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NIM : L200170102

1. Install connectore mysql sesuai versi python

```
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

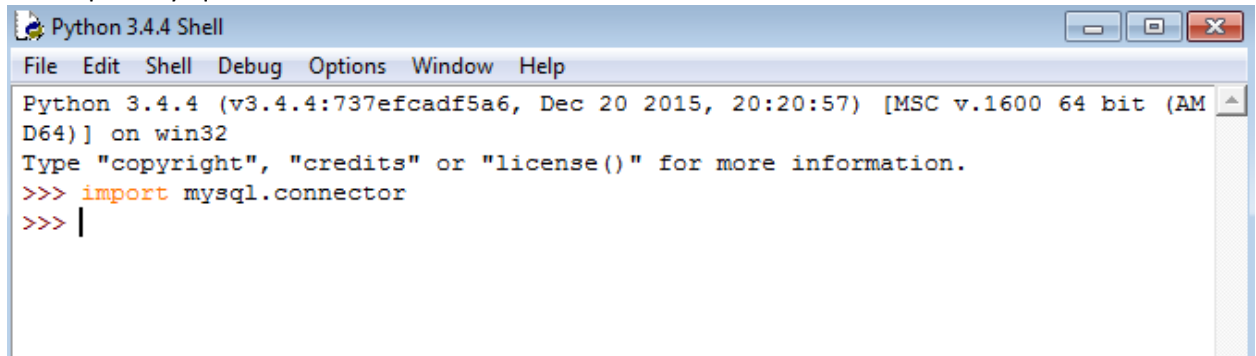
C:\Users\LABSI-08>cd C:
C:\Users\LABSI-08>

C:\Users\LABSI-08>cd C:/

C:\>cd C:\Python34\Scripts

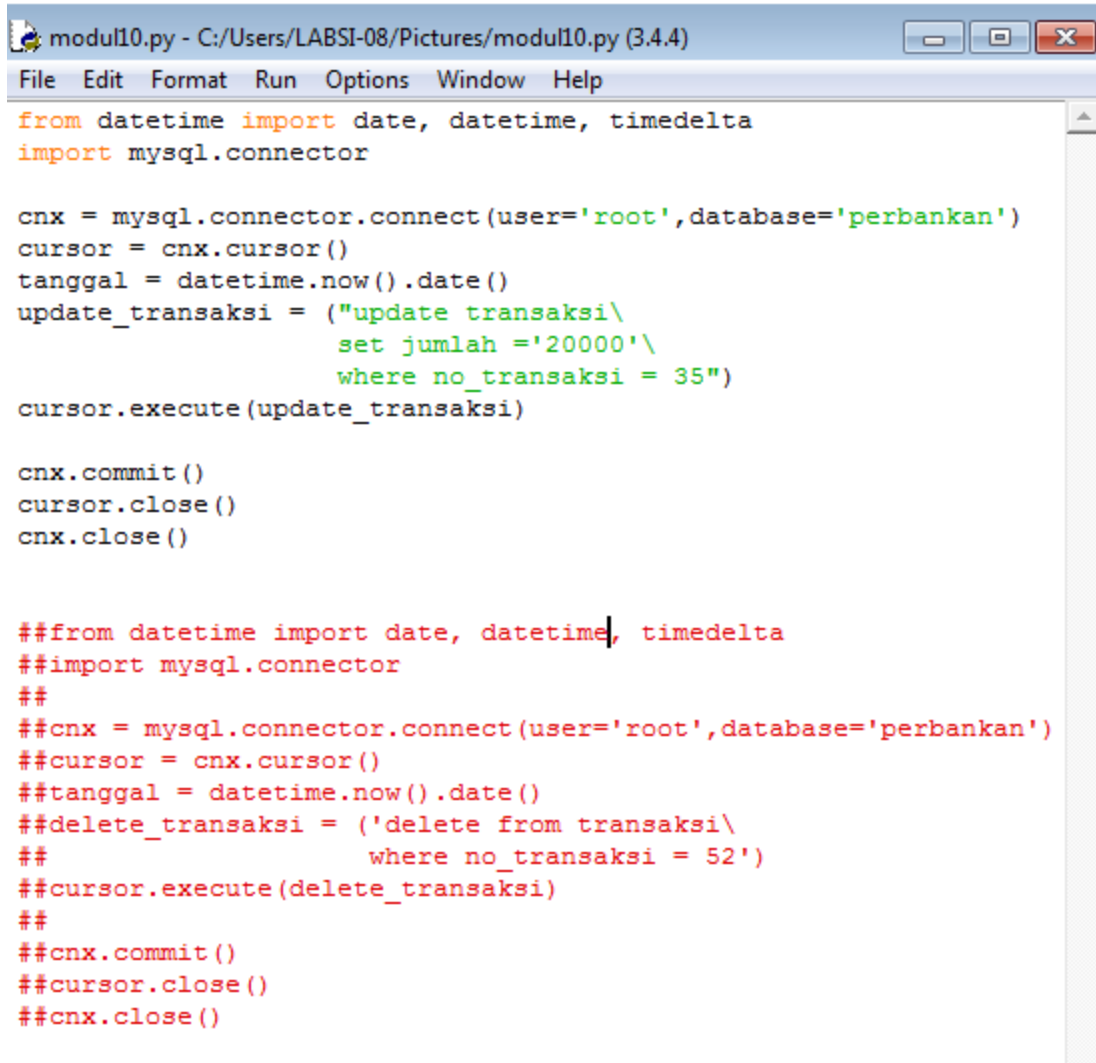
C:\Python34\Scripts>pip install mysql-connector-python
Collecting mysql-connector-python
  Downloading https://files.pythonhosted.org/packages/c5/40/c7ec860ad658870296c1a40afebce8e148997f6759d44307c7b6faa2b130/mysql_connector_python-8.0.16-py2.py3-none-any.whl (341kB)
    100% |#####| 344kB 525kB/s
Collecting protobuf>=3.0.0 (from mysql-connector-python)
  Downloading https://files.pythonhosted.org/packages/8f/5a/077f2811869284d8e15fcc88818922e19cf205a3529f21210f3a1b47dc74/protobuf-3.8.0-py2.py3-none-any.whl (427kB)
    100% |#####| 430kB 553kB/s
Requirement already satisfied (use --upgrade to upgrade): setuptools in c:\python34\lib\site-packages (from protobuf>=3.0.0->mysql-connector-python)
Collecting six>=1.9 (from protobuf>=3.0.0->mysql-connector-python)
  Downloading https://files.pythonhosted.org/packages/73/fb/00a976f728d0d1fecfe898238ce23f502a721c0ac0ecfedb80e0d88c64e9/six-1.12.0-py2.py3-none-any.whl
Installing collected packages: six, protobuf, mysql-connector-python
Successfully installed mysql-connector-python-8.0.16 protobuf-3.8.0 six-1.12.0
You are using pip version 7.1.2, however version 19.1.1 is available.
You should consider upgrading via the 'python -m pip install --upgrade pip' command.
```

