```
import pandas as pd
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt

df=pd.read_csv("Iris.csv")
df.describe()
```

```
                Id  SepalLengthCm  SepalWidthCm  PetalLengthCm
PetalWidthCm
count  150.000000     150.000000    150.000000     150.000000
150.000000
mean    75.500000       5.843333      3.054000       3.758667
1.198667
std     43.445368       0.828066      0.433594       1.764420
0.763161
min      1.000000       4.300000      2.000000       1.000000
0.100000
25%     38.250000       5.100000      2.800000       1.600000
0.300000
50%     75.500000       5.800000      3.000000       4.350000
1.300000
75%    112.750000       6.400000      3.300000       5.100000
1.800000
max    150.000000       7.900000      4.400000       6.900000
2.500000
```

```
df.head()
```

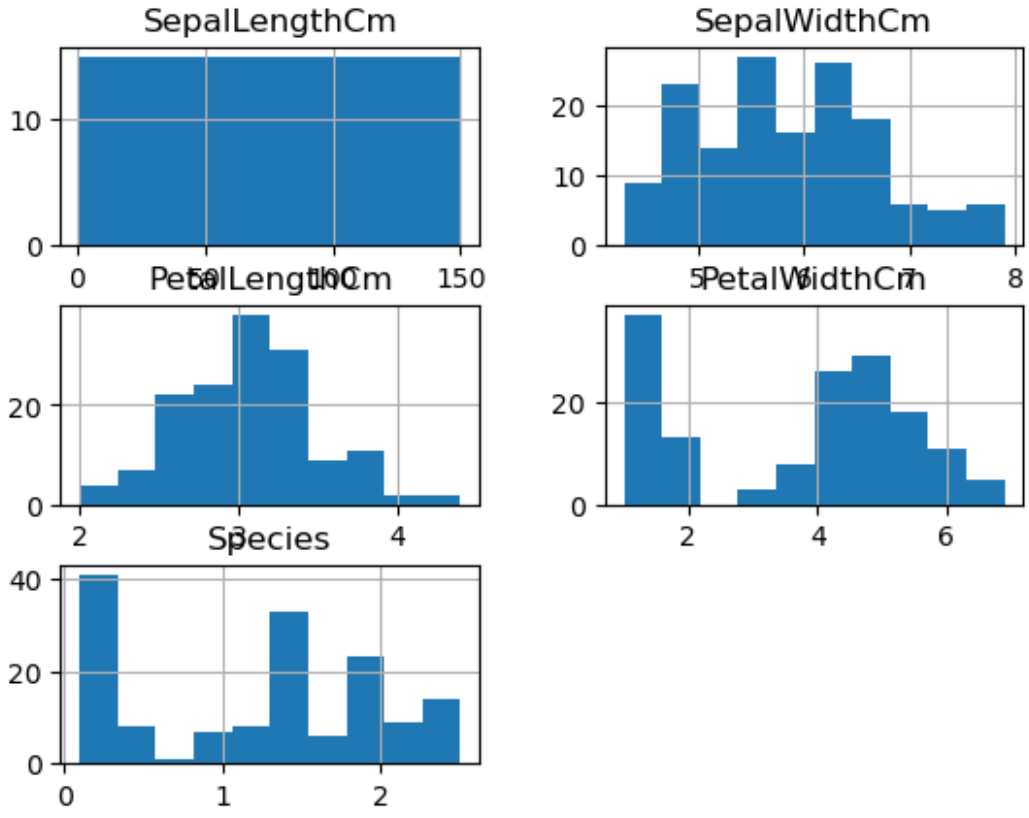
```
   Id  SepalLengthCm  SepalWidthCm  PetalLengthCm  PetalWidthCm
Species
0   1            5.1           3.5            1.4           0.2  Iris-
setosa
1   2            4.9           3.0            1.4           0.2  Iris-
setosa
2   3            4.7           3.2            1.3           0.2  Iris-
setosa
3   4            4.6           3.1            1.5           0.2  Iris-
setosa
4   5            5.0           3.6            1.4           0.2  Iris-
setosa
```

```
headers = ["SepalLengthCm", "SepalWidthCm", "PetalLengthCm",
"PetalWidthCm", "Species", "ExtraColumn"]
df.columns = headers


print(df.head())
print(df.tail())
print(df.info())
```

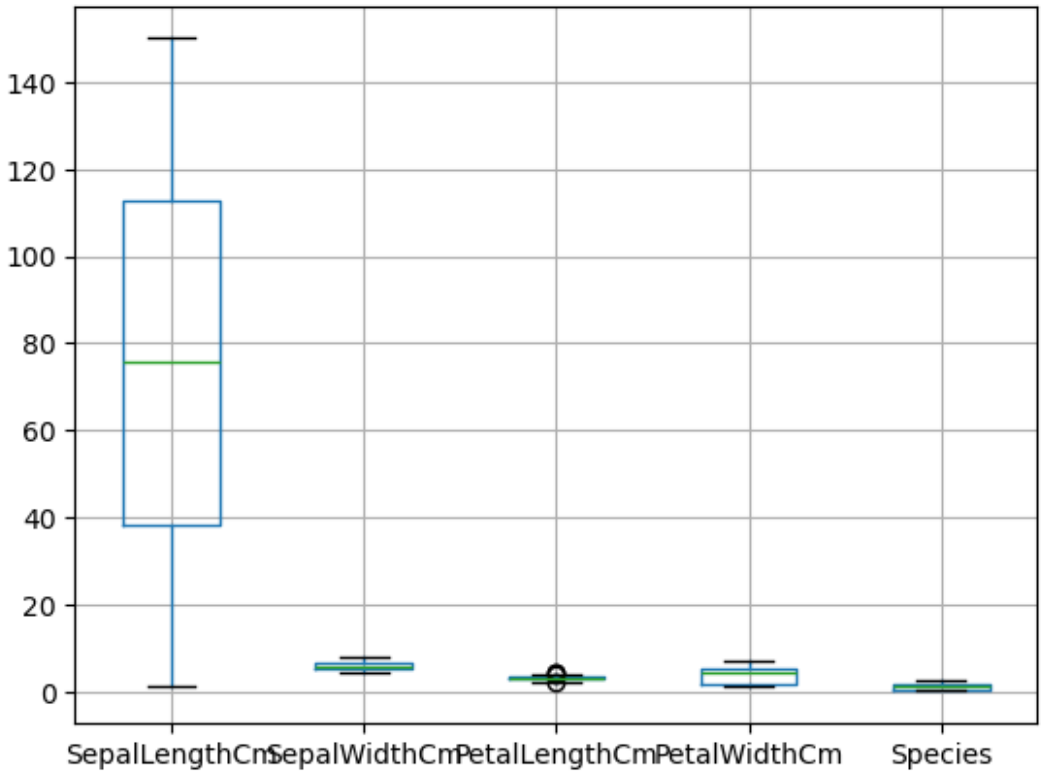
```
print(df.dtypes)
print(df.size)
```

```
   SepalLengthCm  SepalWidthCm  PetalLengthCm  PetalWidthCm
Species  \
0              1           5.1            3.5           1.4      0.2

1              2           4.9            3.0           1.4      0.2

2              3           4.7            3.2           1.3      0.2

3              4           4.6            3.1           1.5      0.2

4              5           5.0            3.6           1.4      0.2


   ExtraColumn
0  Iris-setosa
1  Iris-setosa
