Python for Data Science

Series

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Pandas

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File Edit View Insert Cell Kernel Widgets Help Python [conda env:py35]

In [15]:
```
import numpy as np
```

In [16]:
```
import pandas as pd
```

In [17]:
```
labels = ['a','b','c']
my_data = [10,20,30]
arr = np.array(my_data)
d = {'a':10,'b':20,'c':30}
```

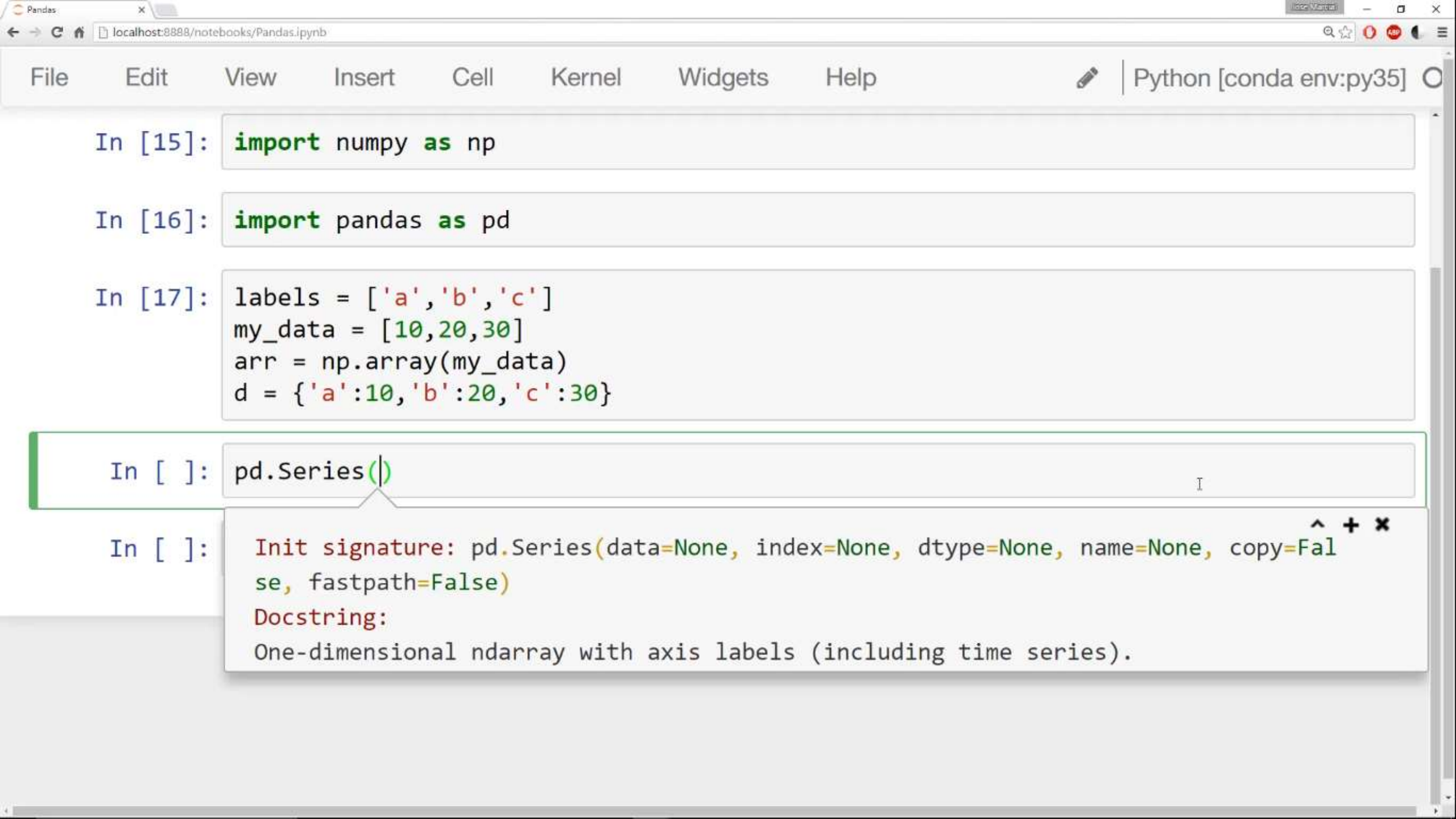
In [18]:
```

```

Out[18]:
```
['a', 'b', 'c']
```

In [ ]:
```

```


Pandas
localhost:8888/notebooks/Pandas.ipynb
File Edit View Insert Cell Kernel Widgets Help
Python [conda env:py35]
In [15]:
import numpy as np
In [16]:
import pandas as pd
In [17]:
labels = ['a','b','c']
my_data = [10,20,30]
arr = np.array(my_data)
d = {'a':10,'b':20,'c':30}
In [ ]:
pd.Series()
In [ ]:
Init signature: pd.Series(data=None, index=None, dtype=None, name=None, copy=Fal
se, fastpath=False)
Docstring:
One-dimensional ndarray with axis labels (including time series).

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In [15]:
```
import numpy as np
```

In [16]:
```
import pandas as pd
```

In [17]:
```
labels = ['a','b','c']
my_data = [10,20,30]
arr = np.array(my_data)
d = {'a':10,'b':20,'c':30}
```

In [22]:
```
pd.Series(data = my_data)
```

Out[22]:
```
0    10
1    20
2    30
dtype: int64
```

In [ ]:

```
arr = np.array(my_data)
d = {'a':10,'b':20,'c':30}
```

In [22]:
```
pd.Series(data = my_data)
```

Out[22]:
```
0    10
1    20
2    30
dtype: int64
```

In [23]:
```
pd.Series(data=my_data,index=labels)
```

Out[23]:
```
a    10
b    20
c    30
dtype: int64
```

In [ ]:

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Python [conda env:py35]

In [23]:
```
pd.Series(data=my_data,index=labels)
```

Out[23]:
```
a    10
b    20
c    30
dtype: int64
```

In [24]:
```
pd.Series(my_data,labels)
```

Out[24]:
```
a    10
b    20
c    30
dtype: int64
```

In [ ]:

```
c    30
dtype: int64
```

In [24]:
```
pd.Series(my_data,labels)
```

Out[24]:
```
a    10
b    20
c    30
dtype: int64
```

In [25]:
```
pd.Series(arr)
```

Out[25]:
```
0    10
1    20
2    30
dtype: int32
```

In [ ]:

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```
c    30
dtype: int64
```

In [24]:
```
pd.Series(my_data,labels)
```

Out[24]:
```
a    10
b    20
c    30
dtype: int64
```

In [26]:
```
pd.Series(arr,labels)
```

Out[26]:
```
a    10
b    20
c    30
dtype: int32
```

In [ ]:

```
c    30
dtype: int64
```

In [26]:
```
pd.Series(arr,labels)
```

Out[26]:
```
a    10
b    20
c    30
dtype: int32
```

In [27]:
```
pd.Series(d)
```

Out[27]:
```
a    10
b    20
c    30
dtype: int64
```

In [ ]:

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Out[27]:
```
a    10
b    20
c    30
dtype: int64
```

In [30]:
```
labels
```

Out[30]:
```
['a', 'b', 'c']
```

In [31]:
```
pd.Series(data=labels)
```

Out[31]:
```
0    a
1    b
2    c
dtype: object
```

In [ ]:

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In [27]:
```
pd.Series(d)
```

Out[27]:
```
a    10
b    20
c    30
dtype: int64
```

In [30]:
```
labels
```

Out[30]:
```
['a', 'b', 'c']
```

In [32]:
```
pd.Series(data=[sum,print,len])
```

Out[32]:
```
0      <built-in function sum>
1    <built-in function print>
2      <built-in function len>
dtype: object
```

In [ ]:

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File Edit View Insert Cell Kernel Widgets Help Python [conda env:py35]

In [32]:
```
pd.Series(data=[sum,print,len])
```

Out[32]:
```
0      <built-in function sum>
1    <built-in function print>
2      <built-in function len>
dtype: object
```

In [33]:
```
ser1 = pd.Series([1,2,3,4],['USA','Germany','USSR','Japan'])
```

In [34]:
```
ser1
```

Out[34]:
```
USA        1
Germany    2
USSR       3
Japan      4
dtype: int64
```

In [ ]:

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File Edit View Insert Cell Kernel Widgets Help Python [conda env:py35]

In [34]:
```
ser1
```

Out[34]:
```
USA        1
Germany    2
USSR       3
Japan      4
dtype: int64
```

In [35]:
```
ser2 = pd.Series([1,2,5,4],['USA','Germany','Italy','Japan'])
```

In [36]:
```
ser2
```

Out[36]:
```
USA        1
Germany    2
Italy      5
Japan      4
dtype: int64
```

In [ ]:

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In [36]:
```
ser2
```

Out[36]:
```
USA        1
Germany    2
Italy      5
Japan      4
dtype: int64
```

In [37]:
```
ser1['USA']
```

Out[37]:
```
1
```

In [ ]:

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```
Italy      5
Japan      4
dtype: int64
```

In [37]:
```
ser1['USA']
```

Out[37]:
```
1
```

In [38]:
```
ser3 = pd.Series(data=labels)
```

In [39]:
```
ser3
```

Out[39]:
```
0    a
1    b
2    c
dtype: object
```

In [ ]:

Out[40]: 'a'

In [41]:
```
ser1
```

Out[41]:
```
USA        1
Germany    2
USSR       3
Japan      4
dtype: int64
```

In [42]:
```
ser2
```

Out[42]:
```
USA        1
Germany    2
Italy      5
Japan      4
dtype: int64
```

In [ ]:

```
Out[40]: 'a'

In [43]: ser1 + ser2
Out[43]: Germany    4.0
         Italy      NaN
         Japan      8.0
         USA        2.0
         USSR       NaN
         dtype: float64

In [42]: ser2
Out[42]: USA        1
         Germany    2
         Italy      5
         Japan      4
         dtype: int64

In [ ]:
```

Not using Series much: but DataFrames very much in the course