Machine Learning Project on Iris Dataset

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In [1]:

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

In [2]:

```
data_set = pd.read_csv("C:/Users/md naiyer azam/Desktop/Iris.csv")
print(data_set)
```

```
      Id  SepalLengthCm  SepalWidthCm  PetalLengthCm  PetalWidthCm  \
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
..   ...            ...           ...            ...           ...
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

            Species
0       Iris-setosa
1       Iris-setosa
2       Iris-setosa
3       Iris-setosa
4       Iris-setosa
..              ...
145  Iris-virginica
146  Iris-virginica
147  Iris-virginica
148  Iris-virginica
149  Iris-virginica

[150 rows x 6 columns]
```

Sepal Length

In [3]:

```
sepal_length = pd.read_csv("C:/Users/md naiyer azam/Desktop/Iris.csv",usecols = ["Id", "Sep
print(sepal_length)
```

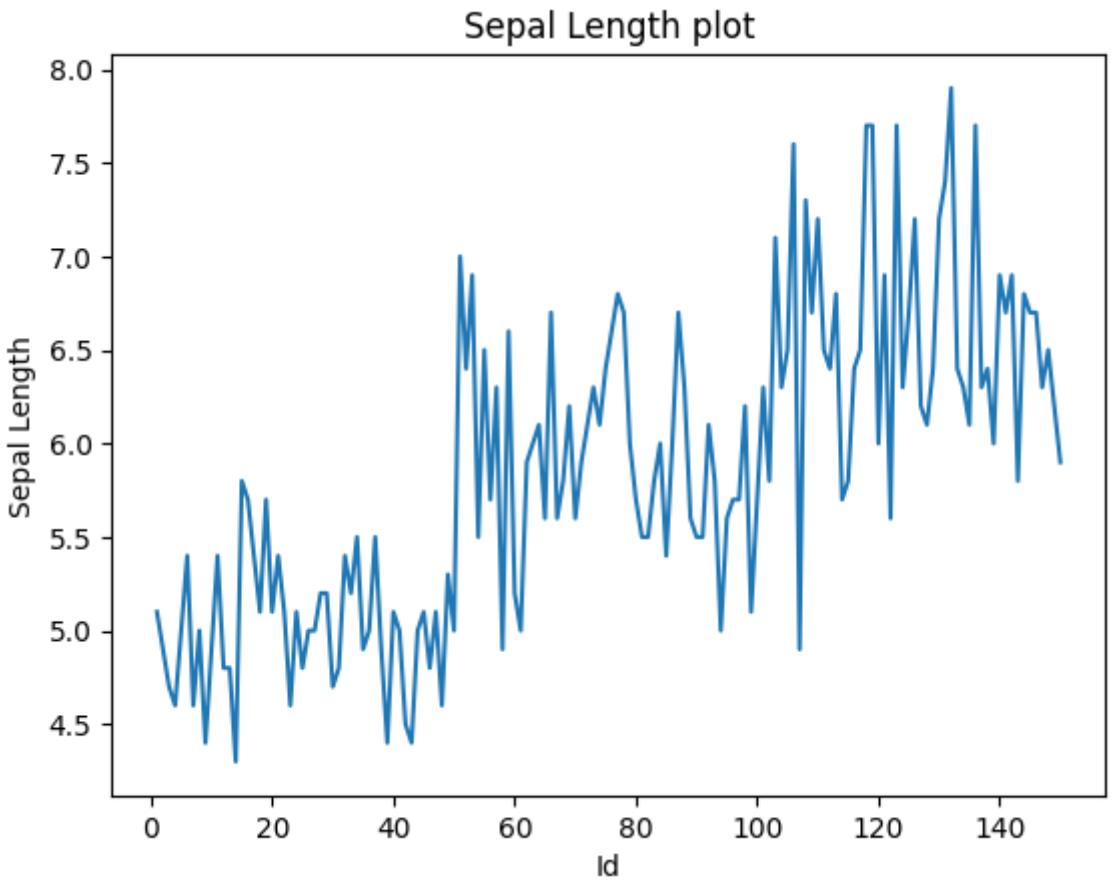
```
      Id  SepalLengthCm
0      1            5.1
1      2            4.9
2      3            4.7
3      4            4.6
4      5            5.0
..   ...            ...
145  146            6.7
146  147            6.3
147  148            6.5
148  149            6.2
149  150            5.9

[150 rows x 2 columns]
```

In [4]:

```
plt.plot(data_set.Id,data_set.SepalLengthCm)
plt.xlabel("Id")
plt.ylabel("Sepal Length")
plt.title("Sepal Length plot")
```

Out[4]:

```
Text(0.5, 1.0, 'Sepal Length plot')
```

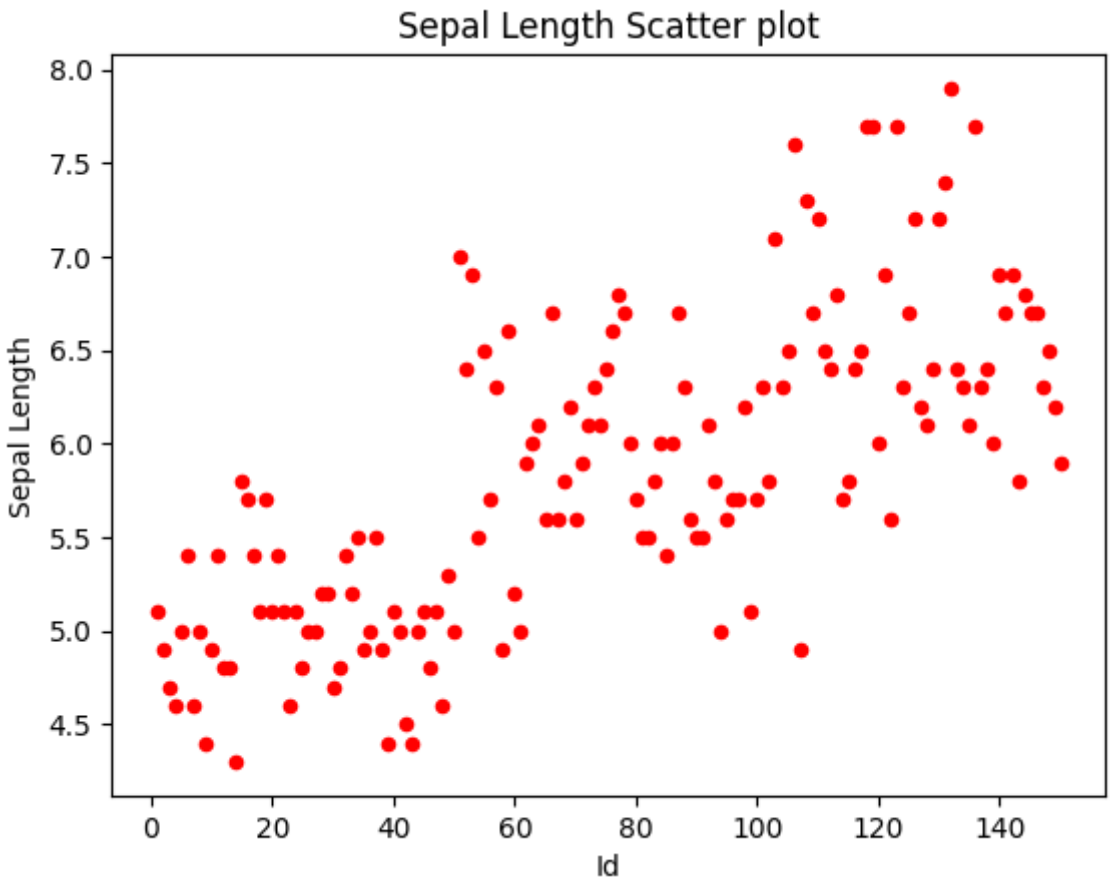


In [5]:

```
data_set.plot(kind='scatter', x = 'Id', y = 'SepalLengthCm', color ='red')
plt.xlabel("Id")
plt.ylabel("Sepal Length")
plt.title("Sepal Length Scatter plot")
```

Out[5]:

```
Text(0.5, 1.0, 'Sepal Length Scatter plot')
```

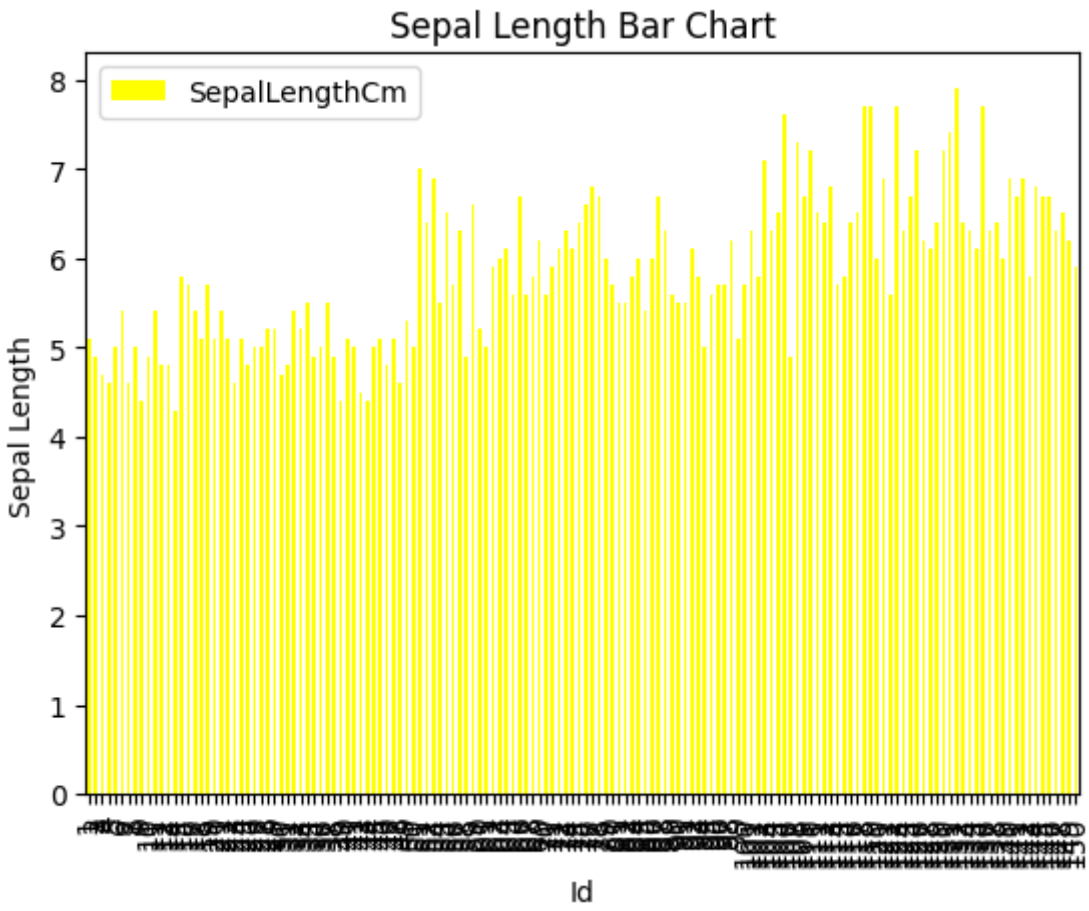


In [6]:

```
data_set.plot(kind='bar', x = 'Id', y = 'SepalLengthCm', color ='yellow')
plt.xlabel("Id")
plt.ylabel("Sepal Length")
plt.title("Sepal Length Bar Chart")
```

Out[6]:

```
Text(0.5, 1.0, 'Sepal Length Bar Chart')
```

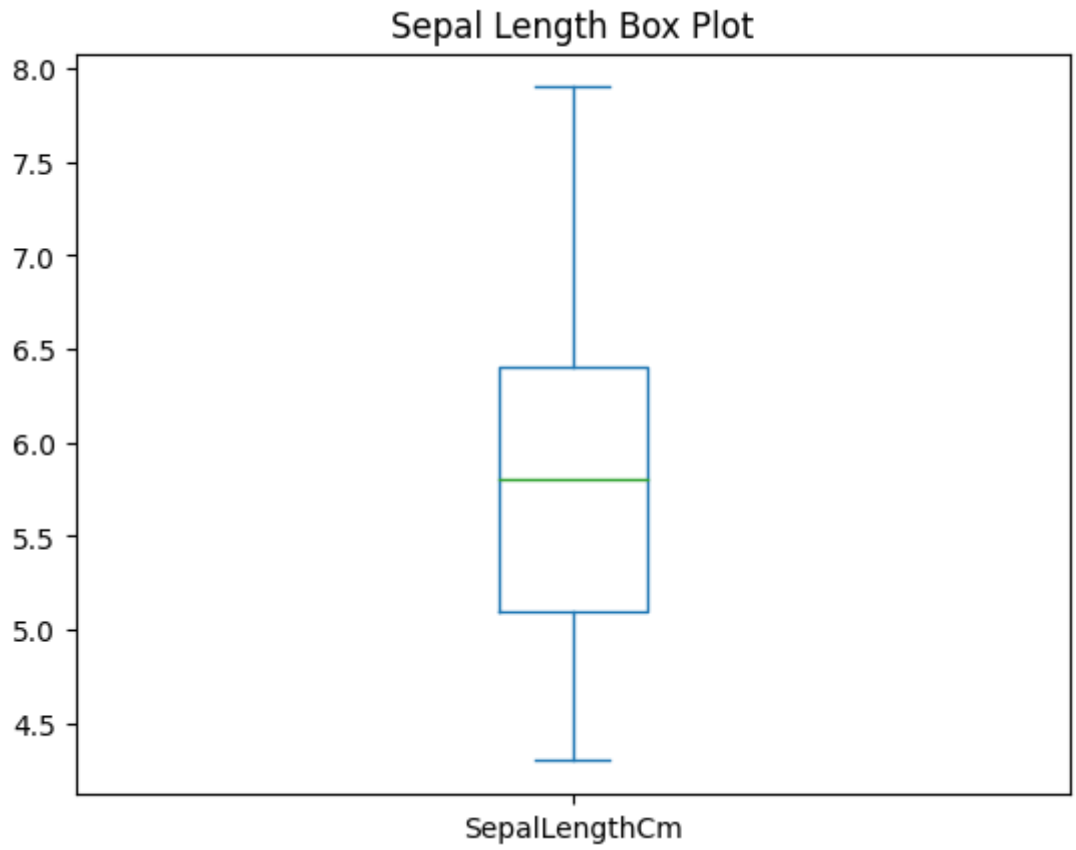


In [7]:

```
data_set.plot(kind='box', y = 'SepalLengthCm')
plt.title("Sepal Length Box Plot")
```

Out[7]:

```
Text(0.5, 1.0, 'Sepal Length Box Plot')
```

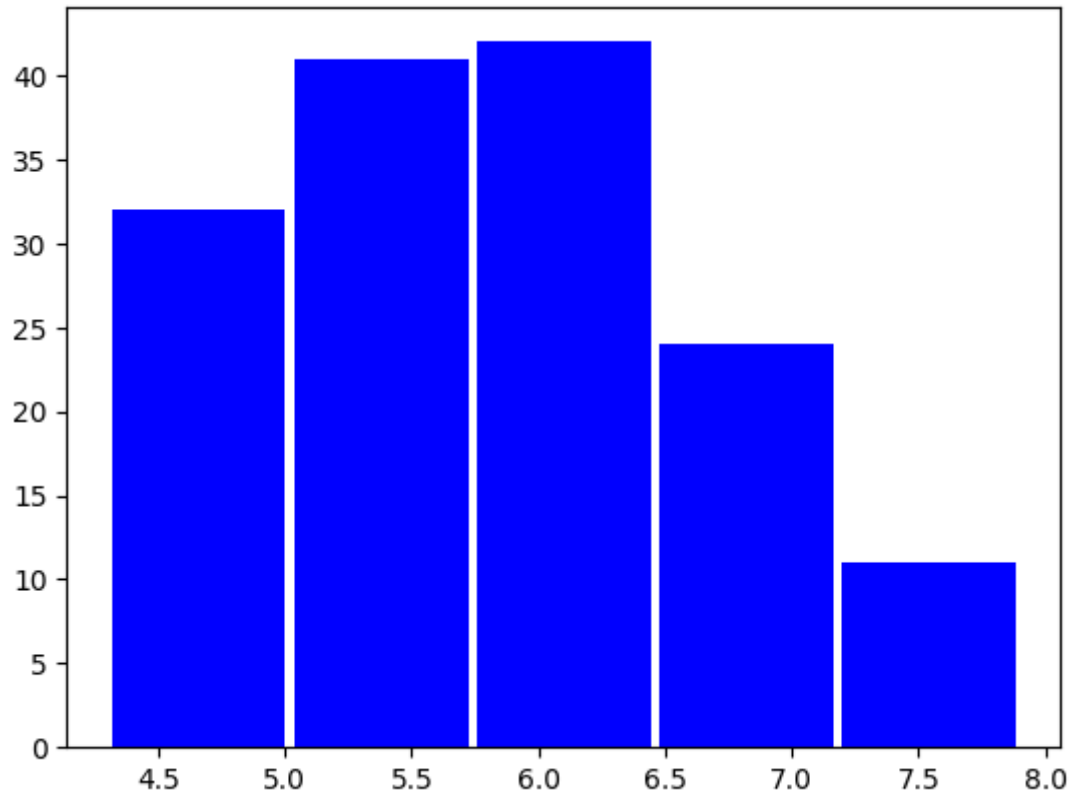


In [8]:

```
sepal_length_list = data_set['SepalLengthCm'].tolist()
plt.hist(sepal_length_list, bins =5,rwidth = 0.95, color = 'blue')
```

