HOW TO JOIN / APPEND / CONCAT TWO TABLES

WITH PYTHON
BY DR. ALVIN ANG

CONTENTS

I. EXAMPLE 1: MERGING DAY – MONTH – YEAR (3 COLUMNS) INTO DD/M/YYYY (1 COLUMN)

https://www.alvinang.sg/s/How_to_Join_Append_Concat_Two_Tables_with_Python_by_Dr_Alvin_Ang.ipynb

If we had 3 columns but wish to merge them altogether into 1 column:

	Day	Month	Year
0	1	Jun	2016
1	2	Jul	2017
2	3	Aug	2018
3	4	Sep	2019
4	5	Oct	2020

→ →

0	1-Jun-2016
1	2-Jul-2017
2	3-Aug-2018
3	4-Sep-2019
4	5-Oct-2020

```
[ ] from pandas import DataFrame

    Dates = {'Day': [1,2,3,4,5],
             'Month': ['Jun','Jul','Aug','Sep','Oct'],
             'Year': [2016,2017,2018,2019,2020]}

    df = DataFrame(Dates, columns= ['Day', 'Month','Year'])

    df
    #we create the First Table first....
```

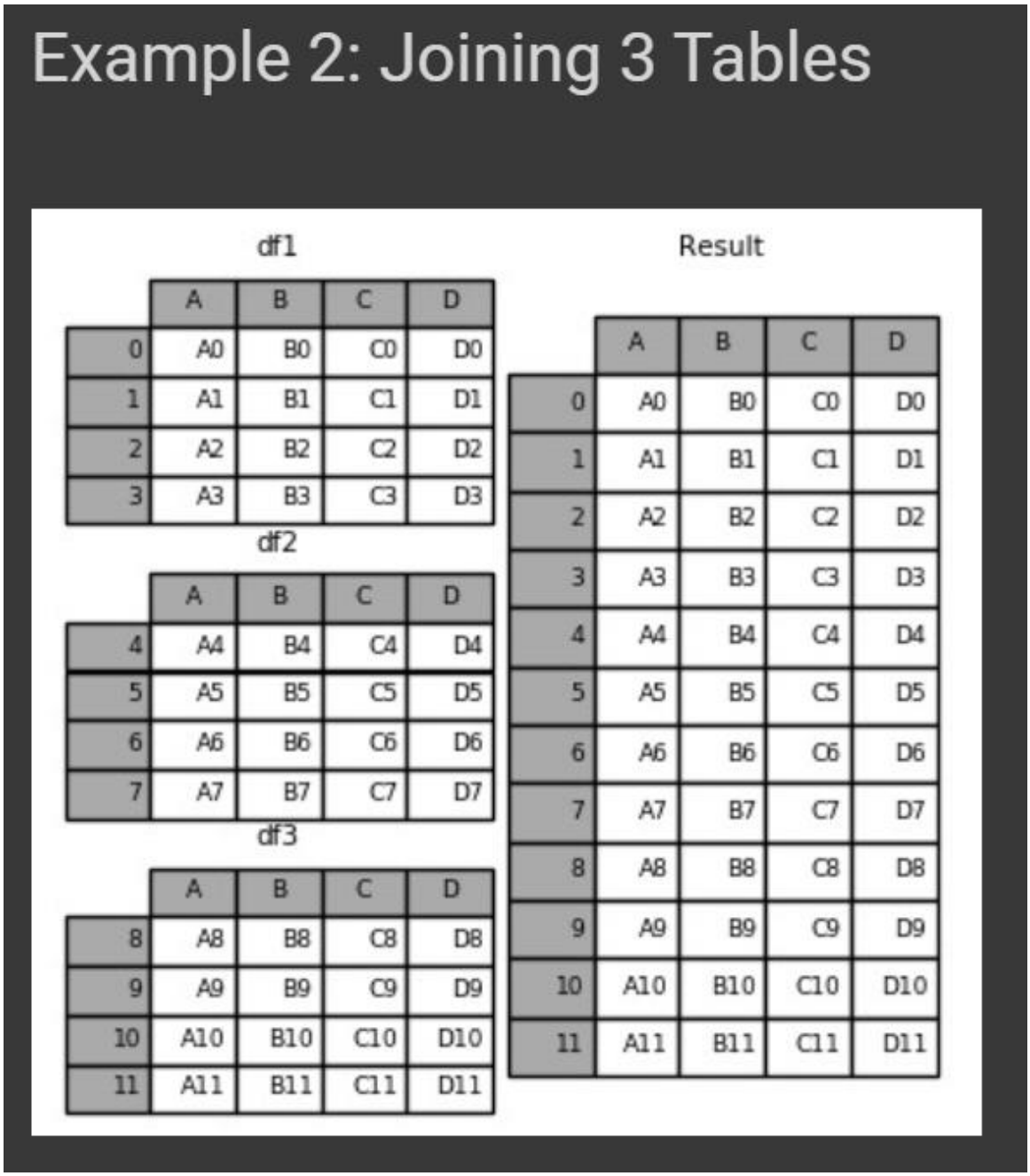
	Day	Month	Year
0	1	Jun	2016
1	2	Jul	2017
2	3	Aug	2018
3	4	Sep	2019
4	5	Oct	2020

```
[ ] df1 = df['Day'].map(str) + '-' + \
          df['Month'].map(str) + '-' + \
          df['Year'].map(str)

    print (df1)

    #3 columns have been merged into 1!
```

```
0    1-Jun-2016
1    2-Jul-2017
2    3-Aug-2018
3    4-Sep-2019
4    5-Oct-2020
dtype: object
```



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

```
[ ] import pandas as pd

    df1 = pd.DataFrame({'A': ['A0', 'A1', 'A2', 'A3'],
                        'B': ['B0', 'B1', 'B2', 'B3'],
                        'C': ['C0', 'C1', 'C2', 'C3'],
                        'D': ['D0', 'D1', 'D2', 'D3']},
                       index=[0, 1, 2, 3])
```

```
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 = pd.DataFrame({'A': ['A4', 'A5', 'A6', 'A7'],
                        'B': ['B4', 'B5', 'B6', 'B7'],
                        'C': ['C4', 'C5', 'C6', 'C7'],
                        'D': ['D4', 'D5', 'D6', 'D7']},
                       index=[4, 5, 6, 7])
```

```
[ ] 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 = pd.DataFrame({'A': ['A8', 'A9', 'A10', 'A11'],
                      'B': ['B8', 'B9', 'B10', 'B11'],
                      'C': ['C8', 'C9', 'C10', 'C11'],
                      'D': ['D8', 'D9', 'D10', 'D11']},
                     index=[8, 9, 10, 11])
```

```
] df3
```

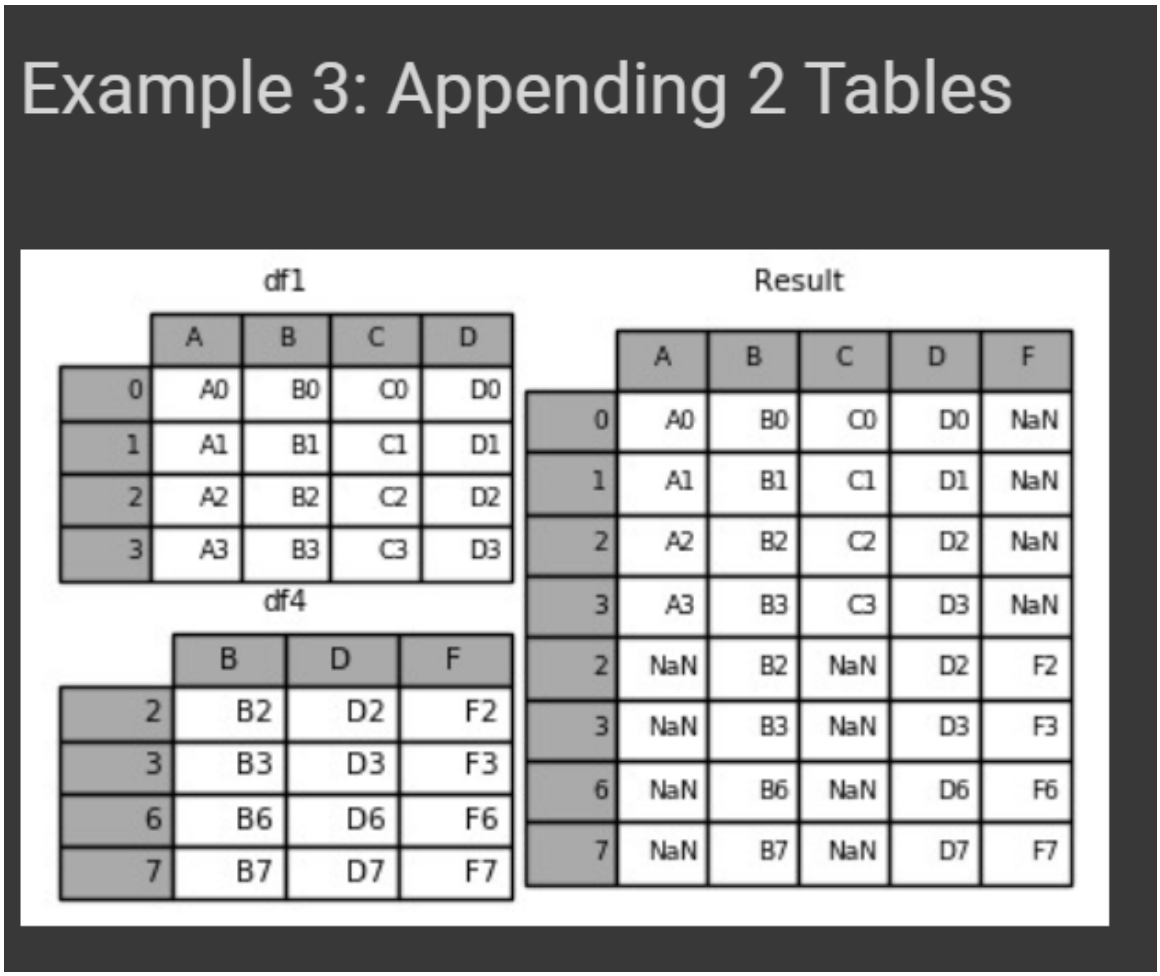
	A	B	C	D
8	A8	B8	C8	D8
9	A9	B9	C9	D9
10	A10	B10	C10	D10
11	A11	B11	C11	D11

```
frames = [df1, df2, df3]

