Importing Relevant Libraries

In [1]:
```python
import numpy as np
import pandas as pd
from pandas import datetime
import matplotlib.pyplot as plt

from pylab import rcParams
import seaborn as sb

from numpy.random import randn
```

In [2]:
```python
%matplotlib inline
rcParams['figure.figsize']=5, 4
sb.set_style('whitegrid')
```

In [3]:
```python
address = 'C:/Users/Prashik/datasets/INTC.csv'
df=pd.read_csv(address,index_col='Date', parse_dates = True)
df.head(n=3)
```

Out[3]:

Date	Open	High	Low	Close	Adj Close	Volume
2019-11-11	57.970001	58.500000	57.900002	58.349998	56.934311	11228900
2019-11-12	58.400002	58.799999	58.029999	58.200001	56.787952	11952500
2019-11-13	57.869999	57.970001	57.349998	57.889999	56.485474	15332700

In [4]: `df.tail(n=3)`

Out[4]:

Date	Open	High	Low	Close	Adj Close	Volume
2020-12-09	50.279999	50.840000	49.730000	50.070000	50.070000	34068400
2020-12-10	49.660000	50.720001	49.590000	50.259998	50.259998	33706000
2020-12-11	50.139999	50.139999	49.119999	49.730000	49.730000	29392900

Time Series Analysis

In [5]: `df['Adj Close'].plot()`

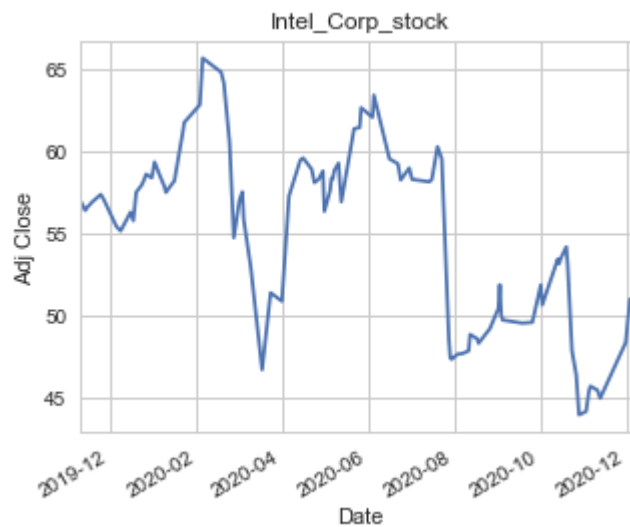Out[5]: `<matplotlib.axes._subplots.AxesSubplot at 0x8b59f70>`
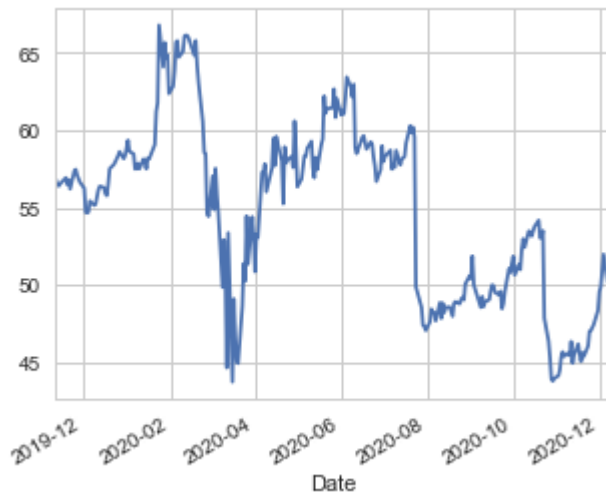
In [6]:
```
df2=df.sample(n=100, random_state=25,axis=0)
plt.xlabel('Date')
plt.ylabel('Adj Close')

plt.title('Intel_Corp_stock')

df2['Adj Close'].plot()
```

Out[6]: `<matplotlib.axes._subplots.AxesSubplot at 0x8d39830>`

In [7]:
```
from statsmodels.graphics.tsaplots import plot_acf
```

```
ImportErrorTraceback (most recent call last)
<ipython-input-7-5a20bf2855a9> in <module>()
----> 1 from statsmodels.graphics.tsaplots import plot_acf

C:\Users\KRISH KHULLAR\Anaconda2\lib\site-packages\statsmodels\graphics\tsapl
ots.py in <module>()
      4 import numpy as np
      5
----> 6 from statsmodels.compat.pandas import sort_values
      7 from statsmodels.graphics import utils
      8 from statsmodels.tsa.stattools import acf, pacf

C:\Users\KRISH KHULLAR\Anaconda2\lib\site-packages\statsmodels\compat\pandas.
py in <module>()
     54     import pandas.tseries.frequencies as frequencies
     55 except ImportError:
---> 56     from pandas.core import datetools
     57     frequencies = datetools

ImportError: cannot import name datetools
```

In [8]:
```
fig = plt.figure(figsize=(134,8))
ax1 = fig.add_subplot(211)
fig = sm.graphics.tsa.plot_acf(df['seasonal First Difference'].iloc[13:],lags=
40,ax=ax1)
```

```
NameErrorTraceback (most recent call last)
<ipython-input-8-41817eddad60> in <module>()
      1 fig = plt.figure(figsize=(134,8))
      2 ax1 = fig.add_subplot(211)
----> 3 fig = sm.graphics.tsa.plot_acf(df['seasonal First Difference'].iloc[1
3:],lags=40,ax=ax1)

NameError: name 'sm' is not defined
```

In [ ]: