LAB1B: CONNECTING AND RETRIEVING DATA FROM SQL SERVER

code explain

Used pyodbc to connect and execute query on database. Data given in
`AdventureWorks2019.bak` . Used pandas to save queried data to dataframe and csv file.

Data joined by key `AddressID` .

SAVED CSV : [https://github.com/Minhtrna/AIL303m/blob/main/LAB-DATA/persondata.csv]

```
In [2]:  import pandas as pd
         import pyodbc
```

```
In [5]:  server = 'MINHLAP\SQLEXPRESS'
         conn = pyodbc.connect('DRIVER={SQL Server};SERVER='+server+';DATABASE=AdventureWork
         cursor = conn.cursor()

         # query data từ  preson.EmailAddress, preson.BusinessEntityAddress, và preson.Addre
         cursor.execute('''
                 SELECT a.AddressID,
                     e.EmailAddress,
                     a.AddressLine1,
                     a.AddressLine2,
                     a.StateProvinceID,
                     a.City,
                     a.PostalCode,
                     a.SpatialLocation,
                     a.rowguid,
                     a.ModifiedDate
                 FROM Person.EmailAddress as e
                 JOIN Person.BusinessEntityAddress as bea
                     ON e.BusinessEntityID = bea.BusinessEntityID
                 JOIN Person.Address as a
                     ON bea.AddressID = a.AddressID
             ''')
         # lưu tất cả data vào  dataframe
         rows = cursor.fetchall()

         columns = [column[0] for column in cursor.description]

         df = pd.DataFrame.from_records(rows, columns=columns)

         df
```

```
<>:1: SyntaxWarning: invalid escape sequence '\S'
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C:\Users\quang\AppData\Local\Temp\ipykernel_9332\3704467224.py:1: SyntaxWarning: inv
alid escape sequence '\S'
  server = 'MINHLAP\SQLEXPRESS'
```

Out[5]:

	AddressID	EmailAddress	AddressLine1	AddressLine2	StateProvinceID	
0	1	thierry0@adventure-works.com	1970 Napa Ct.	None	79	
1	2	vamsi0@adventure-works.com	9833 Mt. Dias Blv.	None	79	
2	3	syed0@adventure-works.com	7484 Roundtree Drive	None	79	
3	4	mikael0@adventure-works.com	9539 Glenside Dr	None	79	
4	5	kim0@adventure-works.com	1226 Shoe St.	None	79	
...	...	...	...	...	...	
18793	32517	ryan0@adventure-works.com	177 11th Ave	None	79	Sam
18794	32518	sairaj0@adventure-works.com	8040 Hill Ct	None	79	Re
18795	32519	barbara1@adventure-works.com	137 Mazatlan	None	79	
18796	32520	dan1@adventure-works.com	5863 Sierra	None	79	E
18797	32521	barbara0@adventure-works.com	7145 Matchstick Drive	None	79	Sam

18798 rows × 10 columns

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```python
In [6]:  # lưu thành file csv
         df.to_csv('persondata.csv', index=True)
```