result = pd.concat(frames)

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



```
import pandas as pd

df1 = pd.DataFrame({'A': ['A0', 'A1', 'A2', 'A3'],
                    'B': ['B0', 'B1', 'B2', 'B3'],
                    'C': ['C0', 'C1', 'C2', 'C3'],
                    'D': ['D0', 'D1', 'D2', 'D3']},
                   index=[0, 1, 2, 3])
```

```
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

```
[ ] df4 = pd.DataFrame({'B': ['B2', 'B3', 'B6', 'B7'],
                        'D': ['D2', 'D3', 'D6', 'D7'],
                        'F': ['F2', 'F3', 'F6', 'F7']},
                       index=[2, 3, 6, 7])
```

```
df4
```

	B	D	F
2	B2	D2	F2
3	B3	D3	F3
6	B6	D6	F6
7	B7	D7	F7

```
[ ] result = df1.append(df4, sort = False)
```

```
result
```

	A	B	C	D	F
0	A0	B0	C0	D0	NaN
1	A1	B1	C1	D1	NaN
2	A2	B2	C2	D2	NaN
3	A3	B3	C3	D3	NaN
2	NaN	B2	NaN	D2	F2
3	NaN	B3	NaN	D3	F3
6	NaN	B6	NaN	D6	F6
7	NaN	B7	NaN	D7	F7

THE END

ABOUT DR. ALVIN ANG

Dr. Alvin Ang earned his Ph.D., Masters and Bachelor degrees from NTU, Singapore. He is a scientist, entrepreneur, as well as a personal/business advisor. More about him at www.AlvinAng.sg.