

**LAPORAN PRAKTIKUM  
PEMROGRAMAN PYHTON**

**LATIHAN MEMBUAT DATABASE**



**Disusun oleh :**  
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**Dosen**  
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**PS D-III TEKNIK INFORMATIKA  
SEKOLAH VOKASI  
UNIVERSITAS SEBELAS MARET  
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## HASIL DAN PEMBAHASAN

Sebelum membuat database, aktifkan XAMPP milik anda. Aktifkan apache dan MySQL

A. Test Koneksi antara jupyter notebook dengan database mysql.

```
In [6]: import sqlite3

conn = sqlite3.connect('d3_ti_2023')

print ("Opened database successfully")

Opened database successfully
```

B. Membuat table dalam database

```
In [6]: import mysql.connector

dataBase = mysql.connector.connect(
    host = "localhost",
    user = "root",
    passwd = "",
    database = "d3_ti_2023"
)

#preparing cursor
cursorObject = dataBase.cursor()

#creating table
studentRecord = """CREATE TABLE Mahasiswa (
    NIM VARCHAR (10) NOT NULL,
    NAMA VARCHAR (30),
    ALAMAT VARCHAR (255),
    MATA_KULIAH VARCHAR (10),
    KELAS VARCHAR (10),
    DOSEN PEMBIMBING VARCHAR (30),
    TAHUN_MASUK INT
)"""

#table created
cursorObject.execute(studentRecord)

#Disconnect
dataBase.close()
```

Berikut table untuk dosen

```
In [1]: import mysql.connector

dataBase = mysql.connector.connect(
    host = "localhost",
    user = "root",
    passwd = "",
    database = "d3_ti_2023"
)

#preparing cursor
cursorObject = dataBase.cursor()

#creating table
studentRecord = """CREATE TABLE Dosen (
    NIP VARCHAR (20) NOT NULL,
    NAMA_DOSEN VARCHAR (50),
    MATA_KULIAH YANG DIAJAR VARCHAR (50),
    TAHUN_MENGAJAR INT,
    BANYAK_KELAS YANG DIAJAR INT,
    TAHUN_PENSIUN INT,
    ALAMAT VARCHAR (50)
)"""

#table created
cursorObject.execute(studentRecord)
|
#Disconnect
dataBase.close()
```

Berikut table untuk mata kuliah

```
In [5]: import mysql.connector

dataBase = mysql.connector.connect(
    host = "localhost",
    user = "root",
    passwd = "",
    database = "d3_ti_2023"
)

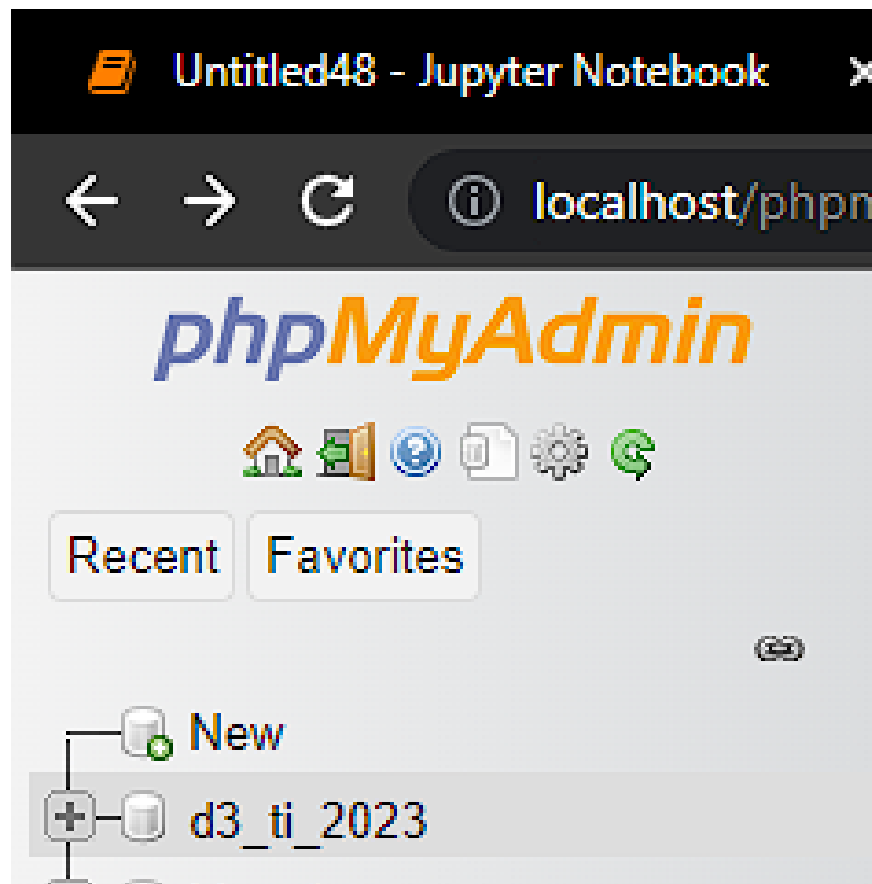
#preparing cursor
cursorObject = dataBase.cursor()

#creating table
studentRecord = """CREATE TABLE Mata_Kuliah (
    KODE_MATKUL VARCHAR (10),
    NAMA_MATKUL VARCHAR (50),
    WAKTU DATE,
    RUANGAN VARCHAR (10),
    DOSEN_PENGAMPU VARCHAR (50),
    SKS INT
)"""

#table created
cursorObject.execute(studentRecord)

#Disconnect
dataBase.close()
```

Berikut table yang telah dibuat dalam database



### C. Mengisi data pada tiap table

Berikut script untuk mengisi data pada table mahasiswa

```
In [16]: import mysql.connector

dataBase = mysql.connector.connect(
    host = "localhost",
    user = "root",
    passwd = "",
    database = "d3_ti_2023"
)

#preparing cursor
cursorObject = dataBase.cursor()

sql = "INSERT INTO Mahasiswa (NIM, NAMA, ALAMAT, MATA_KULIAH, KELAS, DOSEN PEMBIMBING, TAHUN_MASUK) \
VALUES (%s, %s, %s, %s, %s, %s, %s)"
val = ("V3922041", "Subekti Bimo Wicaksono", "Magetan", "praktik web", "TI-E", "Bu Masbahah", "2022"),

cursorObject.executemany (sql, val)
dataBase.commit()

#Disconnect
dataBase.close()
```

Berikut script untuk mengisi data pada table dosen

```
In [12]: import mysql.connector

dataBase = mysql.connector.connect(
    host = "localhost",
    user = "root",
    passwd = "",
    database = "d3_ti_2023"
)

#preparing cursor
cursorObject = dataBase.cursor()

sql = "INSERT INTO Dosen (NIP, NAMA_DOSEN, MATA_KULIAH YANG DIAJAR, TAHUN_MENGAJAR, BANYAK_KELAS YANG DIAJAR, TAHUN_PENSIUN, ALAMAT) \
VALUES (%s, %s, %s, %s, %s, %s, %s)"
val = [(("673262787", "Pak Yusuf", "wireless", "2012", "4", "-", "-"),
        ("112489382", "Bu Nur", "sistem operasi", "2014", "2", "-", "-"),
        ("339922811", "Bu Masbahah", "praktik web", "2015", "5", "-", "-"),
        ("893282918", "Bu Trisna", "statistika", "2012", "1", "-", "-"))]

cursorObject.executemany (sql, val)
dataBase.commit()

#Disconnect
dataBase.close()
```

Berikut script untuk mengisi data pada table mata kuliah

```
In [13]: import mysql.connector

dataBase = mysql.connector.connect(
    host = "localhost",
    user = "root",
    passwd = "",
    database = "d3_ti_2023"
)

#preparing cursor
cursorObject = dataBase.cursor()

sql = "INSERT INTO Mata_Kuliah (KODE_MATKUL, NAMA_MATKUL, WAKTU, RUANGAN, DOSEN_PENGAMPU, SKS) \
VALUES (%s, %s, %s, %s, %s, %s)"
val = [( "23678889", "Wireless", "2023-1-1", "Lab 3", "Pak Yusuf", 2),
      ( "45332234", "sitem operasi", "2023-1-1", "Daring", "Bu Nur", 2),
      ( "65545556", "praktik web", "2023-1-1", "Lab 2", "Bu Masbahah", 2),
      ( "66755531", "statistika", "13", "Daring", "Bu Trisna", 2)
    ]

cursorObject.executemany(sql, val)
dataBase.commit()

#Disconnect
dataBase.close()
```

D. Menampilkan data (select) yang menunjukkan data mata kuliah yang diikuti oleh mahasiswa beserta dosen yang mengajar.

Berikut script untuk menampilkannya

```
In [17]: import mysql.connector

dataBase = mysql.connector.connect(
    host = "localhost",
    user = "root",
    passwd = "",
    database = "d3_ti_2023"
)

#preparing cursor
cursorObject = dataBase.cursor()

query = "SELECT NAMA_MATKUL, DOSEN_PENGAMPU FROM Mata_Kuliah"
cursorObject.execute(query)

myresult = cursorObject.fetchall()

for x in myresult:
    print(x)

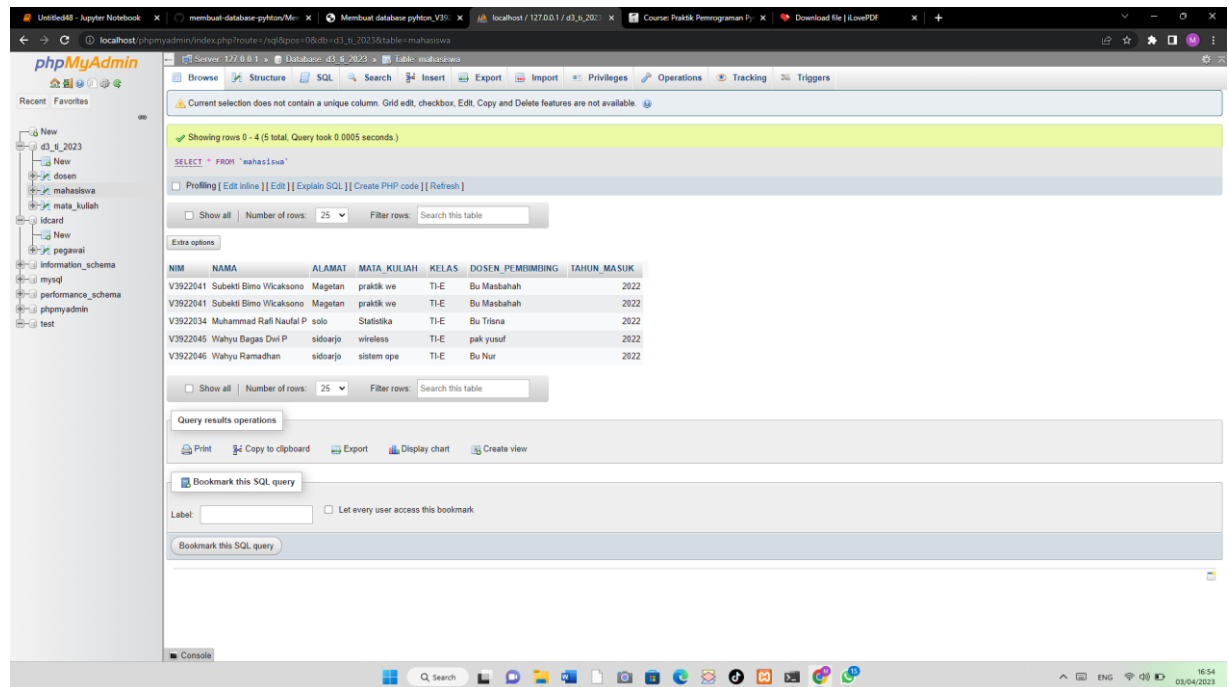
dataBase.close()

('Wireless', 'Pak Yusuf')
('sitem operasi', 'Bu Nur')
('praktik web', 'Bu Masbahah')
('statistika', 'Bu Trisna')
```

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## E. Tapilan table dalam database pada MySQL

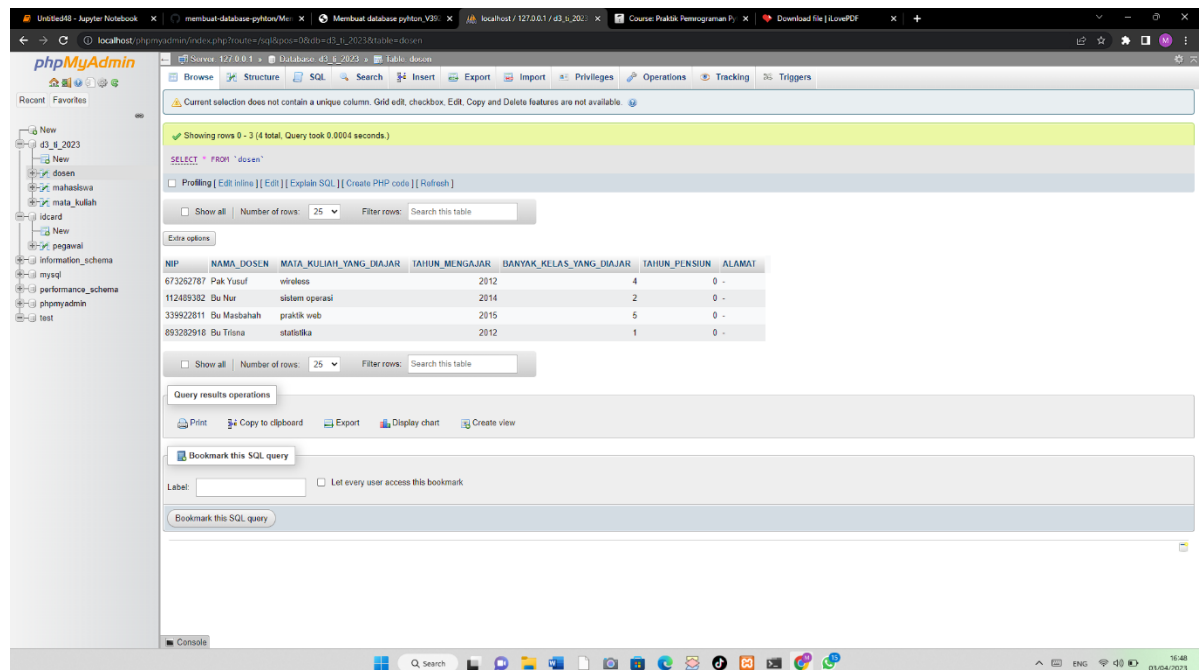
### Tabel mahasiswa



The screenshot shows the phpMyAdmin interface for a MySQL database. The 'mahasiswa' table is selected, and its structure and data are displayed. The table has 7 columns: NIM, NAMA, ALAMAT, MATA\_KULIAH, KELAS, DOSEN PEMBIMBING, and TAHUN\_MASUK. The data is as follows:

NIM	NAMA	ALAMAT	MATA_KULIAH	KELAS	DOSEN PEMBIMBING	TAHUN_MASUK
V3922041	Subekti Bimo Wicaksono	Magetan	pratik we	TH-E	Bu Masbahah	2022
V3922041	Subekti Bimo Wicaksono	Magetan	pratik we	TH-E	Bu Masbahah	2022
V3922034	Muhammad Rafi Nautal P	solo	Statistika	TH-E	Bu Trisna	2022
V3922045	Wahyu Begas Dwi P	sidoarjo	wireless	TH-E	pak yusuf	2022
V3922046	Wahyu Ramadhan	sidoarjo	sistem ope	TH-E	Bu Nur	2022

### Table dosen



The screenshot shows the phpMyAdmin interface for a MySQL database. The 'dosen' table is selected, and its structure and data are displayed. The table has 7 columns: NIP, NAMA\_DOSEN, MATA\_KULIAH YANG DIAJAR, TAHUN\_MENGAJAR, BANYAK KELAS YANG DIAJAR, TAHUN\_PENSIUN, and ALAMAT. The data is as follows:

NIP	NAMA_DOSEN	MATA_KULIAH YANG DIAJAR	TAHUN_MENGAJAR	BANYAK KELAS YANG DIAJAR	TAHUN_PENSIUN	ALAMAT
673262787	Pak Yusuf	wireless	2012	4	0	-
112499382	Bu Nur	sistem operasi	2014	2	0	-
33992811	Bu Masbahah	pratik web	2015	5	0	-
893282918	Bu Trisna	statistika	2012	1	0	-

## Table mata kuliah

The screenshot shows the phpMyAdmin web interface. The left sidebar displays the database structure, including a database named 'd3\_2023' and a table named 'mata\_kuliah'. The main panel shows the 'mata\_kuliah' table with the following data:

KODE_MATKUL	NAMA_MATKUL	WAKTU	RUANGAN	DOSEN_PENGAMPU	SKS
23678809	Wireless	2023-01-01	Lab 3	Pak Yusuf	2
45332234	sistem operasi	2023-01-01	Daring	Bu Nur	2
65545556	praktik web	2023-01-01	Lab 2	Bu Masbahah	2
66755531	statistika	0000-00-00	Daring	Bu Titena	2

The interface also includes a SQL query editor with the query `SELECT * FROM 'mata_kuliah'` and various toolbars for database management and query execution.