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In [1]: ## How to JOIN and MERGE Pandas DataFrame
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In [2]: def Kickstarter_Example_91():
print()
print(format('How to JOIN and MERGE Pandas DataFrame', '^82'))
import warnings
warnings.filterwarnings("ignore")
# load libraries
import pandas as pd
# Create a dataframe
raw_data = {'subject_id': ['1', '2', '3', '4', '5'],
            'first_name': ['Alex', 'Amy', 'Allen', 'Alice', 'Ayoung'],
            'last_name': ['Anderson', 'Ackerman', 'Ali', 'Aoni', 'Atiches']}
df_a = pd.DataFrame(raw_data, columns = ['subject_id', 'first_name', 'last_name'])
print(); print(df_a)
# Create a second dataframe
raw_data = {'subject_id': ['4', '5', '6', '7', '8'],
            'first_name': ['Billy', 'Brian', 'Bran', 'Bryce', 'Betty'],
            'last_name': ['Bonder', 'Black', 'Balwner', 'Brice', 'Btisan']}
df_b = pd.DataFrame(raw_data, columns = ['subject_id', 'first_name', 'last_name'])
print(); print(df_b)
# Create a third dataframe
raw_data = {'subject_id': ['1', '2', '3', '4', '5', '7', '8', '9', '10', '11'],
            'test_id': [51, 15, 15, 61, 16, 14, 15, 1, 61, 16]}
df_n = pd.DataFrame(raw_data, columns = ['subject_id', 'test_id'])
print(); print(df_n)
# Join the two dataframes along rows
df_new = pd.concat([df_a, df_b])
print(); print(df_new)
# Join the two dataframes along columns
df = pd.concat([df_a, df_b], axis=1)
print(); print(df)
# Merge two dataframes along the subject_id value
df = pd.merge(df_new, df_n, on='subject_id')
print(); print(df)
# Merge two dataframes with both the left and right dataframes using the subject_id key
df = pd.merge(df_new, df_n, left_on='subject_id', right_on='subject_id')
print(); print(df)
# Merge with outer join
df = pd.merge(df_a, df_b, on='subject_id', how='outer')
print(); print(df)
# Merge with inner join
df = pd.merge(df_a, df_b, on='subject_id', how='inner')
print(); print(df)
# Merge with right join
df = pd.merge(df_a, df_b, on='subject_id', how='right')
print(); print(df)
# Merge with left join
df = pd.merge(df_a, df_b, on='subject_id', how='left')
print(); print(df)
# Merge while adding a suffix to duplicate column names
df = pd.merge(df_a, df_b, on='subject_id', how='left', suffixes=('_left', '_right'))
print(); print(df)
# Merge based on indexes
df = pd.merge(df_a, df_b, right_index=True, left_index=True)
print(); print(df)
Kickstarter_Example_91()
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\*\*\*\*\*How to JOIN and MERGE Pandas DataFrame\*\*\*\*\*

subject_id	first_name	last_name
0	1	Alex Anderson
1	2	Amy Ackerman
2	3	Allen Ali
3	4	Alice Aoni
4	5	Ayoung Atiches

subject_id	first_name	last_name
0	4	Billy Bonder
1	5	Brian Black
2	6	Bran Balwner
3	7	Bryce Brice
4	8	Betty Btisan

subject_id	test_id	
0	1	51
1	2	15
2	3	15
3	4	61
4	5	16
5	7	14
6	8	15
7	9	1
8	10	61
9	11	16

subject_id	first_name	last_name
0	1	Alex Anderson
1	2	Amy Ackerman
2	3	Allen Ali
3	4	Alice Aoni
4	5	Ayoung Atiches
0	4	Billy Bonder
1	5	Brian Black
2	6	Bran Balwner
3	7	Bryce Brice
4	8	Betty Btisan

subject_id	first_name	last_name	subject_id	first_name	last_name
0	1	Alex Anderson	4	Billy Bonder	
1	2	Amy Ackerman	5	Brian Black	
2	3	Allen Ali	6	Bran Balwner	
3	4	Alice Aoni	7	Bryce Brice	
4	5	Ayoung Atiches	8	Betty Btisan	

subject_id	first_name	last_name	test_id
0	1	Alex Anderson	51
1	2	Amy Ackerman	15
2	3	Allen Ali	15
3	4	Alice Aoni	61
4	4	Billy Bonder	61
5	5	Ayoung Atiches	16
6	5	Brian Black	16
7	7	Bryce Brice	14
8	8	Betty Btisan	15

subject_id	first_name	last_name	test_id
0	1	Alex Anderson	51
1	2	Amy Ackerman	15
2	3	Allen Ali	15
3	4	Alice Aoni	61
4	4	Billy Bonder	61
5	5	Ayoung Atiches	16
6	5	Brian Black	16
7	7	Bryce Brice	14
8	8	Betty Btisan	15

subject_id	first_name_x	last_name_x	first_name_y	last_name_y
0	1	Alex Anderson	NaN	NaN
1	2	Amy Ackerman	NaN	NaN
2	3	Allen Ali	NaN	NaN
3	4	Alice Aoni	Billy Bonder	Bonder
4	5	Ayoung Atiches	Brian Black	Black
5	6	NaN	Bran Balwner	Balwner
6	7	NaN	Bryce Brice	Brice
7	8	NaN	Betty Btisan	Btisan

subject_id	first_name_x	last_name_x	first_name_y	last_name_y
0	4	Alice Aoni	Billy Bonder	Bonder
1	5	Ayoung Atiches	Brian Black	Black

subject_id	first_name_x	last_name_x	first_name_y	last_name_y
0	4	Alice Aoni	Billy Bonder	Bonder
1	5	Ayoung Atiches	Brian Black	Black
2	6	NaN	Bran Balwner	Balwner
3	7	NaN	Bryce Brice	Brice
4	8	NaN	Betty Btisan	Btisan

subject_id	first_name_x	last_name_x	first_name_y	last_name_y
0	1	Alex Anderson	NaN	NaN
1	2	Amy Ackerman	NaN	NaN
2	3	Allen Ali	NaN	NaN
3	4	Alice Aoni	Billy Bonder	Bonder
4	5	Ayoung Atiches	Brian Black	Black

subject_id	first_name_left	last_name_left	first_name_right	last_name_right
0	1	Alex Anderson	NaN	NaN
1	2	Amy Ackerman	NaN	NaN
2	3	Allen Ali	NaN	NaN
3	4	Alice Aoni	Billy Bonder	Bonder
4	5	Ayoung Atiches	Brian Black	Black

subject_id_x	first_name_x	last_name_x	subject_id_y	first_name_y	last_name_y
0	1	Alex Anderson	4	Billy Bonder	Bonder
1	2	Amy Ackerman	5	Brian Black	Black
2	3	Allen Ali	6	Bran Balwner	Balwner
3	4	Alice Aoni	7	Bryce Brice	Brice
4	5	Ayoung Atiches	8	Betty Btisan	Btisan

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In [ ]:
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