Python & MySQL

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Requirements

MySQL Database Server (https://www.mysql.com) atau XAMPP
(https://www.apachefriends.org/index.html)
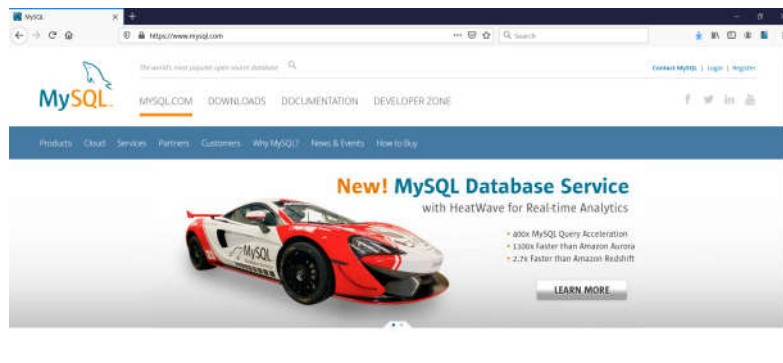
Install MySQL Connector/Python melalui Command Prompt sbb:

- $ pip install mysql-connector-python

Connect to MySQL

```python
import mysql.connector

from getpass import getpass
from mysql.connector import connect, Error

try:
    with connect(
        host="localhost",
        user=input("Enter username: "),
        password=getpass("Enter password: "),
        database="ubl",
    ) as connection:
        print(connection)
except Error as e:
    print(e)
```

```
TERMINAL    PROBLEMS    OUTPUT    DEBUG CONSOLE                    1: powershell

PS F:\python-src> python .\mysql_connect.py
Enter username: root
Enter password:
<mysql.connector.connection.MySQLConnection object at 0x00000202DC97DC70>
```

Create a Database

```python
import mysql.connector

from getpass import getpass
from mysql.connector import connect, Error

try:
    with connect(
        host="localhost",
        user=input("Enter username: "),
        password=getpass("Enter password: "),
    ) as connection:
        create_db_query = "CREATE DATABASE UBL"
        with connection.cursor() as cursor:
            cursor.execute(create_db_query)
except Error as e:
    print(e)
```

```
TERMINAL    PROBLEMS    OUTPUT    DEBUG CONSOLE

PS F:\python-src> python .\mysql_create_db.py
Enter username: root
Enter password:
```

Show Databases

```python
import mysql.connector

from getpass import getpass
from mysql.connector import connect, Error

try:
    with connect(
        host="localhost",
        user=input("Enter username: "),
        password=getpass("Enter password: "),
    ) as connection:
        show_db_query = "SHOW DATABASES"
        with connection.cursor() as cursor:
            cursor.execute(show_db_query)
            for db in cursor:
                print(db)
except Error as e:
    print(e)
```
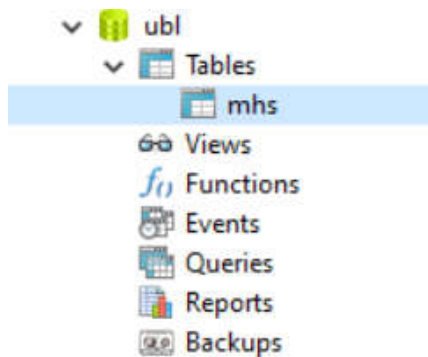
```
TERMINAL    PROBLEMS    OUTPUT    DEBUG CONSOLE

PS F:\python-src> python .\mysql_show_db.py
Enter username: root
Enter password:
('budiluhur',)
('dashboard',)
('db_1911500123',)
('information_schema',)
('mysql',)
('performance_schema',)
('phpmyadmin',)
('smartlearning',)
('test',)
('ubl',)
('wordpress',)
```

Create Table

```python
import mysql.connector

from getpass import getpass
from mysql.connector import connect, Error

try:
    with connect(
        host="localhost",
        user=input("Enter username: "),
        password=getpass("Enter password: "),
        database="ubl"
    ) as connection:
        query = """
            CREATE TABLE mhs(
                nim varchar(10) PRIMARY KEY,
                nama VARCHAR(20),
                alamat VARCHAR(100)
            )
            """
        with connection.cursor() as cursor:
            cursor.execute(query)
            connection.commit()

except Error as e:
    print(e)
```

TERMINAL   PROBLEMS   OUTPUT   DEBUG CONSOLE

PS F:\python-src> python mysql_create_table.py
Enter username: root
Enter password:

- ubl
  - Tables
    - mhs
  - Views
  - Functions
  - Events
  - Queries
  - Reports
  - Backups

Insert Data

```
TERMINAL    PROBLEMS    OUTPUT    DEBUG CONSOLE

PS F:\python-src> python .\mysql_insert.py
Enter username: root
Enter password:
```

nim	nama	alamat
19115001	Budi	Jakarta
19115004	Luhur	Bandung
19115007	Sakti	Surabaya

```python
mysql_insert.py > ...
1   import mysql.connector
2
3   from getpass import getpass
4   from mysql.connector import connect, Error
5
6   try:
7       with connect(
8           host="localhost",
9           user=input("Enter username: "),
10          password=getpass("Enter password: "),
11          database="ubl"
12      ) as connection:
13          query = """
14              INSERT INTO mhs(nim,nama,alamat)
15              VALUES
16                  ('1911500123','Budi','Jakarta'),
17                  ('1911500456','Luhur','Bandung'),
18                  ('1911500789','Sakti','Surabaya')
19              """
20          with connection.cursor() as cursor:
21              cursor.execute(query)
22              connection.commit()
23
24  except Error as e:
25      print(e)
```

Select Data

```
TERMINAL    PROBLEMS    OUTPUT    DEBUG CONSOLE

PS F:\python-src> python .\mysql_select.py
Enter username: root
Enter password:
('1911500123', 'Budi', 'Jakarta')
('1911500456', 'Luhur', 'Bandung')
('1911500789', 'Sakti', 'Surabaya')
```

```python
mysql_select.py > ...
1    import mysql.connector
2
3    from getpass import getpass
4    from mysql.connector import connect, Error
5
6    try:
7        with connect(
8            host="localhost",
9            user=input("Enter username: "),
10           password=getpass("Enter password: "),
11           database="ubl"
12       ) as connection:
13           query = """
14               SELECT * FROM mhs
15               """
16           with connection.cursor() as cursor:
17               cursor.execute(query)
18               result = cursor.fetchall()
19               for row in result:
20                   print(row)
21
22   except Error as e:
23       print(e)
```

Update Data

```
TERMINAL    PROBLEMS    OUTPUT    DEBUG CONSOLE

PS F:\python-src> python .\mysql_update.py
NIM: 1911500123
Update Nama: Test
```

nim	nama	alamat
▶ 1911500123	Test	Jakarta
1911500456	Luhur	Bandung
1911500789	Sakti	Surabaya

```python
mysql_update.py > ...
1   import mysql.connector
2   |
3   from getpass import getpass
4   from mysql.connector import connect, Error
5
6   try:
7       with connect(
8           host="localhost",
9           user="root",
10          password="",
11          database="ubl"
12      ) as connection:
13          vNim=input("NIM: ")
14          vNamaNew=input("Update Nama: ")
15          query = """
16              UPDATE mhs
17              SET nama = "%s"
18              WHERE nim = "%s"
19          """ % (vNamaNew, vNim)
20
21          with connection.cursor() as cursor:
22              cursor.execute(query)
23              connection.commit()
24  except Error as e:
25      print(e)
```

Delete Data

```
TERMINAL    PROBLEMS    OUTPUT    DEBUG CONSOLE

PS F:\python-src> python .\mysql_delete.py
NIM: 1911500123
-1 record deleted.
```

nim	nama	alamat
1911500456	Luhur	Bandung
1911500789	Sakti	Surabaya

```python
mysql_delete.py > ...
1    import mysql.connector
2
3    from getpass import getpass
4    from mysql.connector import connect, Error
5
6    try:
7        with connect(
8            host="localhost",
9            user="root",
10           password="",
11           database="ubl"
12       ) as connection:
13           vNim=input("NIM: ")
14           query = """
15               DELETE FROM mhs
16               WHERE nim = "%s"
17           """ % (vNim)
18
19           with connection.cursor() as cursor:
20               cursor.execute(query)
21               connection.commit()
22
23           print(cursor.rowcount, "record deleted.")
24   except Error as e:
25       print(e)
```