IOT21-writing dht sensor data to mysql db

PgP 9/5/2022-trying to use mariadb but could not get past the error utf-8 unsupported-shown below.

So will try using postgres.-too much hassle, back to mariadb

**PgP 9/7/2022, redid pip for 8.0.29, and it finally worked!  
PgP 10/28/2023, see below, use modified command**

Text

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Python script-see w3: <https://www.w3schools.com/python/python_mysql_insert.asp>

Install mysql python connector: sudo pip install mysql-connector-python==8.0.29

Note: had to specify connector version, otherwise 8.0.30 gives error “UTF-8 unsupported”

10/28/2023: note, connector is now at 8.0.33, so can use:  
sudo pip3 install mysql-connector-python

Graphical user interface, text

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Make sure for odbc to use 64 bit windows connector: <https://dev.mysql.com/doc/connector-odbc/en/connector-odbc-installation-binary-windows.html> (done in IOT20, 9/22)

use myphpadmin to setup connector, if needed (or just use : user/user

create new mysql sensor db-

figure out auto\_increment field for record id:

<https://dev.mysql.com/doc/refman/8.0/en/example-auto-increment.html>

Helpful for troubleshooting-

Remember you can use powershell to ssh pi@192.... And then run mySqL to check out db is up and running ok.

Connecting to phpmyadmin: <http://192.168.1.108/phpmyadmin>; or localhost/phpMyAdmin

Configuring mySql for remote access: <https://phoenixnap.com/kb/mysql-remote-connection>

Look into MySQL workbench-is it better than phpMyAdmin? <https://www.mysql.com/products/workbench/>

See: <https://tableplus.com/blog/2018/10/phpmyadmin-vs-mysql-workbench-vs-tableplus.html> where it appears phyMyAdmin is fine for our needs-web interface good in lab setting

See w3schools for inserting records into mysql using python:  
<https://www.w3schools.com/python/showpython.asp?filename=demo_mysql_insert>   
  
9/7/2022 code that works:

# insert.py, inserts record into MySQL database

# PgP 9/5/2022

from grovepi import \*

import mysql.connector # for RPi must be version 8.0.29 or earlier, otherwise 'UTF-8 unsupported' error

import datetime

dht\_sensor\_port = 5 # Digital Port for DHT sensor

dht\_sensor\_type = 0 # use 0 for the blue-colored sensor-DHT11 and 1 for the white-colored sensor-DHT22

mydb = mysql.connector.connect(

host="192.168.1.15",

user="user",

password="user",

database="sensor"

)

mycursor = mydb.cursor()

while True:

try:

[temp,hum] = dht(dht\_sensor\_port,dht\_sensor\_type)

temperature = str(int(temp \* 9 / 5 + 32))

humidity = str(int(hum))

timestamp = datetime.datetime.now()

sql = "INSERT INTO dht(temperature, humidity, timestamp) VALUES (%s, %s, %s)"

val = (temperature, humidity, timestamp)

mycursor.execute(sql, val)

mydb.commit()

print("Temp: ", temperature, "Humidity: ",humidity, "Time: ",timestamp)

time.sleep(60)

except (IOError,TypeError) as e:

print("Error")

Screenshot of Access odbc into mysql:

Graphical user interface, application, table

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Same data on Rpi from maria dB:

A picture containing text

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Below is 10/26/2023 running Python insert.py to send dht to mysql, using ot.winona.edu to examine results from home:

A screenshot of a computer

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A screenshot of a computer

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Odbc:

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Another idea, 10/29/2023- update crontab so that database insertion programs begin again after morning update/upgrade:

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