2. Cek import mysql.connector



```
Python 3.4.4 Shell
File Edit Shell Debug Options Window Help
Python 3.4.4 (v3.4.4:737efcadf5a6, Dec 20 2015, 20:20:57) [MSC v.1600 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>> import mysql.connector
>>> |
```

3. Tulis code pada shell python



```
modul10.py - C:/Users/LABSI-08/Pictures/modul10.py (3.4.4)
File Edit Format Run Options Window Help

from datetime import date, datetime, timedelta
import mysql.connector

cnx = mysql.connector.connect(user='root', database='perbankan')
cursor = cnx.cursor()
tanggal = datetime.now().date()
update_transaksi = ("update transaksi\
                    set jumlah = '20000'\
                    where no_transaksi = 35")
cursor.execute(update_transaksi)

cnx.commit()
cursor.close()
cnx.close()

##from datetime import date, datetime, timedelta
##import mysql.connector
##
##cnx = mysql.connector.connect(user='root', database='perbankan')
##cursor = cnx.cursor()
##tanggal = datetime.now().date()
##delete_transaksi = ('delete from transaksi\
##                    where no_transaksi = 52')
##cursor.execute(delete_transaksi)
##
##cnx.commit()
##cursor.close()
##cnx.close()
```

4. Masuk ke cmd

```
C:\Python34\Scripts>cd C:/xampp/mysql/bin
```

```
C:\xampp\mysql\bin>mysql -u root
```

```
Welcome to the MariaDB monitor.  Commands end with ; or \g.
```

```
Your MariaDB connection id is 32
```

```
Server version: 10.1.37-MariaDB mariadb.org binary distribution
```

```
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.
```

```
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
```

```
MariaDB [(none)]> use perbankan
```

```
Database changed
```

