LAPORAN E-UAS PRAKTIKUM SISTEM BASIS DATA

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Kelas : B

Mata Kuliah : Praktikum Sistem Basis Data

Pengampu : Dedi Gunawan Ruang, No. Kursi : HOME,13

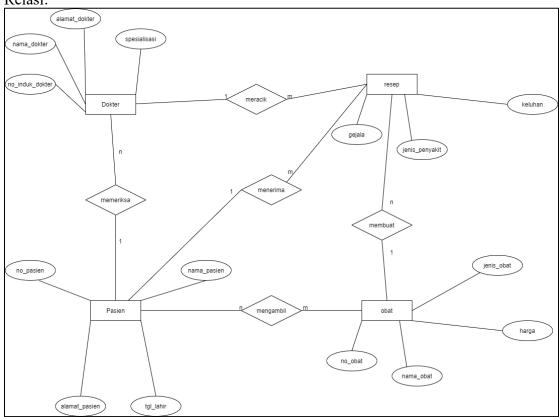
1. Buatlah database berdasarkan kasus di atas dengan nama NamaDatabase_Nim Mahasiswa! Lalu buat tabel dan relasinya.

```
Command Prompt - mysql -u root -p
                                                                                                                                        MariaDB [(none)]> create database klinik L200190031;
Query OK, 1 row affected (0.001 sec)
MariaDB [(none)]> use klinik_L200190031;
Database changed
MariaDB [klinik_L200190031]> create table dokter(
istogor primary key,
-> no_induk_dokter integer primary key,
-> nama_dokter varchar(55) not null,
-> alamat_dokter varchar(55) not null,
-> spesialisasi varchar(25) not null);
Query OK, 0 rows affected (0.025 sec)
MariaDB [klinik_L200190031]> create table pasien(
      -> no_pasien integer primary key,-> nama_pasien varchar(55) not null,
      -> alamat_pasien varchar(55) not null,
-> tgl_lahir varchar(25) not null);
Query OK, 0 rows affected (0.020 sec)
MariaDB [klinik_L200190031]> create table obat(
-> no_obat integer primary key,
-> nama_obat varchar(55) not null,
-> jenis_obat varchar(55) not null,
-> harga integer default 0 not null);
Query OK, 0 rows affected (0.025 sec)
MariaDB [klinik_L200190031]> create table resep(
      -> no_induk_dokterFK integer references dokter(no_induk_dokter) on delete cascade on updat

    -> no_pasienFK integer references pasien(no_pasien) on delete cascade on update cascade,
    -> no_obatFK integer references obat(no_obat) on delete cascade on update cascade,
    -> key(no_induk_dokterFK, no_pasienFK, no_obatFK),

      -> keluhan varchar(55) not null,
-> gejala varchar(55) not null,
-> jenis_penyakit varchar(55) not null);
Query OK, 0 rows affected (0.024 sec)
MariaDB [klinik_L200190031]> create table pasien_has_obat(
      -> no_pasienFK integer references pasien(no_pasien) on delete cascade on update cascade,
      -> no_obatFK integer references obat(no_obat) on delete cascade on update cascade);
Query OK, 0 rows affected (0.017 sec)
MariaDB [klinik L200190031]>
```

Relasi:



	dokter	pasien	resep	obat
dokter		1:m	1:m	-
pasien	n:1		1:m	n:m
resep	n:1	n:1		n:1
obat	-	n:m	1:m	

2.Tuliskan kode program python untuk melakukan perintah INSERT data pada masing-masing tabel, dengan jumlah data pada masing-masing tabel tersebut minimal 15 record.

