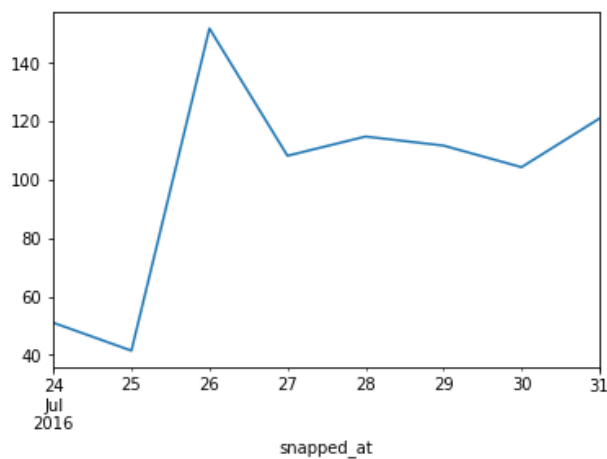


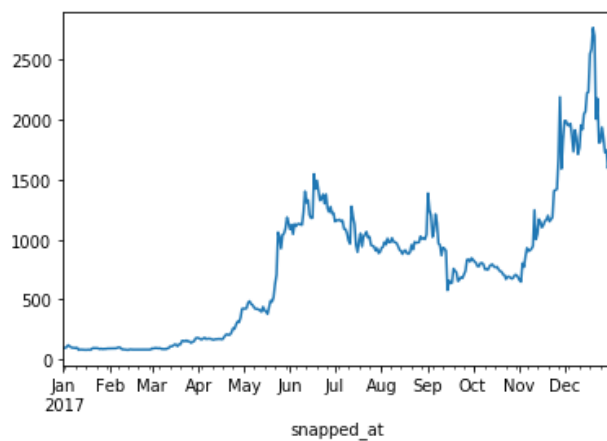
```
In [166]: import pandas as pd
from datetime import datetime
import matplotlib.pyplot as plt
data=pd.read_csv('/home/cnlab/Downloads/etc-inr-max.csv')
data['snapped_at']=pd.to_datetime(data['snapped_at'])
data.index=data['snapped_at']
del data['snapped_at']
#data['2016']
#data['07/2016']
#data['07-2016']
#data['24/07/2016']
#data['24/07/2016':'31/07/2016'] #['07-2016'] also
y=data.price['24/07/2016':'31/07/2016']
#%matplotlib inline
y.plot()
```

Out[166]: <matplotlib.axes._subplots.AxesSubplot at 0x7efc4d47e780>

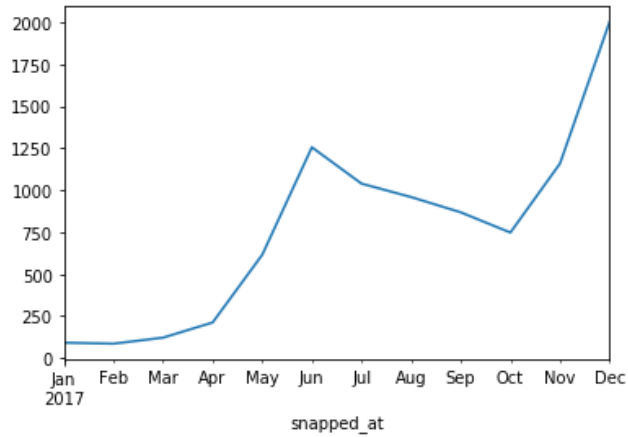


```
In [167]: y=data.price['2017']
y.plot()
```

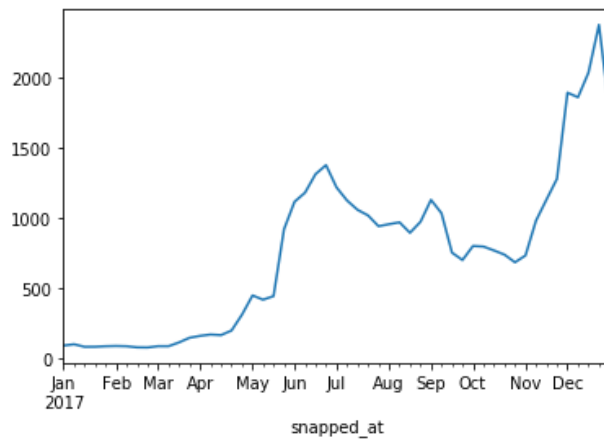
Out[167]: <matplotlib.axes._subplots.AxesSubplot at 0x7efc4d4410f0>