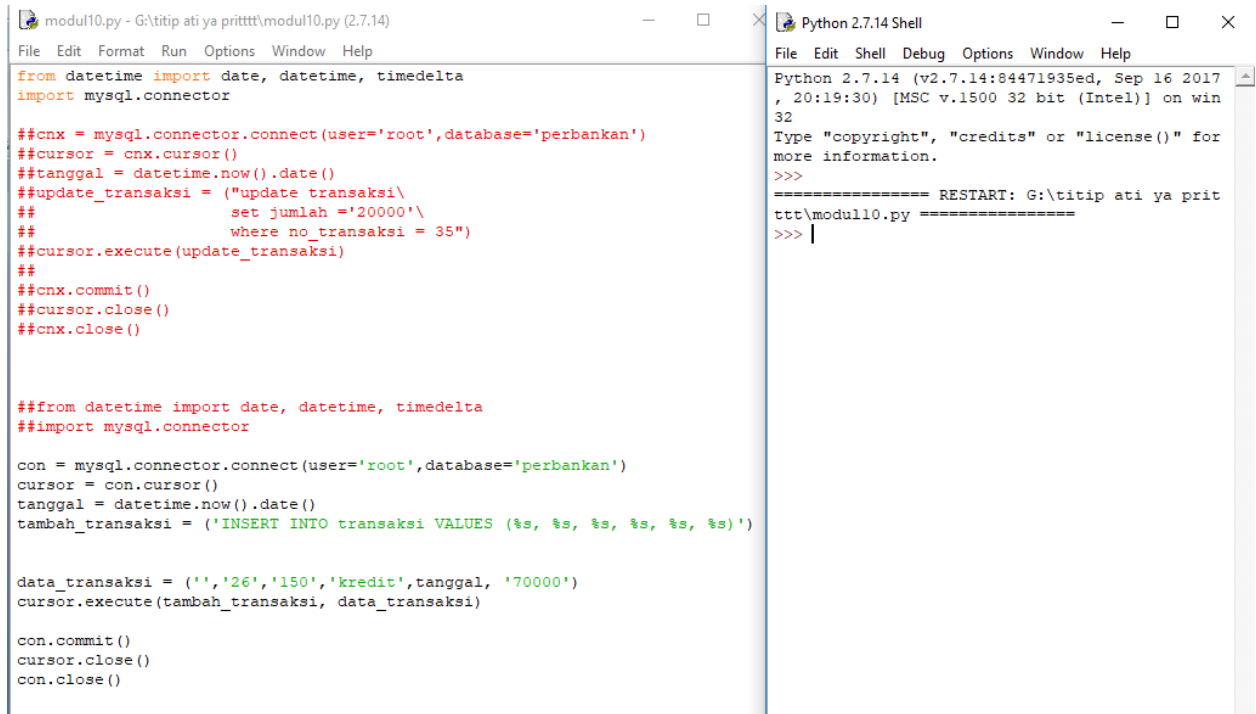
```
MariaDB [perbankan]> select * from transaksi;
```

	no_transaksi	id_nasabahFK	no_rekeningFK	jenis_transaksi	tanggal
	jumlah				
	32	3	105	debit	2009-11-10 00:
00:00	50000				
	33	2	103	debit	2009-11-10 00:
00:00	40000				
	34	4	101	kredit	2009-11-12 00:
00:00	20000				
	35	3	106	debit	2009-11-13 00:
00:00	50000				
	36	5	107	kredit	2009-11-13 00:
00:00	30000				
	37	1	104	kredit	2009-11-15 00:
00:00	200000				
	38	9	110	kredit	2009-11-15 00:
00:00	150000				
	39	5	102	debit	2009-11-16 00:
00:00	20000				
	40	3	105	kredit	2009-11-18 00:
00:00	50000				
	41	4	107	debit	2009-11-19 00:
00:00	100000				
	42	2	103	debit	2009-11-19 00:
00:00	100000				
	43	1	104	debit	2009-11-19 00:
00:00	50000				
	44	4	107	kredit	2009-11-20 00:
00:00	200000				
	45	3	105	debit	2009-11-21 00:
00:00	40000				
	46	1	104	kredit	2009-11-22 00:
00:00	100000				
	47	4	101	kredit	2009-11-22 00:
00:00	20000				

TUGAS

1.

