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Importing data from a MySQL database into a Pandas data frame including column names [duplicate]

Asked 3 years, 3 months ago Active 23 days ago Viewed 49k times

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[How to convert SQL Query result to PANDAS Data Structure?](#) 17 answers

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I am importing data from a MySQL database into a Pandas data frame. The following excerpt is the code that I am using:

```
import mysql.connector as sql
import pandas as pd

db_connection = sql.connect(host='hostname', database='db_name', user='username', password=
db_cursor = db_connection.cursor()
db_cursor.execute('SELECT * FROM table_name')

table_rows = db_cursor.fetchall()

df = pd.DataFrame(table_rows)
```

When I print the data frame it does properly represent the data but my question is, is it possible to also keep the column names? Here is an example output:

	0	1	2	3	4	5	6	7	8
0	:ID[giA0CqQcx+(9kbuSKV==	NaN	NaN	None	None	None	None	None	None
1	1XB+jIS)DN!CXmj>0(P8^]==	NaN	NaN	None	None	None	None	None	None
2	1XB+jIS)DN!CXmj>0(P8^]==	NaN	NaN	None	None	None	None	None	None
3	1XB+jIS)DN!CXmj>0(P8^]==	NaN	NaN	None	None	None	None	None	None
4	1XB+jIS)DN!CXmj>0(P8^]==	NaN	NaN	None	None	None	None	None	None

What I would like to do is keep the column name, which would replace the pandas column indexes. For example, instead of having 0, the column name would be: "First_column" as in the MySQL table. Is there a good way to go about this? or is there a more efficient approach of importing data from MySQL into a Pandas data frame than mine?

python mysql sql pandas numpy

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edited Jan 10 '18 at 22:34



MaxU

135k ● 16 ● 155 ● 212

asked Jun 9 '16 at 15:28



vFlav

374 ● 1 ● 3 ● 7

marked as duplicate by [Bhargav Rao](#) ♦ python Jun 9 '16 at 20:32

This question has been asked before and already has an answer. If those answers do not fully address your question, please [ask a new question](#).

why don't you use `pd.read_sql()`? – [MaxU](#) Jun 9 '16 at 15:31

- 6 The question here is related to *MySQL db* - and not *SQLAlchemy* - as asked in the [duplicate](#). `pd.read_sql()` does not support mysql connection. This question should not be marked as a duplicate. To answer the query: `df = pd.DataFrame(table_rows, columns=db_cursor.column_names)` will do what is asked. – [kneewarp](#) Apr 8 '18 at 10:15 ✎
- 1 @kneewarp you should post this as an answer. The accepted answer will not work with a MySQL connection, which the OP requested. – [kainC](#) Jul 21 '18 at 21:45

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1 Answer

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IMO it would be much more efficient to use pandas for reading data from your MySQL server:

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```
from sqlalchemy import create_engine
import pymysql

db_connection_str = 'mysql+pymysql://mysql_user:mysql_password@mysql_host/mysql_db'
db_connection = create_engine(db_connection_str)

df = pd.read_sql('SELECT * FROM table_name', con=db_connection)
```

this should also take care of column names...

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[edited Aug 28 at 10:35](#)

[answered Jun 9 '16 at 15:32](#)



[MaxU](#)


135k • 16 • 155 • 212

In my case this worked, but couldn't query the table directly anymore until I closed the connection:

```
db_connection.close() – HaMi Aug 14 at 18:11 ✎
```


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