In [1]:
```
pip install mysql-connector-python
```
```
Requirement already satisfied: mysql-connector-python in c:\users\user\anaconda3\lib\site-packages (8.0.28)
Requirement already satisfied: protobuf>=3.0.0 in c:\users\user\anaconda3\lib\site-packages (from mysql-connector-python) (3.19.3)
Note: you may need to restart the kernel to use updated packages.
```
In [1]:
```python
import mysql.connector as connector
from mysql.connector import Error
```
In [7]:
```python
help(Error)
```
```
Help on class Error in module mysql.connector.errors:

class Error(builtins.Exception)
 |  Error(msg=None, errno=None, values=None, sqlstate=None)
 |
 |  Exception that is base class for all other error exceptions
 |
 |  Method resolution order:
 |      Error
 |      builtins.Exception
 |      builtins.BaseException
 |      builtins.object
 |
 |  Methods defined here:
 |
 |  __init__(self, msg=None, errno=None, values=None, sqlstate=None)
 |      Initialize self.  See help(type(self)) for accurate signature.
 |
 |  __str__(self)
 |      Return str(self).
 |
 |  ----------------------------------------------------------------------
 |  Data descriptors defined here:
 |
 |  __weakref__
 |      list of weak references to the object (if defined)
 |
 |  ----------------------------------------------------------------------
 |  Static methods inherited from builtins.Exception:
 |
 |  __new__(*args, **kwargs) from builtins.type
 |      Create and return a new object.  See help(type) for accurate signature.
 |
 |  ----------------------------------------------------------------------
 |  Methods inherited from builtins.BaseException:
 |
 |  __delattr__(self, name, /)
 |      Implement delattr(self, name).
 |
 |  __getattribute__(self, name, /)
 |      Return getattr(self, name).
 |
 |  __reduce__(...)
 |      Helper for pickle.
 |
 |  __repr__(self, /)
 |      Return repr(self).
 |
 |  __setattr__(self, name, value, /)
 |      Implement setattr(self, name, value).
 |
 |  __setstate__(...)
 |
 |  with_traceback(...)
 |      Exception.with_traceback(tb) --
 |      set self.__traceback__ to tb and return self.
 |
 |  ----------------------------------------------------------------------
 |  Data descriptors inherited from builtins.BaseException:
 |
 |  __cause__
 |      exception cause
 |
 |  __context__
 |      exception context
 |
 |  __dict__
 |
 |  __suppress_context__
 |
 |  __traceback__
 |
 |  args
```
In [34]:
```python
# DB server-name/IP, which DB name, userid pass
def getDBConnection():
    try:
        mysqlconobj=connector.connect(host='localhost',database='customer',user='root',password='root')
        print(type(mysqlconobj))
        if(mysqlconobj.is_connected()):
            print('connection achieved succefully with mysql server ',mysqlconobj.get_server_version())
            crsr=mysqlconobj.cursor()
            print(type(crsr))
            print('Cursor created..')
            crsr.execute('select * from book_table')
            # Fetch all records()
            record=crsr.fetchall()
            print('Book_id | Book_name | Book_price | Auther_id')
            for i in record:
                print(i[0],'   ',i[1],'    ',i[2],'      ',i[3])

    except Error as e:
        print(e)
        print('some problem while connecting with Db')
    else:
        print('connection establish suceesfully')
    finally:
        crsr.close()
        mysqlconobj.close()
        print('DB Connection closed!')
```
In [35]:
```python
getDBConnection()
```
```
<class 'mysql.connector.connection_cext.CMySQLConnection'>
connection achieved succefully with mysql server  (8, 0, 28)
<class 'mysql.connector.cursor_cext.CMySQLCursor'>
Cursor created..
Book_id | Book_name | Book_price | Auther_id
1     dfghhg      4566        101
2     dfhjjhg      654        102
3     jhfgfd      543        103
4     iyttr       877        104
5     asdfgg      988        105
6     lkjjhh      123        106
7     asdfg      432        107
8     zxccv      2345        108
9     mnbv      3456        109
10     wwerr       2345        110
11     hgfdd       765        111
12     uytr      4567        112
13     uyyt       986        113
14     hggf       655        114
connection establish suceesfully
DB Connection closed!
```
In [21]:
```python
def getDBConnection():
    try:
        mysqlconobj=connector.connect(host='localhost',database='customer',user='root',password='root')
        print(type(mysqlconobj))
        if(mysqlconobj.is_connected()):
            print('connection achieved succefully with mysql server ',mysqlconobj.get_server_version())
            crsr=mysqlconobj.cursor()
            print(type(crsr))
            print('Cursor created..')
            crsr.execute('select * from book_table')
            # Fetch all records()
            record=crsr.fetchall()
            print('Book_id | Book_name | Book_price | Auther_id')
            for i in record:
                print(i[0],'   ',i[1],'    ',i[2],'      ',i[3])

    except Error as e:
        print(e)
        print('some problem while connecting with Db')
    else:
        print('connection establish suceesfully....')
    return mysqlconobj,crsr

def FetchRecordsByAutherid(Auther_id):
    connection=' '
    cursor=' '
    try:
        connection,cursor=getDBConnection()
        t1=(Auther_id,)
        cursor.execute('select * from book_table where Auther_id=%s',t1)
        record=cursor.fetchone()
        print('no of records:',cursor.rowcount)
        if(cursor.rowcount>0):
            print('Book_id |  Book_name    |   Book_price   |  dl_id')
            print(record[0],'  ',record[1],'  ',record[2],'  ',record[3])

        else:
            print('no record found')
    except Error as e:
        print (e)
        print('problem in fetching the data')
    finally:
        cursor.close()
        connection.close()
        print('Connection closed successfully')

def FetchRecordsSpecified(number_of_record):
    connection=' '
    cursor=' '
    try:
        connection,cursor=getDBConnection()
        cursor=connection.cursor(buffered=True)
        cursor.execute('select * from book_table')
        record=cursor.fetchmany(number_of_record)
        print('no of records fetched ',cursor.rowcount)
        if(cursor.rowcount>0):
                print('Book_id | Book_name | Book_price | Auther_id')
                print(i[0],'   ',i[1],'    ',i[2],'      ',i[3])
        else:
            print('no record found')
    except Error as e:
        print (e)
        print('problem in fetching the data....')
    finally:
        cursor.close()
        connection.close()
        print('Connection closed successfully....')


def InsertRecords(Book_id,Book_name,Book_price,Auther_id):
    connection=' '
    cursor=' '
    try:
        connection,cursor=getDBConnection()
        cursor.execute('insert into book_table (Book_id,Book_name,Book_price,Auther_id) values=[(%s,%s,%s,%s)]',
                      (Book_id,Book_name,Book_price,Auther_id))
        connection.commit()
    except Error as e:
        print (e)
        print('problem in fetching the data....')
    finally:
        cursor.close()
        connection.close()
        print('Connection closed successfully....')

def UpdateRecords(Book_name,Auther_id):
    connection=' '
    cursor=' '
    try:
        connection,cursor=getDBConnection()
        cursor.execute('update book_table set Book_name=%s where Auther_id=%s',(Book_name,Auther_id))
        connection.commit()
    except Error as e:
        print (e)
        print('problem in fetching the data....')
    finally:
        cursor.close()
        connection.close()
        print('Connection closed successfully....')

def DeleteRecords(Auther_id):
    connection=' '
    cursor=' '
    try:
        connection,cursor=getDBConnection()
        t1=(Auther_id,)
        cursor.execute('delete from book_table where Auther_id=%s',t1)
        connection.commit()
    except Error as e:
        print (e)
        print('problem in fetching the data....')
    finally:
        cursor.close()
        connection.close()
        print('Connection closed successfully....')