Insert transaksi



```
modul10.py - G:\titip ati ya pritttt\modul10.py (2.7.14)
File Edit Format Run Options Window Help

from datetime import date, datetime, timedelta
import mysql.connector

##cnx = mysql.connector.connect(user='root',database='perbankan')
##cursor = cnx.cursor()
##tanggal = datetime.now().date()
##update_transaksi = ("update transaksi\
##                      set jumlah ='20000'\
##                      where no_transaksi = 35")
##cursor.execute(update_transaksi)
##
##cnx.commit()
##cursor.close()
##cnx.close()

##from datetime import date, datetime, timedelta
##import mysql.connector

con = mysql.connector.connect(user='root',database='perbankan')
cursor = con.cursor()
tanggal = datetime.now().date()
tambah_transaksi = ('INSERT INTO transaksi VALUES (%s, %s, %s, %s, %s, %s)')

data_transaksi = ('','26','150','kredit',tanggal, '70000')
cursor.execute(tambah_transaksi, data_transaksi)

con.commit()
cursor.close()
con.close()

Python 2.7.14 Shell
File Edit Shell Debug Options Window Help

Python 2.7.14 (v2.7.14:84471935ed, Sep 16 2017
, 20:19:30) [MSC v.1500 32 bit (Intel)] on win
32
Type "copyright", "credits" or "license()" for
more information.
>>>
===== RESTART: G:\titip ati ya prit
ttt\modul10.py =====
>>> |
```

Update nasabah

```

File Edit Format Run Options Window Help
from datetime import date, datetime, timedelta
import mysql.connector

cnx = mysql.connector.connect(user='root',database='perbankan')
cursor = cnx.cursor()
tanggal = datetime.now().date()
update_transaksi = ("update nasabah\
                    set nama_nasabah = 'anggi'\
                    where id_nasabah = 2")
cursor.execute(update_transaksi)

cnx.commit()
cursor.close()
cnx.close()

##from datetime import date, datetime, timedelta
##import mysql.connector
##
##cnx = mysql.connector.connect(user='root',database='perbankan')
##cursor = cnx.cursor()
##tanggal = datetime.now().date()
##delete_transaksi = ('delete from transaksi\
##                    where no_transaksi = 52')
##cursor.execute(delete_transaksi)
##
##cnx.commit()
##cursor.close()
##cnx.close()

```

Hasil

+ Options			
	id_nasabah	nama_nasabah	alamat_nasabah
<input type="checkbox"/> Edit Copy Delete	1	Sutopo	Jl. Jendral Sudirman 12
<input type="checkbox"/> Edit Copy Delete	2	anggi	Jl. MT. Haryono 31
<input type="checkbox"/> Edit Copy Delete	3	Suparman	Jl. Hasanudin 81
<input type="checkbox"/> Edit Copy Delete	4	Kartika Padmasari	Jl. Manggis 15
<input type="checkbox"/> Edit Copy Delete	5	Budi Eko Prayogo	Jl. Kantil 30
<input type="checkbox"/> Edit Copy Delete	6	Satria Eka Jaya	Jl. Slamet Riyadi 45
<input type="checkbox"/> Edit Copy Delete	7	Indri Hapsari	Jl. Sutoyo 5
<input type="checkbox"/> Edit Copy Delete	8	Sari Murti	Jl. Pangandaran 11
<input type="checkbox"/> Edit Copy Delete	9	Canka Lokananta	Jl. Tidar 86
<input type="checkbox"/> Edit Copy Delete	10	Budi Murtono	Jl. Merak 22
<input type="checkbox"/> Edit Copy Delete	11	Joko Ndo Kondo	Jl. Bareng jadian kagak
<input type="checkbox"/> Edit Copy Delete	12	Jon Koplo	Jl. Angin Besar 12
	13	Anggit	Solo

