

Grouping in dictionary comprehensions

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1 Example of converting an .ipynb file to .pdf via LaTeX

The following file contains sample code that contains:

- a function `makeSampleFrame` to create an arbitrary DataFrame with an integer column and a day-of-the-week column
- a dictionary comprehension to create a dictionary with DataFrames as values and integers as keys.
- a dictionary comprehension to group the dictionary by the day-of-the-week.

The grouping performs the aggregation:

$$\bar{Y}_j = \frac{1}{N_j} \sum_i Y_{ij}$$

```
In [20]: import pandas as pd
import numpy.random as npr

def makeSampleFrame():
    return pd.DataFrame({
        'MeterID': npr.random_integers(0, 100, size = 1000),
        'DayOfWeek': npr.choice(
            a = ['Monday', 'Tuesday', 'Wednesday', 'Thursday', 'Friday', 'Saturday', 'Sunday'],
            size = 1000,
            replace = True),
        'value': npr.normal(size = 1000)
    })

dictDFs = {i: makeSampleFrame() for i in range(2)}
goupedDictDFs = {i: dictDFs[i].groupby(['DayOfWeek', 'MeterID']) for i in range(2)}
goupedDictDFs[0] # test

dictAggDFs = {i: goupedDictDFs[i].aggregate(np.mean).reset_index() for i in range(2)}
dictAggDFs[1]
```