Out[8]:

```
(array([32., 41., 42., 24., 11.]),
 array([4.3 , 5.02, 5.74, 6.46, 7.18, 7.9 ]),
 <BarContainer object of 5 artists>)
```



Sepal width

In [9]:

```
sepal_width = pd.read_csv("C:/Users/md naiyer azam/Desktop/Iris.csv",usecols = ["Id", "Sepa
print(sepal_width)
```

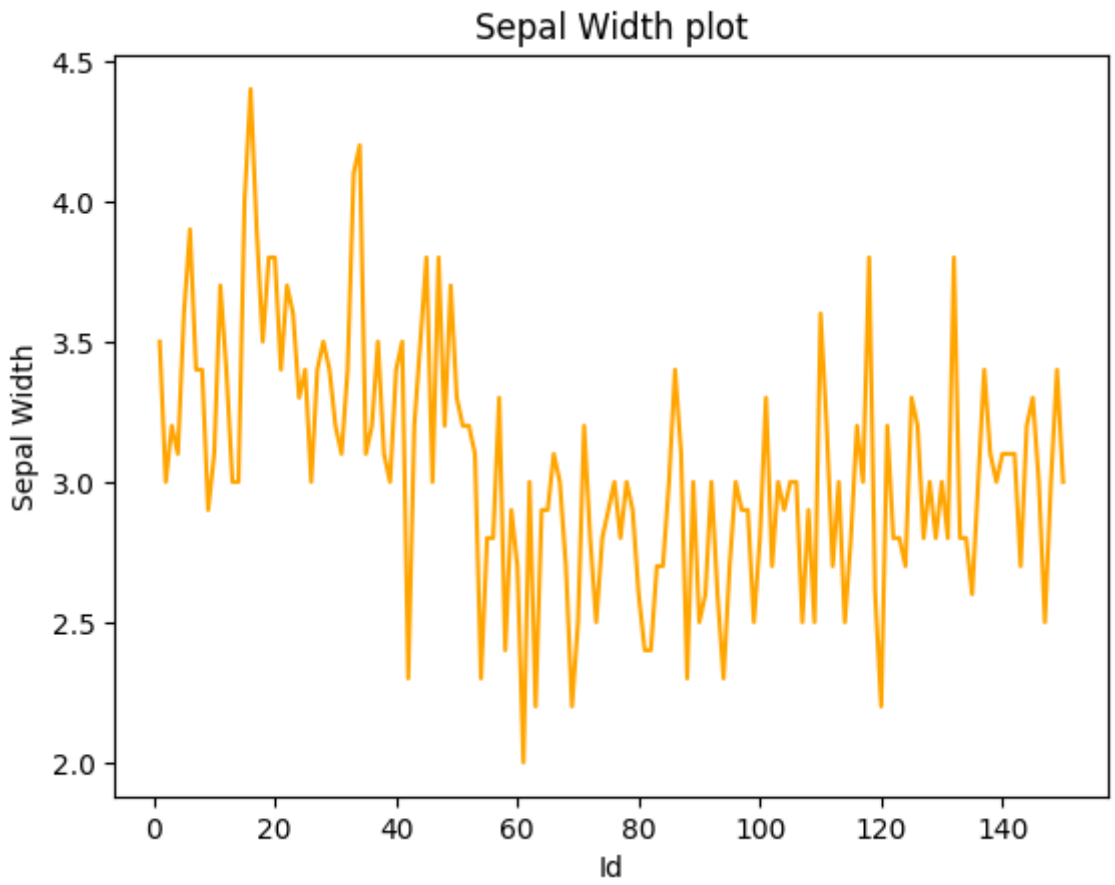
```
      Id  SepalWidthCm
0      1           3.5
1      2           3.0
2      3           3.2
3      4           3.1
4      5           3.6
..   ...           ...
145  146           3.0
146  147           2.5
147  148           3.0
148  149           3.4
149  150           3.0

[150 rows x 2 columns]
```

In [10]:

```
plt.plot(data_set.Id,data_set.SepalWidthCm,color='orange')
plt.xlabel("Id")
plt.ylabel("Sepal Width")
plt.title("Sepal Width plot")
```

Out[10]:

```
Text(0.5, 1.0, 'Sepal Width plot')
```

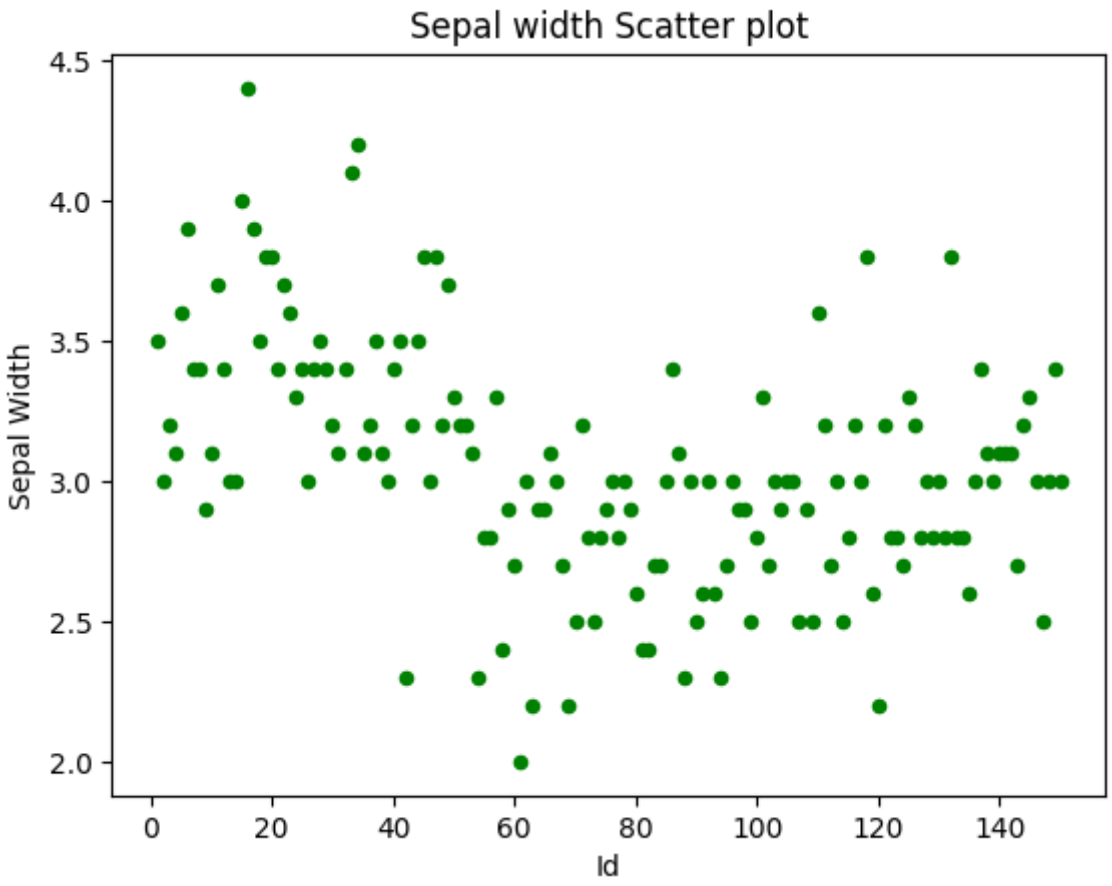


In [11]:

```
data_set.plot(kind='scatter', x = 'Id', y = 'SepalWidthCm', color ='green')
plt.xlabel("Id")
plt.ylabel("Sepal Width")
plt.title("Sepal width Scatter plot")
```

Out[11]:

```
Text(0.5, 1.0, 'Sepal width Scatter plot')
```

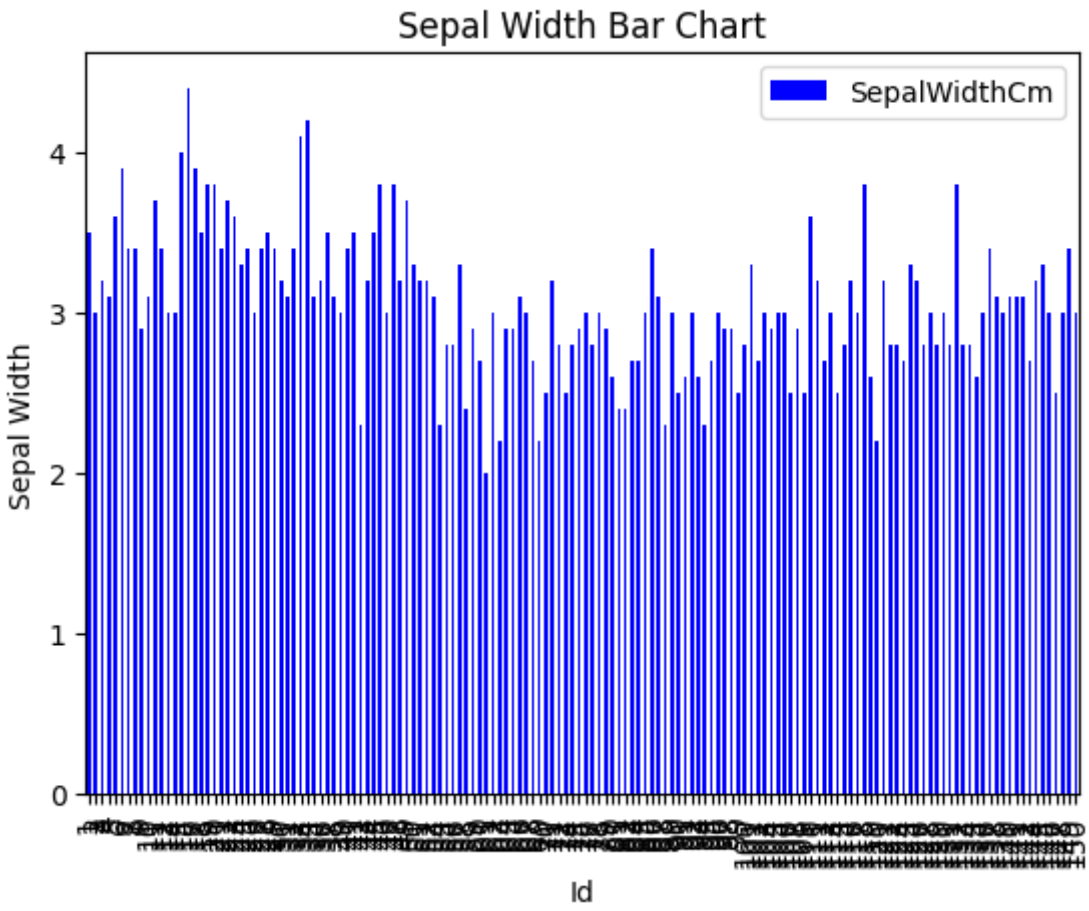


In [12]:

```
data_set.plot(kind='bar', x = 'Id', y = 'SepalWidthCm', color ='blue')
plt.xlabel("Id")
plt.ylabel("Sepal Width")
plt.title("Sepal Width Bar Chart")
```

Out[12]:

```
Text(0.5, 1.0, 'Sepal Width Bar Chart')
```

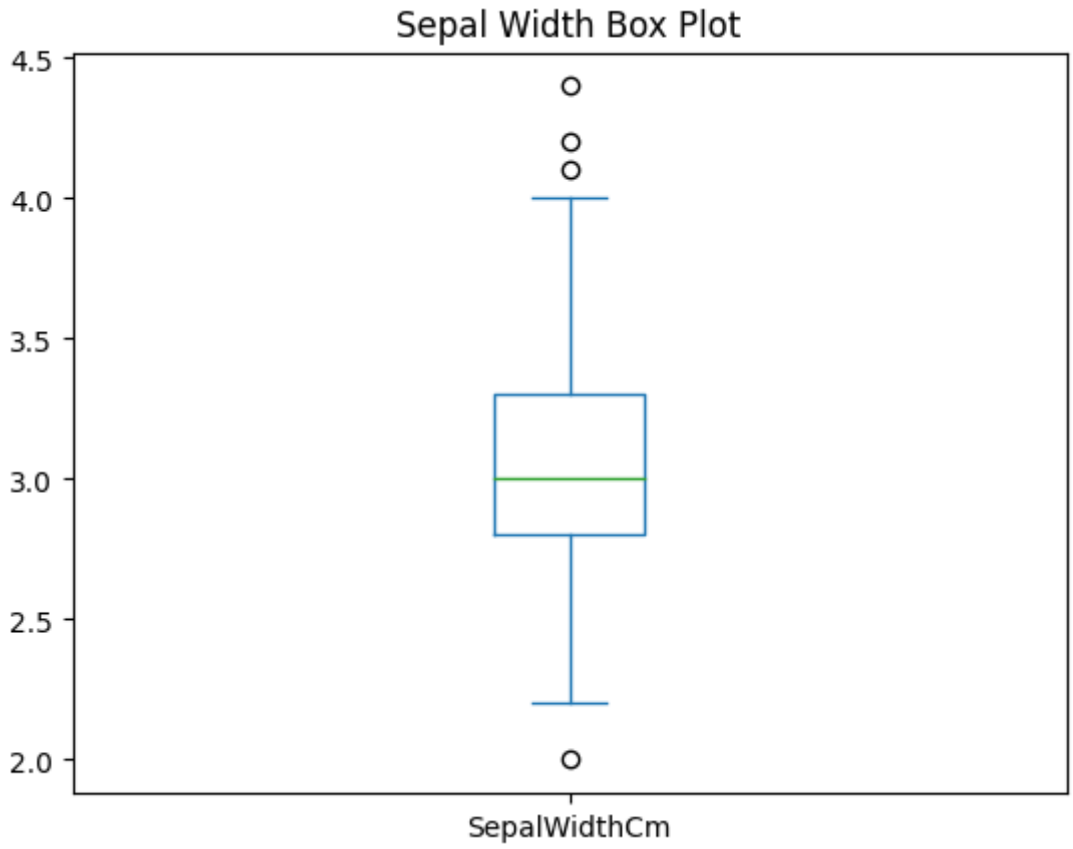


In [13]:

```
data_set.plot(kind='box', y = 'SepalWidthCm')
plt.title("Sepal Width Box Plot")
```

Out[13]:

```
Text(0.5, 1.0, 'Sepal Width Box Plot')
```

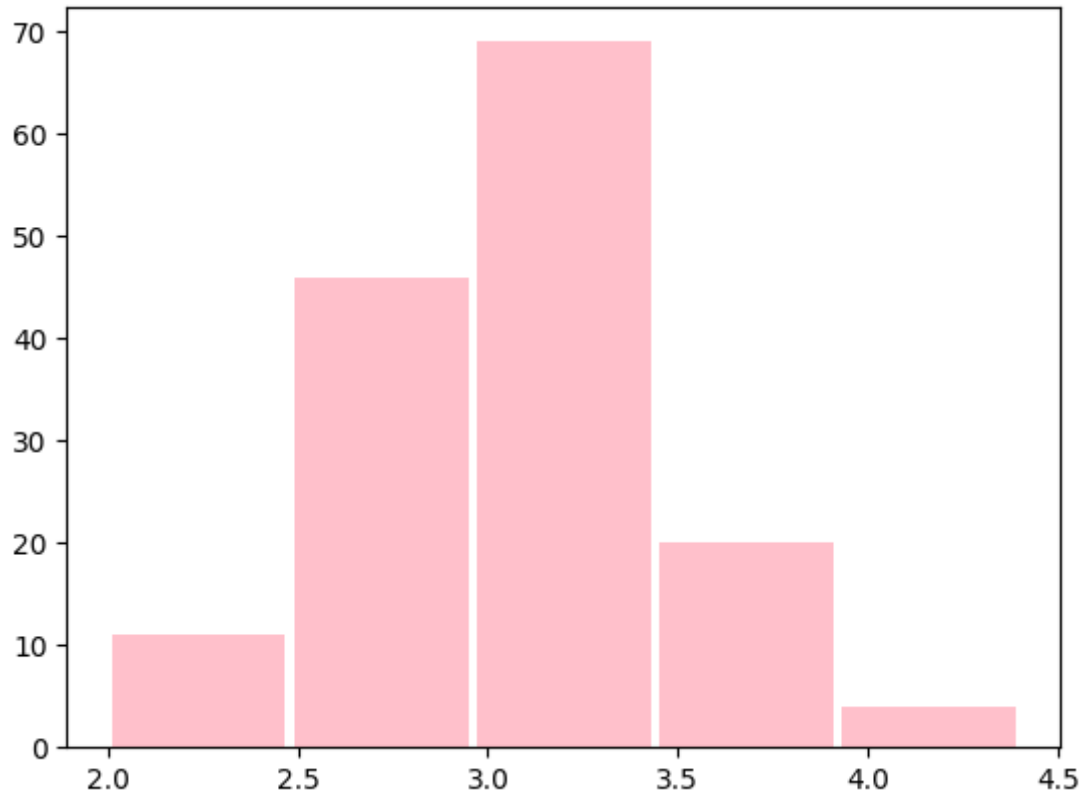


In [14]:

```
sepal_width_list = data_set['SepalWidthCm'].tolist()
plt.hist(sepal_width_list, bins =5,rwidth = 0.95, color = 'pink')
```

Out[14]:

```
(array([11., 46., 69., 20.,  4.]),
 array([2.  , 2.48, 2.96, 3.44, 3.92, 4.4 ]),
 <BarContainer object of 5 artists>)
```



Petal Length

In [15]:

```
petal_length = pd.read_csv("C:/Users/md naiyer azam/Desktop/Iris.csv",usecols = ["Id", "Pet
print(petal_length)
```

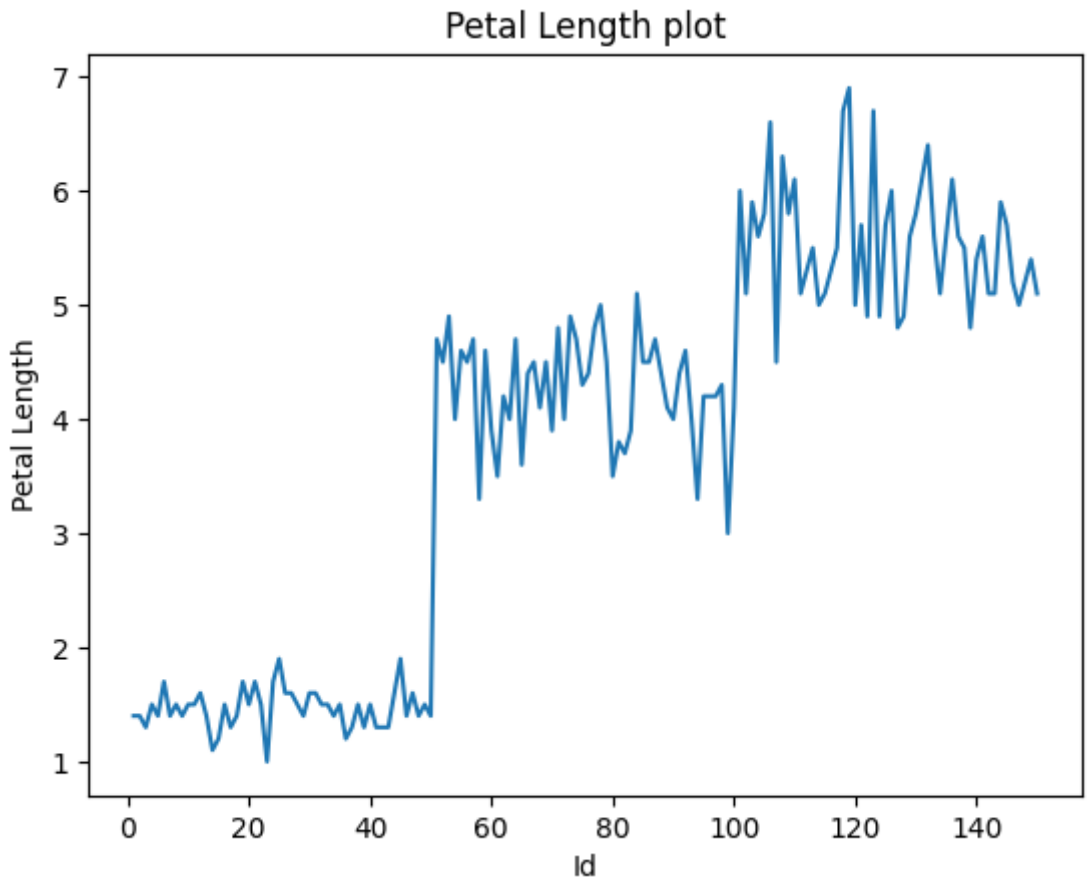
```
      Id  PetalLengthCm
0      1            1.4
1      2            1.4
2      3            1.3
3      4            1.5
4      5            1.4
..   ...            ...
145  146            5.2
146  147            5.0
147  148            5.2
148  149            5.4
149  150            5.1

[150 rows x 2 columns]
```

In [16]:

```
plt.plot(data_set.Id,data_set.PetalLengthCm)
plt.xlabel("Id")
plt.ylabel("Petal Length")
plt.title("Petal Length plot")
```

Out[16]:

```
Text(0.5, 1.0, 'Petal Length plot')
```

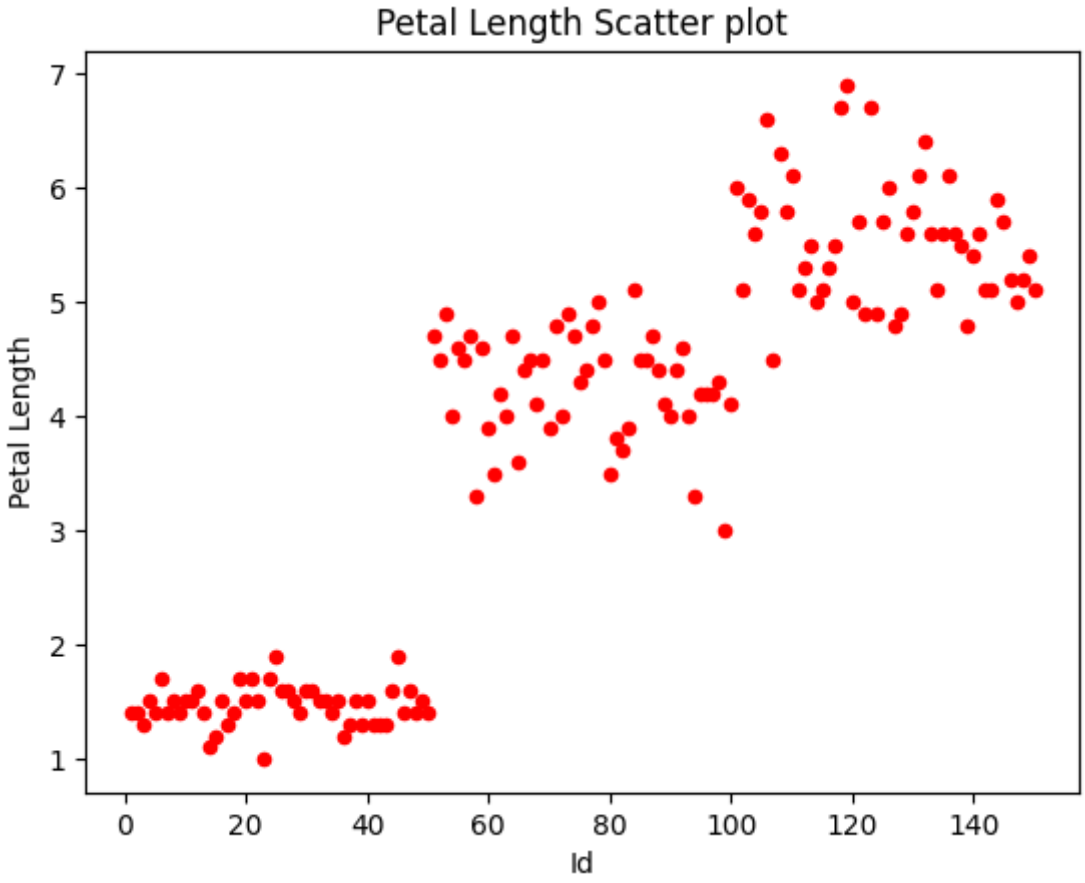


In [17]:

```
data_set.plot(kind='scatter', x = 'Id', y = 'PetalLengthCm', color ='red')
plt.xlabel("Id")
plt.ylabel("Petal Length")
plt.title("Petal Length Scatter plot")
```

Out[17]:

```
Text(0.5, 1.0, 'Petal Length Scatter plot')
```

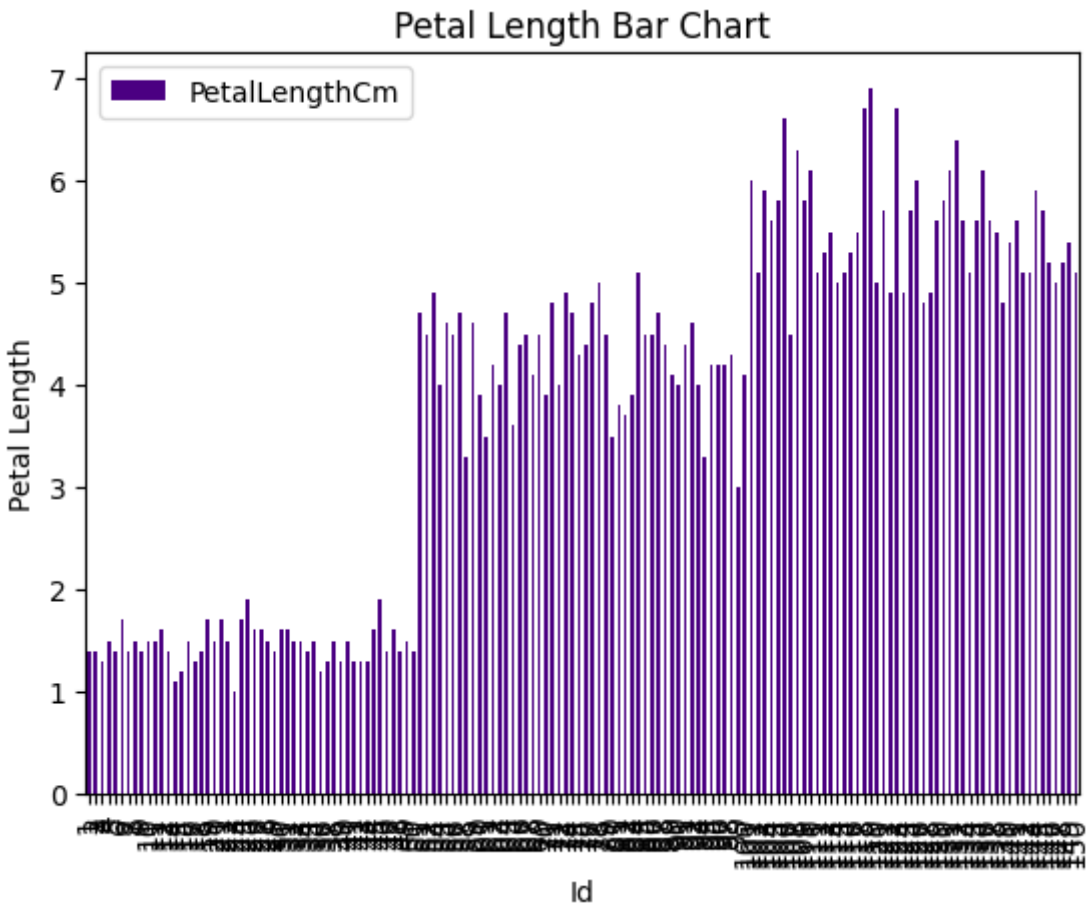


In [18]:

```
data_set.plot(kind='bar', x = 'Id', y = 'PetalLengthCm', color ='indigo')
plt.xlabel("Id")
plt.ylabel("Petal Length")
plt.title("Petal Length Bar Chart")
```

Out[18]:

```
Text(0.5, 1.0, 'Petal Length Bar Chart')
```

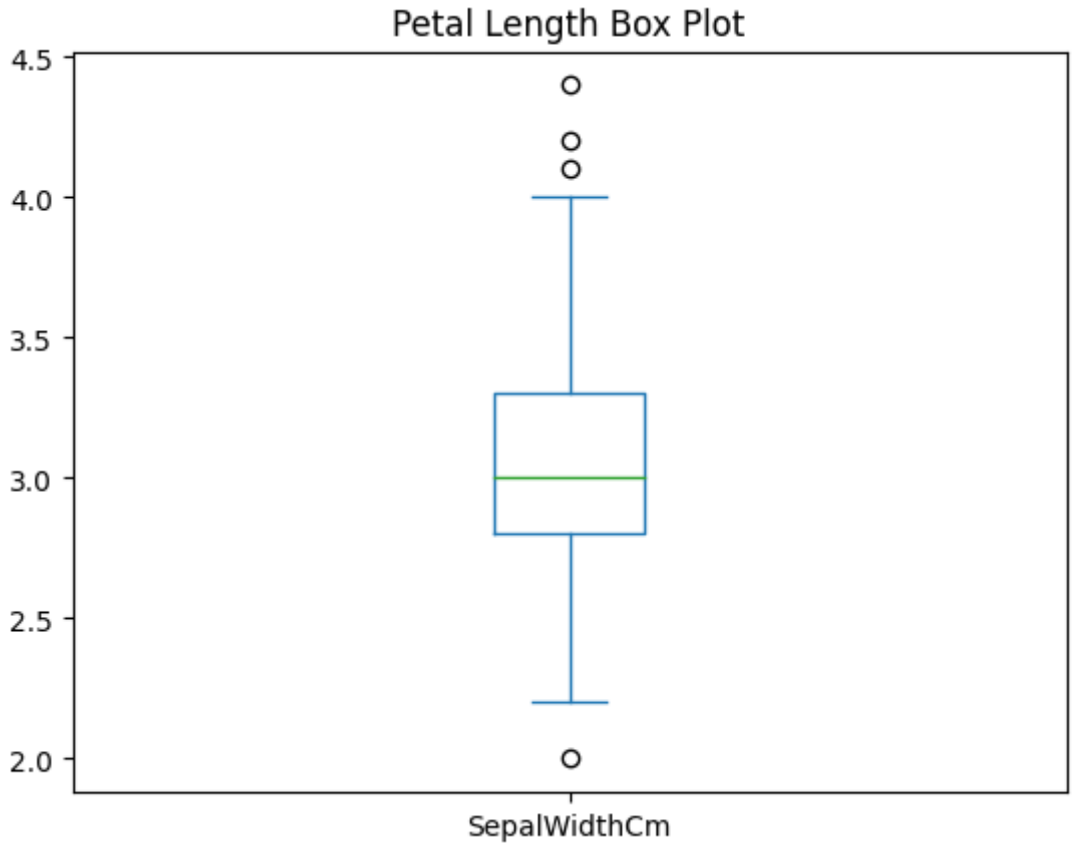


In [19]:

```
data_set.plot(kind='box', y = 'SepalWidthCm')
plt.title("Petal Length Box Plot")
```