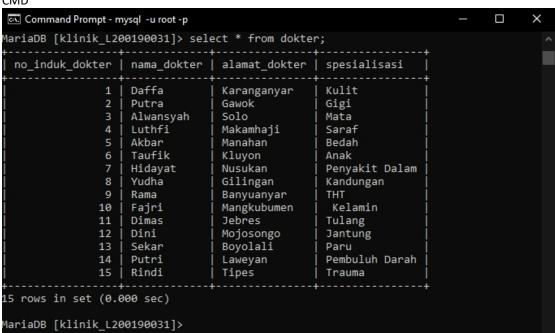
dokter

```
import mysql.connector
```

```
connection = mysql.connector.connect(user='root',database='klinik L200190031')
  mySql insert query = """INSERT INTO dokter (no induk dokter, nama dokter,
alamat dokter, spesialisasi)
                 VALUES (%s, %s, %s, %s) """
  records to insert = [(1, 'Daffa', 'Karanganyar', 'Kulit'),
               (2, 'Putra', 'Gawok', 'Gigi'),
               (3, 'Alwansyah', 'Solo', 'Mata'),
               (4, 'Luthfi', 'Makamhaji', 'Saraf'),
                (5, 'Akbar', 'Manahan', 'Bedah'),
                (6, 'Taufik', 'Kluyon', 'Anak'),
                (7, 'Hidayat', 'Nusukan', 'Penyakit Dalam'),
                (8, 'Yudha', 'Gilingan', 'Kandungan'),
                (9, 'Rama', 'Banyuanyar', 'THT'),
                (10, 'Fajri', 'Mangkubumen', 'Kelamin'),
                (11, 'Dimas', 'Jebres', 'Tulang'),
                (12, 'Dini', 'Mojosongo', 'Jantung'),
                (13, 'Sekar', 'Boyolali', 'Paru'),
                (14, 'Putri', 'Laweyan', 'Pembuluh Darah'),
               (15, 'Rindi', 'Tipes ', 'Trauma')]
  cursor = connection.cursor()
  cursor.executemany(mySql insert query, records to insert)
  connection.commit()
  print(cursor.rowcount, "Record inserted successfully")
except mysql.connector.Error as error:
  print("Failed to insert record into MySQL table {}".format(error))
finally:
  if connection.is connected():
     cursor.close()
     connection.close()
     print("MySQL connection is closed")
```

```
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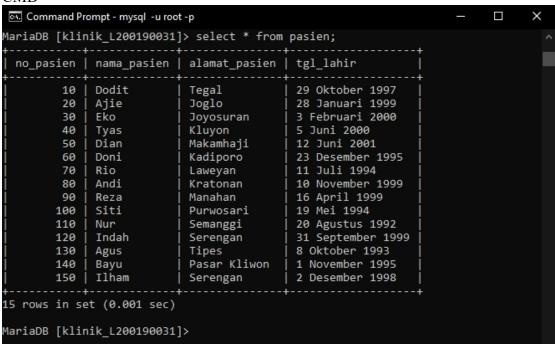
File Talk Stell Stel
```



