**Indexing multiple levels of a MultiIndex**

Looking up indexed data is fast and efficient. And you have already seen that lookups based on the outermost level of a MultiIndex work just like lookups on DataFrames that have a single-level Index.

Looking up data based on inner levels of a MultiIndex can be a bit trickier. In this exercise, you will use your sales DataFrame to do some increasingly complex lookups.

The trickiest of all these lookups are when you want to access some inner levels of the index. In this case, you need to use slice(None) in the slicing parameter for the outermost dimension(s) instead of the usual :, or use pd.IndexSlice. You can refer to the [**pandas documentation**](http://pandas.pydata.org/pandas-docs/stable/advanced.html) for more details. For example, in the video, Dhavide used the following code to extract rows from all Symbols for the dates Oct. 3rd through 4th inclusive:

stocks.loc[(slice(None), slice('2016-10-03', '2016-10-04')), :]

Pay particular attention to the tuple (slice(None), slice('2016-10-03', '2016-10-04')).

**INSTRUCTIONS**

* Look up data for the New York column ('NY') in month 1.
* Look up data for the California and Texas columns ('CA', 'TX') in month 2.
* Look up data for all states in month 2. Use (slice(None), 2) to extract all rows in month 2.

# Look up data for NY in month 1: NY\_month1

NY\_month1 = sales.loc[('NY', 1), :]

print(NY\_month1)

# Look up data for CA and TX in month 2: CA\_TX\_month2

CA\_TX\_month2 = sales.loc[(['CA', 'TX'], 2), :]

# Look up data for all states in month 2: all\_month2

all\_month2 = sales.loc[(slice(None), 2), :]