Out[19]:

```
Text(0.5, 1.0, 'Petal Length Box Plot')
```

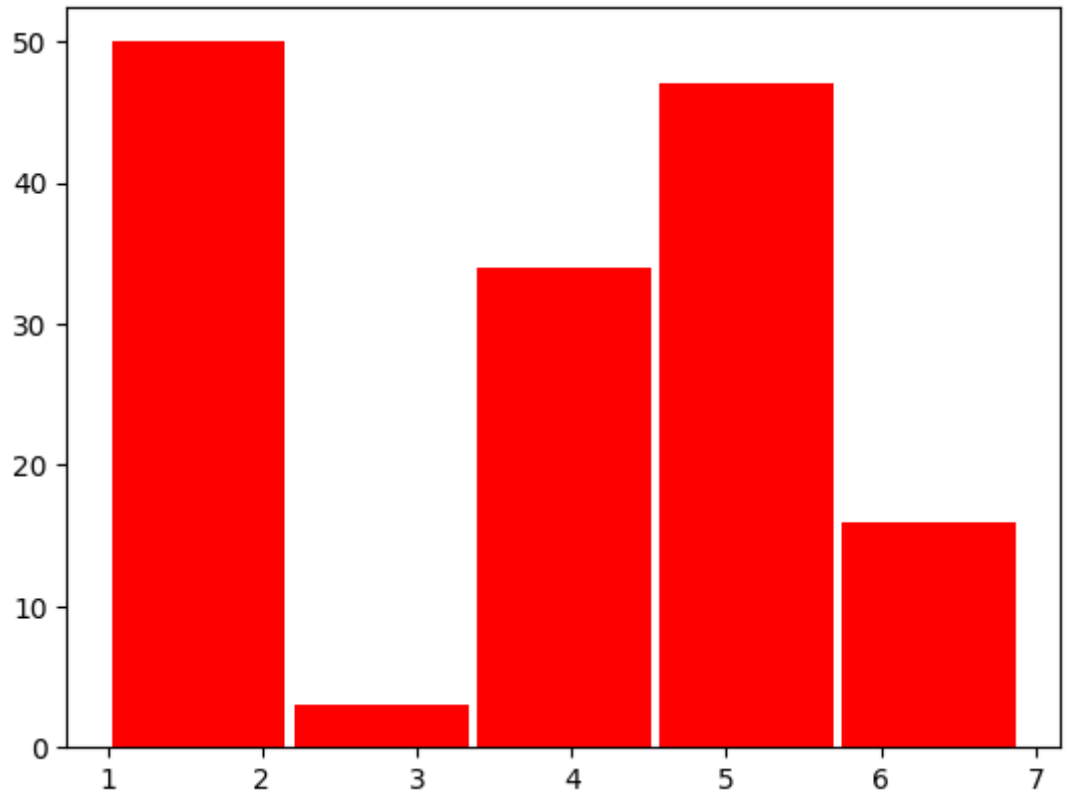


In [20]:

```
Petal_length_list = data_set['PetalLengthCm'].tolist()
plt.hist(Petal_length_list, bins =5,rwidth = 0.95, color = 'red')
```

Out[20]:

```
(array([50.,  3., 34., 47., 16.]),
 array([1.  , 2.18, 3.36, 4.54, 5.72, 6.9 ]),
 <BarContainer object of 5 artists>)
```



Petal Width

In [21]:

```
petal_width = pd.read_csv("C:/Users/md naiyer azam/Desktop/Iris.csv",usecols = ["Id", "Peta
print(petal_width)
```

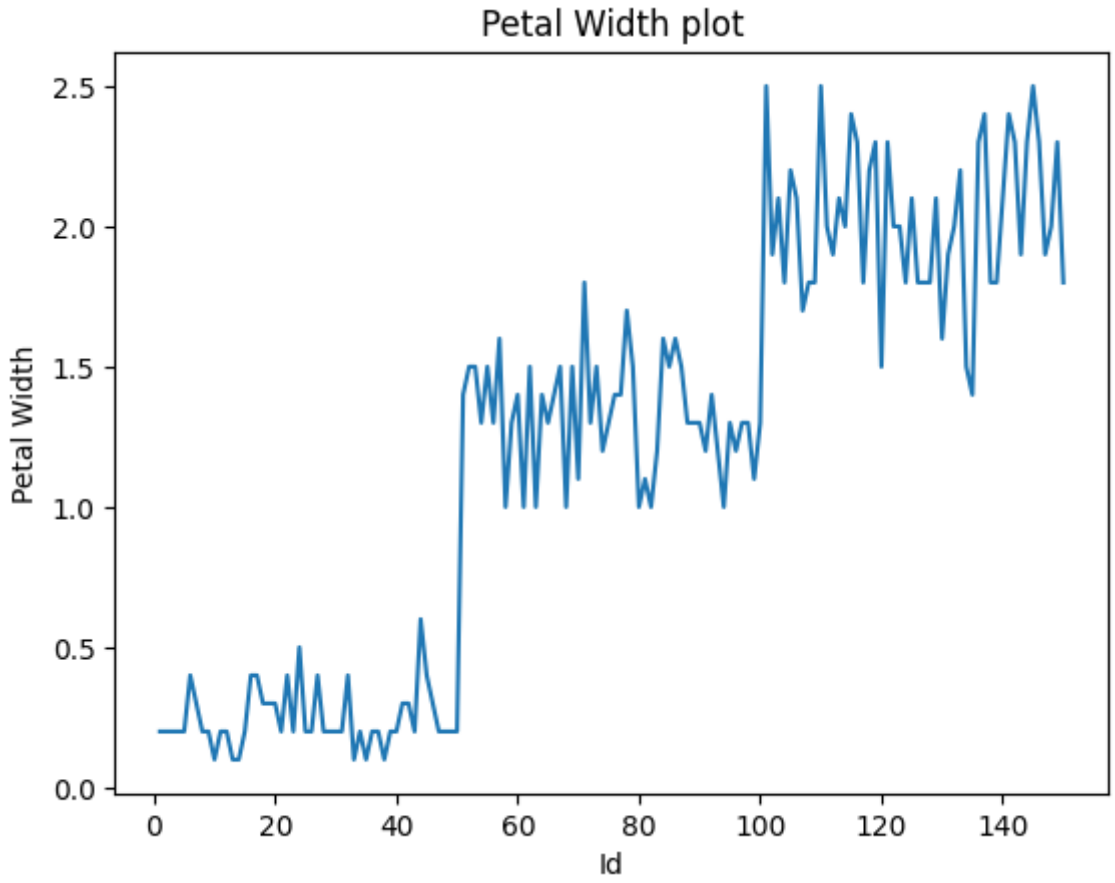
```
      Id  PetalWidthCm
0      1           0.2
1      2           0.2
2      3           0.2
3      4           0.2
4      5           0.2
..   ...           ...
145  146           2.3
146  147           1.9
147  148           2.0
148  149           2.3
149  150           1.8

[150 rows x 2 columns]
```

In [22]:

```
plt.plot(data_set.Id,data_set.PetalWidthCm)
plt.xlabel("Id")
plt.ylabel("Petal Width")
plt.title("Petal Width plot")
```

Out[22]:

```
Text(0.5, 1.0, 'Petal Width plot')
```

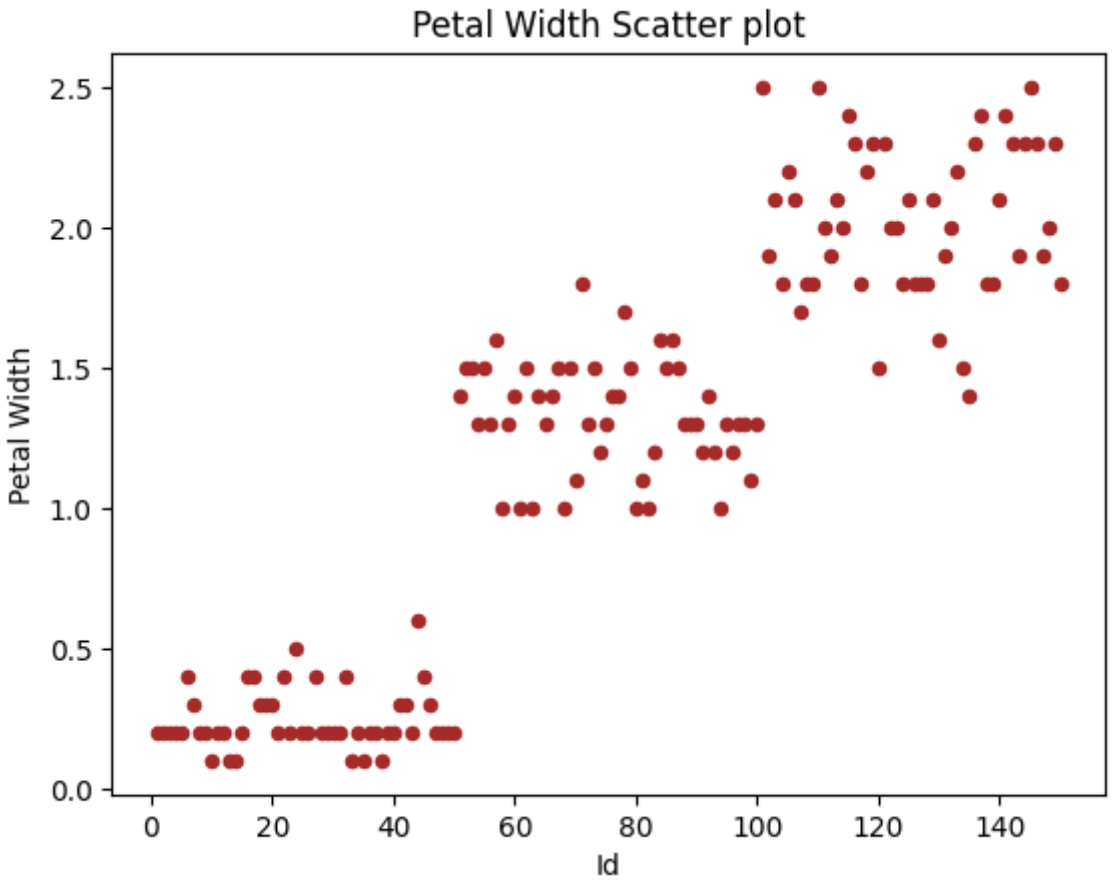


In [23]:

```
data_set.plot(kind='scatter', x = 'Id', y = 'PetalWidthCm', color ='brown')
plt.xlabel("Id")
plt.ylabel("Petal Width")
plt.title("Petal Width Scatter plot")
```

Out[23]:

```
Text(0.5, 1.0, 'Petal Width Scatter plot')
```

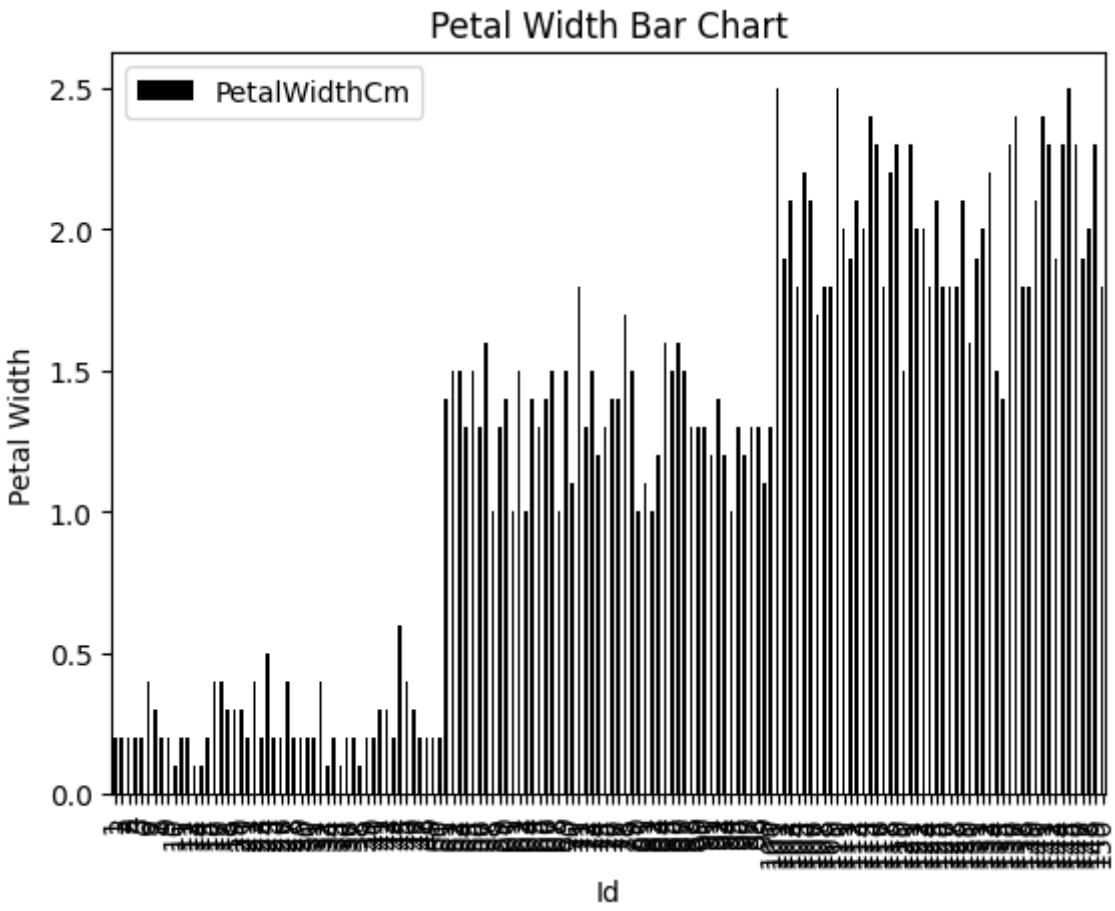


In [24]:

```
data_set.plot(kind='bar', x = 'Id', y = 'PetalWidthCm', color ='black')
plt.xlabel("Id")
plt.ylabel("Petal Width")
plt.title("Petal Width Bar Chart")
```

Out[24]:

```
Text(0.5, 1.0, 'Petal Width Bar Chart')
```

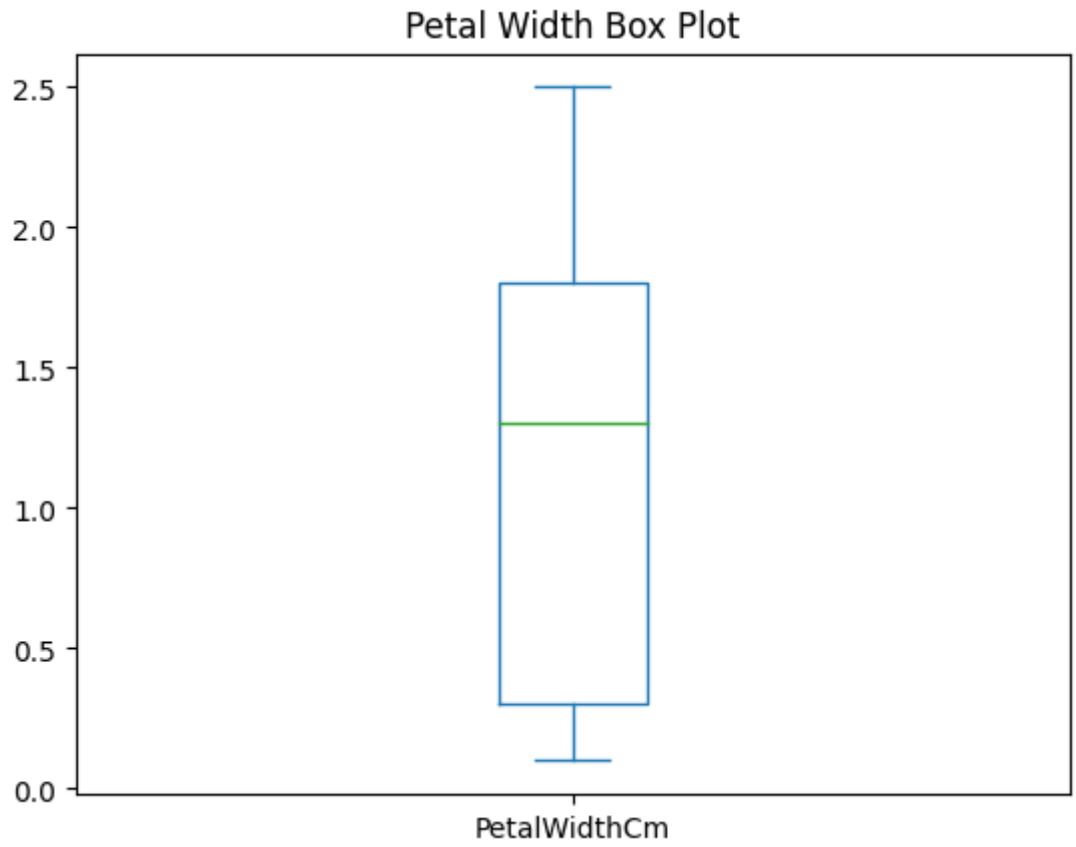


In [25]:

```
data_set.plot(kind='box', y = 'PetalWidthCm')
plt.title("Petal Width Box Plot")
```

Out[25]:

```
Text(0.5, 1.0, 'Petal Width Box Plot')
```

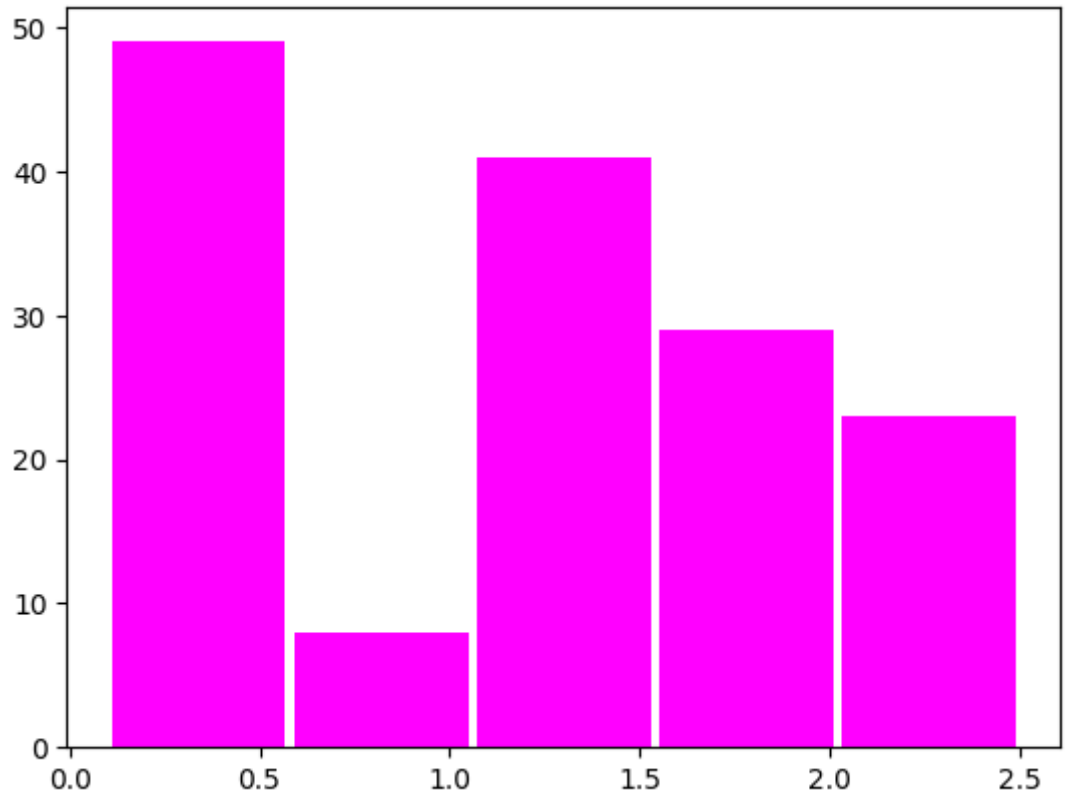


In [26]:

```
Petal_width_list = data_set['PetalWidthCm'].tolist()
plt.hist(Petal_width_list, bins =5,rwidth = 0.95, color = 'magenta')
```

Out[26]:

```
(array([49.,  8., 41., 29., 23.]),
 array([0.1 , 0.58, 1.06, 1.54, 2.02, 2.5 ]),
 <BarContainer object of 5 artists>)
```



IRIS - SETOSA

In [27]:

```
iris_setosa = data_set.head(50)
print(iris_setosa)
```

```
    Id  SepalLengthCm  SepalWidthCm  PetalLengthCm  PetalWidthCm      Specie
s
0    1            5.1           3.5            1.4           0.2  Iris-setos
a
1    2            4.9           3.0            1.4           0.2  Iris-setos
a
2    3            4.7           3.2            1.3           0.2  Iris-setos
a
3    4            4.6           3.1            1.5           0.2  Iris-setos
a
4    5            5.0           3.6            1.4           0.2  Iris-setos
a
5    6            5.4           3.9            1.7           0.4  Iris-setos
a
6    7            4.6           3.4            1.4           0.3  Iris-setos
a
7    8            5.0           3.4            1.5           0.2  Iris-setos
a
8    9            4.4           2.9            1.4           0.2  Iris-setos
a
9   10            4.9           3.1            1.5           0.1  Iris-setos
a
10  11            5.4           3.7            1.5           0.2  Iris-setos
a
11  12            4.8           3.4            1.6           0.2  Iris-setos
a
12  13            4.8           3.0            1.4           0.1  Iris-setos
a
13  14            4.3           3.0            1.1           0.1  Iris-setos
a
14  15            5.8           4.0            1.2           0.2  Iris-setos
a
15  16            5.7           4.4            1.5           0.4  Iris-setos
a
16  17            5.4           3.9            1.3           0.4  Iris-setos
a
17  18            5.1           3.5            1.4           0.3  Iris-setos
a
18  19            5.7           3.8            1.7           0.3  Iris-setos
a
19  20            5.1           3.8            1.5           0.3  Iris-setos
a
20  21            5.4           3.4            1.7           0.2  Iris-setos
a
21  22            5.1           3.7            1.5           0.4  Iris-setos
a
22  23            4.6           3.6            1.0           0.2  Iris-setos
a
23  24            5.1           3.3            1.7           0.5  Iris-setos
a
24  25            4.8           3.4            1.9           0.2  Iris-setos
a
25  26            5.0           3.0            1.6           0.2  Iris-setos
a
26  27            5.0           3.4            1.6           0.4  Iris-setos
a
```

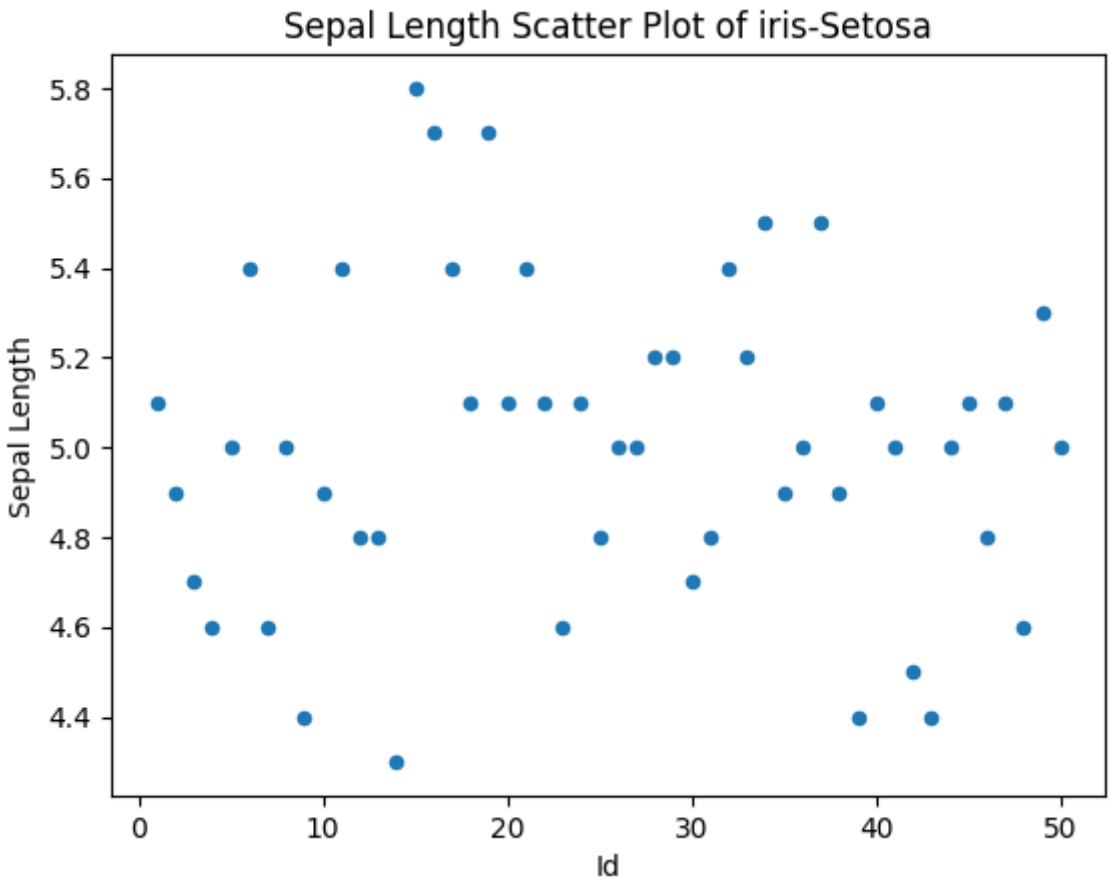
27	28	5.2	3.5	1.5	0.2	Iris-setosa
28	29	5.2	3.4	1.4	0.2	Iris-setosa
29	30	4.7	3.2	1.6	0.2	Iris-setosa
30	31	4.8	3.1	1.6	0.2	Iris-setosa
31	32	5.4	3.4	1.5	0.4	Iris-setosa
32	33	5.2	4.1	1.5	0.1	Iris-setosa
33	34	5.5	4.2	1.4	0.2	Iris-setosa
34	35	4.9	3.1	1.5	0.1	Iris-setosa
35	36	5.0	3.2	1.2	0.2	Iris-setosa
36	37	5.5	3.5	1.3	0.2	Iris-setosa
37	38	4.9	3.1	1.5	0.1	Iris-setosa
38	39	4.4	3.0	1.3	0.2	Iris-setosa
39	40	5.1	3.4	1.5	0.2	Iris-setosa
40	41	5.0	3.5	1.3	0.3	Iris-setosa
41	42	4.5	2.3	1.3	0.3	Iris-setosa
42	43	4.4	3.2	1.3	0.2	Iris-setosa
43	44	5.0	3.5	1.6	0.6	Iris-setosa
44	45	5.1	3.8	1.9	0.4	Iris-setosa
45	46	4.8	3.0	1.4	0.3	Iris-setosa
46	47	5.1	3.8	1.6	0.2	Iris-setosa
47	48	4.6	3.2	1.4	0.2	Iris-setosa
48	49	5.3	3.7	1.5	0.2	Iris-setosa
49	50	5.0	3.3	1.4	0.2	Iris-setosa

In [28]:

```
iris_setosa.plot(kind='scatter', x='Id', y = 'SepalLengthCm')
plt.xlabel("Id")
plt.ylabel("Sepal Length")
plt.title("Sepal Length Scatter Plot of iris-Setosa")
```

Out[28]:

```
Text(0.5, 1.0, 'Sepal Length Scatter Plot of iris-Setosa')
```

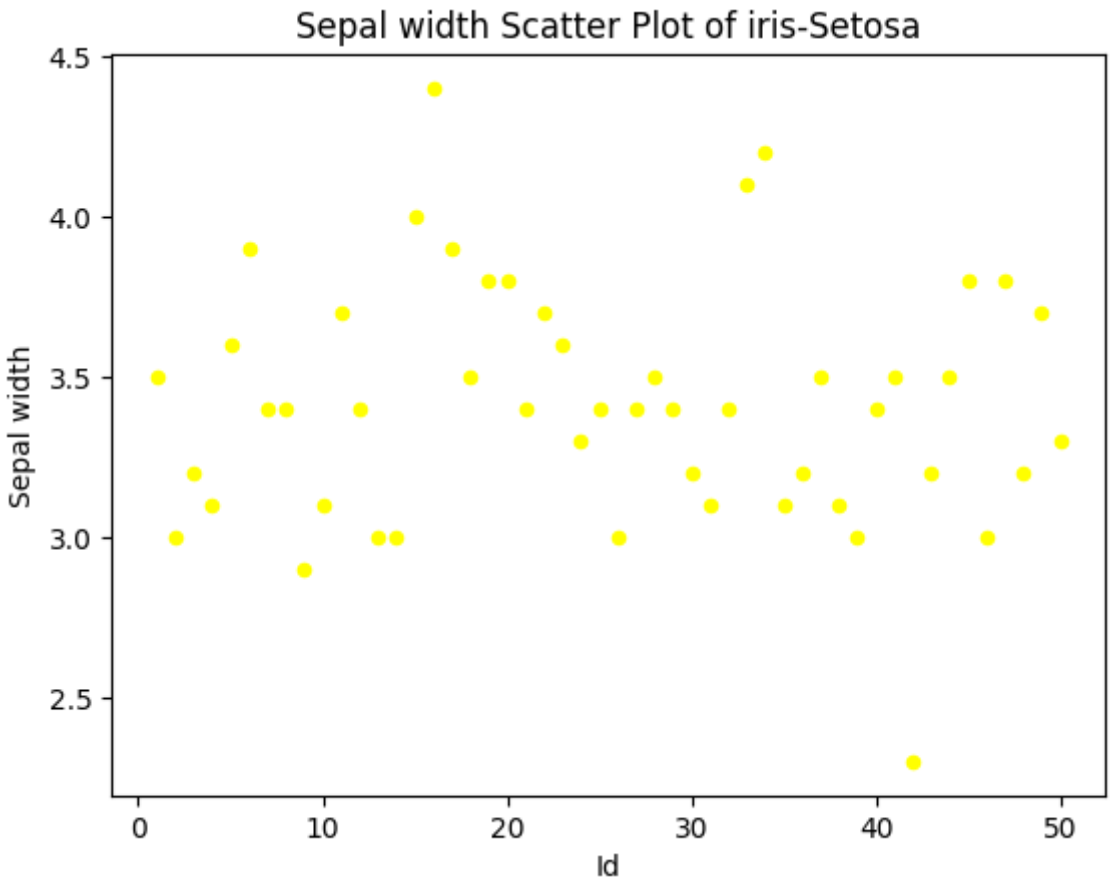


In [29]:

```
iris_setosa.plot(kind='scatter', x='Id', y = 'SepalWidthCm', color ='yellow')
plt.xlabel("Id")
plt.ylabel("Sepal width")
plt.title("Sepal width Scatter Plot of iris-Setosa")
```

Out[29]:

```
Text(0.5, 1.0, 'Sepal width Scatter Plot of iris-Setosa')
```

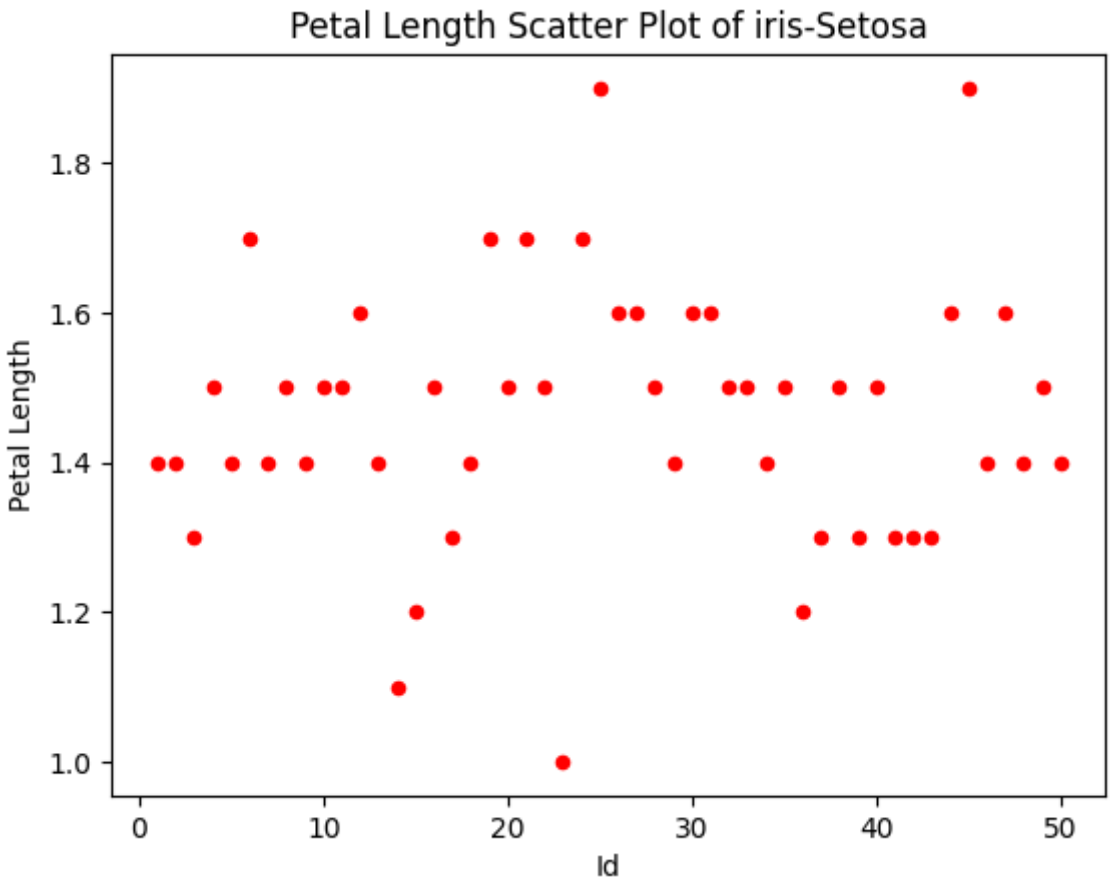


In [30]:

```
iris_setosa.plot(kind='scatter', x='Id', y = 'PetalLengthCm',color='red')
plt.xlabel("Id")
plt.ylabel("Petal Length")
plt.title("Petal Length Scatter Plot of iris-Setosa")
```

Out[30]:

```
Text(0.5, 1.0, 'Petal Length Scatter Plot of iris-Setosa')
```

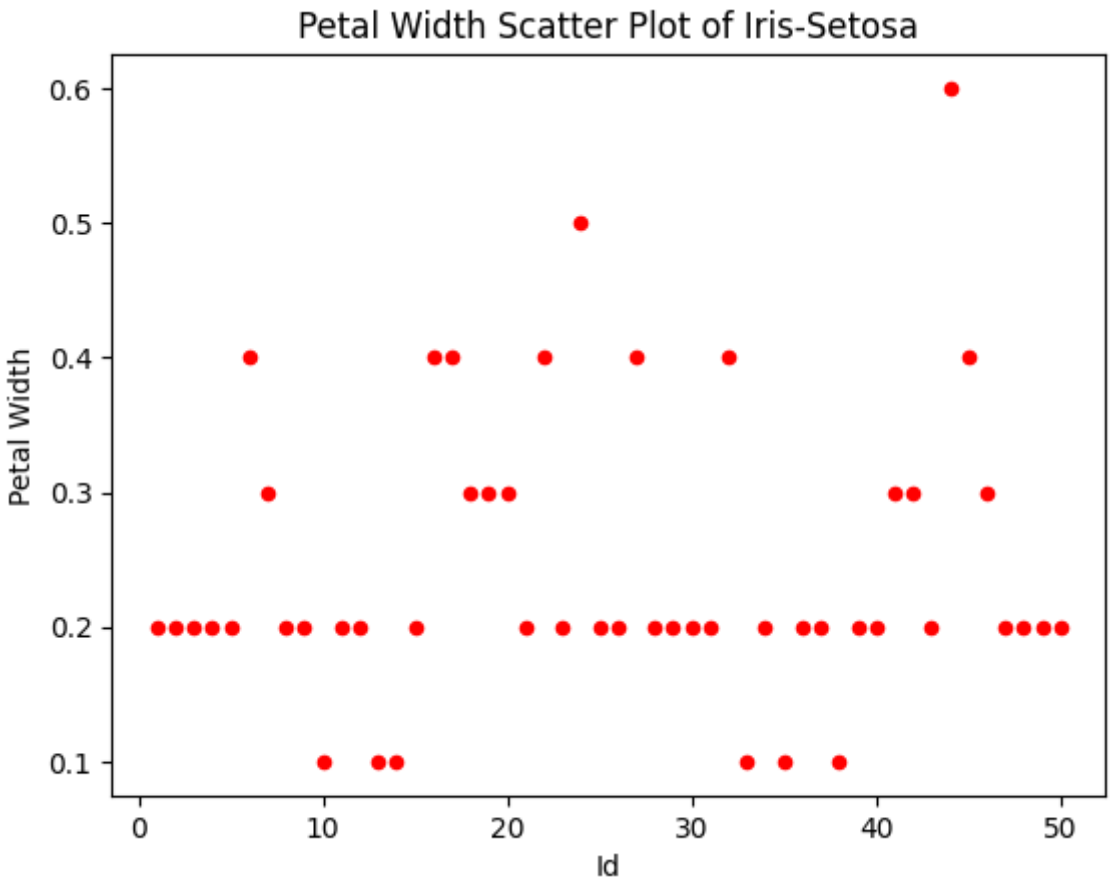


In [31]:

```
iris_setosa.plot(kind='scatter', x='Id', y = 'PetalWidthCm',color='red' )
plt.xlabel("Id")
plt.ylabel("Petal Width")
plt.title("Petal Width Scatter Plot of Iris-Setosa")
```

Out[31]:

```
Text(0.5, 1.0, 'Petal Width Scatter Plot of Iris-Setosa')
```

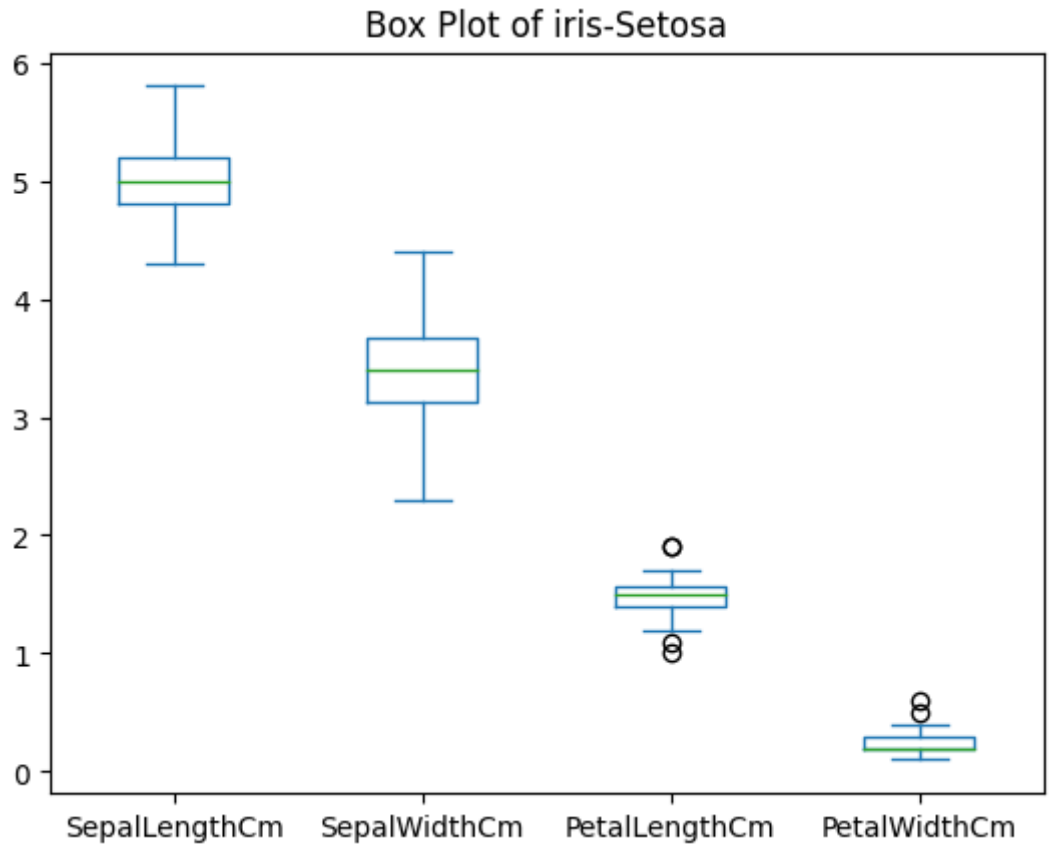


In [32]:

```
iris_setosa.plot(kind='box',y = ['SepalLengthCm','SepalWidthCm','PetalLengthCm','PetalWidth
plt.title("Box Plot of iris-Setosa")
```

Out[32]:

```
Text(0.5, 1.0, 'Box Plot of iris-Setosa')
```



IRIS-VERSICOLOR

In [33]:

```
iris_versicolor=data_set.head(100).tail(50)
print(iris_versicolor)
```

```
     Id  SepalLengthCm  SepalWidthCm  PetalLengthCm  PetalWidthCm  \
50   51            7.0           3.2            4.7           1.4
51   52            6.4           3.2            4.5           1.5
52   53            6.9           3.1            4.9           1.5
53   54            5.5           2.3            4.0           1.3
54   55            6.5           2.8            4.6           1.5
55   56            5.7           2.8            4.5           1.3
56   57            6.3           3.3            4.7           1.6
57   58            4.9           2.4            3.3           1.0
58   59            6.6           2.9            4.6           1.3
59   60            5.2           2.7            3.9           1.4
60   61            5.0           2.0            3.5           1.0
61   62            5.9           3.0            4.2           1.5
62   63            6.0           2.2            4.0           1.0
63   64            6.1           2.9            4.7           1.4
64   65            5.6           2.9            3.6           1.3
65   66            6.7           3.1            4.4           1.4
66   67            5.6           3.0            4.5           1.5
67   68            5.8           2.7            4.1           1.0
68   69            6.2           2.2            4.5           1.5
69   70            5.6           2.5            3.9           1.1
70   71            5.9           3.2            4.8           1.8
71   72            6.1           2.8            4.0           1.3
72   73            6.3           2.5            4.9           1.5
73   74            6.1           2.8            4.7           1.2
74   75            6.4           2.9            4.3           1.3
75   76            6.6           3.0            4.4           1.4
76   77            6.8           2.8            4.8           1.4
77   78            6.7           3.0            5.0           1.7
78   79            6.0           2.9            4.5           1.5
79   80            5.7           2.6            3.5           1.0
80   81            5.5           2.4            3.8           1.1
81   82            5.5           2.4            3.7           1.0
82   83            5.8           2.7            3.9           1.2
83   84            6.0           2.7            5.1           1.6
84   85            5.4           3.0            4.5           1.5
85   86            6.0           3.4            4.5           1.6
86   87            6.7           3.1            4.7           1.5
87   88            6.3           2.3            4.4           1.3
88   89            5.6           3.0            4.1           1.3
89   90            5.5           2.5            4.0           1.3
90   91            5.5           2.6            4.4           1.2
91   92            6.1           3.0            4.6           1.4
92   93            5.8           2.6            4.0           1.2
93   94            5.0           2.3            3.3           1.0
94   95            5.6           2.7            4.2           1.3
95   96            5.7           3.0            4.2           1.2
96   97            5.7           2.9            4.2           1.3
97   98            6.2           2.9            4.3           1.3
98   99            5.1           2.5            3.0           1.1
99  100            5.7           2.8            4.1           1.3

            Species
50  Iris-versicolor
51  Iris-versicolor
52  Iris-versicolor
```

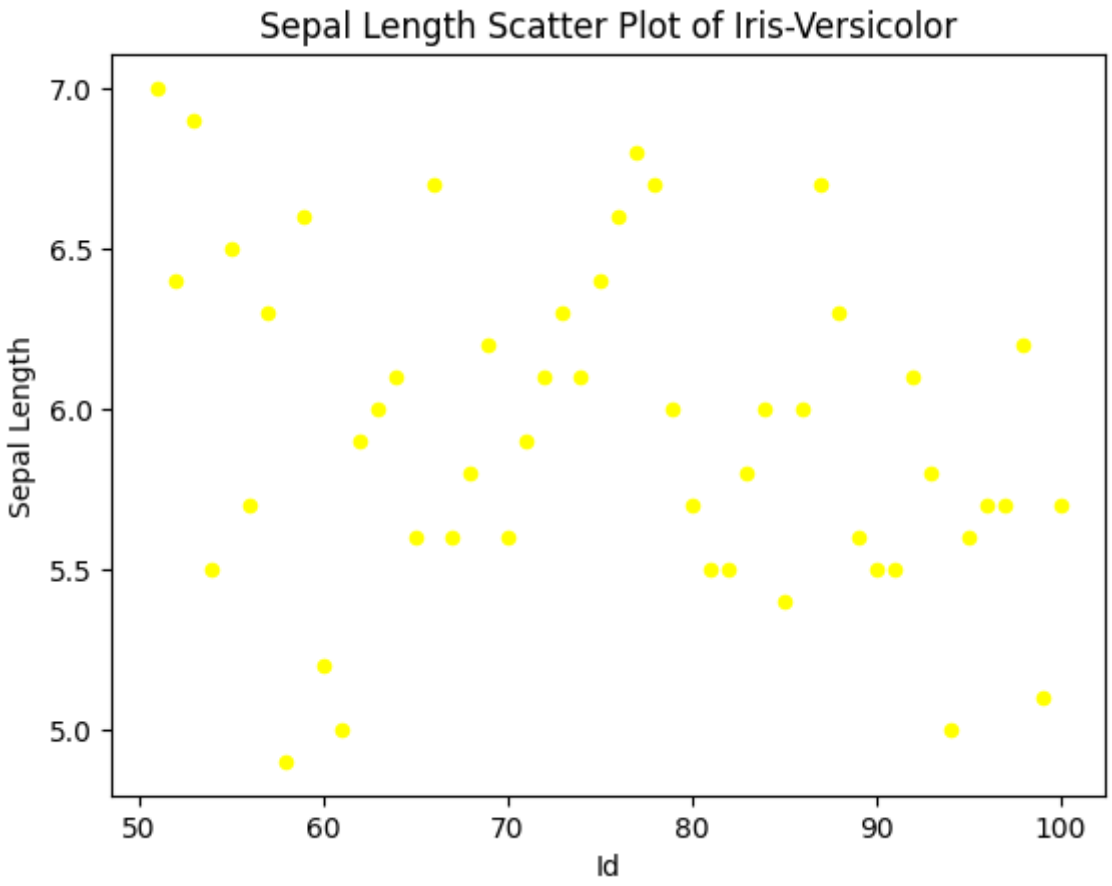
```
53  Iris-versicolor
54  Iris-versicolor
55  Iris-versicolor
56  Iris-versicolor
57  Iris-versicolor
58  Iris-versicolor
59  Iris-versicolor
60  Iris-versicolor
61  Iris-versicolor
62  Iris-versicolor
63  Iris-versicolor
64  Iris-versicolor
65  Iris-versicolor
66  Iris-versicolor
67  Iris-versicolor
68  Iris-versicolor
69  Iris-versicolor
70  Iris-versicolor
71  Iris-versicolor
72  Iris-versicolor
73  Iris-versicolor
74  Iris-versicolor
75  Iris-versicolor
76  Iris-versicolor
77  Iris-versicolor
78  Iris-versicolor
79  Iris-versicolor
80  Iris-versicolor
81  Iris-versicolor
82  Iris-versicolor
83  Iris-versicolor
84  Iris-versicolor
85  Iris-versicolor
86  Iris-versicolor
87  Iris-versicolor
88  Iris-versicolor
89  Iris-versicolor
90  Iris-versicolor
91  Iris-versicolor
92  Iris-versicolor
93  Iris-versicolor
94  Iris-versicolor
95  Iris-versicolor
96  Iris-versicolor
97  Iris-versicolor
98  Iris-versicolor
99  Iris-versicolor
```

In [34]:

```
iris_versicolor.plot(kind='scatter',x='Id',y='SepalLengthCm',color='yellow')
plt.xlabel("Id")
plt.ylabel("Sepal Length")
plt.title("Sepal Length Scatter Plot of Iris-Versicolor")
```

Out[34]:

```
Text(0.5, 1.0, 'Sepal Length Scatter Plot of Iris-Versicolor')
```

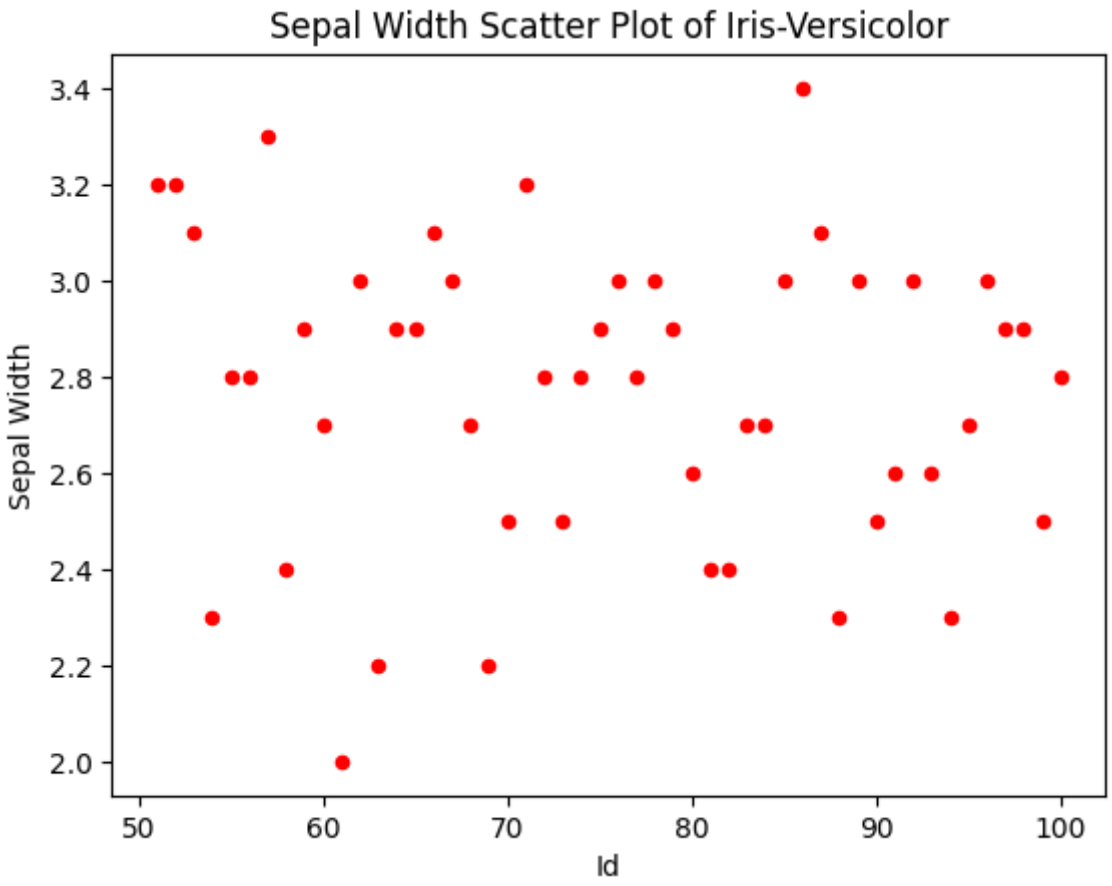


In [35]:

```
iris_versicolor.plot(kind='scatter',x='Id',y='SepalWidthCm',color='red')
plt.xlabel("Id")
plt.ylabel("Sepal Width")
plt.title("Sepal Width Scatter Plot of Iris-Versicolor")
```

Out[35]:

```
Text(0.5, 1.0, 'Sepal Width Scatter Plot of Iris-Versicolor')
```

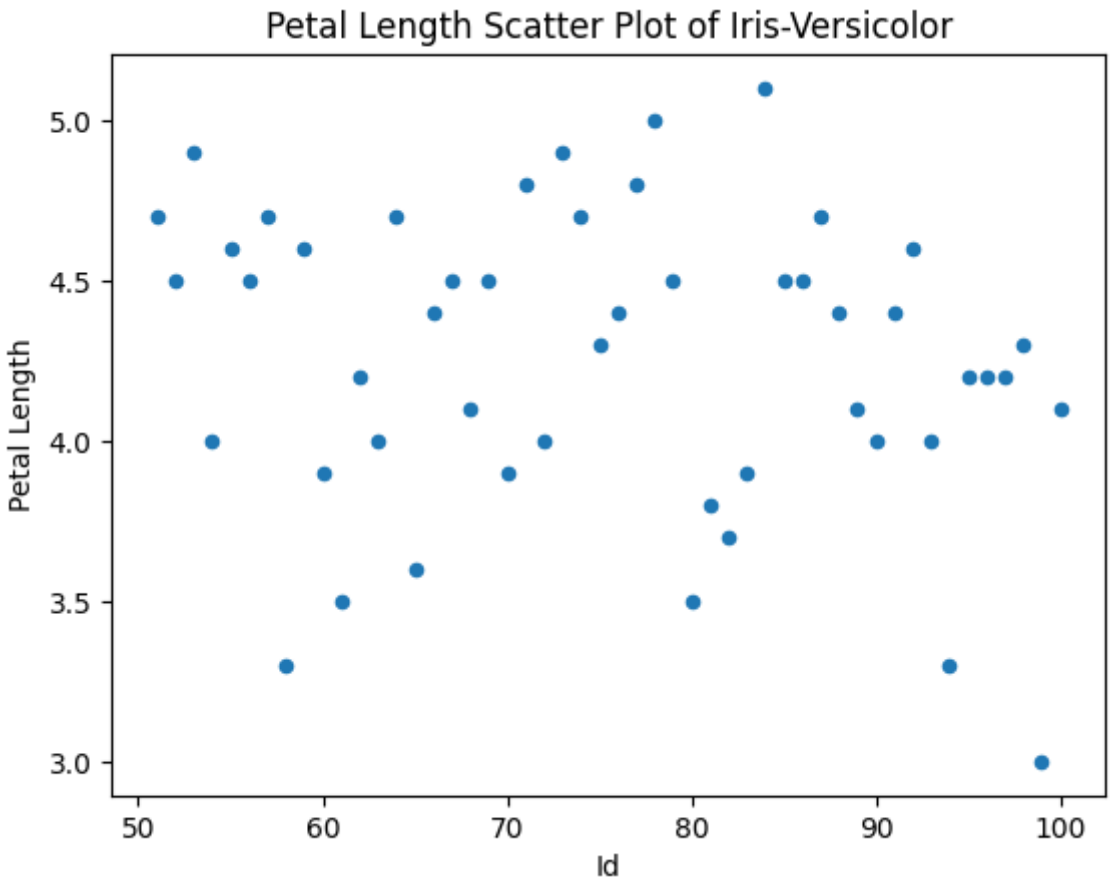


In [36]:

```
iris_versicolor.plot(kind='scatter',x='Id',y='PetalLengthCm')
plt.xlabel("Id")
plt.ylabel("Petal Length")
plt.title("Petal Length Scatter Plot of Iris-Versicolor")
```

Out[36]:

```
Text(0.5, 1.0, 'Petal Length Scatter Plot of Iris-Versicolor')
```

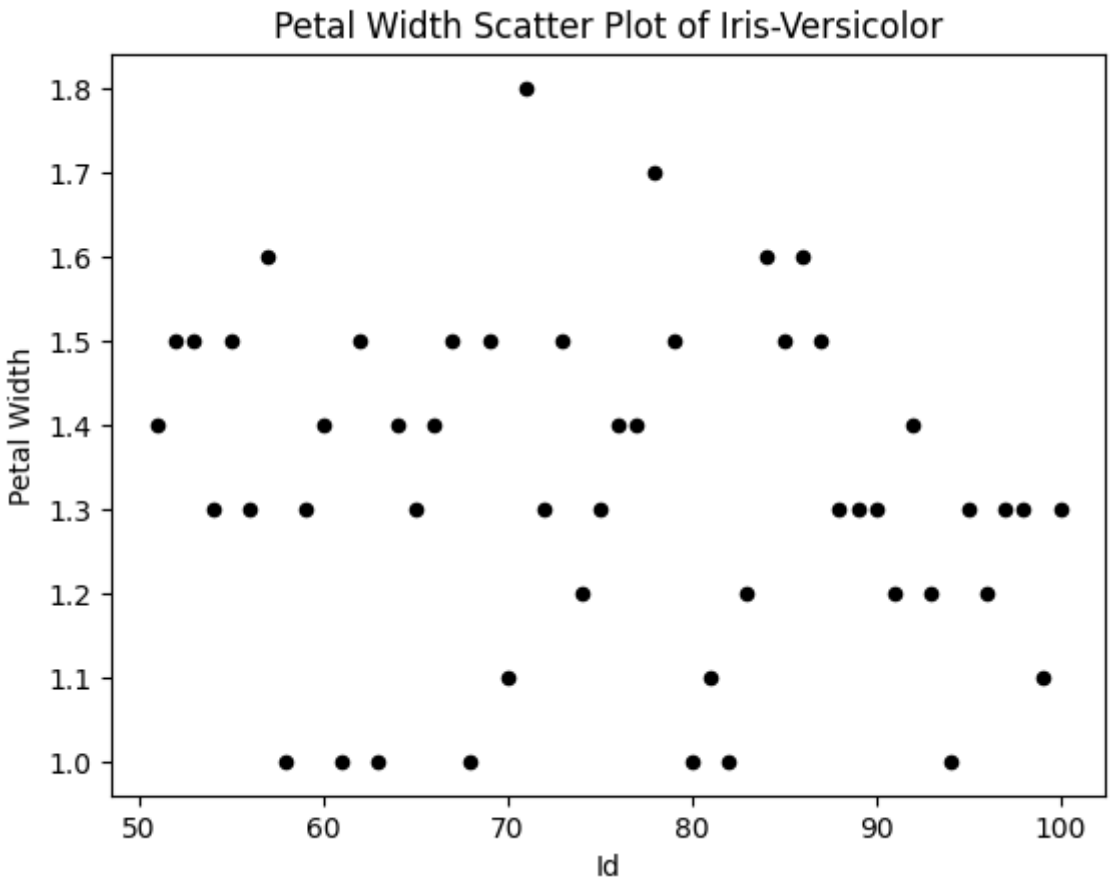


In [37]:

```
iris_versicolor.plot(kind='scatter',x='Id',y='PetalWidthCm',color='black')
plt.xlabel("Id")
plt.ylabel("Petal Width")
plt.title("Petal Width Scatter Plot of Iris-Versicolor")
```

Out[37]:

```
Text(0.5, 1.0, 'Petal Width Scatter Plot of Iris-Versicolor')
```

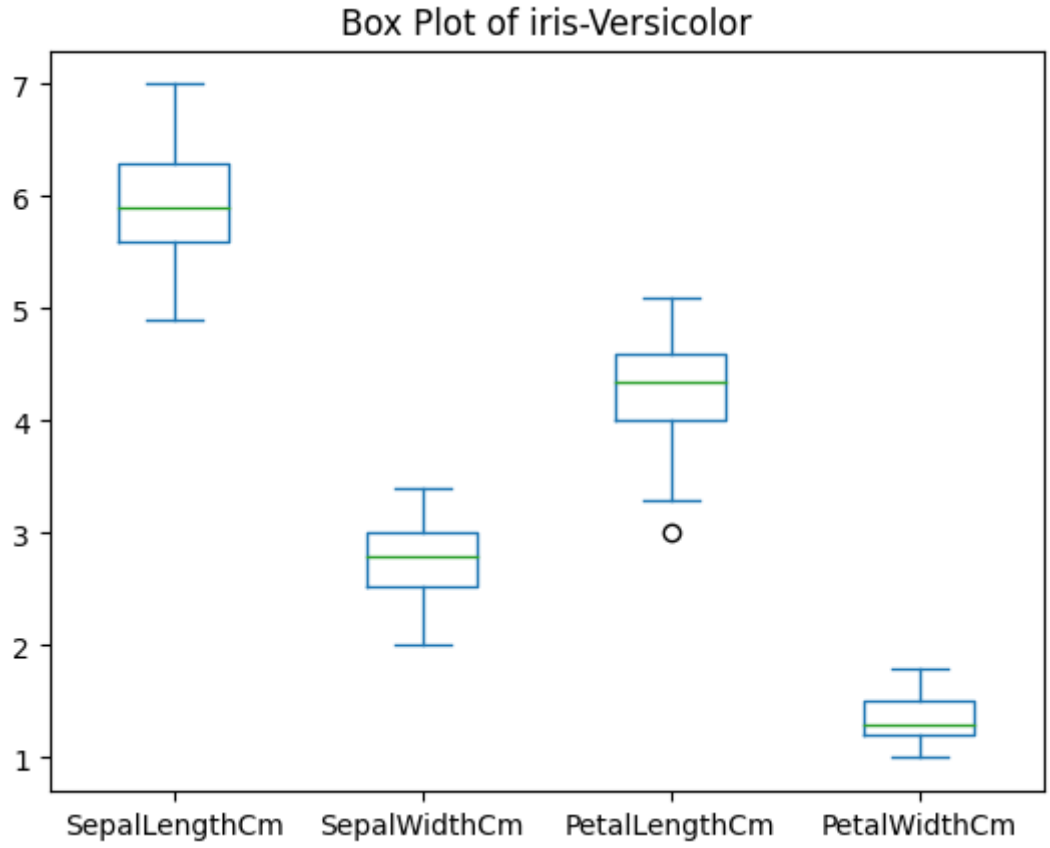


In [38]:

```
iris_versicolor.plot(kind='box',y = ['SepalLengthCm','SepalWidthCm','PetalLengthCm','PetalW
plt.title("Box Plot of iris-Versicolor")
```

Out[38]:

```
Text(0.5, 1.0, 'Box Plot of iris-Versicolor')
```



IRIS-VERGINICA

In [39]:

```
iris_verginica=data_set.tail(50)
print(iris_verginica)
```

```
      Id  SepalLengthCm  SepalWidthCm  PetalLengthCm  PetalWidthCm  \
100  101            6.3           3.3            6.0           2.5
101  102            5.8           2.7            5.1           1.9
102  103            7.1           3.0            5.9           2.1
103  104            6.3           2.9            5.6           1.8
104  105            6.5           3.0            5.8           2.2
105  106            7.6           3.0            6.6           2.1
106  107            4.9           2.5            4.5           1.7
107  108            7.3           2.9            6.3           1.8
108  109            6.7           2.5            5.8           1.8
109  110            7.2           3.6            6.1           2.5
110  111            6.5           3.2            5.1           2.0
111  112            6.4           2.7            5.3           1.9
112  113            6.8           3.0            5.5           2.1
113  114            5.7           2.5            5.0           2.0
114  115            5.8           2.8            5.1           2.4
115  116            6.4           3.2            5.3           2.3
116  117            6.5           3.0            5.5           1.8
117  118            7.7           3.8            6.7           2.2
118  119            7.7           2.6            6.9           2.3
119  120            6.0           2.2            5.0           1.5
120  121            6.9           3.2            5.7           2.3
121  122            5.6           2.8            4.9           2.0
122  123            7.7           2.8            6.7           2.0
123  124            6.3           2.7            4.9           1.8
124  125            6.7           3.3            5.7           2.1
125  126            7.2           3.2            6.0           1.8
126  127            6.2           2.8            4.8           1.8
127  128            6.1           3.0            4.9           1.8
128  129            6.4           2.8            5.6           2.1
129  130            7.2           3.0            5.8           1.6
130  131            7.4           2.8            6.1           1.9
131  132            7.9           3.8            6.4           2.0
132  133            6.4           2.8            5.6           2.2
133  134            6.3           2.8            5.1           1.5
134  135            6.1           2.6            5.6           1.4
135  136            7.7           3.0            6.1           2.3
136  137            6.3           3.4            5.6           2.4
137  138            6.4           3.1            5.5           1.8
138  139            6.0           3.0            4.8           1.8
139  140            6.9           3.1            5.4           2.1
140  141            6.7           3.1            5.6           2.4
141  142            6.9           3.1            5.1           2.3
142  143            5.8           2.7            5.1           1.9
143  144            6.8           3.2            5.9           2.3
144  145            6.7           3.3            5.7           2.5
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

            Species
100  Iris-virginica
101  Iris-virginica
102  Iris-virginica
```

