MariaDB Connectivity with Python/Flask

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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.

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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.

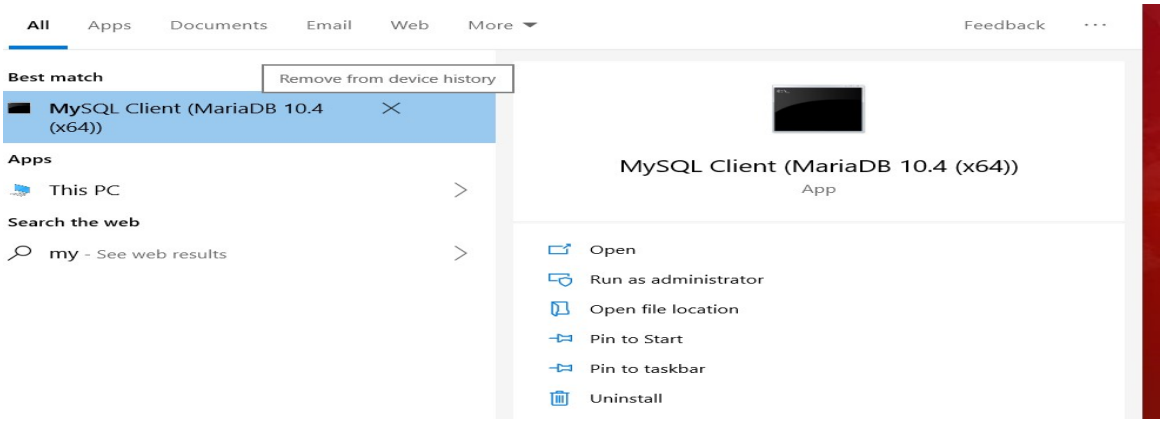
Steps :

Download MariaDB

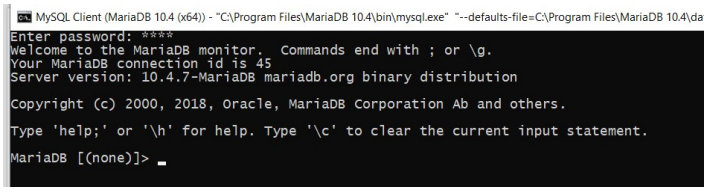
We can download MariaDB from below URL-

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



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.

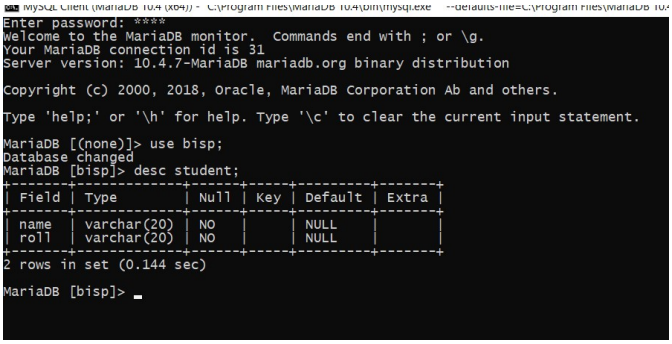
   >> create table student(name varchar(20) not null,roll varchar(20) not null);

   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



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_sqlalchemyimport 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

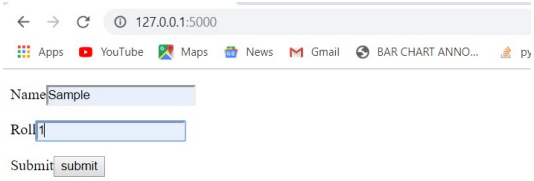
```
from flask import render_template,request
from flaskblog import app, db
import mysql.connector as mariadb

@app.route('/act',methods=['GET','POST'])
defact():
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



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

Step 3: Fetch all the records

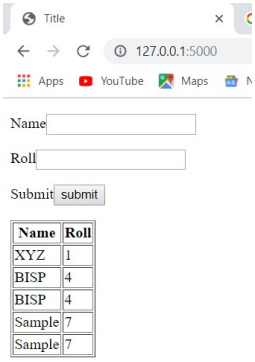
```
defstudent():
cur.execute("select * from student")
    rows = cur.fetchall()
return render_template('student.html',rows=rows)
```

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