pasien import mysql.connector

```
try:
  connection = mysql.connector.connect(user='root',database='klinik L200190031')
  mySql insert query = """INSERT INTO pasien (no_pasien, nama_pasien,
alamat pasien, tgl lahir)
                 VALUES (%s, %s, %s, %s) """
  records to insert = [(10, 'Dodit', 'Tegal', '29 Oktober 1997'),
                (20, 'Ajie', 'Joglo', '28 Januari 1999'),
                (30, 'Eko', 'Joyosuran', '3 Februari 2000'),
                (40, 'Tyas', 'Kluyon', '5 Juni 2000'),
                (50, 'Dian', 'Makamhaji', '12 Juni 2001'),
                (60, 'Doni', 'Kadiporo', '23 Desember 1995'),
                (70, 'Rio', 'Laweyan', '11 Juli 1994'),
                (80, 'Andi', 'Kratonan', '10 November 1999'),
                (90, 'Reza', 'Manahan', '16 April 1999'),
                (100, 'Siti', 'Purwosari', '19 Mei 1994'),
                (110, 'Nur', 'Semanggi', '20 Agustus 1992'),
                (120, 'Indah', 'Serengan', '31 September 1999'),
                (130, 'Agus', 'Tipes', '8 Oktober 1993'),
                (140, 'Bayu', 'Pasar Kliwon', '1 November 1995'),
                (150, 'Ilham', 'Serengan', '2 Desember 1998')]
  cursor = connection.cursor()
  cursor.executemany(mySql insert query, records to insert)
  connection.commit()
  print(cursor.rowcount, "Record inserted successfully")
except mysql.connector.Error as error:
  print("Failed to insert record into MySQL table {}".format(error))
finally:
  if connection.is connected():
     cursor.close()
     connection.close()
     print("MySQL connection is closed")
```

```
| Michael State | Michael Debug Options Window Help | File Edit Format Run Options Window Help | Fighton 3.5, Stagagay/s.5, Stoardadp, May 3 2021, 17:27; | Help?, "copyright", "credits" or "license()" for State | S
```



```
obat
import mysql.connector
try:
  connection = mysql.connector.connect(user='root',database='klinik L200190031')
  mySql insert query = """INSERT INTO obat (no obat, nama obat, jenis obat,
harga)
                 VALUES (%s, %s, %s, %s) """
  records to insert = [(101, 'Acarbose', 'Serbuk', 20000),
               (201, 'Acetazolamide', 'Larutan', 30000),
               (301, 'Antangin', 'Larutan', 10000),
               (401, 'Antibiotik', 'Larutan', 60000),
               (501, 'Bodrex', 'Tablet', 15000),
               (601, 'Bleomycin', 'Tablet', 25000),
               (701, 'Combivent', 'Pil', 24000),
               (801, 'Combantrin', 'Kapsul', 22000),
               (901, 'Dermatix', 'Pil', 45000),
               (1001, 'Diapet', 'Tablet', 32000),
               (1101, 'Eptifibatide', 'Serbuk', 21000),
               (1201, 'Etanercept', 'Kapsul', 79000),
               (1301, 'Fosinopril', 'Pil', 39000),
               (1401, 'Glukagon', 'Tablet', 54000),
               (1501, 'Imboost', 'Tablet', 66000)]
  cursor = connection.cursor()
  cursor.executemany(mySql insert query, records to insert)
  connection.commit()
  print(cursor.rowcount, "Record inserted successfully")
except mysql.connector.Error as error:
  print("Failed to insert record into MySQL table {}".format(error))
```

finally:

if connection.is connected():

print("MySQL connection is closed")