Update transaksi

```
*modul10.py - G:\titip ati ya pritttt\modul10.py (2.7.14)*
File Edit Format Run Options Window Help

from datetime import date, datetime, timedelta
import mysql.connector

cnx = mysql.connector.connect(user='root',database='perbankan')
cursor = cnx.cursor()
tanggal = datetime.now().date()
update_transaksi = ("update transaksi\
                    set jumlah ='20000'\
                    where no_transaksi = 35")
cursor.execute(update_transaksi)

















































cnx.commit()
cursor.close()
cnx.close()

##from datetime import date, datetime, timedelta
##import mysql.connector

##con = mysql.connector.connect(user='root',database='perbankan')
##cursor = con.cursor()
##tanggal = datetime.now().date()
##tambah_transaksi = ('INSERT INTO transaksi VALUES (%s, %s, %s, %s, %s, %s)')
##
##
##data_transaksi = ('','26','150','kredit',tanggal, '70000')
##cursor.execute(tambah_transaksi, data_transaksi)
##
##con.commit()
##cursor.close()
##con.close()
```

Hasil
sebelum

Options

			no_transaksi	id_nasabahFK	no_rekeningFK	jenis_transaksi	tanggal	jumlah	
<input type="checkbox"/>	 Edit	 Copy	 Delete	32	3	105	debit	2009-11-10 00:00:00	50000
<input type="checkbox"/>	 Edit	 Copy	 Delete	33	2	103	debit	2009-11-10 00:00:00	40000
<input type="checkbox"/>	 Edit	 Copy	 Delete	34	4	101	kredit	2009-11-12 00:00:00	20000
<input type="checkbox"/>	 Edit	 Copy	 Delete	35	3	106	debit	2009-11-13 00:00:00	50000
<input type="checkbox"/>	 Edit	 Copy	 Delete	36	5	107	kredit	2009-11-13 00:00:00	30000
<input type="checkbox"/>	 Edit	 Copy	 Delete	37	1	104	kredit	2009-11-15 00:00:00	200000
<input type="checkbox"/>	 Edit	 Copy	 Delete	38	9	110	kredit	2009-11-15 00:00:00	150000
<input type="checkbox"/>	 Edit	 Copy	 Delete	39	5	102	debit	2009-11-16 00:00:00	20000
<input type="checkbox"/>	 Edit	 Copy	 Delete	40	3	105	kredit	2009-11-18 00:00:00	50000
<input type="checkbox"/>	 Edit	 Copy	 Delete	41	4	107	debit	2009-11-19 00:00:00	100000
<input type="checkbox"/>	 Edit	 Copy	 Delete	42	2	103	debit	2009-11-19 00:00:00	100000
<input type="checkbox"/>	 Edit	 Copy	 Delete	43	1	104	debit	2009-11-19 00:00:00	50000
<input type="checkbox"/>	 Edit	 Copy	 Delete	44	4	107	kredit	2009-11-20 00:00:00	200000
<input type="checkbox"/>	 Edit	 Copy	 Delete	45	3	105	debit	2009-11-21 00:00:00	40000
<input type="checkbox"/>	 Edit	 Copy	 Delete	46	1	104	kredit	2009-11-22 00:00:00	100000
<input type="checkbox"/>	 Edit	 Copy	 Delete	47	4	101	kredit	2009-11-22 00:00:00	20000

Setelah

Server: 127.0.0.1 Database: perbankan Table: transaksi

Browse Structure SQL Search Insert Export Import Privileges Operations Tra

1 > >> | ☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Options

		no_transaksi	id_nasabahFK	no_rekeningFK	jenis_transaksi	tanggal	jumlah
<input type="checkbox"/>	Edit Copy Delete	32	3	105	debit	2009-11-10 00:00:00	50000
<input type="checkbox"/>	Edit Copy Delete	33	2	103	debit	2009-11-10 00:00:00	40000
<input type="checkbox"/>	Edit Copy Delete	34	4	101	kredit	2009-11-12 00:00:00	20000
<input type="checkbox"/>	Edit Copy Delete	35	3	106	debit	2009-11-13 00:00:00	20000
<input type="checkbox"/>	Edit Copy Delete	36	5	107	kredit	2009-11-13 00:00:00	30000
<input type="checkbox"/>	Edit Copy Delete	37	1	104	kredit	2009-11-15 00:00:00	200000
<input type="checkbox"/>	Edit Copy Delete	38	9	110	kredit	2009-11-15 00:00:00	150000
<input type="checkbox"/>	Edit Copy Delete	39	5	102	debit	2009-11-16 00:00:00	20000
<input type="checkbox"/>	Edit Copy Delete	40	3	105	kredit	2009-11-18 00:00:00	50000
<input type="checkbox"/>	Edit Copy Delete	41	4	107	debit	2009-11-19 00:00:00	100000
<input type="checkbox"/>	Edit Copy Delete	42	2	103	debit	2009-11-19 00:00:00	100000
<input type="checkbox"/>	Edit Copy Delete	43	1	104	debit	2009-11-19 00:00:00	50000
<input type="checkbox"/>	Edit Copy Delete	44	4	107	kredit	2009-11-20 00:00:00	200000
<input type="checkbox"/>	Edit Copy Delete	45	3	105	debit	2009-11-21 00:00:00	40000