```
In [35]:
```python
FetchRecordsByAutherid(106)
```
```
<class 'mysql.connector.connection_cext.CMySQLConnection'>
connection achieved succefully with mysql server  (8, 0, 28)
<class 'mysql.connector.cursor_cext.CMySQLCursor'>
Cursor created..
Book_id | Book_name | Book_price | Auther_id
1     dfghhg      4566        101
2     dfhjjhg      654        102
3     jhfgfd      543        103
4     iyttr       877        104
5     asdfgg      988        105
6     lkjjhh      123        106
7     asdfg      432        107
8     zxccv      2345        108
9     mnbv      3456        109
10     wwerr       2345        110
11     hgfdd       765        111
12     uytr      4567        112
13     uyyt       986        113
14     hggf       655        114
connection establish suceesfully....
no of records: 1
Book_id |  Book_name    |   Book_price   |  dl_id
6    lkjjhh    123    106
Connection closed successfully
```
In [35]:
```python
UpdateRecords('khhgfds',108)
```
```
<class 'mysql.connector.connection_cext.CMySQLConnection'>
connection achieved succefully with mysql server  (8, 0, 28)
<class 'mysql.connector.cursor_cext.CMySQLCursor'>
Cursor created..
Book_id | Book_name | Book_price | Auther_id
1     dfghhg      4566        101
2     dfhjjhg      654        102
3     jhfgfd      543        103
4     iyttr       877        104
5     asdfgg      988        105
6     lkjjhh      123        106
7     asdfg      432        107
8     khhgfds      2345        108
9     mnbv      3456        109
10     wwerr       2345        110
12     uytr      4567        112
13     uyyt       986        113
connection establish suceesfully....
Connection closed successfully....
```
In [22]:
```python
DeleteRecords(114)
```
```
<class 'mysql.connector.connection_cext.CMySQLConnection'>
connection achieved succefully with mysql server  (8, 0, 28)
<class 'mysql.connector.cursor_cext.CMySQLCursor'>
Cursor created..
Book_id | Book_name | Book_price | Auther_id
1     dfghhg      4566        101
2     dfhjjhg      654        102
3     jhfgfd      543        103
4     iyttr       877        104
5     asdfgg      988        105
6     lkjjhh      123        106
7     asdfg      432        107
8     zxccv      2345        108
9     mnbv      3456        109
10     wwerr       2345        110
11     hgfdd       765        111
12     uytr      4567        112
13     uyyt       986        113
14     hggf       655        114
connection establish suceesfully....
Connection closed successfully....
```
In [23]:
```python
getDBConnection()
```
```
<class 'mysql.connector.connection_cext.CMySQLConnection'>
connection achieved succefully with mysql server  (8, 0, 28)
<class 'mysql.connector.cursor_cext.CMySQLCursor'>
Cursor created..
Book_id | Book_name | Book_price | Auther_id
1     dfghhg      4566        101
2     dfhjjhg      654        102
3     jhfgfd      543        103
4     iyttr       877        104
5     asdfgg      988        105
6     lkjjhh      123        106
7     asdfg      432        107
8     zxccv      2345        108
9     mnbv      3456        109
10     wwerr       2345        110
11     hgfdd       765        111
12     uytr      4567        112
13     uyyt       986        113
connection establish suceesfully....
```
Out[23]:
```
(<mysql.connector.connection_cext.CMySQLConnection at 0x2079b282640>,
 <mysql.connector.cursor_cext.CMySQLCursor at 0x2079b282e20>)
```
In [24]:
```python
DeleteRecords(111)
```
```
<class 'mysql.connector.connection_cext.CMySQLConnection'>
connection achieved succefully with mysql server  (8, 0, 28)
<class 'mysql.connector.cursor_cext.CMySQLCursor'>
Cursor created..
Book_id | Book_name | Book_price | Auther_id
1     dfghhg      4566        101
2     dfhjjhg      654        102
3     jhfgfd      543        103
4     iyttr       877        104
5     asdfgg      988        105
6     lkjjhh      123        106
7     asdfg      432        107
8     zxccv      2345        108
9     mnbv      3456        109
10     wwerr       2345        110
11     hgfdd       765        111
12     uytr      4567        112
13     uyyt       986        113
connection establish suceesfully....
Connection closed successfully....
```
In [25]:
```python
getDBConnection()
```
```
<class 'mysql.connector.connection_cext.CMySQLConnection'>
connection achieved succefully with mysql server  (8, 0, 28)
<class 'mysql.connector.cursor_cext.CMySQLCursor'>
Cursor created..
Book_id | Book_name | Book_price | Auther_id
1     dfghhg      4566        101
2     dfhjjhg      654        102
3     jhfgfd      543        103
4     iyttr       877        104
5     asdfgg      988        105
6     lkjjhh      123        106
7     asdfg      432        107
8     zxccv      2345        108
9     mnbv      3456        109
10     wwerr       2345        110
12     uytr      4567        112
13     uyyt       986        113
connection establish suceesfully....
```
Out[25]:
```
(<mysql.connector.connection_cext.CMySQLConnection at 0x2079b282820>,
 <mysql.connector.cursor_cext.CMySQLCursor at 0x2079b282ee0>)
```
In [2]:
```python
import sqlite3 as s
```
In [3]:
```
pip install sqlite3
```
```
Note: you may need to restart the kernel to use updated packages.
ERROR: Could not find a version that satisfies the requirement sqlite3 (from versions: none)
ERROR: No matching distribution found for sqlite3
```
In [17]:
```python
connection=s.connect("Healcare.db")
print("Connected to database")
```
```
Connected to database
```
In [16]:
```python
# Assignment
```
In [52]:
```python
import mysql.connector as connector
from mysql.connector import Error
def getDBConnection():
    try:
        mysqlobj=connector.connect(host='localhost',database='customer',user='root',password='root')
        print(type(mysqlobj))
        if(mysqlobj.is_connected()):
            print('connection achieved succefully with mysql server ',mysqlobj.get_server_version())
            crs=mysqlobj.cursor()
            print(type(crs))
            print('Cursor created..')
    except Error as e:
        print(e)
        print('some problem while connecting with Db')
    else:
        print('connection establish suceesfully....')
    return mysqlobj,crs

def FetchAllRecords():
    connection=' '
    cursor=' '
    try:
        connection,cursor=getDBConnection()
        cursor.execute('select * from items')
        record=cursor.fetchall()
        print('Item_id     |    Item_name     |    Item_cost     |  Supplier_id')
        for i in record:
            print(i[0],'        ',i[1],'               ',i[2],'            ',i[3])
    except Error as e:
        print (e)
        print('problem in fetching the data....')
    finally:
        cursor.close()
        connection.close()
        print('Connection closed successfully....')
```
In [42]:
```python
# 1.Write a python program to create a table in database with name item(item Id,Item Name, Item cost,supplier id)
def CreateTable():
        connection=' '
        cursor=' '
        try:
            connection,cursor=getDBConnection()
            cursor.execute('create table items (Item_id int,Item_name varchar(25),Item_cost int,Supplier_id int)')
            record=cursor.fetchall()
            connection.commit()

        except Error as e:
            print(e)
            print('some problem while creating the table')
        else:
            print('Table created successfully')
        finally:
            cursor.close()
            connection.close()
            print('DB Connection closed!')
```
In [43]:
```python
CreateTable()
```
```
<class 'mysql.connector.connection_cext.CMySQLConnection'>
connection achieved succefully with mysql server  (8, 0, 28)
<class 'mysql.connector.cursor_cext.CMySQLCursor'>
Cursor created..
connection establish suceesfully....
Table created successfully
DB Connection closed!