cursor.close()
connection.close()

```
IDLE Shell 3.9.5
                                                                                                   klinik.py - C:\Kuliah\Prak SBD\UAS\klinik.py (3.9.5)
                                                                                                                                                                                                                                                File Edit Shell Debug Options Window Help
                                                                                                   File Edit Format Run Options Window Help
Python 3.9.5 (tags/v3.9.5:0a7dcbd, May 3 2021, 17:27:
                                                                                                   import mysgl.connector
64)] on win32
Type "help", "copyright", "credits" or "license()" for try:
                                                                                                         connection = mysql.connector.connect(user='root',database='klinik L200190031')
TESTART: C:\Kuliah\Prak SBD\UAS\kl
15 Record inserted successfully
MySQL connection is closed
                                                                                                        records_to_insert = [(101, 'Acarbose', 'Serbuk', 20000),
(201, 'Acarbose', 'Serbuk', 20000),
(301, 'Antangin', 'Larutan', 10000),
(401, 'Antihiotik', 'Larutan', 60000),
(501, 'Bodrex', 'Tablet', 15000),
(601, 'Bleomycin', 'Tablet', 25000),
(701, 'Combantrin', 'Kapsul', 22000),
(801, 'Combantrin', 'Kapsul', 22000),
(901, 'Dematix', 'Pil', 45000),
(1001, 'Diapet', 'Tablet', 32000),
(1101, 'Eptifibatide', 'Serbuk', 21000),
(1201, 'Etanercept', 'Kapsul', 79000),
(1301, 'Fosinopril', 'Pil', 39000),
(1401, 'Glukagon', 'Tablet', 54000),
(1501, 'Imboost', 'Tablet', 56000)]
... RESTART: C:\Kuliah\Prak SBD\UAS\kl
15 Record inserted successfully
MySQL connection is closed
>>>
>>>

RESTART: C:\Kuliah\Frak SBD\UAS\kl
Failed to insert record into MySQL table 1064 (42000):
SQL syntax; check the manual that corresponds to your
the right syntax to use near ')

VALUES (101, 'Acarbose', 'S
MySQL connection is closed
\Prak SBD\UAS\klinik.py ===
15 Record inserted successfully
MySQL connection is closed
                                                                                                         cursor = connection.cursor()
                                                                                                          cursor.executemany(mySql_insert_query, records_to_insert)
                                                                                                          connection.commit()
                                                                                                         print(cursor.rowcount, "Record inserted successfully")
                                                                                                   except mysql.connector.Error as error:
    print("Failed to insert record into MySQL table {}".format(error))
                                                                                                              connection.is_connected():
    cursor.close()
    connection.close()
    print("MySQL connection is closed")
```

```
Command Prompt - mysql -u root -p
MariaDB [klinik_L200190031]> select * from obat;
                           | jenis_obat | harga
 no_obat | nama_obat
                                          20000
      101
            Acarbose
                            Serbuk
            Acetazolamide
                                          30000
      201
                            Larutan
      301
            Antangin
                            Larutan
                                          10000
     401
            Antibiotik
                                          60000
                            Larutan
      501
            Bodrex
                             Tablet
                                          15000
     601
            Bleomycin
                             Tablet
                                          25000
      701
            Combivent
                            Pil
                                          24000
     801
            Combantrin
                            Kapsul
                                          22000
     901
            Dermatix
                            Pil
                                          45000
            Diapet
     1001
                             Tablet
                                          32000
            Eptifibatide
     1101
                             Serbuk
                                          21000
     1201
            Etanercept
                             Kapsul
                                          79000
     1301
                            Pil
            Fosinopril
                                          39888
     1401
            Glukagon
                            Tablet
                                          54000
     1501
            Imboost
                            Tablet
                                          66000
15 rows in set (0.000 sec)
MariaDB [klinik_L200190031]>
```

```
resep
import mysql.connector
try:
  connection = mysql.connector.connect(user='root',database='klinik L200190031')
  mySql insert query = """INSERT INTO resep (no induk dokterFK, no pasienFK,
no obatFK, keluhan, gejala, jenis penyakit)
                 VALUES (%s, %s, %s, %s, %s, %s) """
  records to insert = [(1, 10, 101, 'Demam', 'Batuk Kering', 'Covid 19'),
                (1, 20, 201, 'Pusing', 'Mual dan Muntah', 'Vertigo'),
               (2, 30, 301, 'Mual saat makan', 'Sakit berlebihan diperut', 'Maag'),
                (3, 40, 401, 'Bersin', 'Demam', 'Flu'),
                (4, 50, 501, 'Sesak Nafas', 'Mati Rasa', 'Jantung'),
                (5, 60, 601, 'Demam', 'Bersin', 'Influenza'),
                (6, 70, 101, 'Benjol di Anus', 'Anus Sakit', 'Wasir'),
                (7, 80, 301, 'Perut Sakit', 'Feses Cair', 'Diare'),
                (7, 90, 1001, 'Mata Sakit', 'Badan Sakit', 'Kelelahan'),
                (8, 100, 1101, 'Nyeri Dada', 'Batuk', 'Asma'),
                (9, 110, 101, 'Sakit mata', 'Batuk Kering', 'Covid 19'),
                (10, 120, 1301, 'Demam', 'Mata berair', 'Hipermetropi'),
                (11, 130, 1401, 'Benjolan di tubuh', 'Gatal Gatal', 'Cacar Air'),
                (12, 140, 1201, 'Panas', 'Pusing', 'Demam'),
                (13, 140, 1201, 'Mulut Bau', 'Gigi Kuning', 'Karang gigi')]
  cursor = connection.cursor()
  cursor.executemany(mySql insert query, records to insert)
  connection.commit()
  print(cursor.rowcount, "Record inserted successfully")
except mysql.connector.Error as error:
  print("Failed to insert record into MySQL table {}".format(error))
```

finally:

if connection.is connected():

print("MySQL connection is closed")

cursor.close()
connection.close()

```
*klinik.py - C:\Kuliah\Prak SBD\UAS\klinik.py (3.9.5)*
                                                                                                                                                                                                                                                                                  File Edit Format Run Options Window Help
15 Record inserted successfully
MySQL connection is closed
>>>
                                                                        mport mysql.connector
>>> RESTART: C:\Kuliah'
15 Record inserted successfully
MySQL connection is closed
                                                                            .
connection = mysql.connector.connect(user='root',database='klinik L200190031')
                                                                            mySql_insert_query = """INSERT INTO resep (no_induk_dokterFK, no_pasienFK, no_obatFK, keluhan, gejala, jenis_penyakit)

VALUES (%s, %s, %s, %s, %s, %s) """
RESTART: C:\Kuliah\
15 Record inserted successfully
MySQL connection is closed
>>>
                                                                           >>>
RESTART: C:\Kuliah'
15 Record inserted successfully
MySQL connection is closed
                       ---- RESTART: C:\Kuliah
 15 Record inserted successfully
MySQL connection is closed
      ----- RESTART: C:\Kulia
 MySQL connection is closed
15 Record inserted successfully
MySQL connection is closed
15 Record inserted successfully
MySQL connection is closed
                                                                            cursor = connection.cursor()
cursor.executemany(mySql_insert_query, records_to_insert)
connection.commit()
print(cursor.rowcount, "Record inserted successfully")
                         ---- RESTART: C:\Kuliah\
MySQL connection is closed
15 Record inserted successfully
MySQL connection is closed
15 Record inserted successfully
MySQL connection is closed
>>>
                                                                             ept mysql.connector.Error as error:
print("Failed to insert record into MySQL table {}".format(error))
>>> RESTART: C:\Kuliah
15 Record inserted successfully
My50L connection is closed
15 Record inserted successfully
My50L connection is closed
                                                                     finally:
    if connection.is_connected():
        cursor.close()
        connection.close()
        print("MySGL connection is closed")
```



```
import mysql.connector
try:
  connection = mysql.connector.connect(user='root',database='klinik L200190031')
  mySql insert query = """INSERT INTO pasien has obat (no pasienFK,
no obatFK)
                VALUES (%s, %s) """
  records to insert = [(10,101),
               (20,201),
               (30,301),
               (40,401),
               (50,501,),
               (60,601),
               (70,101),
               (80,301),
               (90,1001),
               (100,1101),
               (110,101),
               (120, 1301),
               (130,1401),
               (140,1201),
               (140,1201)
  cursor = connection.cursor()
  cursor.executemany(mySql_insert_query, records_to_insert)
  connection.commit()
  print(cursor.rowcount, "Record inserted successfully")
except mysql.connector.Error as error:
  print("Failed to insert record into MySQL table {}".format(error))
finally:
  if connection.is connected():
    cursor.close()
    connection.close()
```

print("MySQL connection is closed")

pasien has obat

```
lDLE Shell 3.9.5
                                             *klinik.py - C:\Kuliah\Prak SBD\UAS\klinik.py (3.9.5)*
                                                                                                                                                  File Edit Shell Debug Options Window Help File Edit Format Run Options Window Help
15 Record inserted successfully
MySQL connection is closed
                                             import mysql.connector
                                                  connection = mysql.connector.connect(user='root',database='klinik_L200190031')
                    === RESTART: C:\Kulia
15 Record inserted successfully
MySQL connection is closed
                                                 ====== RESTART: C:\Kulia
                                                 records_to_insert = [(10,101),
15 Record inserted successfully
MySQL connection is closed
                                                                            (30,301),
(40,401),
(50,501,),
                     == RESTART: C:\Kulia
15 Record inserted successfully
MySQL connection is closed
                                                                            (60,601),
                                                                            (70,101),
(80,301),
                      = RESTART: C:\Kulia
15 Record inserted successfully
MySQL connection is closed
                                                                            (90,1001)
                                                                            (100,1101).
                                                                            (110,101),
(120,1301),
(130,1401),
                    === RESTART: C:\Kulia
15 Record inserted successfully
MySQL connection is closed
15 Record inserted successfully
                                                                            (140, 1201)
                                                                           (140,1201)1
MySQL connection is closed
                                                  cursor = connection.cursor()
              ====== RESTART: C:\Kulia
                                                  cursor.executemany(mySql_insert_query, records_to_insert)
                                                  connection.commit()
15 Record inserted successfully
                                                 print(cursor.rowcount, "Record inserted successfully")
MySQL connection is closed
15 Record inserted successfully
MySQL connection is closed
                                             except mysgl.connector.Error as error:
                                                  print("Failed to insert record into MySQL table {}".format(error))
                      = RESTART: C:\Kulia
15 Record inserted successfully
MySQL connection is closed
15 Record inserted successfully
                                                 if connection.is connected():
                                                      cursor.close()
                                                      connection.close()
print("MySQL connection is closed")
MySQL connection is closed
```

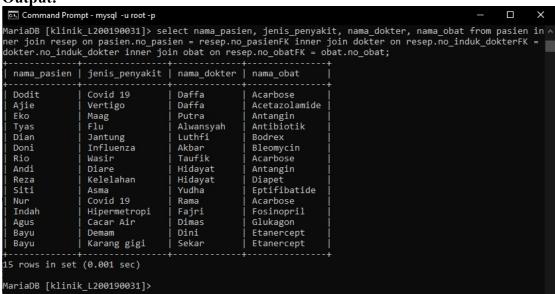
```
Command Prompt - mysql -u root -p
                                                             ×
MariaDB [klinik_L200190031]> select * from pasien_has_obat;
 no_pasienFK | no_obatFK |
           10
                       101
           20
                       201
           30
                       301
           40
                       401
           50
                       501
           60
                       601
           70
                       101
           80
                       301
           90
                      1001
          100
                      1101
          110
                       101
          120
                      1301
          130
                      1401
          140
                      1201
          140
                      1201
15 rows in set (0.000 sec)
```

3. Buatlah join query yang bisa menampilkan nama pasien, jenis penyakit, nama dokter, dan obat yang diberikan!

Query:

select nama_pasien, jenis_penyakit, nama_dokter, nama_obat from pasien inner join resep on pasien.no_pasien = resep.no_pasienFK inner join dokter on resep.no_induk_dokterFK = dokter.no_induk_dokter inner join obat on resep.no_obatFK = obat.no_obat;

Output:

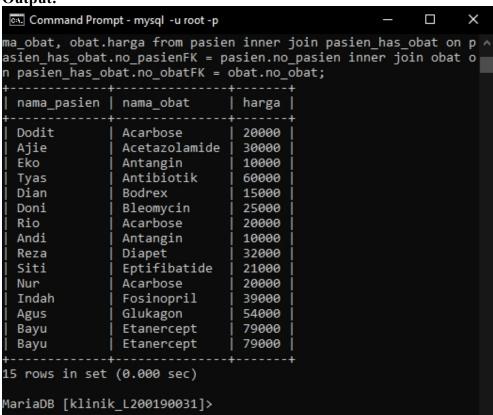


4. Buatlah query yang bisa menampilkan nama pasien dan daftar obat yang digunakan oleh pasien tersebut serta harga total yang harus dibayarkan oleh pasien!

Query:

select pasien.nama_pasien, obat.nama_obat, obat.harga from pasien inner join pasien_has_obat on pasien_has_obat.no_pasienFK = pasien.no_pasien inner join obat on pasien_has_obat.no_obatFK = obat.no_obat;

Output:



5. Buatlah query beserta sub query yang dapat menampilkan nama pasien yang mengkonsumsi obat paling banyak serta memiliki total harga obat yang paling tinggi!

select pasien.nama_pasien as "Nama Pasien", SUM(obat.harga) as "Total Harga Obat", COUNT(obat.nama_obat) as "Jumlah Obat" from pasien inner join pasien_has_obat on pasien_has_obat.no_pasienFK = pasien.no_pasien inner join obat on pasien_has_obat.no_obatFK = obat.no_obat where obat.harga = (SELECT MAX(harga) from obat);