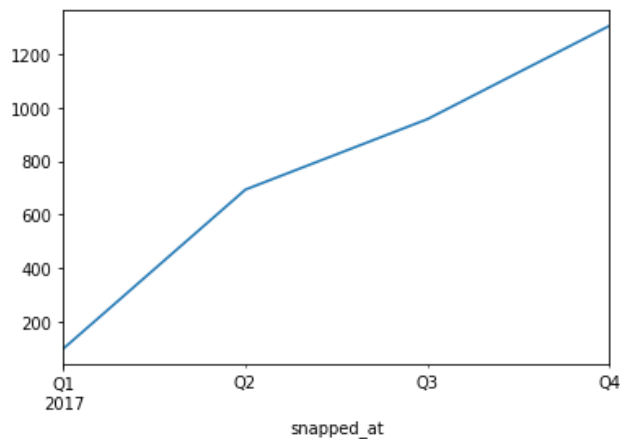
```
In [168]: y=data.price['2017'].resample('M').mean().plot()
```



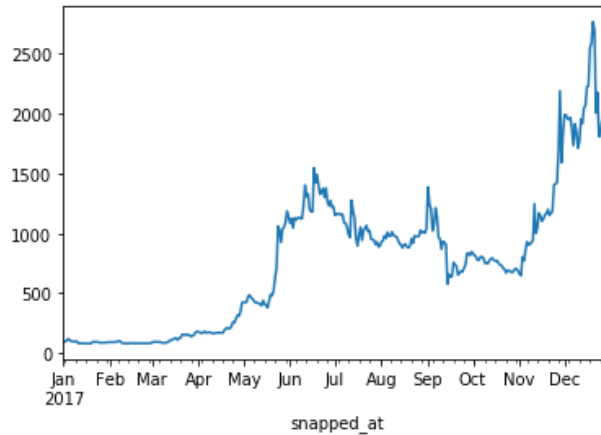
```
In [169]: y=data.price['2017'].resample('W').mean().plot()
```



```
In [170]: y=data.price['2017'].resample('Q').mean().plot() #Q=quater
```



