#### In [3]: from sklearn import datasets iris = datasets.load iris() In [7]: import numpy as np import pandas as pd data1 = pd.DataFrame(data = np.c\_[iris['data'], iris['target']], columns = iris['feature\_names'] + ['target'] ) print(data1.head) <bound method NDFrame.head of</pre> sepal length (cm) sepal width (cm) petal length (cm) petal wi dth (cm) \ 5.1 3.5 0.2 4.9 0.2 1 3.0 1.4 4.7 3.2 1.3 0.2 3.1 0.2 3 4.6 1.5 5.0 4 3.6 1.4 0.2 . . . . . . . . . . . . 145 6.7 3.0 5.2 2.3 146 6.3 2.5 5.0 1.9 2.0 147 6.5 3.0 5.2 2.3 148 6.2 3.4 5.4 149 5.9 3.0 5.1 1.8 target 0 0.0 1 0.0 2 0.0 0.0 0.0 4 . . . 145 2.0 2.0 146 147 2.0 148 2.0 149 2.0 [150 rows x 5 columns]> - 1 4 In [14]: import matplotlib.pyplot as plt fig , ax = plt.subplots() # scatter the sepal length against the sepal width ax.scatter(data1['sepal length (cm)'], data1['sepal width (cm)']) #set a title and labels ax.set title('Iris Dataset') ax.set xlabel('sepal length') ax.set\_ylabel('sepal width') Out[14]: Text(0, 0.5, 'sepal width') Iris Dataset 4.5 4.0 3.5 width

sepal 3.0

2.0

```
4.5 5.0 5.5 6.0 6.5 7.0 7.5 8.0 sepal length
```

#### In [10]:

```
list(data1.columns)

Out[10]:
['sepal length (cm)',
    'sepal width (cm)',
    'petal length (cm)',
    'petal width (cm)',
    'target']
```

### In [16]:

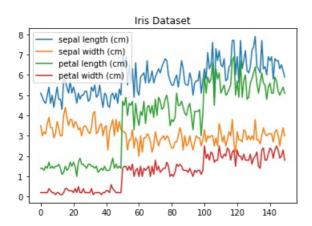
```
print(data1.target)
0
       0.0
       0.0
1
       0.0
2
       0.0
       0.0
4
      . . .
145
       2.0
146
       2.0
147
       2.0
148
       2.0
149
       2.0
Name: target, Length: 150, dtype: float64
```

# In [17]:

```
#get columns to plot(to plot all the columns)
columns = datal.columns.drop(['target'])
#create x data
x_data = range(0, datal.shape[0])
#create figure and axis
fig , ax =plt.subplots()
#plot each column
for column in columns:
    ax.plot(x_data, datal[column], label=column)
#set title and legend
ax.set_title('Iris Dataset')
ax.legend()
```

## Out[17]:

<matplotlib.legend.Legend at 0x233b5110a88>



# In [18]:

import pandas as pd

```
wine reviews = pd.read csv ("")
#print(df)
#create a figure and axis
fig, ax = plt.subplots()
#count the occurences of each class
data = wine reviews['Proline'].value counts()
#get x and y data
points = data.index
frequency = data.values
# create bar chart
ax.bar(points, frequency)
#set title and labels
ax.set title('Wine Review Scores')
ax.set xlabel('Points')
ax.set ylabel('Frequency')
FileNotFoundError
                                         Traceback (most recent call last)
<ipython-input-18-fe2f03d89c16> in <module>
     1 import pandas as pd
---> 2 wine_reviews = pd.read_csv ("")
      3 #print(df)
      4 #create a figure and axis
      5 fig, ax = plt.subplots()
~\Anaconda3\lib\site-packages\pandas\io\parsers.py in parser f(filepath or buffer, sep, delimiter,
header, names, index_col, usecols, squeeze, prefix, mangle_dupe_cols, dtype, engine, converters, t
rue_values, false_values, skipinitialspace, skiprows, skipfooter, nrows, na_values,
keep_default_na, na_filter, verbose, skip_blank_lines, parse_dates, infer_datetime_format,
keep date col, date parser, dayfirst, cache dates, iterator, chunksize, compression, thousands,
decimal, lineterminator, quotechar, quoting, doublequote, escapechar, comment, encoding, dialect,
error_bad_lines, warn_bad_lines, delim_whitespace, low_memory, memory_map, float_precision)
    683
    684
--> 685
                return read(filepath or buffer, kwds)
    686
    687
            parser f. name = name
~\Anaconda3\lib\site-packages\pandas\io\parsers.py in read(filepath_or_buffer, kwds)
    455
    456
            # Create the parser.
--> 457
            parser = TextFileReader(fp or buf, **kwds)
    458
    459
            if chunksize or iterator:
~\Anaconda3\lib\site-packages\pandas\io\parsers.py in init (self, f, engine, **kwds)
                    self.options["has index names"] = kwds["has index names"]
    894
--> 895
                self._make_engine(self.engine)
    896
    897
            def close(self):
~\Anaconda3\lib\site-packages\pandas\io\parsers.py in make engine(self, engine)
   1133 def make engine (self, engine="c"):
                if engine == "c":
   1134
-> 1135
                    self. engine = CParserWrapper(self.f, **self.options)
   1136
                else.
   1137
                    if engine == "python":
~\Anaconda3\lib\site-packages\pandas\io\parsers.py in init (self, src, **kwds)
   1915
               kwds["usecols"] = self.usecols
   1916
-> 1917
                self._reader = parsers.TextReader(src, **kwds)
   1918
                self.unnamed cols = self. reader.unnamed cols
   1919
pandas\_libs\parsers.pyx in pandas. libs.parsers.TextReader. cinit ()
pandas\ libs\parsers.pyx in pandas. libs.parsers.TextReader. setup parser source()
FileNotFoundError: [Errno 2] File b'' does not exist: b''
In [19]:
\verb|https://nbconvert.readthedocs.io/en/latest/install.html| #installing-tex.|
```

```
File "<ipython-input-19-8ca5a9a9e093>", line 1
    https://nbconvert.readthedocs.io/en/latest/install.html#installing-tex.

SyntaxError: invalid syntax
In []:
```