

Skill test 1

Roll No: 210901033

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Question: 3. Write a Python program to implement Data wrangling functions as below.

- a. Join two dataframes using join() function. (10 mark)
- b. Using the melt function to reshape the DataFrame format from wide to long. (10 mark)

Program:

```
import numpy as np

import pandas as pd

Df=pd.DataFrame({'Name':['Molly','Polly','Dolly'],
'Age1':['18','19','20'],'Gender1':['M','M','F'],'Score1':['99','98','100']})

Df1=pd.DataFrame({'Name':['Hector','Sam','Gideon'],'Age2':['22','23','24'],'Gender2':['F','M','M'],
'Score2':['100','97','96']})

print(Df)

print(Df1)

Df0=pd.DataFrame({'Dummy Column':[True,False,False]})

DfJ=Df.join(Df0)

print(DfJ)

merged_df=pd.merge(Df,Df1,on='Name')

print(merged_df)

reshape_df=pd.melt(merged_df,id_vars='Name',value_vars=['Age1','Age2','Gender1','Gender2',
'Score1','Score2'])

print(reshape_df)
```

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In [27]:

```
import numpy as np
import pandas as np
Df=pd.DataFrame({'Name':['Molly','Polly','Dolly'], 'Age1':['18','19','20'],'Gender1':['M','M','F'],'Score1':['99','98','100']})
Df1=pd.DataFrame({'Name':['Hector','Sam','Gideon'],'Age2':['22','23','24'],'Gender2':['F','M','M'],'Score2':['100','97','96']})
print(Df)
print(Df1)
```

	Name	Age1	Gender1	Score1
0	Molly	18	M	99
1	Polly	19	M	98
2	Dolly	20	F	100

	Name	Age2	Gender2	Score2
0	Hector	22	F	100
1	Sam	23	M	97
2	Gideon	24	M	96

In [28]:

```
Df0=pd.DataFrame({'Dummy Column':[True,False,False]})
Df3=Df.join(Df0)
print(Df3)
```

	Name	Age1	Gender1	Score1	Dummy Column
0	Molly	18	M	99	True
1	Polly	19	M	98	False
2	Dolly	20	F	100	False

In [35]:

```
merged_df=pd.merge(Df,Df1,on='Name')
print(merged_df)
reshaped_df=pd.melt(merged_df,id_vars='Name',value_vars=['Age1','Age2','Gender1','Gender2','Score1','Score2'])
print(reshaped_df)
```

Empty DataFrame
Columns: [Name, Age1, Gender1, Score1, Age2, Gender2, Score2]
Index: []
Empty DataFrame
Columns: [Name, variable, value]
Index: []

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	Name	Age1	Gender1	Score1
0	Hector	22	F	100
1	Sam	23	M	97
2	Gideon	24	M	96

In [28]:

```
Df0=pd.DataFrame({'Dummy Column':[True,False,False]})
Df3=Df.join(Df0)
print(Df3)
```

	Name	Age1	Gender1	Score1	Dummy Column
0	Molly	18	M	99	True
1	Polly	19	M	98	False
2	Dolly	20	F	100	False

In [35]:

```
merged_df=pd.merge(Df,Df1,on='Name')
print(merged_df)
reshaped_df=pd.melt(merged_df,id_vars='Name',value_vars=['Age1','Age2','Gender1','Gender2','Score1','Score2'])
print(reshaped_df)
```

Empty DataFrame
Columns: [Name, Age1, Gender1, Score1, Age2, Gender2, Score2]
Index: []
Empty DataFrame
Columns: [Name, variable, value]
Index: []

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