



Combining Queries



Keywords

- UNION [ALL]
- INTERSECT
- EXCEPT

Combining Queries

What is the difference between a UNION/INTERSECT/EXCEPT and a JOIN?

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What is the difference between a UNION/INTERSECT/EXCEPT and a JOIN?

A JOIN glues two tables together along one or more columns.

A UNION/INTERSECT/EXCEPT stacks two tables together.

Think of JOINing as being like a merge from pandas.

pd.merge(<df1>, <df2>, **on** = <col or list of cols to join on>, **how** = <join_type>)

left				right				Result					
	key	A	B		key	C	D		key	A	B	C	D
0	K0	A0	B0	0	K0	C0	D0	0	K0	A0	B0	C0	D0
1	K1	A1	B1	1	K1	C1	D1	1	K1	A1	B1	C1	D1
2	K2	A2	B2	2	K2	C2	D2	2	K2	A2	B2	C2	D2
3	K3	A3	B3	3	K3	C3	D3	3	K3	A3	B3	C3	D3

- Need one or more “key” columns to join on
- Pastes matching rows together along the key column(s)

Whereas, UNION is like Concatenating two DataFrames:

pd.concat(<df1>, <df2>, <df3>)

df1

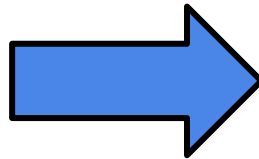
	A	B	C	D
0	A0	B0	C0	D0
1	A1	B1	C1	D1
2	A2	B2	C2	D2
3	A3	B3	C3	D3

df2

	A	B	C	D
4	A4	B4	C4	D4
5	A5	B5	C5	D5
6	A6	B6	C6	D6
7	A7	B7	C7	D7

df3

	A	B	C	D
8	A8	B8	C8	D8
9	A9	B9	C9	D9
10	A10	B10	C10	D10
11	A11	B11	C11	D11



Result

	A	B	C	D
0	A0	B0	C0	D0
1	A1	B1	C1	D1
2	A2	B2	C2	D2
3	A3	B3	C3	D3
4	A4	B4	C4	D4
5	A5	B5	C5	D5
6	A6	B6	C6	D6
7	A7	B7	C7	D7
8	A8	B8	C8	D8
9	A9	B9	C9	D9
10	A10	B10	C10	D10
11	A11	B11	C11	D11

- Same columns
- Like pasting them together