```
In [44]:
```python
# 2.Write a python program to insert 5 records in table by accepting data from user.
def InsertRecords():
    connection=' '
    cursor=' '
    try:
            connection,cursor=getDBConnection()
            record='''insert into items (Item_id,Item_name,Item_cost,Supplier_id) values (%s,%s,%s,%s)'''
            records_insert = [(101,"Pizza", 2000, 110),
                             (102,'Pasta', 2000, 120),
                             (103,'Maggi', 1000, 130),
                             (104,'Panner', 2500, 140),
                             (105,'Burger', 2300, 150)]
            cursor.executemany(record,records_insert)
            connection.commit()
            print(cursor.rowcount, "Record inserted successfully into items table")
    except Error as e:
            print (e)
            print('problem in fetching the data....')
    finally:
            cursor.close()
            connection.close()
            print('Connection closed successfully....')
```
In [45]:
```python
InsertRecords()
```
```
<class 'mysql.connector.connection_cext.CMySQLConnection'>
connection achieved succefully with mysql server  (8, 0, 28)
<class 'mysql.connector.cursor_cext.CMySQLCursor'>
Cursor created..
connection establish suceesfully....
5 Record inserted successfully into items table
Connection closed successfully....
```
In [47]:
```python
FetchAllRecords()
```
```
<class 'mysql.connector.connection_cext.CMySQLConnection'>
connection achieved succefully with mysql server  (8, 0, 28)
<class 'mysql.connector.cursor_cext.CMySQLCursor'>
Cursor created..
connection establish suceesfully....
Item_id     |    Item_name     |    Item_cost     |  Supplier_id
101          Pizza                 2000              110
102          Pasta                 2000              120
103          Maggi                 1000              130
104          Panner                 2500              140
105          Burger                2300              150
Connection closed successfully....
```
In [86]:
```python
# 3.Write a python program to show records with cost between 1000 to 4450
def ShowTableRecords():
    connection=' '
    cursor=' '
    try:
        connection,cursor=getDBConnection()
        cursor=connection.cursor(buffered=True)
        cursor.execute('select * from items where items.Item_cost between 1000 and 4450')
        record=cursor.fetchall()
        print('Item_id     |    Item_name     |    Item_cost     |  Supplier_id')
        for i in record:
            print(i[0],'        ',i[1],'               ',i[2],'            ',i[3])
        connection.commit()
    except Error as e:
        print (e)
        print('problem in fetching the data....')
    finally:
        cursor.close()
        connection.close()
        print('Connection closed successfully....')
```
In [76]:
```python
ShowTableRecords()
#FetchAllRecords()
```
```
<class 'mysql.connector.connection_cext.CMySQLConnection'>
connection achieved succefully with mysql server  (8, 0, 28)
<class 'mysql.connector.cursor_cext.CMySQLCursor'>
Cursor created..
connection establish suceesfully....
Item_id     |    Item_name     |    Item_cost     |  Supplier_id
101          Pizza                 2000              110
102          Pasta                 2000              120
103          Maggi                 1000              130
104          Panner                 2500              140
105          Burger                2300              150
Connection closed successfully....
```
In [83]:
```python
# 4. Write a python program to increase cost of item by 2000, which are supplied  by supplier id 120
def IncreaseCost():
    connection=' '
    cursor=' '
    try:
        connection,cursor=getDBConnection()
        cursor.execute('update items set items.Item_cost=items.Item_cost+2000 where Supplier_id=120')
        record=cursor.fetchall()
        connection.commit()
    except Error as e:
        print (e)
        print('problem in fetching the data....')
    finally:
        cursor.close()
        connection.close()
        print('Connection closed successfully....')
```
In [85]:
```python
IncreaseCost()
FetchAllRecords()
```
```
<class 'mysql.connector.connection_cext.CMySQLConnection'>
connection achieved succefully with mysql server  (8, 0, 28)
<class 'mysql.connector.cursor_cext.CMySQLCursor'>
Cursor created..
connection establish suceesfully....
Connection closed successfully....
<class 'mysql.connector.connection_cext.CMySQLConnection'>
connection achieved succefully with mysql server  (8, 0, 28)
<class 'mysql.connector.cursor_cext.CMySQLCursor'>
Cursor created..
connection establish suceesfully....
Item_id     |    Item_name     |    Item_cost     |  Supplier_id
101          Pizza                 2000              110
102          Pasta                 6000              120
103          Maggi                 1000              130
104          Panner                 2500              140
105          Burger                2300              150
Connection closed successfully....
```
In [87]:
```python
# 5.Write a python program to fetch all itemId and itenName as key values pairs
def FetchAll():
    connection=' '
    cursor=' '
    try:
        connection,cursor=getDBConnection()
        cursor.execute('select Item_id,Item_name from items')
        record=cursor.fetchall()
        for i in record:
                print(i)
        connection.commit()
    except Error as e:
        print (e)
        print('problem in fetching the data....')
    finally:
        cursor.close()
        connection.close()
        print('Connection closed successfully....')
```
In [88]:
```python
FetchAll()
```
```
<class 'mysql.connector.connection_cext.CMySQLConnection'>
connection achieved succefully with mysql server  (8, 0, 28)
<class 'mysql.connector.cursor_cext.CMySQLCursor'>
Cursor created..
connection establish suceesfully....
(101, 'Pizza')
(102, 'Pasta')
(103, 'Maggi')
(104, 'Panner')
(105, 'Burger')
Connection closed successfully....
```
In [96]:
```python
# 6.Write a python program to fetch first 10 records in key-value pair format
def FetchRecords():
    connection=' '
    cursor=' '
    try:
        connection,cursor=getDBConnection()
        cursor.execute('select Item_id,Item_name,Item_cost,Supplier_id from items')
        record=cursor.fetchall()
        for i in record:
                print(i)
        connection.commit()
    except Error as e:
        print (e)
        print('problem in fetching the data....')
    finally:
        cursor.close()
        connection.close()
        print('Connection closed successfully....')
```
In [97]:
```python
FetchRecords()
```
```
<class 'mysql.connector.connection_cext.CMySQLConnection'>
connection achieved succefully with mysql server  (8, 0, 28)
<class 'mysql.connector.cursor_cext.CMySQLCursor'>
Cursor created..
connection establish suceesfully....
(101, 'Pizza', 2000, 110)
(103, 'Maggi', 1000, 130)
(104, 'Panner', 2500, 140)
(105, 'Burger', 2300, 150)
Connection closed successfully....
```
In [91]:
```python
# 6.Write a python program to delete item records with item name you specified
def DeleteRecords(Item_id):
    connection=' '
    cursor=' '
    try:
        connection,cursor=getDBConnection()
        t1=(Item_id,)
        cursor.execute('delete from items where Item_id=%s',t1)
        connection.commit()
    except Error as e:
        print (e)
        print('problem in fetching the data....')
    finally:
        cursor.close()
        connection.close()
        print('Connection closed successfully....')
```
In [94]:
```python
DeleteRecords(102)
```
```
<class 'mysql.connector.connection_cext.CMySQLConnection'>
connection achieved succefully with mysql server  (8, 0, 28)
<class 'mysql.connector.cursor_cext.CMySQLCursor'>
Cursor created..
connection establish suceesfully....
Connection closed successfully....
```
In [95]:
```python
FetchAllRecords()
```
```
<class 'mysql.connector.connection_cext.CMySQLConnection'>
connection achieved succefully with mysql server  (8, 0, 28)
<class 'mysql.connector.cursor_cext.CMySQLCursor'>
Cursor created..
connection establish suceesfully....
Item_id     |    Item_name     |    Item_cost     |  Supplier_id
101          Pizza                 2000              110
103          Maggi                 1000              130
104          Panner                 2500              140
105          Burger                2300              150
Connection closed successfully....
```
In [ ]: