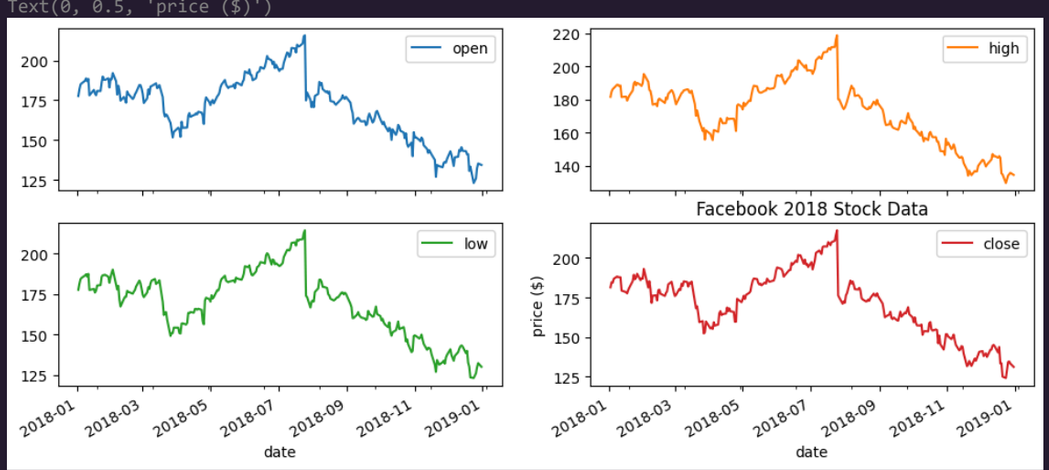
```
%matplotlib inline
import matplotlib.pyplot as plt
import numpy as np
import pandas as pd
import seaborn as sns
fb = pd.read_csv(
 '/content/fb_stock_prices_2018.csv', index_col='date', parse_dates=True
)
```

```
fb.close.plot()
plt.suptitle('FB Closing Price')
plt.xlabel('date')
plt.ylabel('price ($)')
```

```
Text(0, 0.5, 'price ($)')
```


```
fb.iloc[:,:4].plot(subplots=True, layout=(2, 2), figsize=(12, 5))
plt.title('Facebook 2018 Stock Data')
plt.xlabel('date')
plt.ylabel('price ($)')
```

```
Text(0, 0.5, 'price ($)')
```

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Text(0, 0.5, 'price ($)')
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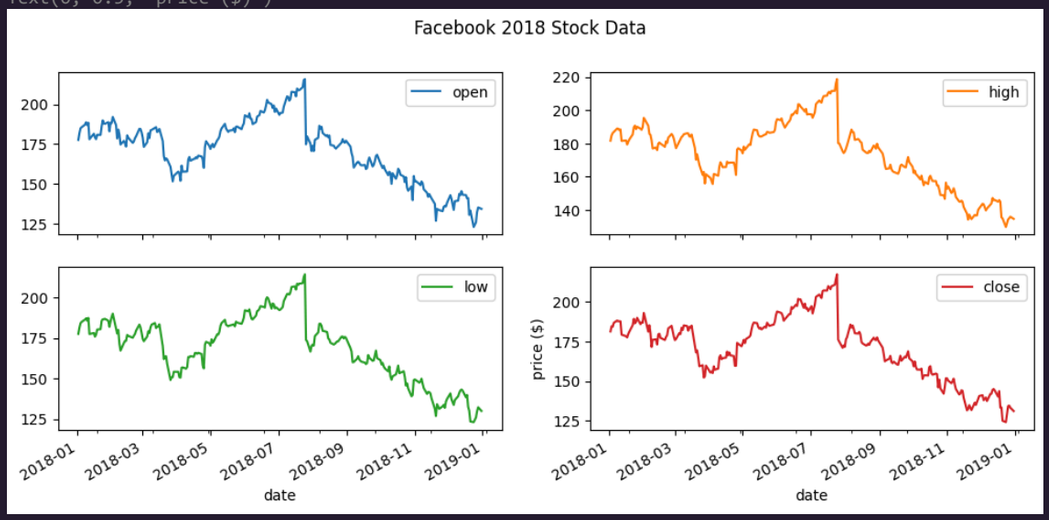
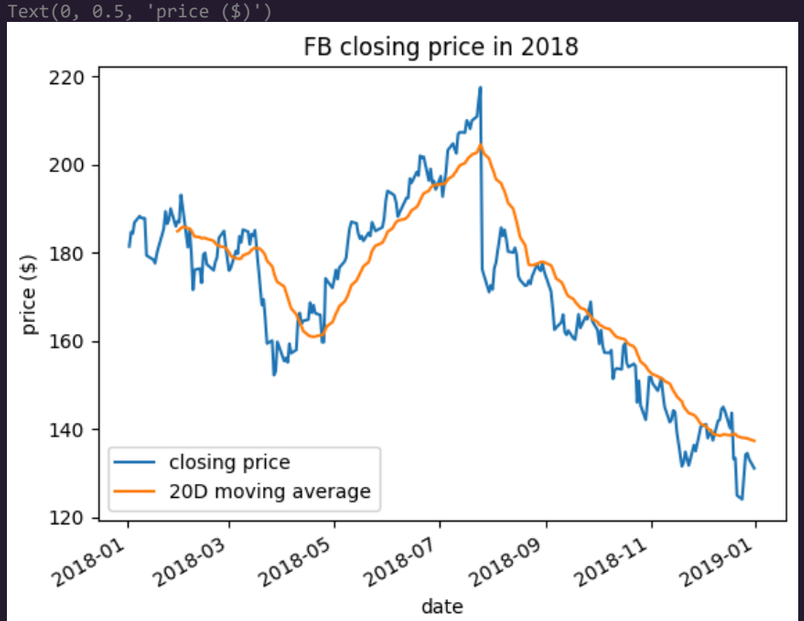


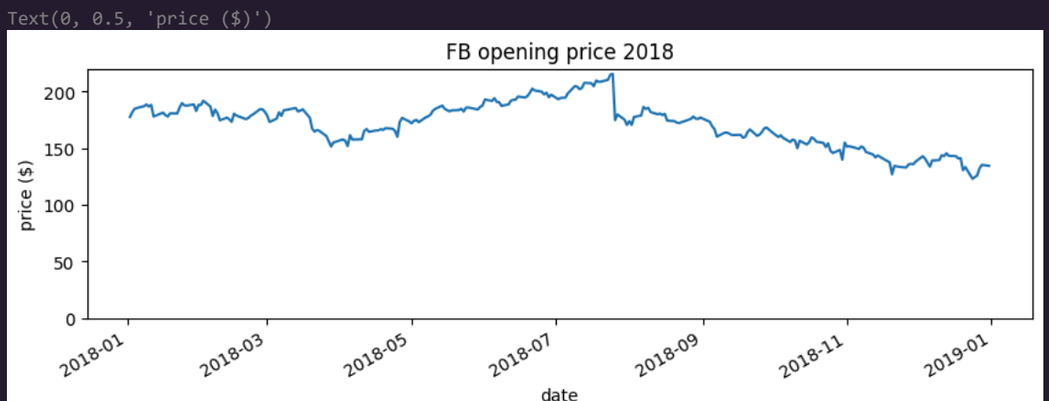

```
fb.assign(
 ma=lambda x: x.close.rolling(20).mean()
).plot(
 y=['close', 'ma'],
 title='FB closing price in 2018',
 label=['closing price', '20D moving average']
)
plt.legend(loc='lower left')
plt.ylabel('price ($)')
```

```
Text(0, 0.5, 'price ($)')
```



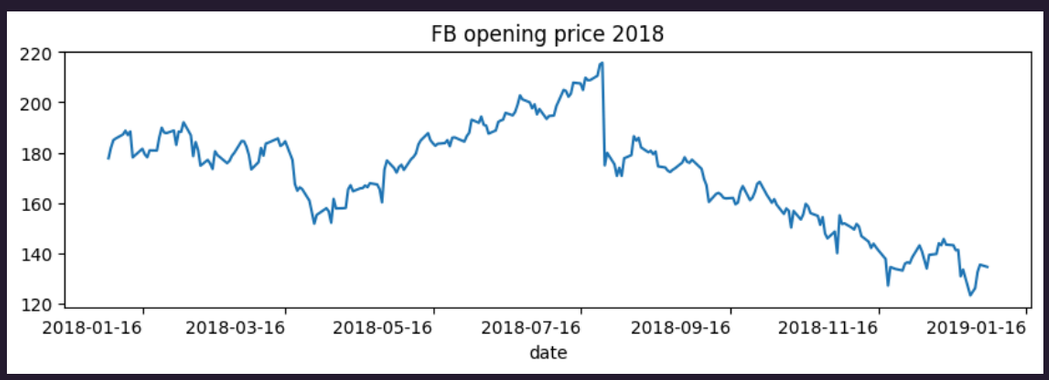

```
fb.open.plot(figsize=(10, 3), title='FB opening price 2018')
plt.ylim(0, None)
plt.ylabel('price ($)')
```

```
Text(0, 0.5, 'price ($)')
```



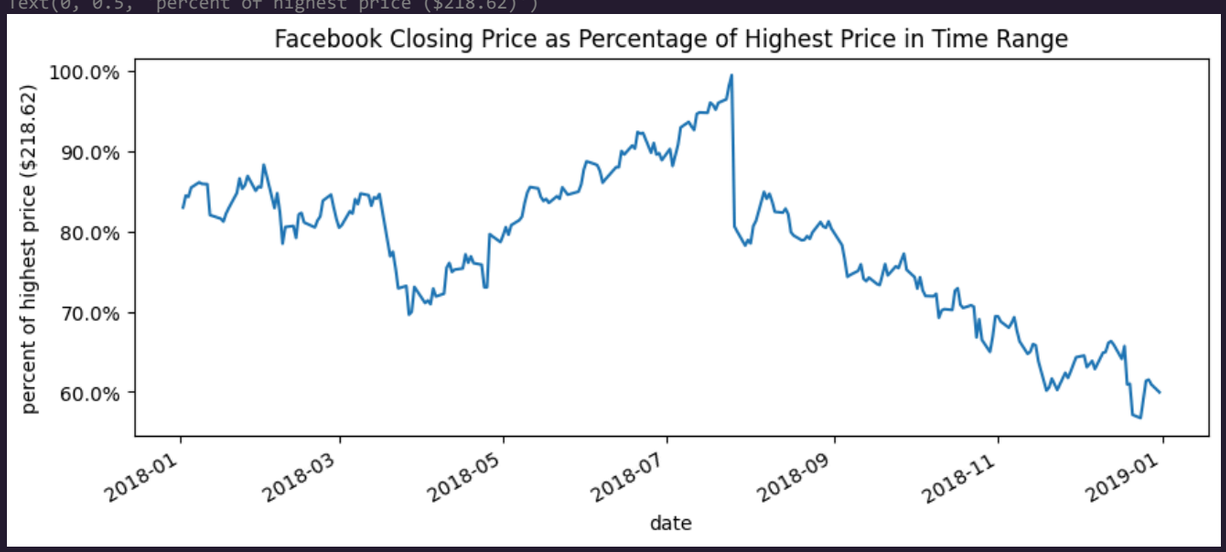

```
import calendar
fb.open.plot(figsize=(10, 3), rot=0, title='FB opening price 2018')
locs, labels = plt.xticks()
plt.xticks(locs + 15 , calendar.month_name[1::2])
plt.ylabel('price ($)')
```

```
---------------------------------------------------------------------------
ValueError                                Traceback (most recent call last)
<ipython-input-12-49f9a03c7ca6> in <cell line: 4>()
      2 fb.open.plot(figsize=(10, 3), rot=0, title='FB opening price 2018')
      3 locs, labels = plt.xticks()
----> 4 plt.xticks(locs + 15 , calendar.month_name[1::2])
      5 plt.ylabel('price ($)')

                              3 frames
/usr/local/lib/python3.10/dist-packages/matplotlib/axis.py in set_ticklabels(self, labels, minor,
fontdict, **kwargs)
   1967             # remove all tick labels, so only error for > 0 labels
   1968             if len(locator.locs) != len(labels) and len(labels) != 0:
-> 1969                 raise ValueError(
   1970                     "The number of FixedLocator locations"
   1971                     f" ({len(locator.locs)}), usually from a call to"

ValueError: The number of FixedLocator locations (7), usually from a call to set_ticks, does not
match the number of labels (6).
```



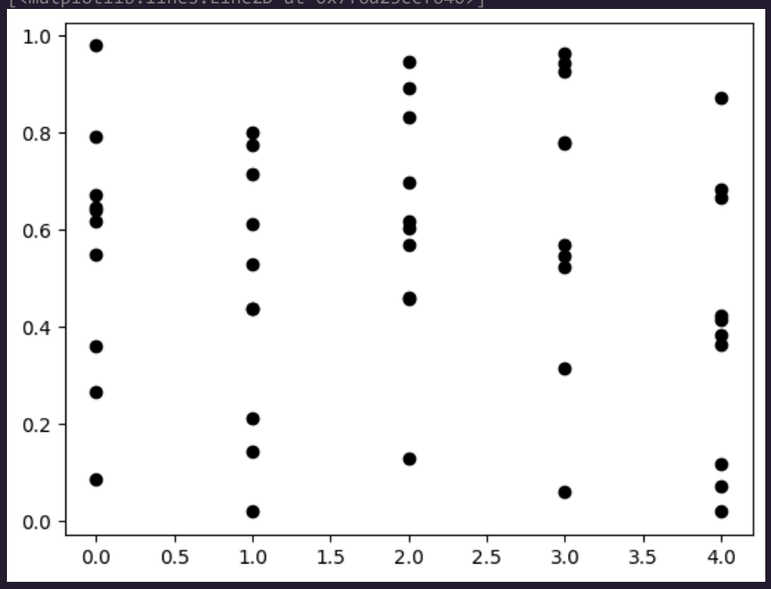

```
1 import matplotlib.ticker as ticker
2 ax = fb.close.plot(
3  figsize=(10, 4),
4  title='Facebook Closing Price as Percentage of Highest Price in Time Range'
5 )
6 ax.yaxis.set_major_formatter(
7  ticker.PercentFormatter(xmax=fb.high.max())
8 )
9 ax.set_yticks([
10  fb.high.max()*pct for pct in np.linspace(0.6, 1, num=5)
11 ]) # show round percentages only (60%, 80%, etc.)
12 ax.set_ylabel(f'percent of highest price (${fb.high.max()})')
13
```

```
Text(0, 0.5, 'percent of highest price ($218.62)')
```




```
1 fig, ax = plt.subplots(1, 1)
2 np.random.seed(0)
3 ax.plot(np.tile(np.arange(0, 5), 10), np.random.rand(50), 'ko')
```

[<matplotlib.lines.Line2D at 0x7f6d23ccf640>]




```
1
2 fig, ax = plt.subplots(1, 1)
3 np.random.seed(0)
4 ax.plot(np.tile(np.arange(0, 5), 10), np.random.rand(50), 'ko')
5 ax.get_xaxis().set_major_locator(
6  ticker.MultipleLocator(base=1)
7 )
```