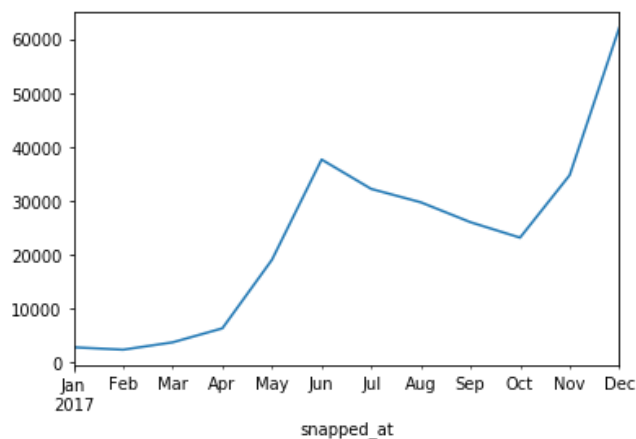
```
In [171]: y=data.price['2017'].resample('d').mean().plot() #date
```



```
In [172]: y=data.price['2017'].resample('M').sum()  
print(y)  
y.plot()
```

```
snapped_at  
2017-01-31    2850.300396  
2017-02-28    2404.388324  
2017-03-31    3772.827206  
2017-04-30    6363.706038  
2017-05-31   19076.231140  
2017-06-30   37647.483301  
2017-07-31   32200.728319  
2017-08-31   29719.288197  
2017-09-30   26034.360189  
2017-10-31   23168.964699  
2017-11-30   34749.156752  
2017-12-31   62064.351459  
Freq: M, Name: price, dtype: float64
```

```
Out[172]: <matplotlib.axes._subplots.AxesSubplot at 0x7efc4d0b7c88>
```



```
In [173]: data=pd.read_csv('/home/cnlab/Downloads/etc-inr-max.csv',parse_dates=['s
napped_at'],index_col=['snapped_at'])
data.index
```

```
Out[173]: DatetimeIndex(['2016-07-24 00:00:00', '2016-07-25 00:00:00',
                        '2016-07-26 00:00:00', '2016-07-27 00:00:00',
                        '2016-07-28 00:00:00', '2016-07-29 00:00:00',
                        '2016-07-30 00:00:00', '2016-07-31 00:00:00',
                        '2016-08-01 00:00:00', '2016-08-02 00:00:00',
                        ...,
                        '2018-02-26 00:00:00', '2018-02-27 00:00:00',
                        '2018-02-28 00:00:00', '2018-03-01 00:00:00',
                        '2018-03-02 00:00:00', '2018-03-03 00:00:00',
                        '2018-03-04 00:00:00', '2018-03-05 00:00:00',
                        '2018-03-06 00:00:00', '2018-03-07 00:00:00'],
                        dtype='datetime64[ns]', name='snapped_at', length=591, freq
=None)
```

```
In [174]: data.isnull().sum()
```

```
Out[174]: price          1
market_cap         0
total_volume        0
dtype: int64
```

```
In [175]: #fill with nearest values
data=data.fillna(data.bfill())
data.isnull().sum()
```

```
Out[175]: price          1
market_cap         0
total_volume        0
dtype: int64
```

```
In [176]: data=data.dropna()
```

```
In [190]: #take new dataset atomospheric CO2 for continous air sample hawaii USA m
arch1958-dec2001
import pandas as pd
import statsmodels.api as sm
import matplotlib.pyplot as plt
#get datasets
data=sm.datasets.co2.load_pandas()
co2=data.data
co2=co2.fillna(co2.bfill())

#find all observation for year 1980,by month,between range,by week,by qu
ater,by date
#find summation of co2 by month of year1991 then plot it
#avg by month,by day,by week then plot it
```

```
In [192]: co2['1980'].head(5)
```

```
Out[192]:
```

	co2
1980-01-05	337.6
1980-01-12	337.4
1980-01-19	338.3
1980-01-26	338.4
1980-02-02	338.0

```
In [193]: co2['10/1980'].head(5)
```

```
Out[193]:
```

	co2
1980-10-04	335.8
1980-10-11	335.8
1980-10-18	336.1
1980-10-25	336.4

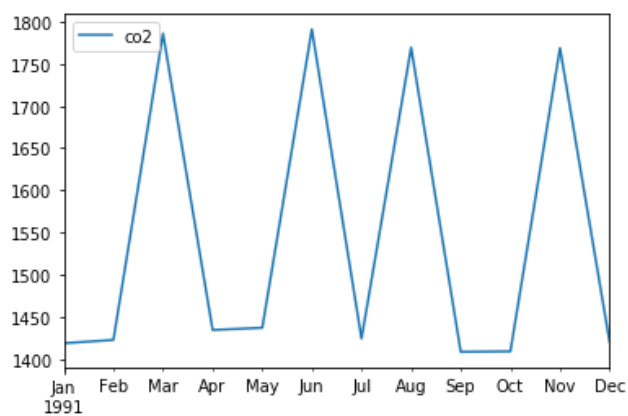
```
In [194]: co2['1991'].resample('M').sum()
```

```
Out[194]:
```

	co2
1991-01-31	1418.7
1991-02-28	1422.6
1991-03-31	1786.0
1991-04-30	1434.4
1991-05-31	1437.0
1991-06-30	1790.9
1991-07-31	1424.2
1991-08-31	1769.3
1991-09-30	1408.5
1991-10-31	1409.0
1991-11-30	1768.7
1991-12-31	1420.1

```
In [195]: co2['1991'].resample('M').sum().plot()
```

```
Out[195]: <matplotlib.axes._subplots.AxesSubplot at 0x7efc4d120dd8>
```



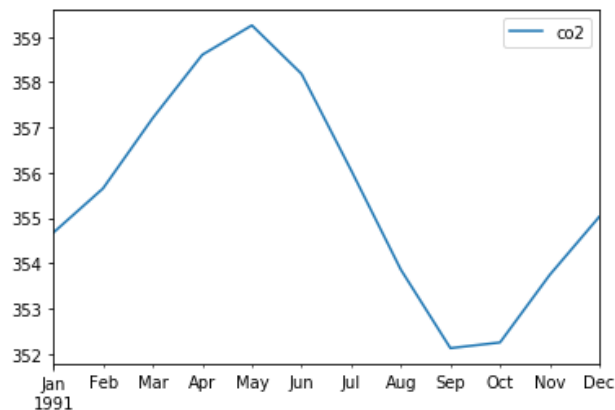
```
In [196]: co2['1991'].resample('M').mean()
```

```
Out[196]:
```

	co2
1991-01-31	354.675
1991-02-28	355.650
1991-03-31	357.200
1991-04-30	358.600
1991-05-31	359.250
1991-06-30	358.180
1991-07-31	356.050
1991-08-31	353.860
1991-09-30	352.125
1991-10-31	352.250
1991-11-30	353.740
1991-12-31	355.025

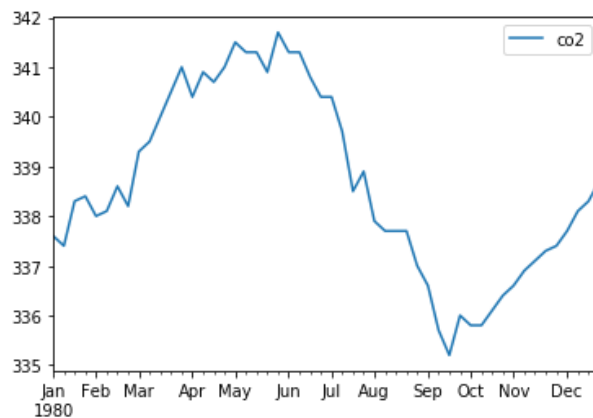
```
In [197]: co2['1991'].resample('M').mean().plot()
```

```
Out[197]: <matplotlib.axes._subplots.AxesSubplot at 0x7efc4d0d27f0>
```



```
In [210]: co2['1980'].plot()
```

```
Out[210]: <matplotlib.axes._subplots.AxesSubplot at 0x7efc4cbfbc88>
```



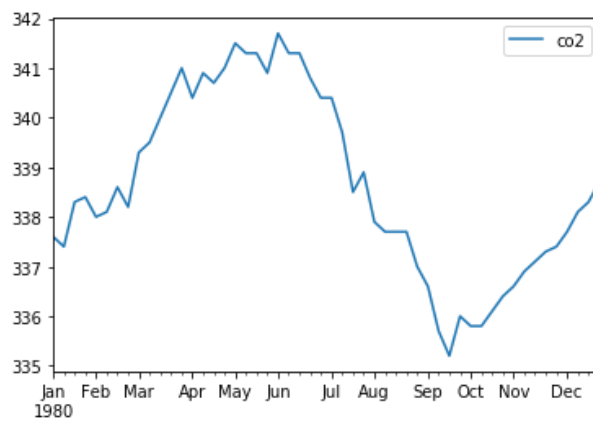
```
In [213]: co2['1980'].resample('W').sum().head(10)
```

```
Out[213]:
```

	co2
1980-01-06	337.6
1980-01-13	337.4
1980-01-20	338.3
1980-01-27	338.4
1980-02-03	338.0
1980-02-10	338.1
1980-02-17	338.6
1980-02-24	338.2
1980-03-02	339.3
1980-03-09	339.5

```
In [214]: co2['1980'].resample('W').sum().plot()
```

```
Out[214]: <matplotlib.axes._subplots.AxesSubplot at 0x7efc4cba3c18>
```



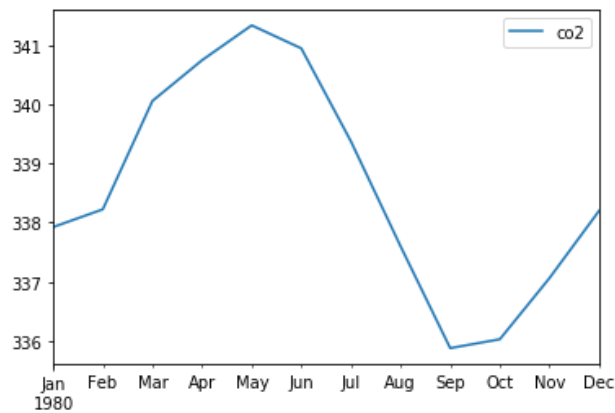
```
In [215]: co2['1980'].resample('M').mean()
```

```
Out[215]:
```

	co2
1980-01-31	337.925
1980-02-29	338.225
1980-03-31	340.060
1980-04-30	340.750
1980-05-31	341.340
1980-06-30	340.950
1980-07-31	339.375
1980-08-31	337.600
1980-09-30	335.875
1980-10-31	336.025
1980-11-30	337.060
1980-12-31	338.200

```
In [216]: co2['1980'].resample('M').mean().plot()
```

```
Out[216]: <matplotlib.axes._subplots.AxesSubplot at 0x7efc4cacef98>
```



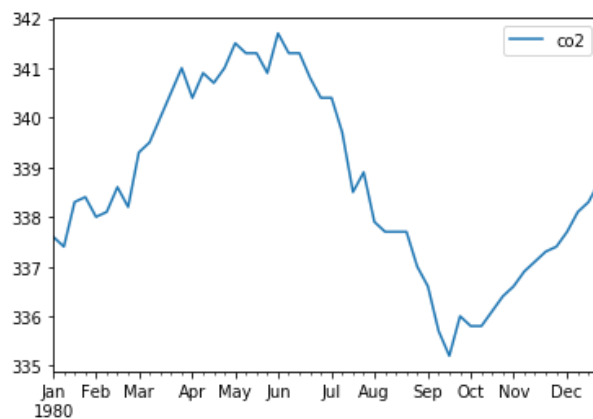

```
In [217]: co2['1980'].resample('W').mean().head(10)
```

```
Out[217]:
```

	co2
1980-01-06	337.6
1980-01-13	337.4
1980-01-20	338.3
1980-01-27	338.4
1980-02-03	338.0
1980-02-10	338.1
1980-02-17	338.6
1980-02-24	338.2
1980-03-02	339.3
1980-03-09	339.5

```
In [218]: co2['1980'].resample('W').mean().plot()
```

```
Out[218]: <matplotlib.axes._subplots.AxesSubplot at 0x7efc4cace470>
```



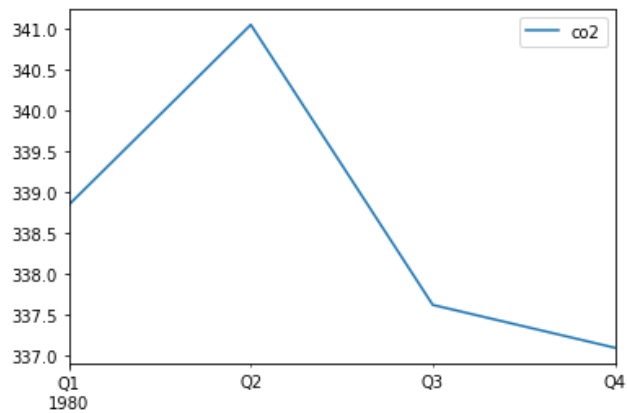
```
In [219]: co2['1980'].resample('Q').mean()
```

```
Out[219]:
```

	co2
1980-03-31	338.838462
1980-06-30	341.038462
1980-09-30	337.615385
1980-12-31	337.092308

```
In [220]: co2['1980'].resample('Q').mean().plot()
```

```
Out[220]: <matplotlib.axes._subplots.AxesSubplot at 0x7efc4c9610f0>
```



```
In [223]: %matplotlib inline
import mpld3
mpld3.enable_notebook()
co2.plot()
```

```
Out[223]: <matplotlib.axes._subplots.AxesSubplot at 0x7efc4c706c18>
```