2  Iris-setosa
3  Iris-setosa
4  Iris-setosa
     SepalLengthCm  SepalWidthCm  PetalLengthCm  PetalWidthCm  Species
\
145            146           6.7            3.0           5.2      2.3

146            147           6.3            2.5           5.0      1.9

147            148           6.5            3.0           5.2      2.0

148            149           6.2            3.4           5.4      2.3

149            150           5.9            3.0           5.1      1.8


        ExtraColumn
145  Iris-virginica
146  Iris-virginica
147  Iris-virginica
148  Iris-virginica
149  Iris-virginica
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 150 entries, 0 to 149
Data columns (total 6 columns):
 #   Column         Non-Null Count  Dtype
---  ------         --------------  -----
 0   SepalLengthCm  150 non-null    int64
 1   SepalWidthCm   150 non-null    float64
 2   PetalLengthCm  150 non-null    float64
 3   PetalWidthCm   150 non-null    float64
 4   Species        150 non-null    float64
```

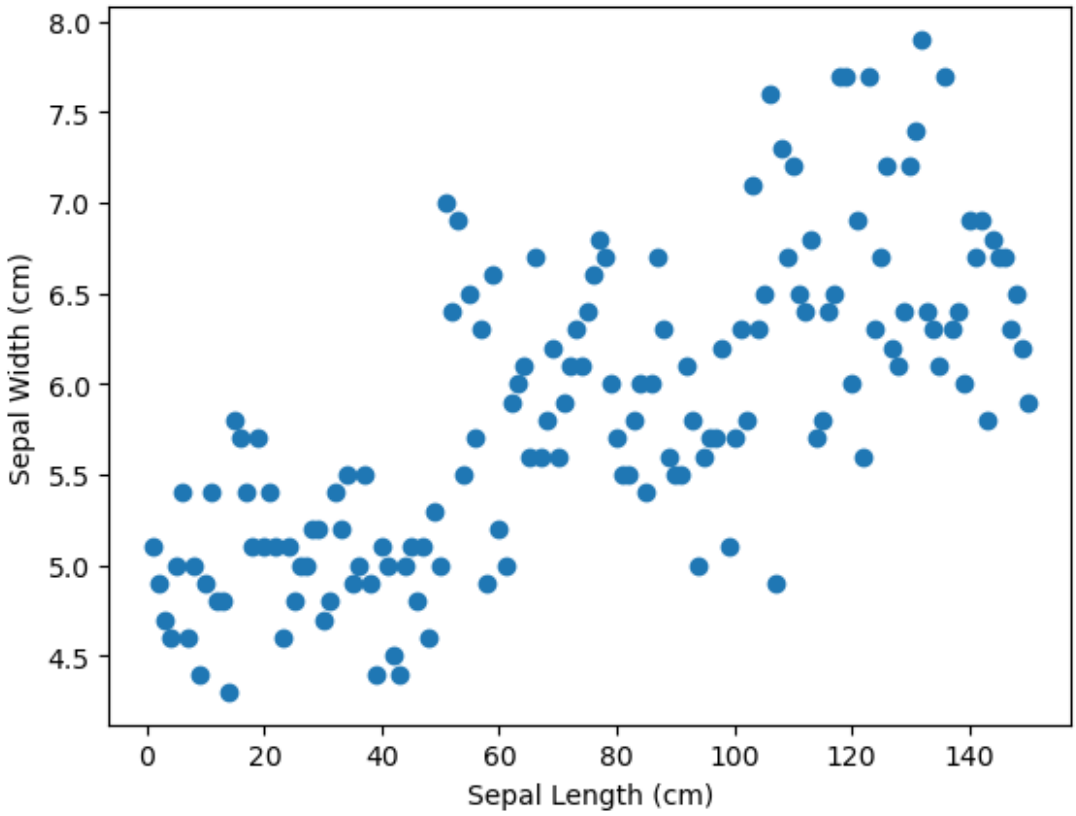
```
 5   ExtraColumn    150 non-null    object
dtypes: float64(4), int64(1), object(1)
memory usage: 7.2+ KB
None
SepalLengthCm      int64
SepalWidthCm     float64
PetalLengthCm    float64
PetalWidthCm     float64
Species          float64
ExtraColumn       object
dtype: object
900

df.hist()
plt.show()
```



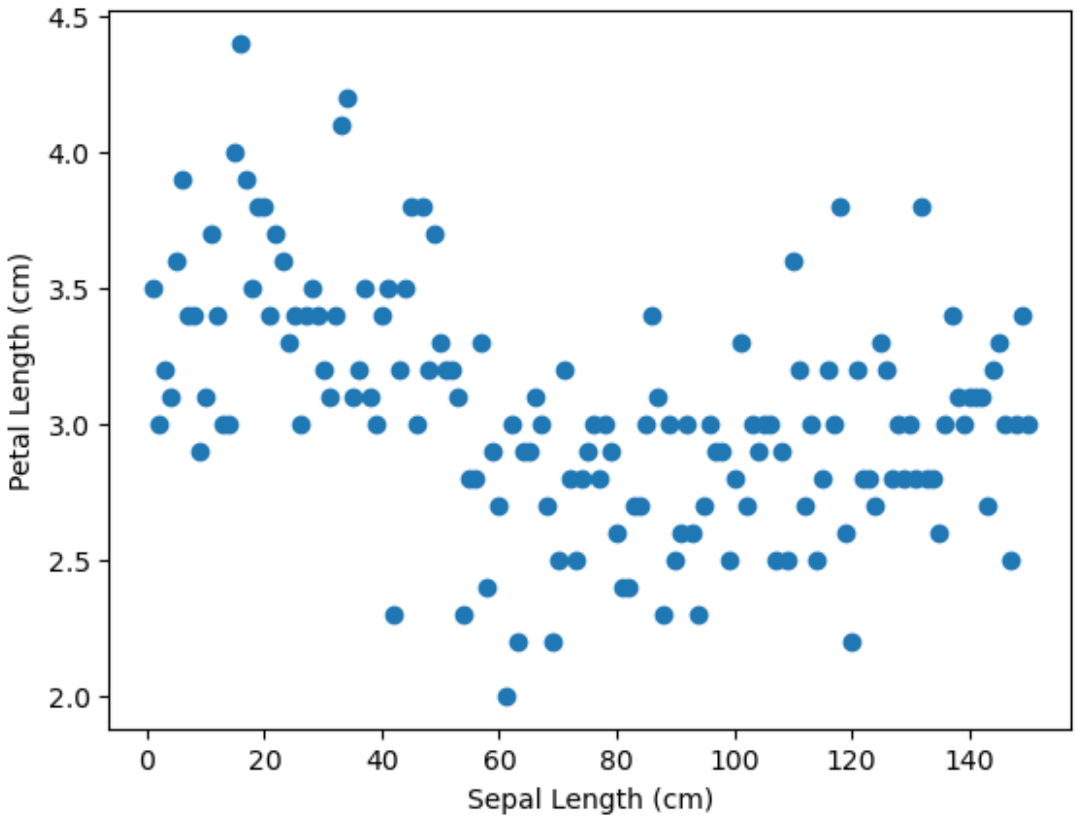

```
df.boxplot()
plt.show()
```



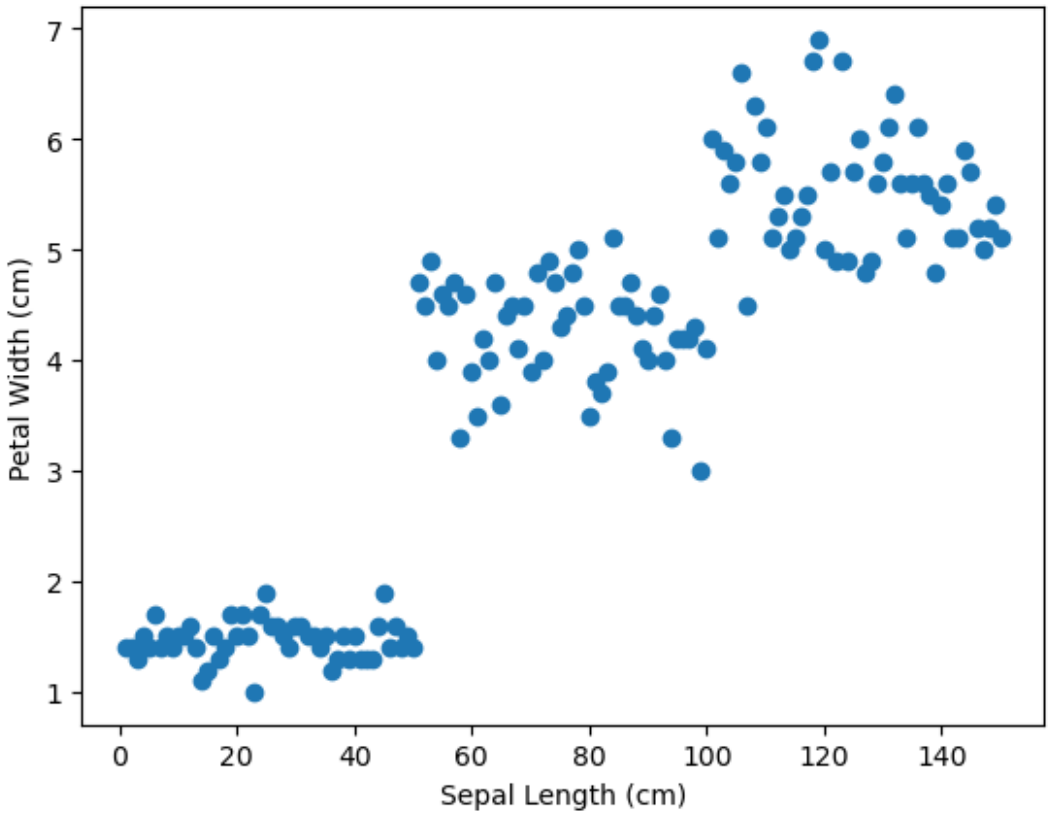

```
plt.scatter(df['SepalLengthCm'], df['SepalWidthCm'])
plt.xlabel('Sepal Length (cm)')
plt.ylabel('Sepal Width (cm)')
plt.show()
```



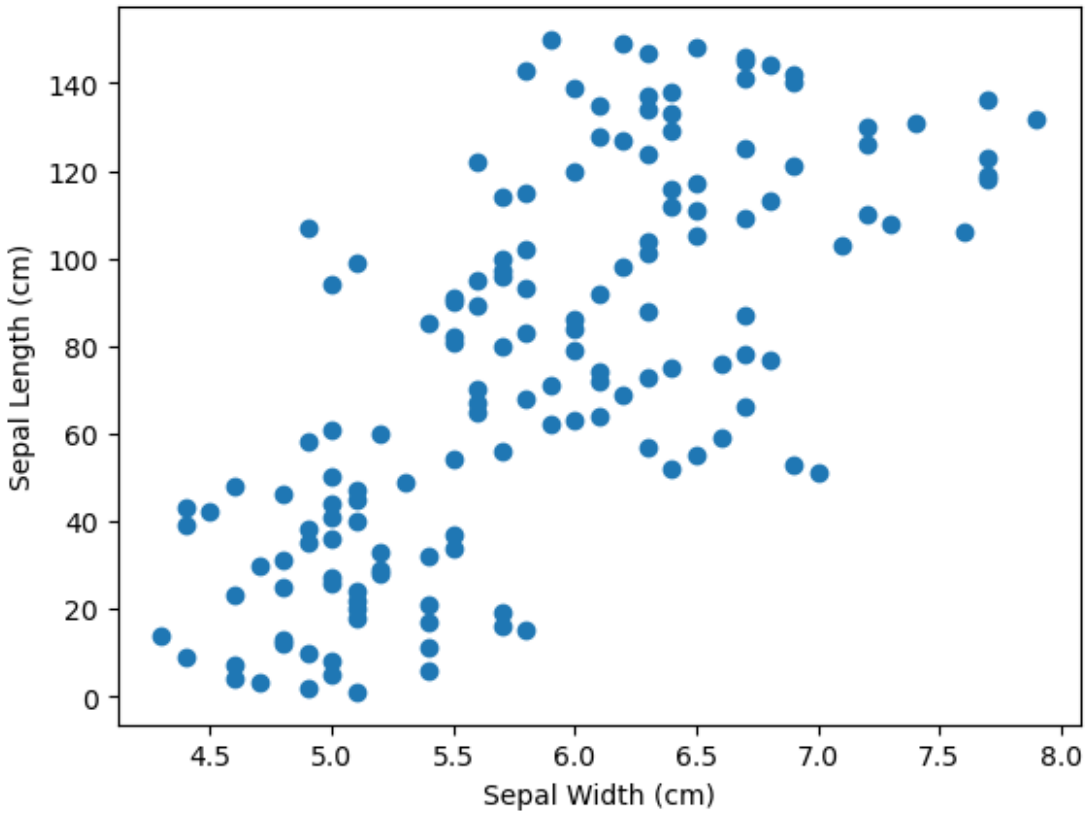

```
plt.scatter(df['SepalLengthCm'], df['PetalLengthCm'])
plt.xlabel('Sepal Length (cm)')
plt.ylabel('Petal Length (cm)')
plt.show()
```



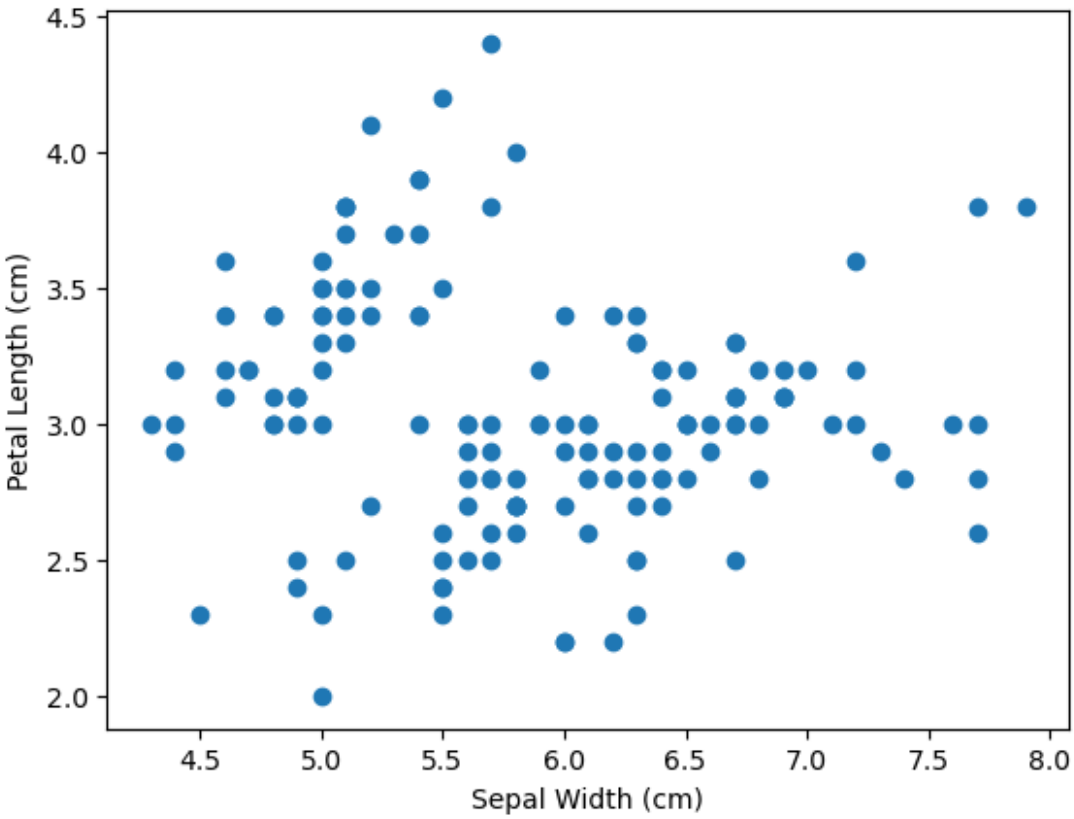

```
plt.scatter(df['SepalLengthCm'], df['PetalWidthCm'])
plt.xlabel('Sepal Length (cm)')
plt.ylabel('Petal Width (cm)')
plt.show()
```



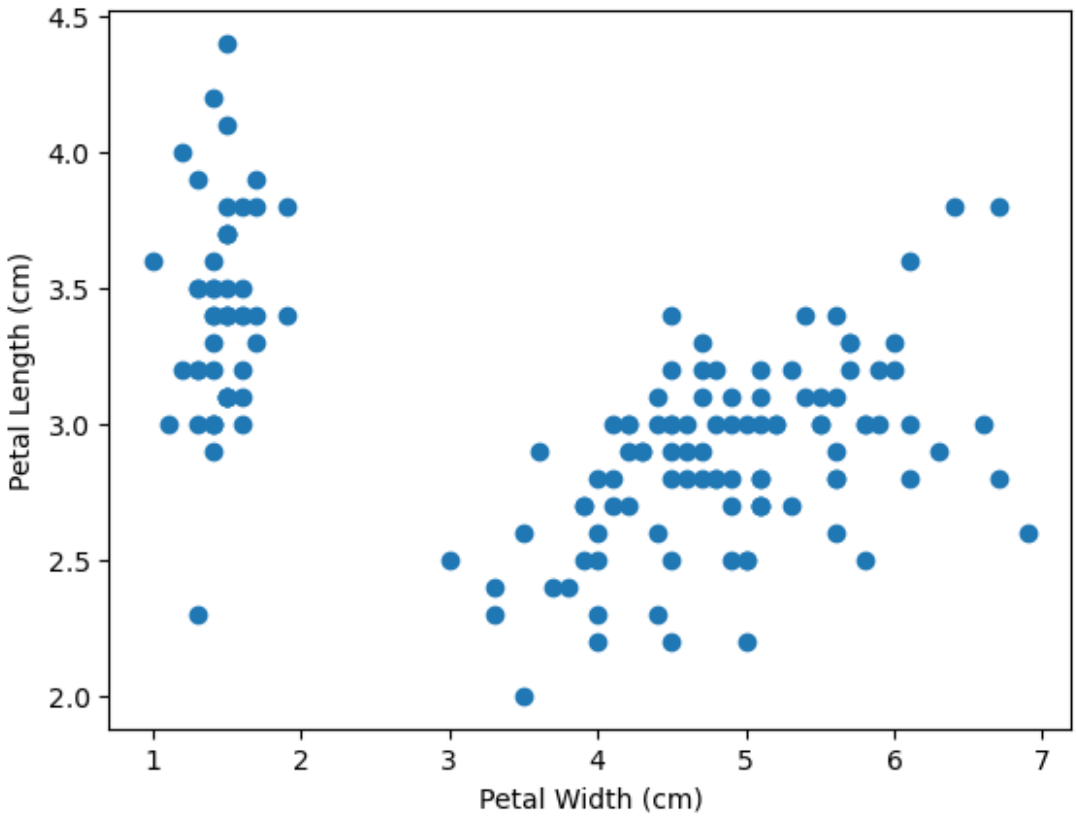

```
plt.scatter(df['SepalWidthCm'], df['SepalLengthCm'])
plt.xlabel('Sepal Width (cm)')
plt.ylabel('Sepal Length (cm)')
plt.show()
```



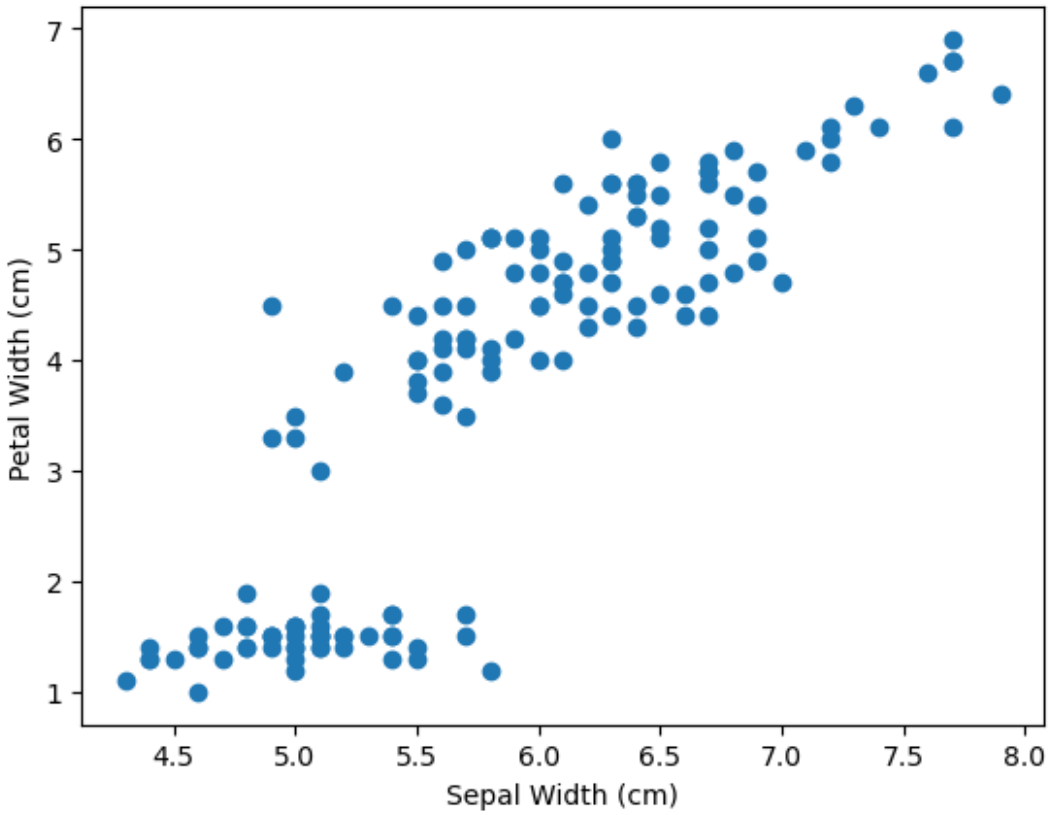

```
plt.scatter(df['SepalWidthCm'], df['PetalLengthCm'])
plt.xlabel('Sepal Width (cm)')
plt.ylabel('Petal Length (cm)')
plt.show()
```



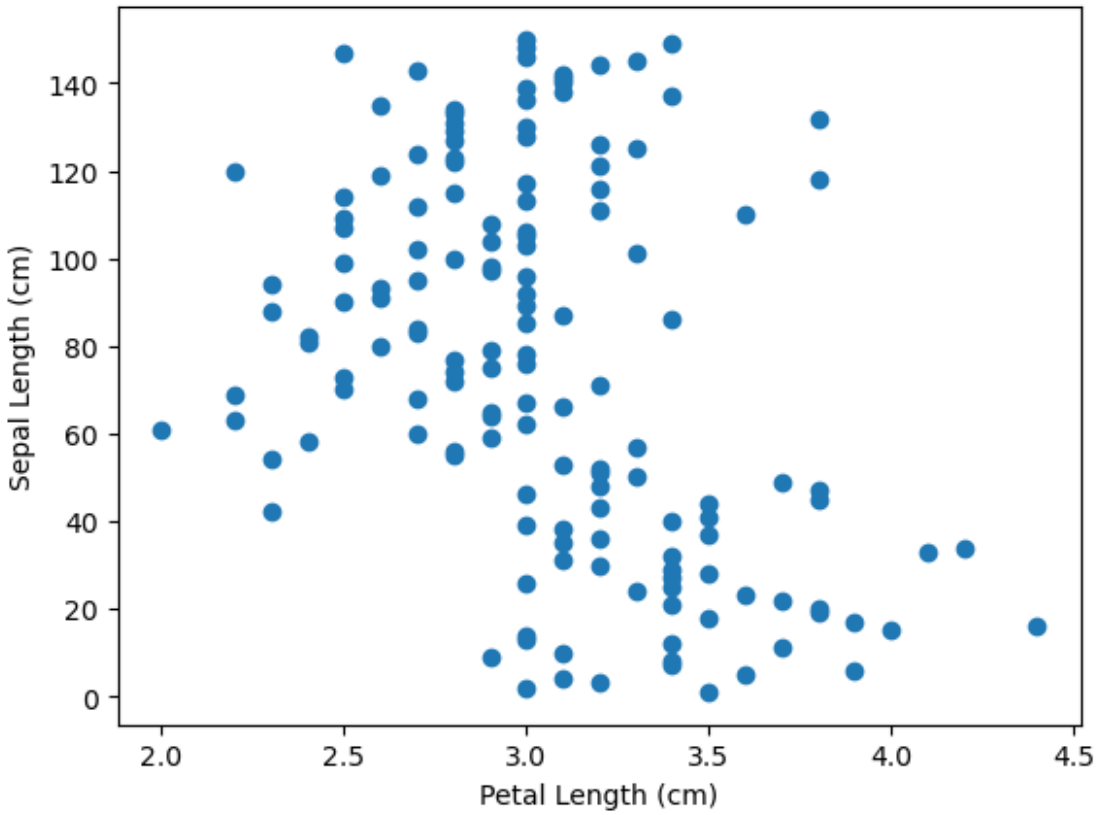

```
plt.scatter(df['PetalWidthCm'], df['PetalLengthCm'])
plt.xlabel('Petal Width (cm)')
plt.ylabel('Petal Length (cm)')
plt.show()
```



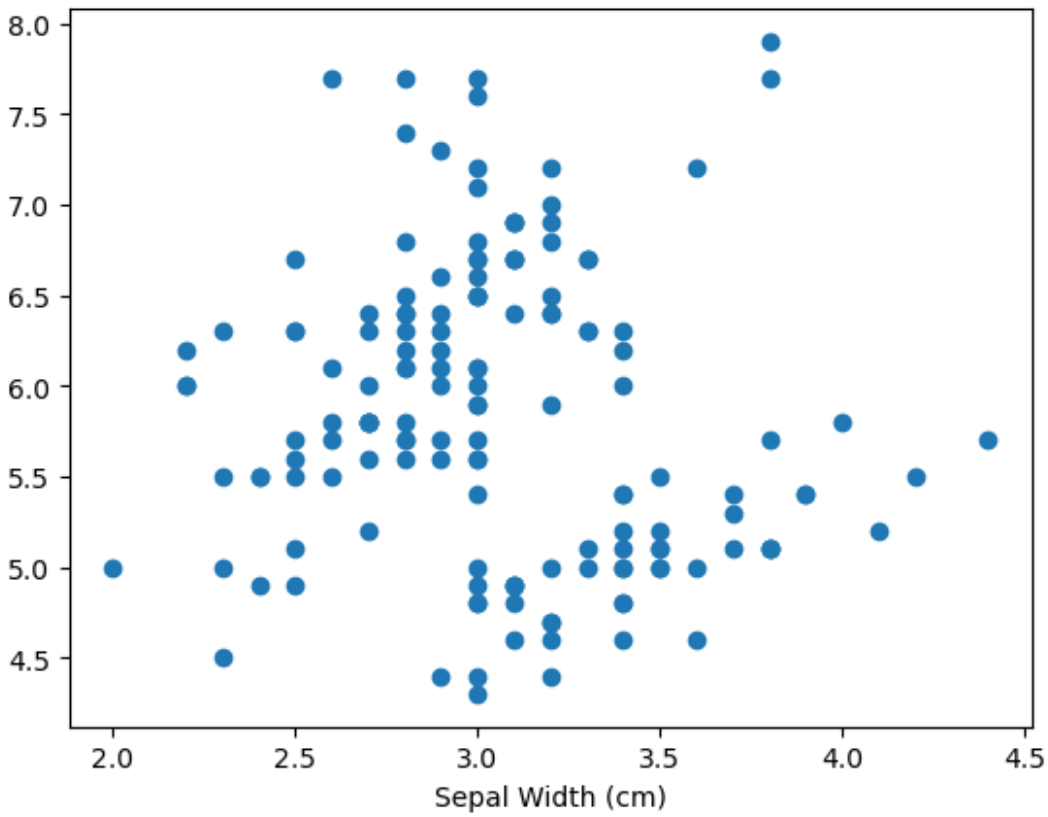

```
plt.scatter(df['SepalWidthCm'], df['PetalWidthCm'])
plt.xlabel('Sepal Width (cm)')
plt.ylabel('Petal Width (cm)')
plt.show()
```



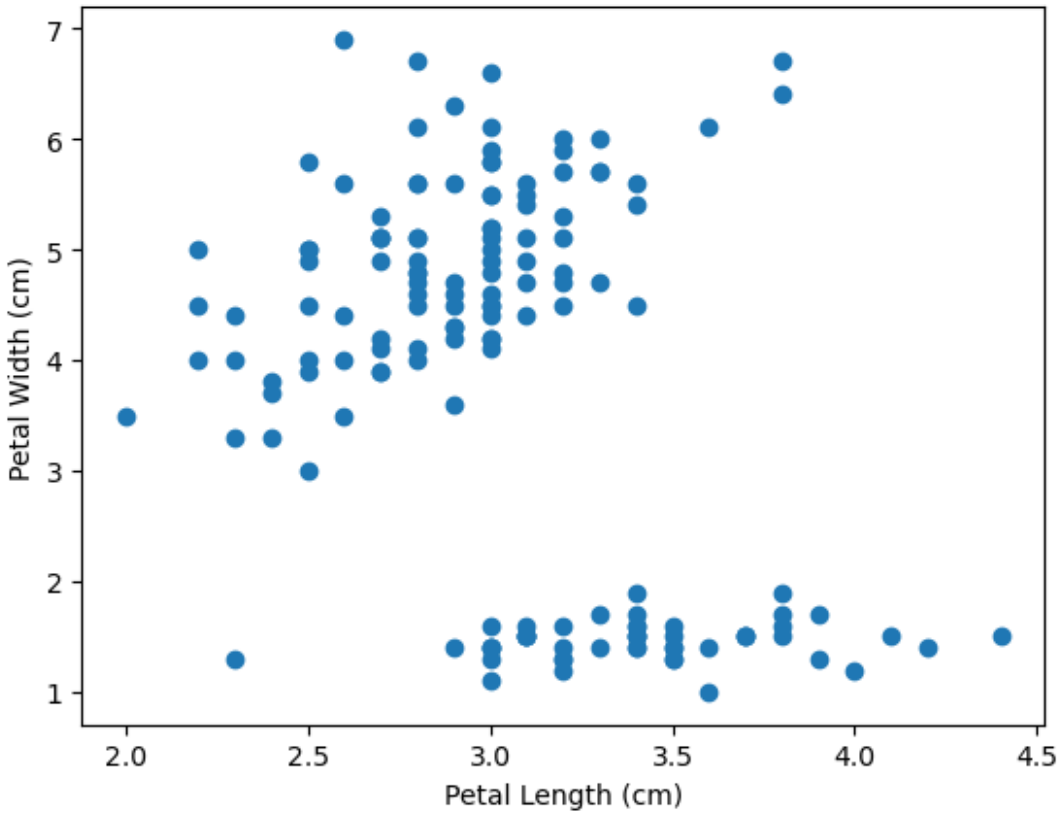

```
plt.scatter(df['PetalLengthCm'], df['SepalLengthCm'])
plt.xlabel('Petal Length (cm)')
plt.ylabel('Sepal Length (cm)')
plt.show()
```



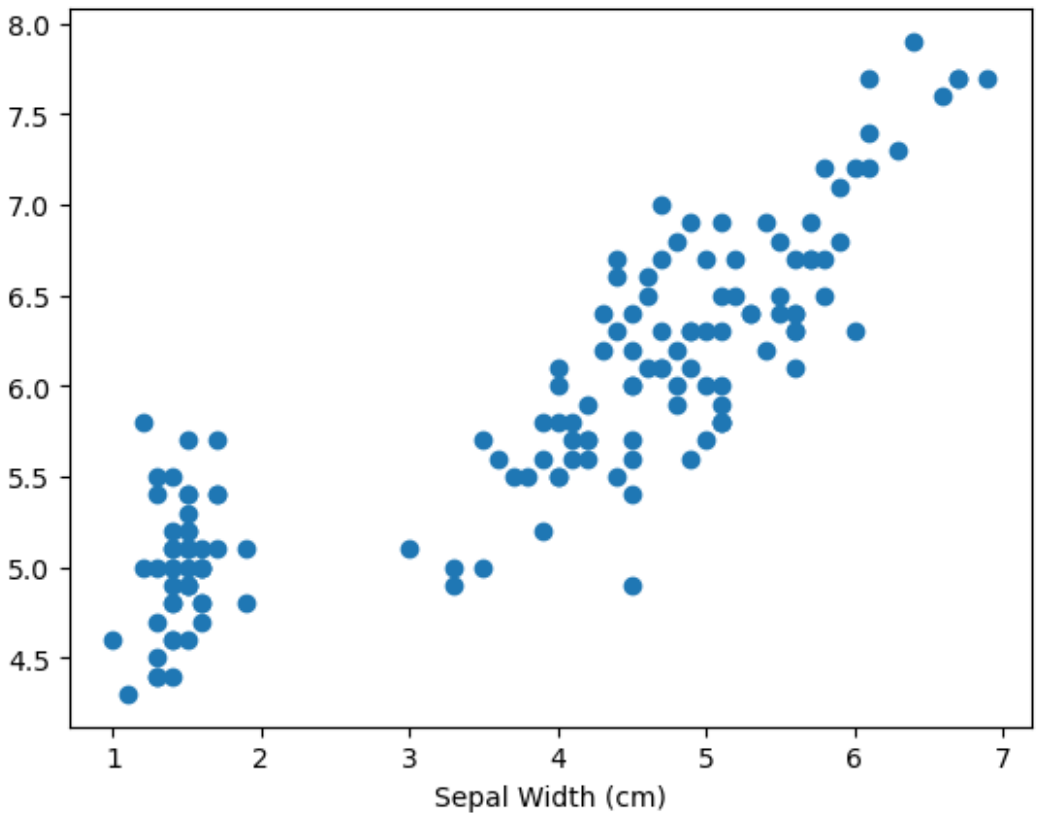

```
plt.scatter(df['PetalLengthCm'],df['SepalWidthCm'])
plt.xlabel('Petal Length (cm)')
plt.xlabel('Sepal Width (cm)')
plt.show()
```




```
plt.scatter(df['PetalLengthCm'],df['PetalWidthCm'])
plt.xlabel('Petal Length (cm)')
plt.ylabel('Petal Width (cm)')
plt.show()
```




```
plt.scatter(df['PetalWidthCm'], df['SepalWidthCm'])
plt.xlabel('Petal Width (cm)')
plt.xlabel('Sepal Width (cm)')
plt.show()
```


8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
1
2
3
4
5
6
7
Sepal Width (cm)