Pandas - Melt

January 8, 2023

1 Pandas Melt Function

```
[1]: import pandas as pd
     df = pd.read_csv('weather.csv')
     df.head()
                                     Chittagong
[1]:
               day
                    Dhaka
                            Sylhet
     0
           Monday
                        20
                                21
     1
          Tuesday
                        20
                                 26
                                              26
     2
        Wednesday
                        25
                                 27
                                              26
     3
         Thursday
                        20
                                 27
                                              22
     4
           Friday
                        26
                                 22
                                              27
[4]: df1 = pd.melt(df, id_vars=['day'])
                                              # id_vars = id variable, x axix or column, __
      →melt works as pivot to some extend
     df1
[4]:
                day
                        variable
                                  value
     0
            Monday
                           Dhaka
                                      20
     1
            Tuesday
                           Dhaka
                                      20
     2
         Wednesday
                           Dhaka
                                      25
     3
                           Dhaka
          Thursday
                                      20
     4
            Friday
                           Dhaka
                                      26
     5
                                      20
          Saturday
                           Dhaka
     6
             Sunday
                           Dhaka
                                      26
     7
            Monday
                          Sylhet
                                      21
     8
            Tuesday
                          Sylhet
                                      26
     9
         Wednesday
                          Sylhet
                                      27
     10
          Thursday
                          Sylhet
                                      27
     11
            Friday
                          Sylhet
                                      22
     12
          Saturday
                          Sylhet
                                      20
     13
                                      25
             Sunday
                          Sylhet
     14
            Monday
                     Chittagong
                                      21
     15
            Tuesday
                     Chittagong
                                      26
     16
         Wednesday
                                      26
                     Chittagong
     17
          Thursday
                     Chittagong
                                      22
                                      27
     18
            Friday
                     Chittagong
     19
          Saturday
                     Chittagong
                                      23
```

```
20
       Sunday Chittagong
                              23
```

```
[7]: df1[df1['variable']=='Dhaka']
                                      # Accessing
[7]:
               day variable
                              value
     0
           Monday
                      Dhaka
                                 20
     1
          Tuesday
                      Dhaka
                                 20
     2
                      Dhaka
                                 25
        Wednesday
     3
         Thursday
                      Dhaka
                                 20
     4
           Friday
                      Dhaka
                                 26
     5
         Saturday
                      Dhaka
                                 20
     6
           Sunday
                      Dhaka
                                 26
[8]:
    df1[df1['variable'] == 'Sylhet']
                                        # Accessing
[8]:
                day variable value
     7
            Monday
                      Sylhet
                                  21
           Tuesday
     8
                      Sylhet
                                  26
     9
         Wednesday
                      Sylhet
                                  27
     10
          Thursday
                      Sylhet
                                  27
     11
                      Sylhet
                                  22
            Friday
     12
                                  20
          Saturday
                      Sylhet
     13
                      Sylhet
                                  25
             Sunday
    1.0.1 Documentation
    https://pandas.pydata.org/docs/reference/api/pandas.melt.html
```

Changing Column Names

```
[10]: df1 = pd.melt(df, id_vars=['day'], var_name = 'City', value_name =
     df1
```

```
[10]:
                 day
                              City
                                    Temperature
                             Dhaka
      0
              Monday
                                              20
      1
             Tuesday
                            Dhaka
                                              20
      2
           Wednesday
                            Dhaka
                                              25
      3
            Thursday
                            Dhaka
                                              20
      4
              Friday
                            Dhaka
                                              26
      5
                            Dhaka
                                              20
            Saturday
      6
              Sunday
                            Dhaka
                                              26
      7
                           Sylhet
              Monday
                                              21
      8
             Tuesday
                           Sylhet
                                              26
           Wednesday
                           Sylhet
                                              27
      9
                                              27
      10
            Thursday
                           Sylhet
      11
              Friday
                           Sylhet
                                              22
      12
            Saturday
                           Sylhet
                                              20
      13
              Sunday
                           Sylhet
                                              25
```

14	Monday	Chittagong	21
15	Tuesday	Chittagong	26
16	Wednesday	Chittagong	26
17	Thursday	Chittagong	22
18	Friday	Chittagong	27
19	Saturday	Chittagong	23
20	Sunday	Chittagong	23