student;
```

The following screen will display

```
mysql client (MariaDB 10.4 (x64)) - C:\Program Files\MariaDB 10.4\bin\mysql.exe --defaults-file=C:\Program Files\MariaDB 10.4\my.cnf
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 31
Server version: 10.4.7-MariaDB mariadb.org binary distribution
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
MariaDB [(none)]> use bisp;
Database changed
MariaDB [bisp]> desc student;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| name  | varchar(20) | NO |   |          |       |
| roll  | varchar(20) | NO |   |          |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.144 sec)

MariaDB [bisp]> _
```

How to connect with Flask:

- 1) Install MySQL client for python by using the following command in your flask project

```
>> pip install mysql-connect-python
```

- 2) Go to your config.py file and enter the following code.

```
from flask import Flask
from flask_sqlalchemy import SQLAlchemy

app = Flask(__name__)

app.config['SECRET_KEY'] = '*****'
app.config['SQLALCHEMY_DATABASE_URI'] =
'mysql://yourdatabase:yourdatabase@localhost/mysql'
db = SQLAlchemy(app)
```

- 3) For insert record in database. We are creating a html page called student.html

```
<!DOCTYPE html
<html lang="en">
<head>
<meta charset="UTF-8">
<title>Title</title>
</head>
<body>

<form action="/act" method="post">
<p>Name<input type="text" name="name"></p>
<p>Roll<input type="text" name="roll"></p>
<p>Submit<input type="submit" value="submit"></p>
</form>

</body>
</html>
```

4) Your main.py file

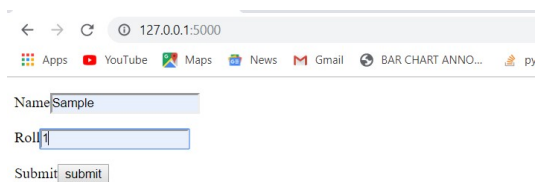
```
from flask import render_template, request
from flaskblog import app, db
import mysql.connector as mariadb

@app.route('/act', methods=['GET', 'POST'])
def act():
    if (request.method == 'POST'):
        try:
            name = request.form['name']
            roll = request.form['roll']
            conn = mariadb.connect(user='your username', password='your
password', database='your database name')
            cur = conn.cursor()
            sql="insert into student(name,roll) values('{}','{}').format(name,roll)
            cur.execute(sql)
            conn.commit()
            msg="data has been stored"
            return render_template('address.html', msg=msg)
        except:
            return "Database connection error"
```

Testing:

Steps to test Integartion

Step1: Start your flask app



A screenshot of a web browser window. The address bar shows the URL 127.0.0.1:5000. Below the address bar, there are several tabs: Apps, YouTube, Maps, News, Gmail, and BAR CHART ANNO... The main content area of the browser displays a simple web form. It has two input fields: the first is labeled 'Name' and contains the text 'Sample'; the second is labeled 'Roll' and is empty. Below these fields is a button labeled 'Submit'.

Step 2: Click on **submit data** Button.

Step 3: Fetch all the records

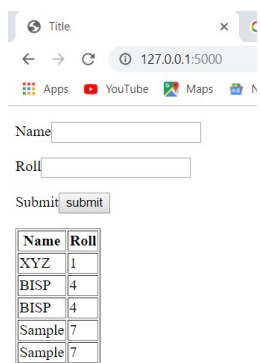
```
def student():
    cur.execute("select * from student")
    rows = cur.fetchall()
    return render_template('student.html', rows=rows)
```

Edit your student.html file by entering the following code

```
<table border="1">
<thead>
<th>Name</th>
<th>Roll</th>
</thead>
{% for row in rows %}
<tr>
<td>{{row[0]}}</td>
<td>{{row[1]}}</td>
</tr>
{% endfor %}

</table>
```

Run the server and see the all records available in mariaDb



That's It Thanks for reading this