In [86]:
```
#PRODIGY TASK 1
```

In [84]:
```
import csv
import statistics as stat
import pandas as pd
from scipy.stats import norm
import matplotlib.pyplot as plt
import seaborn as sns
get_ipython().run_line_magic('matplotlib', 'inline')
```

In [85]:
```
data=pd.read_csv(r"C:\Users\shripad pramod rane\Desktop\internship vir\prodigy\task1\Googl
```

In [53]:
```
data.head(5)
```

Out[53]:

	Date	Open	High	Low	Close	Adj Close	Volume
0	2010-01-04	15.689439	15.753504	15.621622	15.684434	15.684434	78169752
1	2010-01-05	15.695195	15.711712	15.554054	15.615365	15.615365	120067812
2	2010-01-06	15.662162	15.662162	15.174174	15.221722	15.221722	158988852
3	2010-01-07	15.250250	15.265265	14.831081	14.867367	14.867367	256315428
4	2010-01-08	14.814815	15.096346	14.742492	15.065566	15.065566	188783028

In [54]:
```
data.columns
```

Out[54]:
```
Index(['Date', 'Open', 'High', 'Low', 'Close', 'Adj Close', 'Volume'], dtype='object')
```

In [61]:
```
data['Volume']
```

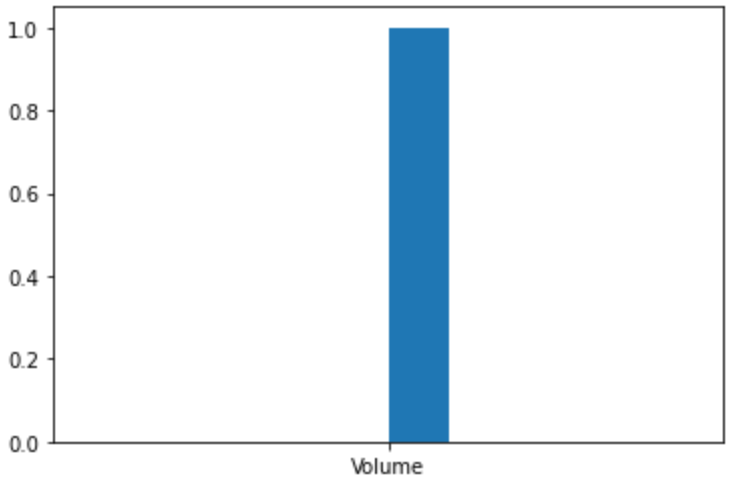
Out[61]:
```
0        78169752
1       120067812
2       158988852
3       256315428
4       188783028
          ...
3267     23003000
3268     20097300
3269     19523200
3270     23333500
3271     23986300
Name: Volume, Length: 3272, dtype: int64
```

In [62]:
```
Title=data['Volume']
```

In [69]:
```
mean = str('Volume, Length')
```

In [75]:
```
plt.hist('Volume')
```

Out[75]:
```
(array([0., 0., 0., 0., 0., 1., 0., 0., 0., 0.]),
 array([-0.5, -0.4, -0.3, -0.2, -0.1,  0. ,  0.1,  0.2,  0.3,  0.4,  0.5]),
 <BarContainer object of 10 artists>)
```

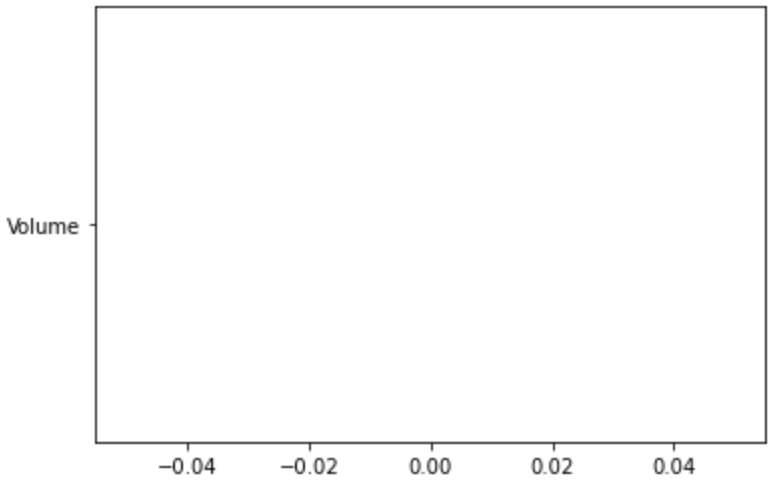


In [76]:
```
print('Volume')
```

```
Volume
```

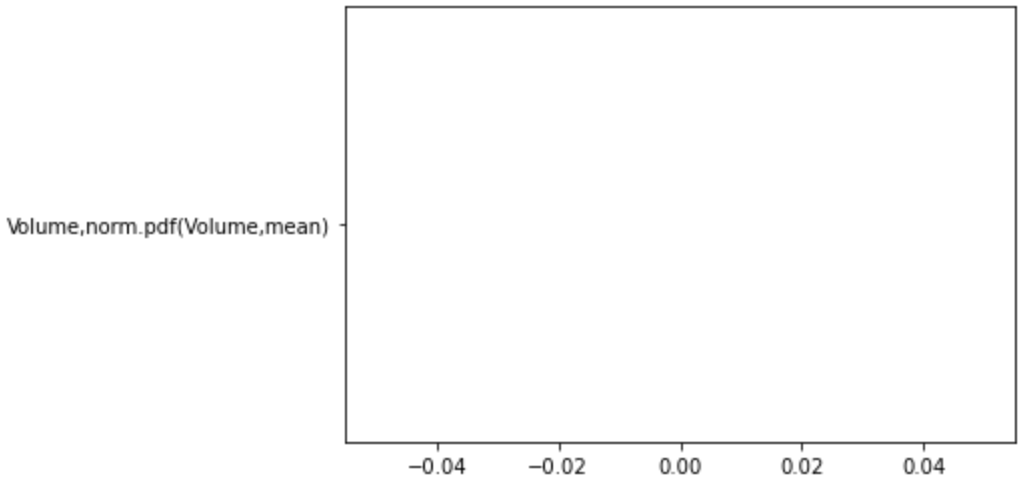
In [77]:
```
plt.plot('Volume')
```

Out[77]:
```
[<matplotlib.lines.Line2D at 0x2b814478d30>]
```



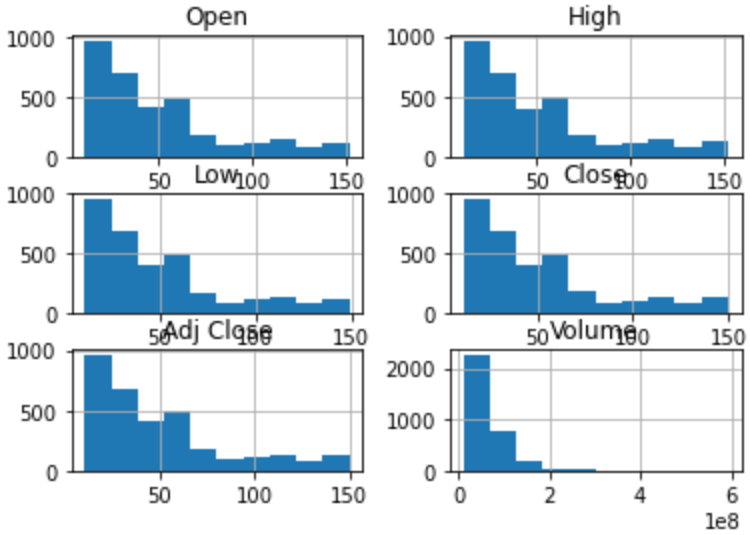
In [79]:
```
plt.plot('Volume,norm.pdf(Volume,mean)')
```

Out[79]:
```
[<matplotlib.lines.Line2D at 0x2b8144a7c40>]
```



In [80]:
```
data.hist()
```

Out[80]:
```
array([[<AxesSubplot:title={'center':'Open'}>,
        <AxesSubplot:title={'center':'High'}>],
       [<AxesSubplot:title={'center':'Low'}>,
        <AxesSubplot:title={'center':'Close'}>],
       [<AxesSubplot:title={'center':'Adj Close'}>,
        <AxesSubplot:title={'center':'Volume'}>]], dtype=object)
```



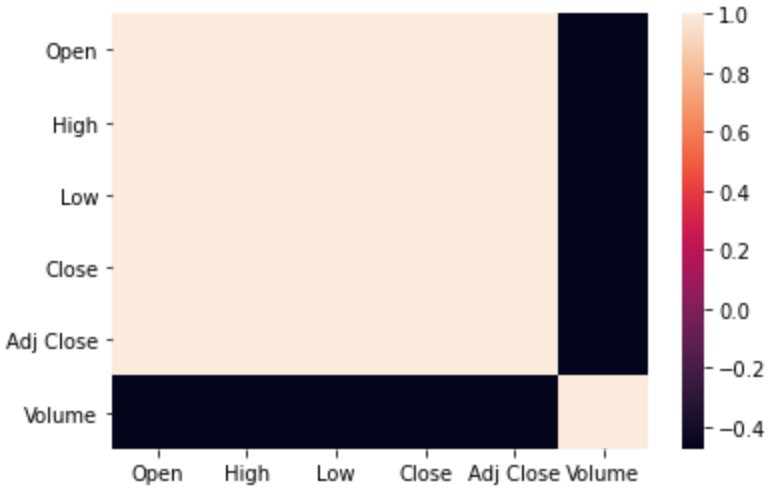
In [81]:
```
data.corr()
```

Out[81]:

	Open	High	Low	Close	Adj Close	Volume
Open	1.000000	0.999871	0.999856	0.999695	0.999695	-0.472816
High	0.999871	1.000000	0.999822	0.999854	0.999854	-0.471273
Low	0.999856	0.999822	1.000000	0.999864	0.999864	-0.475476
Close	0.999695	0.999854	0.999864	1.000000	1.000000	-0.473755
Adj Close	0.999695	0.999854	0.999864	1.000000	1.000000	-0.473755
Volume	-0.472816	-0.471273	-0.475476	-0.473755	-0.473755	1.000000

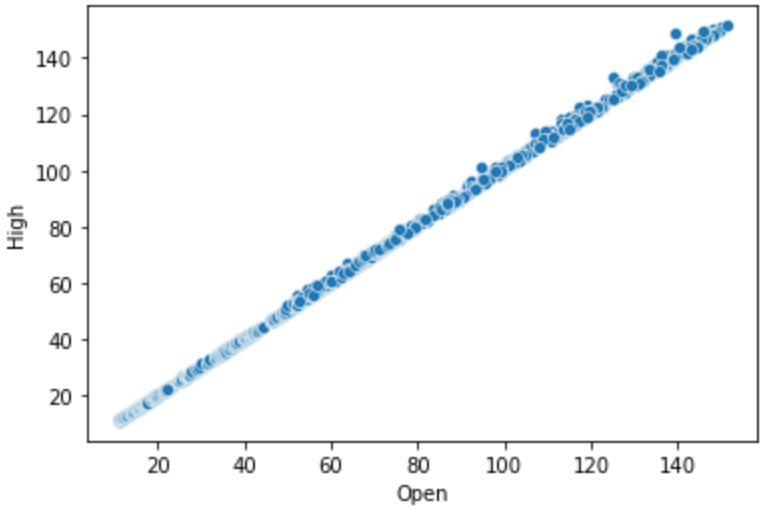
In [82]:
```
sns.heatmap(data.corr())
```

Out[82]:
```
<AxesSubplot:>
```



In [83]:
```
sns.scatterplot(x='Open',y='High', data=data)
```

Out[83]: <AxesSubplot:xlabel='Open', ylabel='High'>



In [ ]: