In [46]:
```
# print data
print(data)
print("\n")
# slicing by explicit index
print(data['a':'c'])
```

```
a    0.25
b    0.50
c    0.75
d    1.00
e    1.25
dtype: float64


a    0.25
b    0.50
c    0.75
dtype: float64
```

In [47]:
```
# masking
print(data[(data>0.3)&(data<0.8)])
```

```
b    0.50
c    0.75
dtype: float64
```

In [48]:
```
# fancy indexing
data[['a','e']]
```

Out[48]:
```
a    0.25
e    1.25
dtype: float64
```

In [49]:
```
data=pd.Series(['a','b','c'],index=[1,2,3])
data
```

Out[49]:
```
1    a
2    b
3    c
dtype: object
```

In [50]:
```
# explicit index when indexing
data[1]
```

Out[50]:
```
'a'
```

In [51]:
```
# explicit index when indexing
data[2]
```

Out[51]:
```
'b'
```

In [52]:
```
# implicit index when slicing
data[1:3]
```

Out[52]:
```
2    b
3    c
dtype: object
```

In [53]:
```
# print data
data
```

Out[53]:
```
1    a
2    b
3    c
dtype: object
```

In [54]:
```
# loc references explicit index in indexing
data.loc[1]
```

Out[54]:
```
'a'
```

In [55]:
```
# loc references explicit index in indexing
data.loc[2]
```

Out[55]:
```
'b'
```

In [56]:
```
# loc references explicit index in slicing also
data.loc[1:3]
```

Out[56]:
```
1    a
2    b
3    c
dtype: object
```

In [57]:
```
# Print data
data
```

Out[57]:
```
1    a
2    b
3    c
dtype: object
```

In [58]:
```
# iloc references implicit index in indexing
data.iloc[1]
```

Out[58]:
```
'b'
```

In [59]:
```
# iloc references implicit index in indexing
data.iloc[2]
```

Out[59]:
```
'c'
```

In [60]:
```
# iloc references implicit index in slicing
data.iloc[1:3]
```

Out[60]:
```
2    b
3    c
dtype: object
```

This repo contains an introduction to Jupyter and IPython.

Outline of some basics:

- Notebook Basics
- IPython - beyond plain python
- Markdown Cells
- Rich Display System
- Custom Display logic
- Running a Secure Public Notebook Server
- How Jupyter works to run code in different languages.

You can also get this tutorial and run it on your laptop:

```
git clone https://github.com/ipython/ipython-in-depth
```

Install IPython and Jupyter:

with conda:

```
conda install ipython jupyter
```

with pip:

```
# first, always upgrade pip!
pip install --upgrade pip
pip install --upgrade ipython jupyter
```

Start the notebook in the tutorial directory:

```
cd ipython-in-depth
jupyter notebook
```