In [62]:
```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
df = pd.read_csv(r'C:\Users\Berk\Desktop\aapl1.csv')
```

In [63]:
```
df = df.dropna(subset=['Numberoftrades', 'Depth','Volume','Spread','Price'])
```

In [64]:
```
df = df[['Numberoftrades', 'Depth','Volume','Spread','Price']]
```

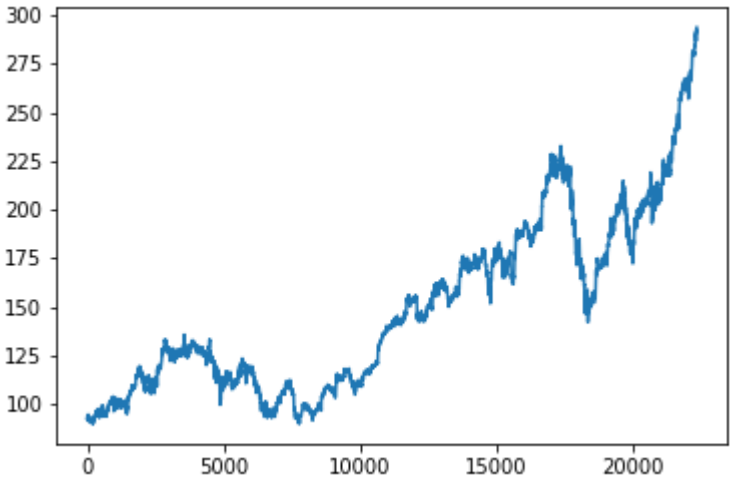
In [65]:
```
df.tail()
```

Out[65]:

	Numberoftrades	Depth	Volume	Spread	Price
22341	1522.0	89326	274313.0	0.02	292.06
22342	1159.0	67108	201727.0	0.01	292.20
22343	1824.0	66850	319730.0	0.01	292.36
22344	6702.0	161770	1339937.0	0.03	293.41
22345	1.0	932	2328806.0	0.35	293.65