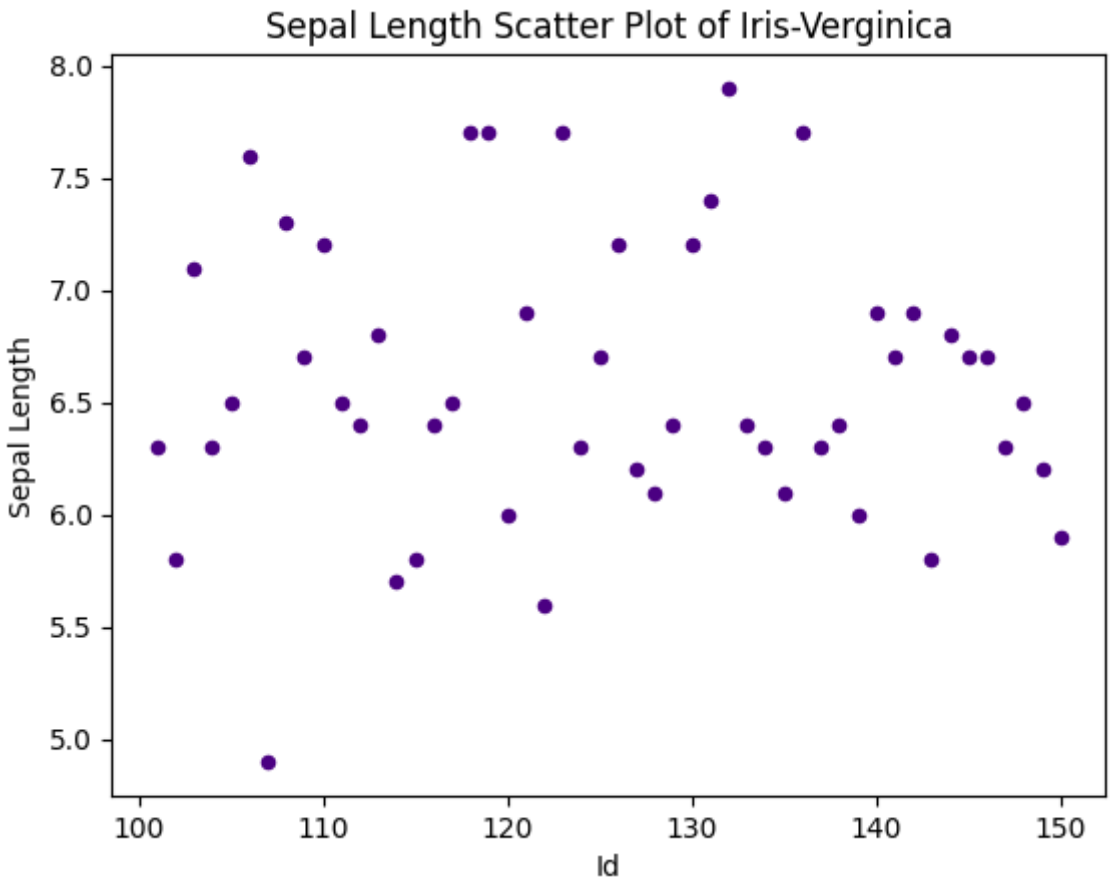
```
103  Iris-virginica
104  Iris-virginica
105  Iris-virginica
106  Iris-virginica
107  Iris-virginica
108  Iris-virginica
109  Iris-virginica
110  Iris-virginica
111  Iris-virginica
112  Iris-virginica
113  Iris-virginica
114  Iris-virginica
115  Iris-virginica
116  Iris-virginica
117  Iris-virginica
118  Iris-virginica
119  Iris-virginica
120  Iris-virginica
121  Iris-virginica
122  Iris-virginica
123  Iris-virginica
124  Iris-virginica
125  Iris-virginica
126  Iris-virginica
127  Iris-virginica
128  Iris-virginica
129  Iris-virginica
130  Iris-virginica
131  Iris-virginica
132  Iris-virginica
133  Iris-virginica
134  Iris-virginica
135  Iris-virginica
136  Iris-virginica
137  Iris-virginica
138  Iris-virginica
139  Iris-virginica
140  Iris-virginica
141  Iris-virginica
142  Iris-virginica
143  Iris-virginica
144  Iris-virginica
145  Iris-virginica
146  Iris-virginica
147  Iris-virginica
148  Iris-virginica
149  Iris-virginica
```

In [40]:

```
iris_verginica.plot(kind='scatter',x='Id',y='SepalLengthCm',color='Indigo')
plt.xlabel("Id")
plt.ylabel("Sepal Length")
plt.title("Sepal Length Scatter Plot of Iris-Verginica")
```

Out[40]:

```
Text(0.5, 1.0, 'Sepal Length Scatter Plot of Iris-Verginica')
```

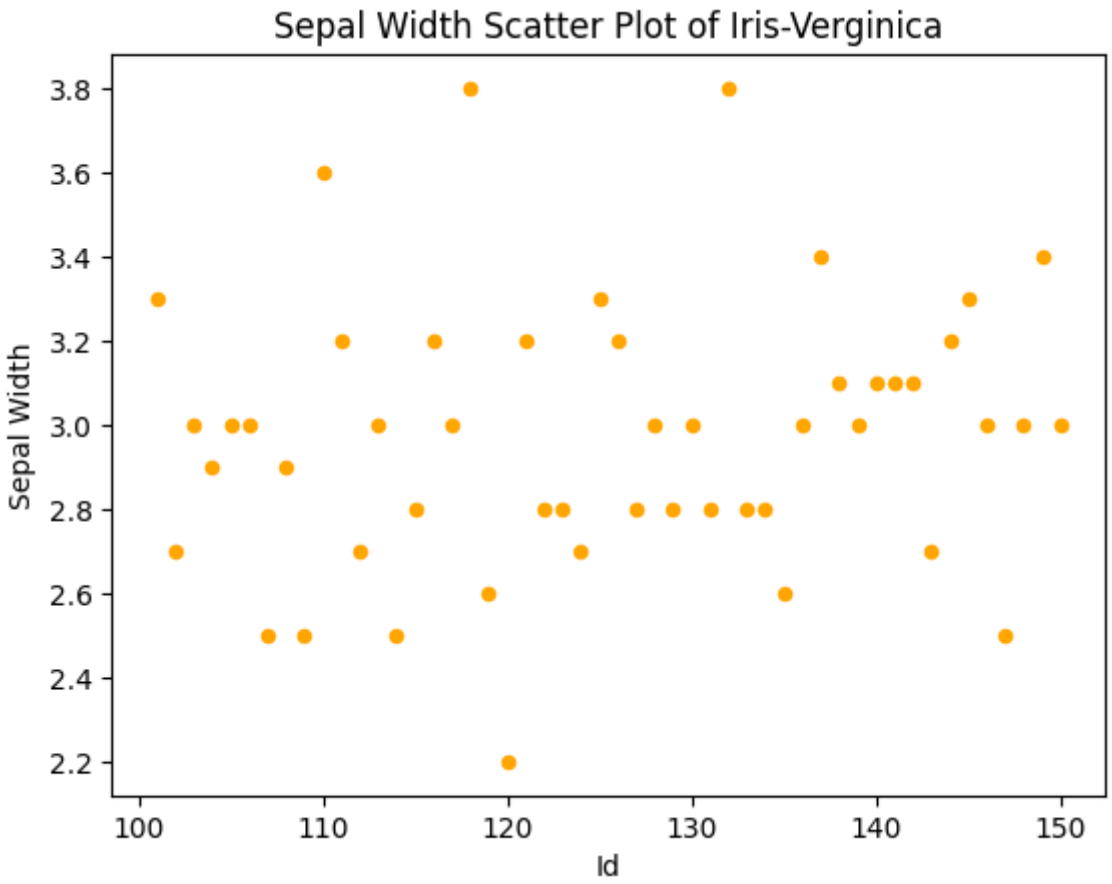


In [41]:

```
iris_verginica.plot(kind='scatter',x='Id',y='SepalWidthCm',color='orange')
plt.xlabel("Id")
plt.ylabel("Sepal Width")
plt.title("Sepal Width Scatter Plot of Iris-Verginica")
```

Out[41]:

```
Text(0.5, 1.0, 'Sepal Width Scatter Plot of Iris-Verginica')
```

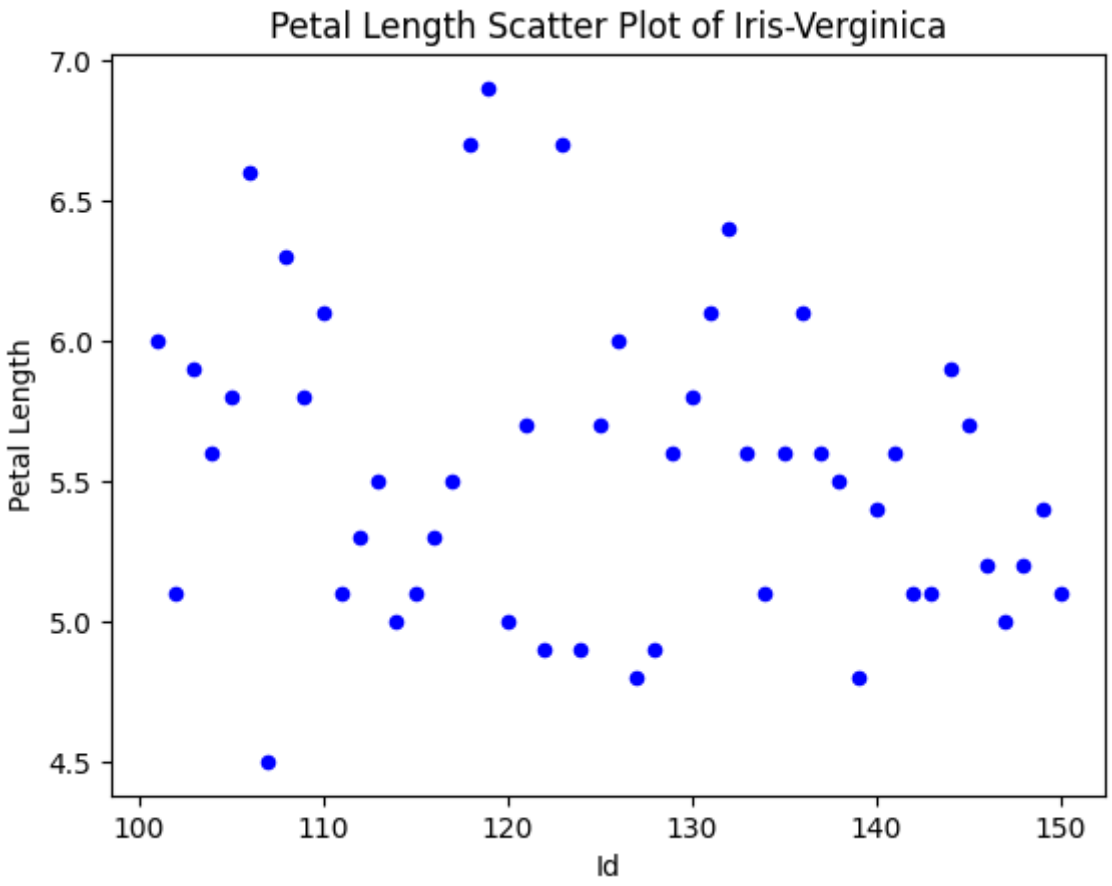


In [45]:

```
iris_verginica.plot(kind='scatter',x='Id',y='PetalLengthCm',color='blue')
plt.xlabel("Id")
plt.ylabel("Petal Length")
plt.title("Petal Length Scatter Plot of Iris-Verginica")
```

Out[45]:

```
Text(0.5, 1.0, 'Petal Length Scatter Plot of Iris-Verginica')
```

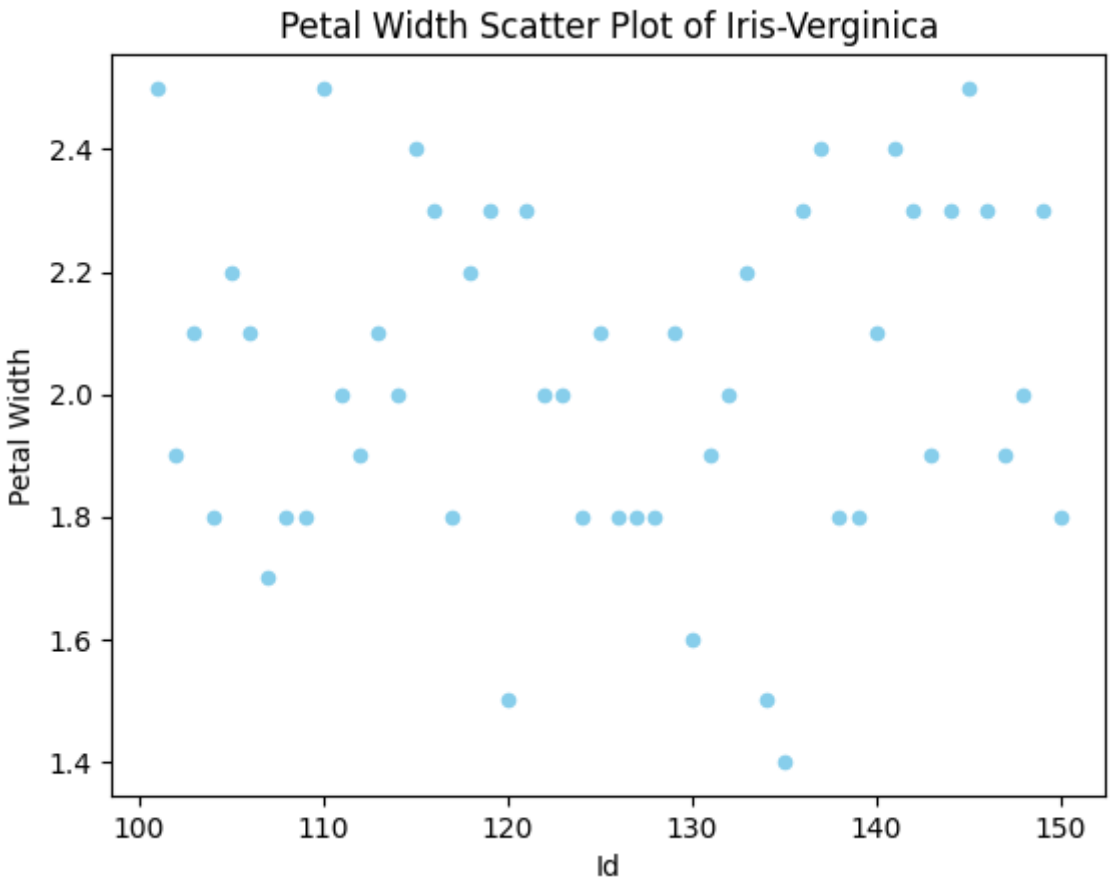


In [43]:

```
iris_verginica.plot(kind='scatter',x='Id',y='PetalWidthCm',color='skyblue')
plt.xlabel("Id")
plt.ylabel("Petal Width")
plt.title("Petal Width Scatter Plot of Iris-Verginica")
```

Out[43]:

```
Text(0.5, 1.0, 'Petal Width Scatter Plot of Iris-Verginica')
```

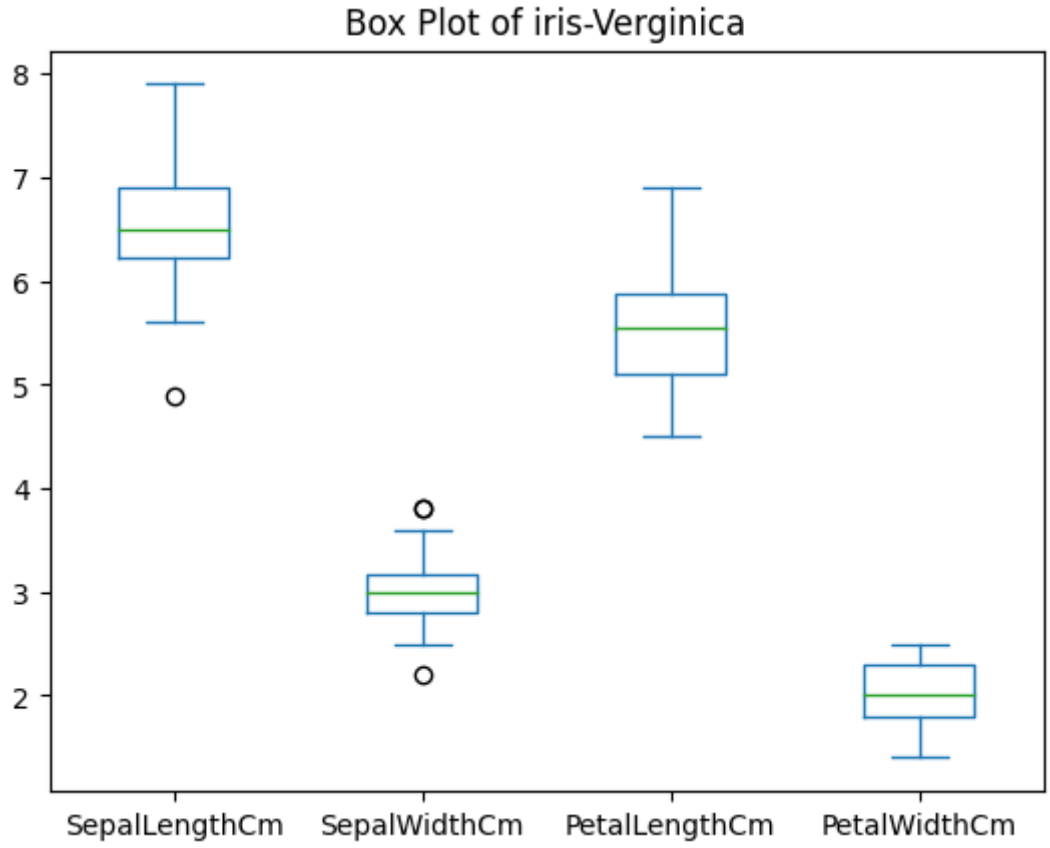


In [44]:

```
iris_verginica.plot(kind='box',y = ['SepalLengthCm','SepalWidthCm','PetalLengthCm','PetalWi
plt.title("Box Plot of iris-Verginica")
```

Out[44]:

```
Text(0.5, 1.0, 'Box Plot of iris-Verginica')
```



In [ ]: