pandas.DataFrame.melt

`DataFrame.melt`(*self*, *id_vars=None*, *value_vars=None*, *var_name=None*, *value_name='value'*, *col_level=None*) → **'DataFrame'** [source]

Unpivot a DataFrame from wide to long format, optionally leaving identifiers set.

This function is useful to massage a DataFrame into a format where one or more columns are identifier variables (*id_vars*), while all other columns, considered measured variables (*value_vars*), are “unpivoted” to the row axis, leaving just two non-identifier columns, ‘variable’ and ‘value’. .. versionadded:: 0.20.0

Parameters: **id_vars : *tuple, list, or ndarray, optional***

Column(s) to use as identifier variables.

value_vars : *tuple, list, or ndarray, optional*

Column(s) to unpivot. If not specified, uses all columns that are not set as *id_vars*.

var_name : *scalar*

Name to use for the ‘variable’ column. If None it uses `frame.columns.name` or ‘variable’.

value_name : *scalar, default ‘value’*

Name to use for the ‘value’ column.

col_level : *int or str, optional*

If columns are a MultiIndex then use this level to melt.

Returns: **DataFrame**

Unpivoted DataFrame.

See also

`melt`

pivot_table

DataFrame.pivot

Series.explode

Examples

```
>>> df = pd.DataFrame({'A': {0: 'a', 1: 'b', 2: 'c'},
...                    'B': {0: 1, 1: 3, 2: 5},
...                    'C': {0: 2, 1: 4, 2: 6}})
>>> df
   A  B  C
0  a  1  2
1  b  3  4
2  c  5  6
```

```
>>> df.melt(id_vars=['A'], value_vars=['B'])
   A variable  value
0  a        B      1
1  b        B      3
2  c        B      5
```

```
>>> df.melt(id_vars=['A'], value_vars=['B', 'C'])
   A variable  value
0  a        B      1
1  b        B      3
2  c        B      5
3  a        C      2
4  b        C      4
5  c        C      6
```

The names of ‘variable’ and ‘value’ columns can be customized:

```
>>> df.melt(id_vars=['A'], value_vars=['B'],
...         var_name='myVarname', value_name='myValname')
   A myVarname  myValname
0  a         B          1
1  b         B          3
2  c         B          5
```

If you have multi-index columns:

```
>>> df.columns = [list('ABC'), list('DEF')]
>>> df
   A  B  C
   D  E  F
0  a  1  2
1  b  3  4
2  c  5  6
```

```
>>> df.melt(col_level=0, id_vars=['A'], value_vars=['B'])
   A variable  value
0  a        B      1
1  b        B      3
2  c        B      5
```

```
>>> df.melt(id_vars=[('A', 'D')], value_vars=[('B', 'E')])
  (A, D) variable_0 variable_1  value
0      a          B          E      1
1      b          B          E      3
2      c          B          E      5
```

[<< pandas.DataFrame.median](#)

[pandas.DataFrame.memory_usage >>](#)

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