delete transaksi

```

modul10.py - C:/Users/LABSI-08/Pictures/modul10.py (3.4.4)
File Edit Format Run Options Window Help
from datetime import date, datetime, timedelta
import mysql.connector

##cnx = mysql.connector.connect(user='root',database='perbankan')
##cursor = cnx.cursor()
##tanggal = datetime.now().date()
##update_transaksi = ("update transaksi\
##                      set jumlah ='20000'\
##                      where no_transaksi = 35")
##cursor.execute(update_transaksi)
##
##cnx.commit()
##cursor.close()
##cnx.close()

from datetime import date, datetime, timedelta
import mysql.connector

cnx = mysql.connector.connect(user='root',database='perbankan')
cursor = cnx.cursor()
tanggal = datetime.now().date()
delete_transaksi = ('delete from transaksi\
                    where no_transaksi = 32')
cursor.execute(delete_transaksi)

cnx.commit()
cursor.close()
cnx.close()

```

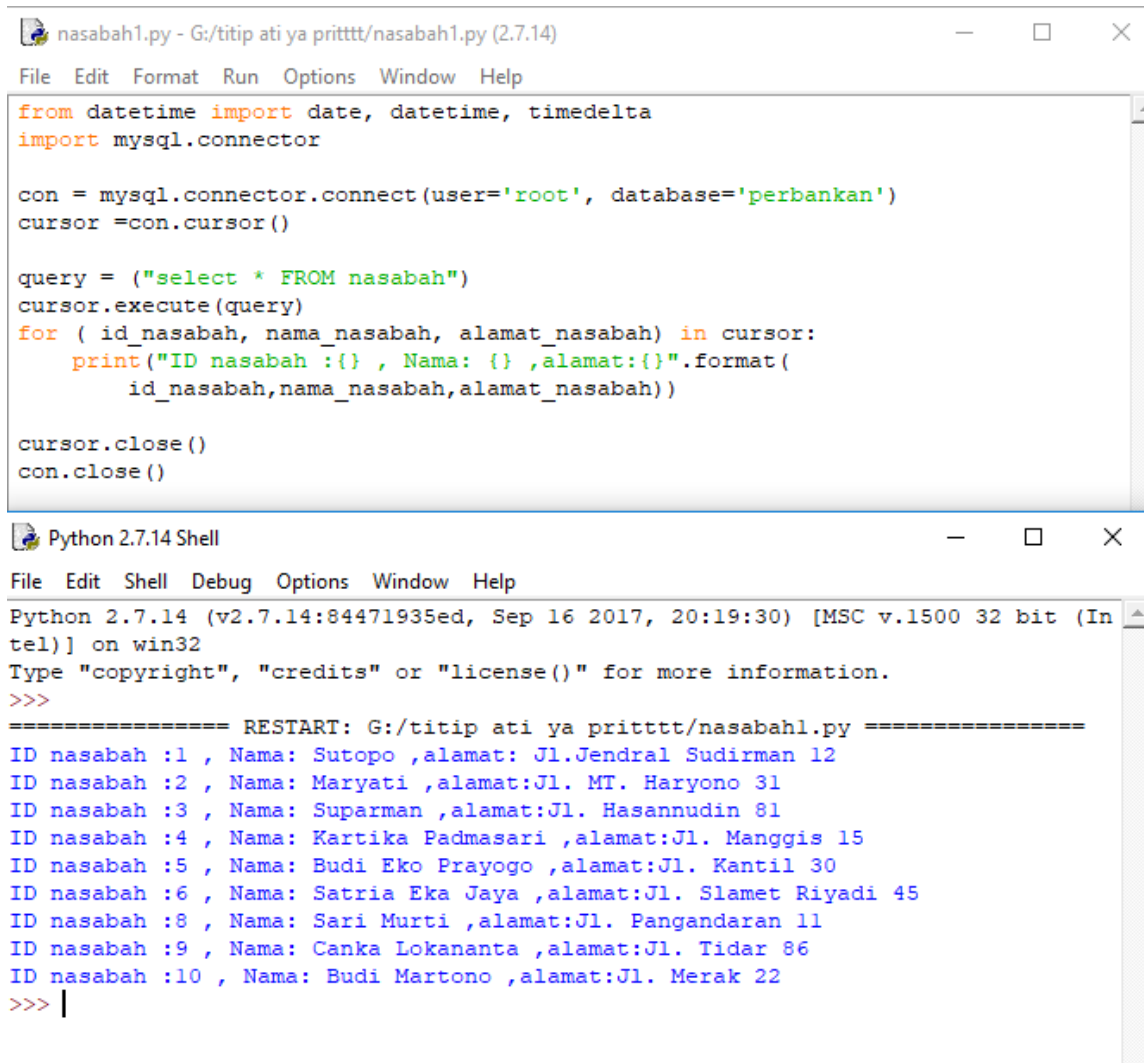
Hasil

		no_transaksi	id_nasabahFK	no_rekeningFK	jenis_transaksi	ta
<input type="checkbox"/>	 Edit  Copy  Delete	33	2	103	debit	20
<input type="checkbox"/>	 Edit  Copy  Delete	34	4	101	kredit	20
<input type="checkbox"/>	 Edit  Copy  Delete	35	3	106	debit	20
<input type="checkbox"/>	 Edit  Copy  Delete	36	5	107	kredit	20
<input type="checkbox"/>	 Edit  Copy  Delete	37	1	104	kredit	20
<input type="checkbox"/>	 Edit  Copy  Delete	38	9	110	kredit	20
<input type="checkbox"/>	 Edit  Copy  Delete	39	5	102	debit	20
<input type="checkbox"/>	 Edit  Copy  Delete	40	3	105	kredit	20
<input type="checkbox"/>	 Edit  Copy  Delete	41	4	107	debit	20
<input type="checkbox"/>	 Edit  Copy  Delete	42	2	103	debit	20
<input type="checkbox"/>	 Edit  Copy  Delete	43	1	104	debit	20
<input type="checkbox"/>	 Edit  Copy  Delete	44	4	107	kredit	20
<input type="checkbox"/>	 Edit  Copy  Delete	45	3	105	debit	20
<input type="checkbox"/>	 Edit  Copy  Delete	46	1	104	kredit	20
<input type="checkbox"/>	 Edit  Copy  Delete	47	4	101	kredit	20
