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How to rename multiple column headers in a Pandas DataFrame?

Difficulty Level : Easy   ●   Last Updated : 25 May, 2022

Here we are going to rename multiple column headers using **rename()** method. The rename method is used to rename a single column as well as rename multiple columns at a time. And pass columns that contain the new values and inplace = true as an argument. We pass inplace = true because we just modify the working data frame if we pass inplace = false then it returns a new data frame.

Way 1: Using rename() method

1. Import pandas.
2. Create a data frame with multiple columns.
3. Create a dictionary and set key = old name, value= new name of columns header.
4. Assign the dictionary in columns.
5. Call the rename method and pass columns that contain dictionary and inplace=true as an argument.

Example:

Python

```python
# import pandas
import pandas as pd

# create data frame
```

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```
            'Location': ["Saharanpur", "Rampur", "Agra",
                         "Saharanpur", "Noida"],
```

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```python
# print original data frame
display(df)

# create a dictionary
# key = old name
# value = new name
dict = {'First Name': 'Name',
        'Location': 'City',
        'Pay': 'Salary'}

# call rename () method
df.rename(columns=dict,
          inplace=True)

# print Data frame after rename columns
display(df)
```

Output:

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	First Name	Location	Pay
0	Mukul	Saharanpur	56000.0

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3	Vedansh	Saharanpur	45000.0
4	Krishna	Noida	62000.0

	Name	City	Salary
0	Mukul	Saharanpur	56000.0
1	Rohan	Rampur	55000.0
2	Mayank	Agra	61000.0
3	Vedansh	Saharanpur	45000.0
4	Krishna	Noida	62000.0

Example 2:

In this example, we will rename the multiple times using the same approach.

Python3

```python
# import pandas
import pandas as pd

# create data frame
df = pd.DataFrame({'First Name': ["Mukul", "Rohan", "Mayank",
                                  "Vedansh", "Krishna"],

                  'Location': ["Saharanpur", "Rampur",
                               "Agra", "Saharanpur", "Noida"],

                  'Pay': [56000.0, 55000.0, 61000.0, 45000.0, 62000.0]})

print("Original DataFrame")

# print original data frame
display(df)

# create a dictionary
# key = old name
# value = new name
dict = {'First Name': 'Name',
        'Location': 'City',
        'Pay': 'Salary'}
```

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```
# call rename () method
df.rename(columns=dict,
```

```
# print Data frame after rename columns
display(df)

# create a dictionary
# key = old name
# value = new name
dict = {'Name': 'Full Name',
        'City': 'Address',
        'Salary': 'Amount'}

# call rename () method
df.rename(columns=dict,
          inplace=True)

display(df)
```

Output:

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Orignal DataFrame

0	Mukul	Saharanpur	56000.0
1	Rohan	Rampur	55000.0
2	Mayank	Agra	61000.0
3	Vedansh	Saharanpur	45000.0
4	Krishna	Noida	62000.0

After rename

	Name	**City**	**Salary**
0	Mukul	Saharanpur	56000.0
1	Rohan	Rampur	55000.0
2	Mayank	Agra	61000.0

4	Krishna	Noida	62000.0

	Full Name	**Address**	**Amount**
0	Mukul	Saharanpur	56000.0
1	Rohan	Rampur	55000.0
2	Mayank	Agra	61000.0
3	Vedansh	Saharanpur	45000.0
4	Krishna	Noida	62000.0

Way 2: Using index

One must follow the below steps as listed in sequential order prior to landing upon implementation part as follows:

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2. Create a data frame with multiple columns.

5. Print the dataframe.

Example

Python3

```python
# import pandas
import pandas as pd

# create data frame
df = pd.DataFrame({'First Name': ["Mukul", "Rohan", "Mayank",
                                  "Vedansh", "Krishna"],

                   'Location': ["Saharanpur", "Rampur", "Agra",
                                "Saharanpur", "Noida"],

                   'Pay': [56000.0, 55000.0, 61000.0, 45000.0, 62000.0]})

# print original data frame
display(df)

# renaming the column by index
df.columns.values[0:2] =["name", "address" ]

# print Data frame after rename columns
display(df)
```

Output:

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	First Name	Location	Pay

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2	Mayank	Agra	61000.0
3	Vedansh	Saharanpur	45000.0
4	Krishna	Noida	62000.0

	name	address	Pay
0	Mukul	Saharanpur	56000.0
1	Rohan	Rampur	55000.0
2	Mayank	Agra	61000.0
3	Vedansh	Saharanpur	45000.0
4	Krishna	Noida	62000.0

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Article Contributed By :

mukulsomukesh
@mukulsomukesh

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