

# MULTIINDEX INTERNALS

some of the components that make up MultiIndex objects, also known as hierarchical indices in pandas

## LEVELS

a list of lists containing each label value for each of the levels in the MultiIndex

L0 date	L1 name
2014-01-02	FB
	AAPL
	GOOGL
	MSFT
	AMZN

## NAMES

a list containing the names of each level

```
FrozenList(['date', 'name'])
```

## LEVSHAPE

a tuple containing the length of each level

```
(1421, 5)
```

## VALUES

Use visual charts to communicate info more effectively.

```
array([('2014-01-02', 'FB'), ('2014-01-02', 'AAPL'),  
      ('2014-01-02', 'GOOGL'), ..., ('2019-08-23',  
      ('2019-08-23', 'AMZN'), ('2019-08-23', 'FB'))]
```