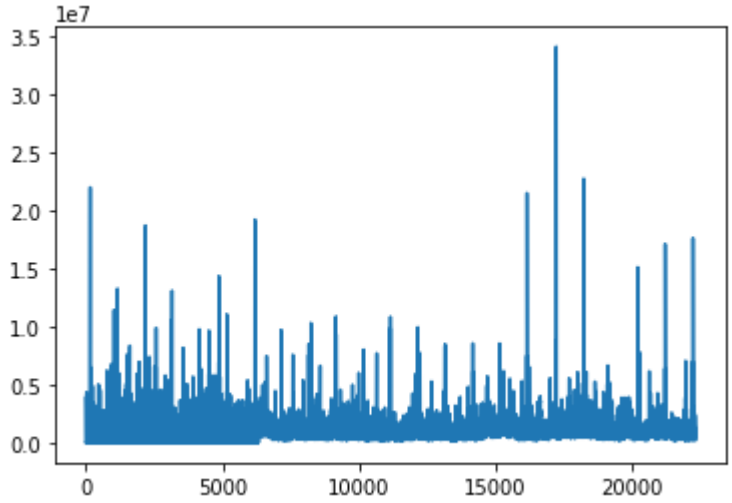
In [66]:
```
plt.plot(df['Price'])
```

Out[66]:
```
[<matplotlib.lines.Line2D at 0x61b0e5eb08>]
```



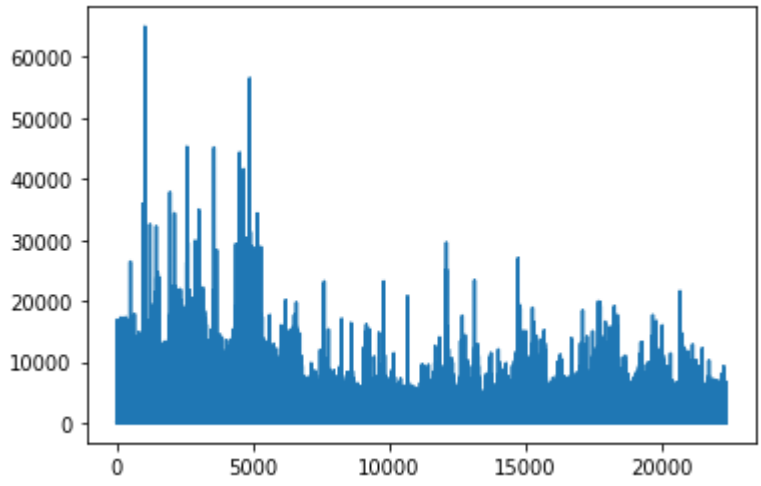
In [67]:
```
plt.plot(df['Volume'])
```

Out[67]: [<matplotlib.lines.Line2D at 0x61b0eb5908>]



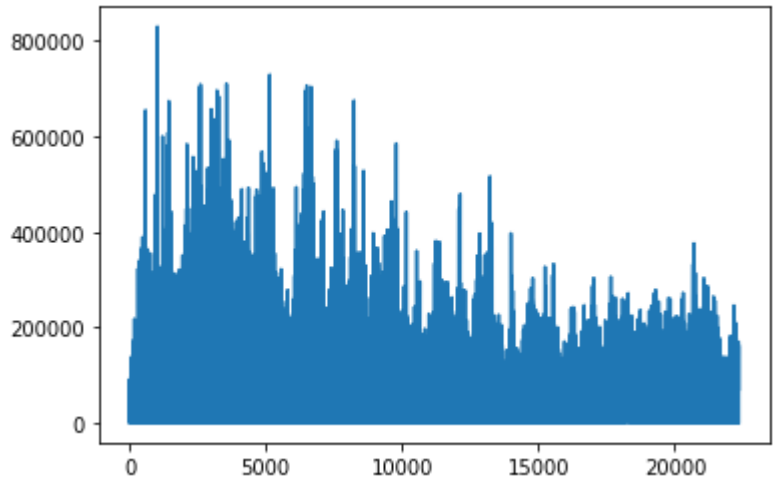
In [68]:
```
plt.plot(df['Numberoftrades'])
```

Out[68]: [<matplotlib.lines.Line2D at 0x61b10b83c8>]



In [69]:
```
plt.plot(df['Depth'])
```

Out[69]:
```
[<matplotlib.lines.Line2D at 0x61b1112e88>]
```



In [70]:
```
n = df.shape[0]
p = df.shape[1]
df = df.values
```

In [71]:
```
df
```

Out[71]:
```
array([[1.400000e+01, 3.660000e+02, 1.434000e+03, 2.000000e-01,
        9.250000e+01],
       [6.000000e+00, 3.400000e+01, 1.305000e+03, 1.900000e-01,
        9.240000e+01],
       [1.300000e+01, 3.140000e+02, 2.403000e+03, 2.200000e-01,
        9.220000e+01],
       ...,
       [1.824000e+03, 6.685000e+04, 3.197300e+05, 1.000000e-02,
        2.923600e+02],
       [6.702000e+03, 1.617700e+05, 1.339937e+06, 3.000000e-02,
        2.934100e+02],
       [1.000000e+00, 9.320000e+02, 2.328806e+06, 3.500000e-01,
        2.936500e+02]])
```

In [59]:

```
# Training and test data
train_start = 0
train_end = int(np.floor(0.8*n))
test_start = train_end
test_end = len(df)
data_train = df[p.arange(train_start, train_end), :]
data_test = df[np.arange(test_start, test_end), :]
```

```
---------------------------------------------------------------------------
AttributeError                            Traceback (most recent call last)
<ipython-input-59-e23c34024e43> in <module>
      4 test_start = train_end
      5 test_end = len(df)
----> 6 data_train = df[p.arange(train_start, train_end), :]
      7 data_test = df[np.arange(test_start, test_end), :]

AttributeError: 'int' object has no attribute 'arange'
```

In [8]:
```
import tensorflow as tf
```

```
---------------------------------------------------------------------
----
ImportError                               Traceback (most recent call l
ast)
~\Anaconda3\lib\site-packages\tensorflow\python\pywrap_tensorflow.py in
<module>
     57
---> 58   from tensorflow.python.pywrap_tensorflow_internal import *
     59

~\Anaconda3\lib\site-packages\tensorflow\python\pywrap_tensorflow_inter
nal.py in <module>
     27             return _mod
---> 28     _pywrap_tensorflow_internal = swig_import_helper()
     29     del swig_import_helper

~\Anaconda3\lib\site-packages\tensorflow\python\pywrap_tensorflow_inter
nal.py in swig_import_helper()
     23             try:
---> 24                 _mod = imp.load_module('_pywrap_tensorflow_inte
rnal', fp, pathname, description)
     25             finally:

~\Anaconda3\lib\imp.py in load_module(name, file, filename, details)
    241         else:
--> 242             return load_dynamic(name, filename, file)
    243     elif type_ == PKG_DIRECTORY:

~\Anaconda3\lib\imp.py in load_dynamic(name, path, file)
    341             name=name, loader=loader, origin=path)
--> 342         return _load(spec)
    343

ImportError: DLL load failed: The specified module could not be found.

During handling of the above exception, another exception occurred:

ImportError                               Traceback (most recent call l
ast)
<ipython-input-8-64156d691fe5> in <module>
----> 1 import tensorflow as tf

~\Anaconda3\lib\site-packages\tensorflow\__init__.py in <module>
     39 import sys as _sys
     40
---> 41 from tensorflow.python.tools import module_util as _module_util
     42 from tensorflow.python.util.lazy_loader import LazyLoader as _L
azyLoader
     43

~\Anaconda3\lib\site-packages\tensorflow\python\__init__.py in <module>
     48 import numpy as np
     49
---> 50 from tensorflow.python import pywrap_tensorflow
```

```
     51
     52 # Protocol buffers

~\Anaconda3\lib\site-packages\tensorflow\python\pywrap_tensorflow.py in
<module>
     67 for some common reasons and solutions.  Include the entire stac
k trace
     68 above this error message when asking for help.""" % traceback.f
ormat_exc()
---> 69   raise ImportError(msg)
     70
     71 # pylint: enable=wildcard-import,g-import-not-at-top,unused-imp
ort,line-too-long

ImportError: Traceback (most recent call last):
  File "C:\Users\Berk\Anaconda3\lib\site-packages\tensorflow\python\pyw
rap_tensorflow.py", line 58, in <module>
    from tensorflow.python.pywrap_tensorflow_internal import *
  File "C:\Users\Berk\Anaconda3\lib\site-packages\tensorflow\python\pyw
rap_tensorflow_internal.py", line 28, in <module>
    _pywrap_tensorflow_internal = swig_import_helper()
  File "C:\Users\Berk\Anaconda3\lib\site-packages\tensorflow\python\pyw
rap_tensorflow_internal.py", line 24, in swig_import_helper
    _mod = imp.load_module('_pywrap_tensorflow_internal', fp, pathname,
description)
  File "C:\Users\Berk\Anaconda3\lib\imp.py", line 242, in load_module
    return load_dynamic(name, filename, file)
  File "C:\Users\Berk\Anaconda3\lib\imp.py", line 342, in load_dynamic
    return _load(spec)
ImportError: DLL load failed: The specified module could not be found.


Failed to load the native TensorFlow runtime.

See https://www.tensorflow.org/install/errors (https://www.tensorflow.o
rg/install/errors)

for some common reasons and solutions.  Include the entire stack trace
above this error message when asking for help.
```

In [ ]:

In [ ]:

In [ ]: