

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>]

query result

	AddressID	EmailAddress	AddressLine1	AddressLine2	StateProvinceID	City	PostalCode	SpatialLocation	rowguid	ModifiedDate
0	1	thierry0@adventure-works.com	1970 Napa Ct.	None	79	Bothell	98011	b'\xe6\x10\x00\x00\x01\x0c\xae\x8b\xfc\xbc\xe...	9AADCB0D-36CF-483F-84D8-585C2D4EC6E9	2007-12-04
1	2	vamsi0@adventure-works.com	9833 Mt. Dias Blv.	None	79	Bothell	98011	b'\xe6\x10\x00\x00\x01\x0c\xdf\xfa\x85\x1a\xe6...	32A5489E-F034-4BF8-B573-A71CDE60D8C0	2008-11-30
2	3	syed0@adventure-works.com	7484 Roundtree Drive	None	79	Bothell	98011	b'\xe6\x10\x00\x00\x01\x0c\x18\xe3\x04\xcf\xad...	4C506923-6D1B-452C-A07C-BAA6F5B142A4	2013-03-07
3	4	mikael0@adventure-works.com	9539 Glenside Dr	None	79	Bothell	98011	b'\xe6\x10\x00\x00\x01\x0c\x81\x1c\x9f\xdeG@\x...	E5946C78-4BCC-477F-9FA1-CC09DE16A880	2009-02-03
4	5	kim0@adventure-works.com	1226 Shoe St.	None	79	Bothell	98011	b'\xe6\x10\x00\x00\x01\x0c\xa5\x6f\x8a\xbb\x9dG@...	FBAFF937-4A97-4AF0-81FD-B849900E98B0	2008-12-19
...
18793	32517	ryan0@adventure-works.com	177 11th Ave	None	79	Sammamish	98074	b'\xe6\x10\x00\x00\x01\x0c\xbf\xdc\xce8m\xdc6G@...	2F76ECD8-B22C-4353-BE61-09FE000E13CE	2008-12-29
18794	32518	sairaj0@adventure-works.com	8040 Hill Ct	None	79	Redmond	98052	b'\xe6\x10\x00\x00\x01\x0c\x01\x0c\x01\x19\x19\xfd4G@r1\...	0E5F2D4F-C38F-406C-9169-8CCD754D8F94	2009-01-19
18795	32519	barbara1@adventure-works.com	137 Mazatlan	None	79	Seattle	98104	b'\xe6\x10\x00\x00\x01\x0c\x12\x1f\x1e5\x87vc...	7B2B1EE6-43A4-426D-8A7D-54DD451F7168	2009-02-11
...

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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
```

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        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: invalid 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	Samir
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	Samir

18798 rows × 10 columns



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