MatDeck - Work with MySQL database

Inner join

- Level: Basic

In this example, we illustrate how MatDeck can be used to work with MySQL database. We will use db_connect() function to establish a connection to database, and db_query() function 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"   DVal **:=** "mysql"   Connection Parameters
HostVal **:=** "localhost"   PortVal **:=** 3306
DatVal **:=** "matdeck"

Query Strings

quVal **:=** "SELECT software.Name as 'Software', company.Name as 'Company' FROM"

quVal **+=** " software JOIN company ON software.Number = company.Number"

Connecting To Database

conn **:=** db_connect$\big($DVal , "Name" , HostVal , PortVal , UserVal , PassVal , DatVal$\big)$

Display 'software and 'company'' tables Data

dat **:=** db_query$\big($conn , "SELECT · FROM Software"$\big)$

dat1 **:=** db_query$\big($conn , "SELECT · FROM company"$\big)$

dat =

Name	Number
"NewSoftware"	157
"NewSoftware"	157
"ThirdSoftware"	628
"MatDeck"	1
"OtherSoftwares"	999
"NewSoftware"	157

dat1 =

id	Name	Number
1	"LabDeck"	1
2	"Company 1"	157
3	"Company 2"	456
4	"Company 3"	628
5	"Company 4"	999
6	"Company 5"	1258

$$\text{dat2} := \text{db\_query}\big(\text{conn}, \text{quVal}\big)$$

$\text{dat2} =$

Software	Company
"NewSoftware"	"Company 1"
"NewSoftware"	"Company 1"
"ThirdSoftware"	"Company 3"
"MatDeck"	"LabDeck"
"OtherSoftwares"	"Company 4"
"NewSoftware"	"Company 1"

⋮

We could also achieve this task using MatDeck script inside the document.

```
1    // MatDeck program for select query using join (inner join) in MYSQL
     database
2
3    // Connecting to the server
4    conn := db_connect("mysql", "Name", "localhost", 3306, "test_user",
     "Test123", "matdeck")
5
6    // Print all from table 'software'
7    print(db_query(conn, "SELECT * FROM software"))
8    print("\n")
9
10   // Print all from table 'company'
11   print(db_query(conn, "SELECT * FROM company"))
12   print("\n")
13
14   // Select query with inner join
15   print(db_query(conn, "SELECT software.Name as 'Software', company.Name as
     'Company' FROM software JOIN company ON software.Number =
     company.Number"))
16
17   // Disconnecting from the server
18   db_close(conn)
```

Output


```
MatDeck Console

["NewSoftware"   157]
["NewSoftware"   157]
["ThirdSoftware"  628]
["MatDeck"   1]
["OtherSoftwares"  999]


[1   "LabDeck"   1]
[2   "Company 1"   157]
[3   "Company 2"   456]
[4   "Company 3"   628]
[5   "Company 4"   999]
[6   "Company 5"   1258]


["MatDeck"   "LabDeck"]
["NewSoftware"   "Company 1"]
["NewSoftware"   "Company 1"]
["ThirdSoftware"   "Company 3"]
["OtherSoftwares"   "Company 4"]
```