**Lesson 5**

We will be taking a brief look at the ***stack*** and ***unstack*** functions.

In [1]:

*# Import libraries*

**import** **pandas** **as** **pd**

**import** **sys**

In [2]:

print 'Python version ' + sys.version

print 'Pandas version: ' + pd.\_\_version\_\_

Python version 2.7.5 |Anaconda 2.1.0 (64-bit)| (default, Jul 1 2013, 12:37:52) [MSC v.1500 64 bit (AMD64)]

Pandas version: 0.15.2

In [3]:

*# Our small data set*

d = {'one':[1,1],'two':[2,2]}

i = ['a','b']

*# Create dataframe*

df = pd.DataFrame(data = d, index = i)

df

Out[3]:

|  |  |  |
| --- | --- | --- |
|  | **one** | **two** |
| **a** | 1 | 2 |
| **b** | 1 | 2 |

In [4]:

df.index

Out[4]:

Index([u'a', u'b'], dtype='object')

In [5]:

*# Bring the columns and place them in the index*

stack = df.stack()

stack

Out[5]:

a one 1

two 2

b one 1

two 2

dtype: int64

In [6]:

*# The index now includes the column names*

stack.index

Out[6]:

MultiIndex(levels=[[u'a', u'b'], [u'one', u'two']],

labels=[[0, 0, 1, 1], [0, 1, 0, 1]])

In [7]:

unstack = df.unstack()

unstack

Out[7]:

one a 1

b 1

two a 2

b 2

dtype: int64

In [8]:

unstack.index

Out[8]:

MultiIndex(levels=[[u'one', u'two'], [u'a', u'b']],

labels=[[0, 0, 1, 1], [0, 1, 0, 1]])

We can also flip the column names with the index using the ***T*** (transpose) function.

In [9]:

transpose = df.T

transpose

Out[9]:

|  |  |  |
| --- | --- | --- |
|  | **a** | **b** |
| **one** | 1 | 1 |
| **two** | 2 | 2 |

In [10]:

transpose.index

Out[10]:

Index([u'one', u'two'], dtype='object')