

Python - Work with MySQL database

Inner join

- Level: Basic

In this example, we illustrate how Python can be used within MatDeck to work with MySQL database. First we will use MySQL Connector/Python to establish a connection to database with given name, display 'software' and 'company' tables data and after that we will use inner join query to display software *Name* from 'software' table and company *Name* from 'company' table where *Number* value in both tables are the same.

Inner join query

The task is to establish the connection to MySQL Database, to display Name value from 'software' table and company *Name* from 'company' table on rows which Number value is the same on both tables.

```
UserVal:= "test_user"
PassVal:= "Test123"
HostVal:= "localhost"
DatVal:= "matdeck"
DVal:= "mysql"
PortVal:= 3306
```

Connection Parameters

Code

```
1 #py
2 import mysql.connector as SQLCON
3
4 # Connecting to the server
5 conn = SQLCON.connect(user = 'test_user',
6                       password = 'Test123',
7                       host = 'localhost',
8                       database= 'matdeck')
9
10 # Preparing a cursor object
11 cursorObj=conn.cursor()
12
13 #Print all from table 'software'
14 cursorObj.execute("SELECT * FROM software")
15 records = cursorObj.fetchall()
16 print("Table 'software' data:")
17 for row in records:
18     print(row)
19 print("\n")
20
21 #Print all from table 'company'
22 cursorObj.execute("SELECT * FROM company")
23 records = cursorObj.fetchall()
24 print("Table 'company' data:")
25 for row in records:
26     print(row)
27 print("\n")
28
29
30
```

```

31 # Select query with inner join
32 cursorObj.execute("SELECT software.Name as 'Software', company.Name as
'Company' FROM software JOIN company ON software.Number = company.Number")
33
34 # Display query results
35 records = cursorObj.fetchall()
36 print("Inner join results:")
37 for row in records:
38     print(row)
39
40 # Disconnecting from the server
41 conn.close()
42 ###

```

Output

```

C:\WINDOWS\system32\cmd.exe
C:\Users\Milos\Desktop\Python Examples\py_db8>python.exe
Table 'software' data:
('NewSoftware', 157)
('NewSoftware', 157)
('ThirdSoftware', 628)
('MatDeck', 1)
('OtherSoftwares', 999)

Table 'company' data:
(1, 'LabDeck', 1)
(2, 'Company 1', 157)
(3, 'Company 2', 456)
(4, 'Company 3', 628)
(5, 'Company 4', 999)
(6, 'Company 5', 1258)

Inner join results:
('MatDeck', 'LabDeck')
('NewSoftware', 'Company 1')
('NewSoftware', 'Company 1')
('ThirdSoftware', 'Company 3')
('OtherSoftwares', 'Company 4')

```