<input type="checkbox"/>	 Edit  Copy  Delete	48	2	103	debit	20

Console

2. Buatlah kode program python untuk mendapat

a. Data Nasabah



The image shows a screenshot of a Python script and its execution. The top window is a text editor titled 'nasabah1.py - G:/titip ati ya pritttt/nasabah1.py (2.7.14)'. It contains a Python script that connects to a MySQL database named 'perbankan' using the 'root' user. The script executes a query to select all data from a table named 'nasabah' and prints the results. The bottom window is a 'Python 2.7.14 Shell' showing the execution of the script. It displays the output of the query, which lists 10 customer records with their IDs, names, and addresses.

```
nasabah1.py - G:/titip ati ya pritttt/nasabah1.py (2.7.14)
File Edit Format Run Options Window Help

from datetime import date, datetime, timedelta
import mysql.connector

con = mysql.connector.connect(user='root', database='perbankan')
cursor =con.cursor()

query = ("select * FROM nasabah")
cursor.execute(query)
for ( id_nasabah, nama_nasabah, alamat_nasabah) in cursor:
    print("ID nasabah :{} , Nama: {} ,alamat:{}".format(
        id_nasabah,nama_nasabah,alamat_nasabah))

cursor.close()
con.close()
```

```
Python 2.7.14 Shell
File Edit Shell Debug Options Window Help
Python 2.7.14 (v2.7.14:84471935ed, Sep 16 2017, 20:19:30) [MSC v.1500 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: G:/titip ati ya pritttt/nasabah1.py =====
ID nasabah :1 , Nama: Sutopo ,alamat: Jl.Jendral Sudirman 12
ID nasabah :2 , Nama: Maryati ,alamat:Jl. MT. Haryono 31
ID nasabah :3 , Nama: Suparman ,alamat:Jl. Hasannudin 81
ID nasabah :4 , Nama: Kartika Padmasari ,alamat:Jl. Manggis 15
ID nasabah :5 , Nama: Budi Eko Prayogo ,alamat:Jl. Kantil 30
ID nasabah :6 , Nama: Satria Eka Jaya ,alamat:Jl. Slamet Riyadi 45
ID nasabah :8 , Nama: Sari Murti ,alamat:Jl. Pangandaran 11
ID nasabah :9 , Nama: Canka Lokananta ,alamat:Jl. Tidar 86
ID nasabah :10 , Nama: Budi Martono ,alamat:Jl. Merak 22
>>> |
```

b. Data nasabah yang melakukan transaksi antara bulan oktober sampai desember

File Edit Format Run Options Window Help

```
from datetime import date, datetime, timedelta
import mysql.connector

cnx = mysql.connector.connect(user='root', database='perbankan')
cursor = cnx.cursor()

|
query = ("select nasabah.id_nasabah, nasabah.nama_nasabah, transaksi.tanggal FROM nasabah,transaksi ")
cursor.execute(query)
for( id_nasabah, nama_nasabah, tanggal) in cursor:
    print("ID nasabah:() , nama: (), tanggal:()".format(
        id_nasabah, nama_nasabah, tanggal))
cursor.close()
cnx.close()
```

===== RESTART: D:\semester4\praktikum basis data\sbd modul11\nasabah2.py =====

```
ID nasabah :3 ,Nama: Superman ,tanggal:2009-11-10 00:00:00
ID nasabah :2 ,Nama: Maryati ,tanggal:2009-11-10 00:00:00
ID nasabah :4 ,Nama: Kartika Padmasari ,tanggal:2009-11-12 00:00:00
ID nasabah :3 ,Nama: Superman ,tanggal:2009-11-13 00:00:00
ID nasabah :5 ,Nama: Budi Eko Prayogo ,tanggal:2009-11-13 00:00:00
ID nasabah :1 ,Nama: Sutopo ,tanggal:2009-11-15 00:00:00
ID nasabah :9 ,Nama: Canka Lekananta ,tanggal:2009-11-15 00:00:00
ID nasabah :5 ,Nama: Budi Eko Prayogo ,tanggal:2009-11-16 00:00:00
ID nasabah :3 ,Nama: Superman ,tanggal:2009-11-18 00:00:00
ID nasabah :4 ,Nama: Kartika Padmasari ,tanggal:2009-11-19 00:00:00
ID nasabah :2 ,Nama: Maryati ,tanggal:2009-11-19 00:00:00
ID nasabah :1 ,Nama: Sutopo ,tanggal:2009-11-19 00:00:00
ID nasabah :4 ,Nama: Kartika Padmasari ,tanggal:2009-11-20 00:00:00
ID nasabah :3 ,Nama: Superman ,tanggal:2009-11-21 00:00:00
ID nasabah :1 ,Nama: Sutopo ,tanggal:2009-11-22 00:00:00
ID nasabah :4 ,Nama: Kartika Padmasari ,tanggal:2009-11-22 00:00:00
ID nasabah :2 ,Nama: Maryati ,tanggal:2009-11-22 00:00:00
ID nasabah :5 ,Nama: Budi Eko Prayogo ,tanggal:2009-11-25 00:00:00
ID nasabah :10 ,Nama: Budi Murtono ,tanggal:2009-11-26 00:00:00
ID nasabah :3 ,Nama: Superman ,tanggal:2009-11-27 00:00:00
ID nasabah :2 ,Nama: Maryati ,tanggal:2009-11-28 00:00:00
ID nasabah :3 ,Nama: Superman ,tanggal:2009-11-28 00:00:00
ID nasabah :5 ,Nama: Budi Eko Prayogo ,tanggal:2009-11-30 00:00:00
ID nasabah :1 ,Nama: Sutopo ,tanggal:2009-12-01 00:00:00
ID nasabah :2 ,Nama: Maryati ,tanggal:2009-12-02 00:00:00
ID nasabah :4 ,Nama: Kartika Padmasari ,tanggal:2009-12-04 00:00:00
ID nasabah :2 ,Nama: Maryati ,tanggal:2009-12-05 00:00:00
ID nasabah :5 ,Nama: Budi Eko Prayogo ,tanggal:2009-12-05 00:00:00
ID nasabah :7 ,Nama: Indri Hapsari ,tanggal:2009-12-05 00:00:00
```