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

```python
df=pd.read_csv("/home/student/Desktop/Iris.csv")
```

```python
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

```python
df.mean()
```

```
/tmp/ipykernel_3672/3698961737.py:1: FutureWarning: The default value of numeric_only in
DataFrame.mean is deprecated. In a future version, it will default to False. In additio
n, specifying 'numeric_only=None' is deprecated. Select only valid columns or specify th
e value of numeric_only to silence this warning.
  df.mean()
```

```
Id               75.500000
SepalLengthCm     5.843333
SepalWidthCm      3.054000
PetalLengthCm     3.758667
PetalWidthCm      1.198667
dtype: float64
```

```python
df.median()
```

```
/tmp/ipykernel_3672/530051474.py:1: FutureWarning: The default value of numeric_only in
DataFrame.median is deprecated. In a future version, it will default to False. In additi
on, specifying 'numeric_only=None' is deprecated. Select only valid columns or specify t
he value of numeric_only to silence this warning.
  df.median()
```

```
Id               75.50
SepalLengthCm     5.80
SepalWidthCm      3.00
PetalLengthCm     4.35
PetalWidthCm      1.30
dtype: float64
```

```python
df.mode()
```

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Out[7]:

	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm	Species
0	1	5.0	3.0	1.5	0.2	Iris-setosa
1	2	NaN	NaN	NaN	NaN	Iris-versicolor
2	3	NaN	NaN	NaN	NaN	Iris-virginica
3	4	NaN	NaN	NaN	NaN	NaN
4	5	NaN	NaN	NaN	NaN	NaN
...	...	...	...	...	...	...
145	146	NaN	NaN	NaN	NaN	NaN
146	147	NaN	NaN	NaN	NaN	NaN
147	148	NaN	NaN	NaN	NaN	NaN
148	149	NaN	NaN	NaN	NaN	NaN
149	150	NaN	NaN	NaN	NaN	NaN

150 rows × 6 columns

In [8]:
```python
df.std()
```

```
/tmp/ipykernel_3672/3390915376.py:1: FutureWarning: The default value of numeric_only in
DataFrame.std is deprecated. In a future version, it will default to False. In addition,
specifying 'numeric_only=None' is deprecated. Select only valid columns or specify the v
alue of numeric_only to silence this warning.
  df.std()
```

Out[8]:
```
Id               43.445368
SepalLengthCm     0.828066
SepalWidthCm      0.433594
PetalLengthCm     1.764420
PetalWidthCm      0.763161
dtype: float64
```

In [9]:
```python
df.min()
```

Out[9]:
```
Id                        1
SepalLengthCm           4.3
SepalWidthCm            2.0
PetalLengthCm           1.0
PetalWidthCm            0.1
Species         Iris-setosa
dtype: object
```

In [10]:
```python
df.max()
```

Out[10]:
```
Id                        150
SepalLengthCm             7.9
SepalWidthCm              4.4
PetalLengthCm             6.9
PetalWidthCm              2.5
Species         Iris-virginica
dtype: object
```

In [11]:
```python
df.var()
```

```
/tmp/ipykernel_3672/1568254755.py:1: FutureWarning: The default value of numeric_only in
DataFrame.var is deprecated. In a future version, it will default to False. In addition,
specifying 'numeric_only=None' is deprecated. Select only valid columns or specify the v
alue of numeric_only to silence this warning.
  df.var()
```

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```
Out[11]:    Id                1887.500000
            SepalLengthCm        0.685694
            SepalWidthCm         0.188004
            PetalLengthCm        3.113179
            PetalWidthCm         0.582414
            dtype: float64
```

```
In [12]:  plt.hist(df['PetalWidthCm'])
          plt.show()
```
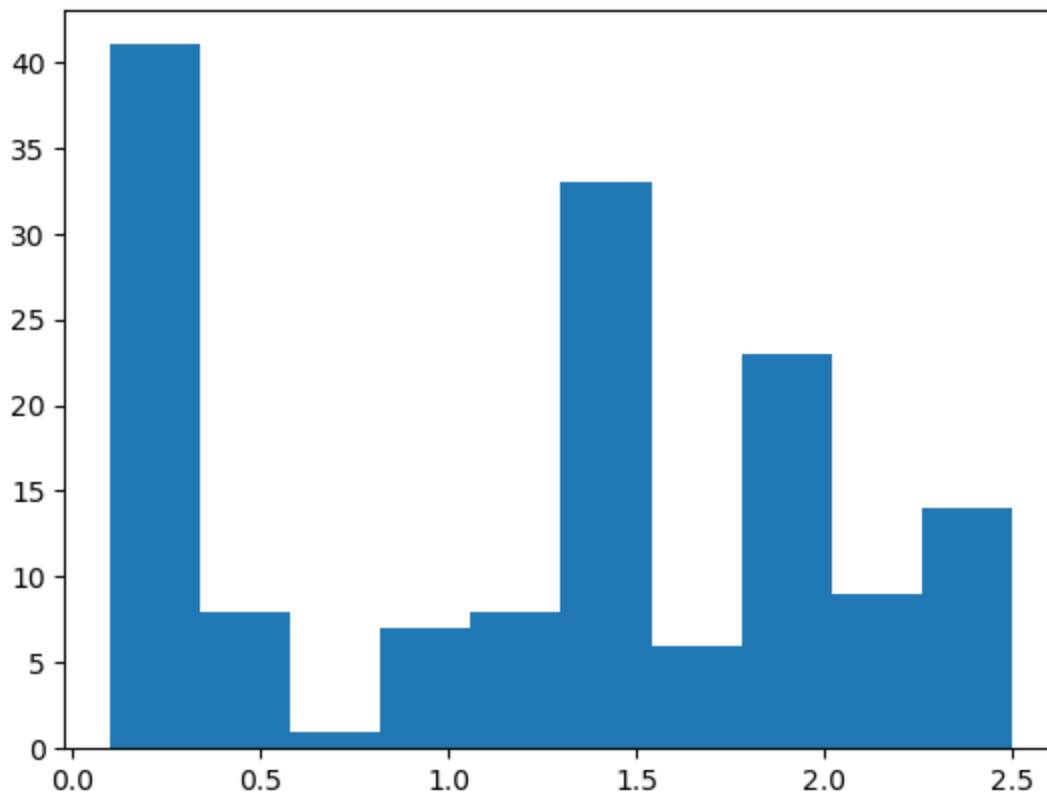


```
In [29]:  plt.figure(figsize=(7,5))
          df.boxplot()
          plt.show()
```
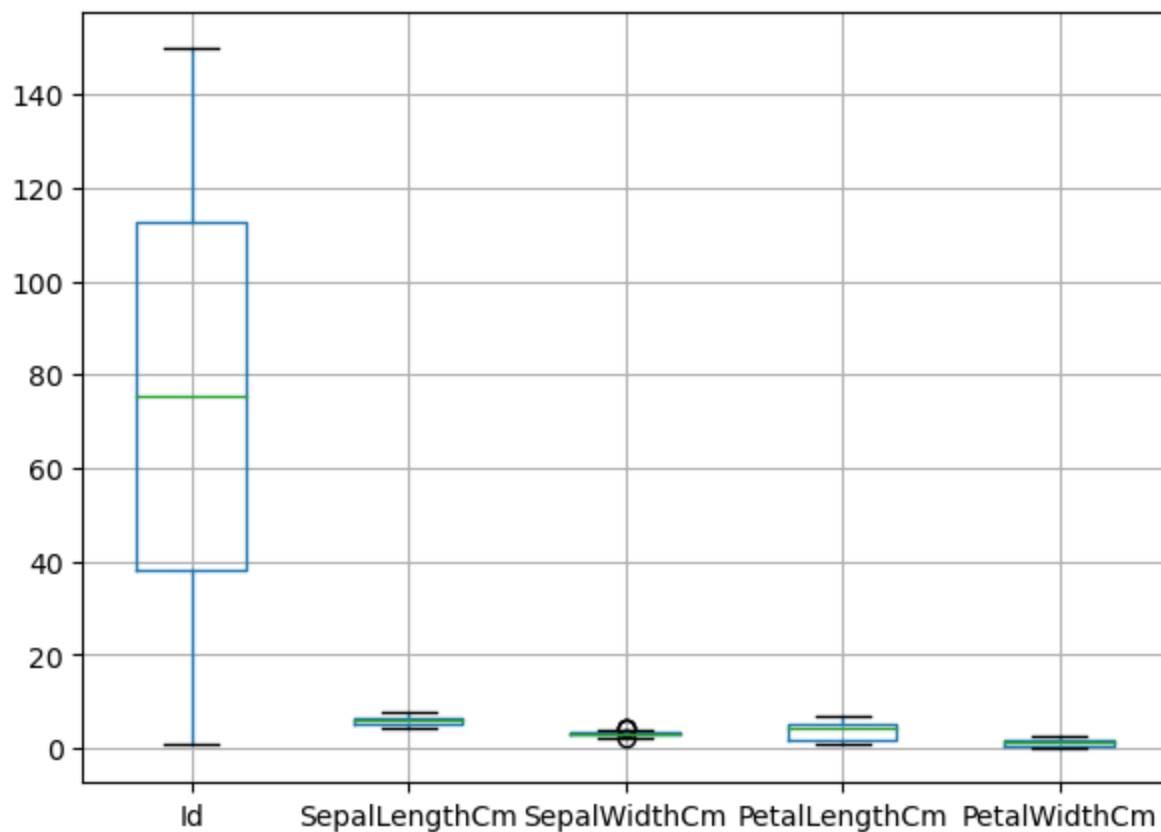
```
In [21]: fig,axes=plt.subplots(2,2,figsize=(16,8))
         axes[0,0].set_title("Distribution of Sepal Length")
         axes[0,0].hist(df["SepalLengthCm"])
         axes[0,1].set_title("Distribution of Sepal Width")
         axes[0,1].hist(df["SepalWidthCm"]);
         axes[1,0].set_title("Distribution of Petal Length")
         axes[1,0].hist(df["PetalLengthCm"]);
         axes[1,1].set_title("Distribution of Petal Width")
         axes[1,1].hist(df["PetalWidthCm"]);
         plt.show()
```
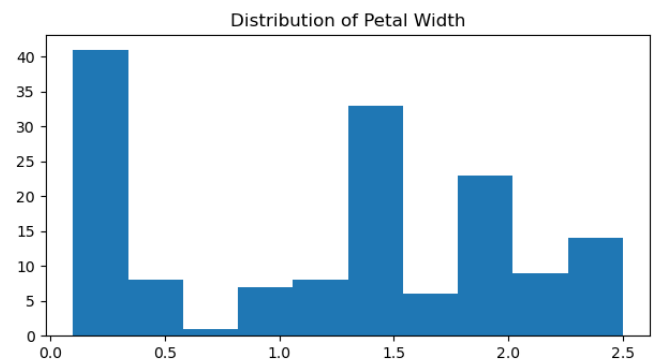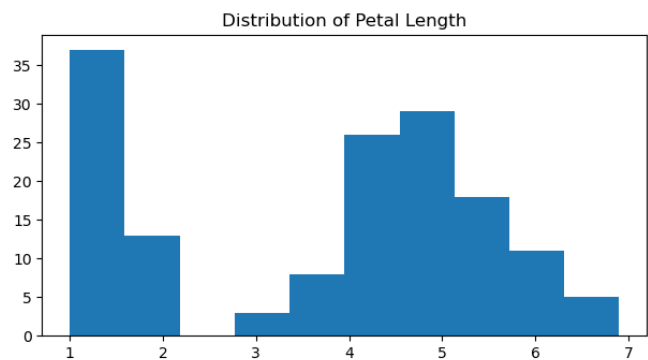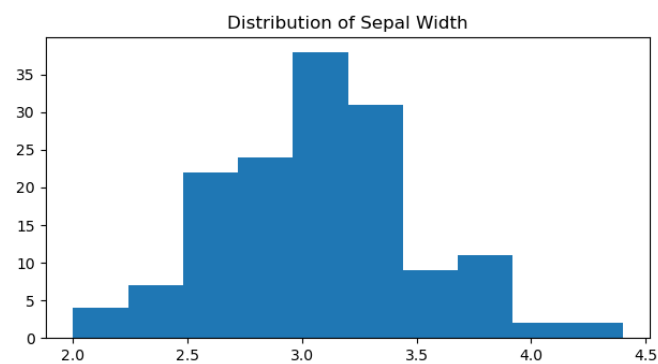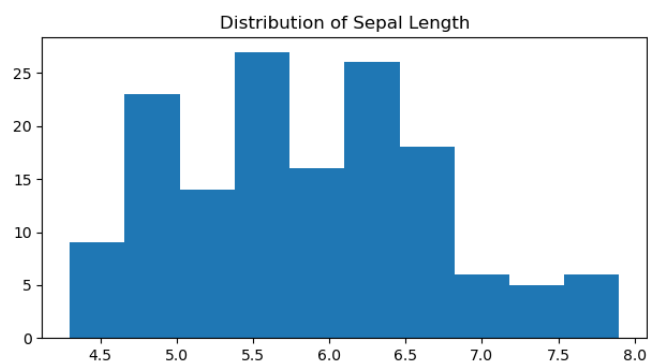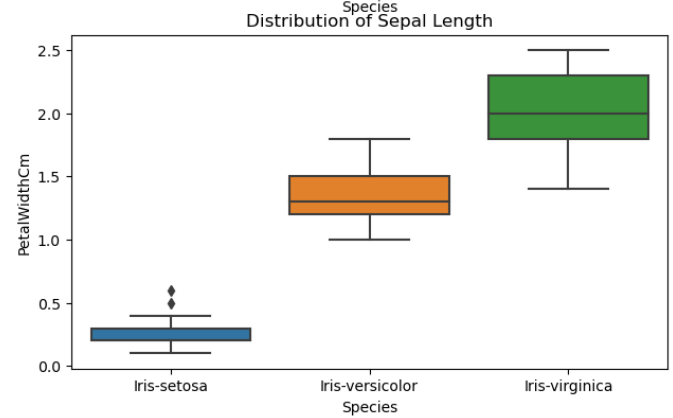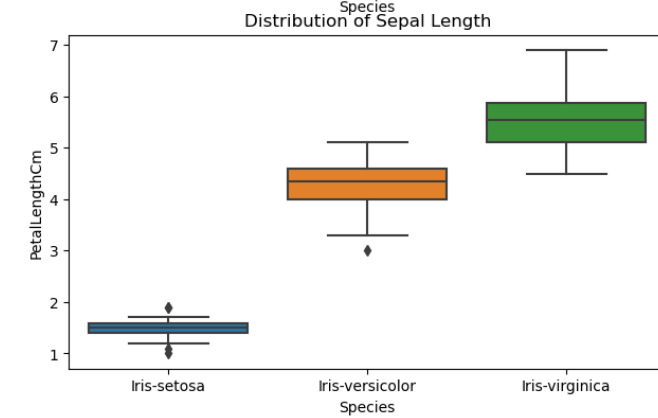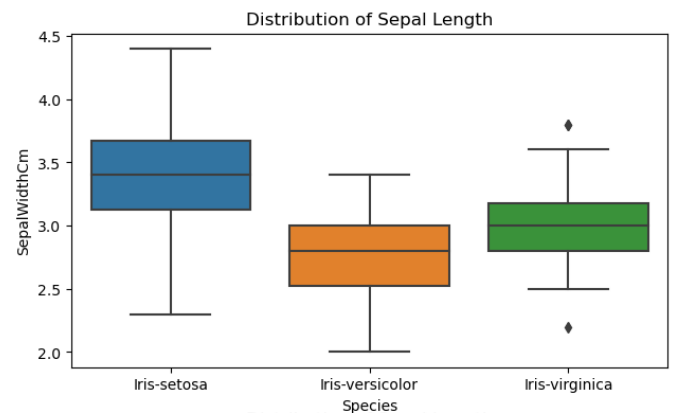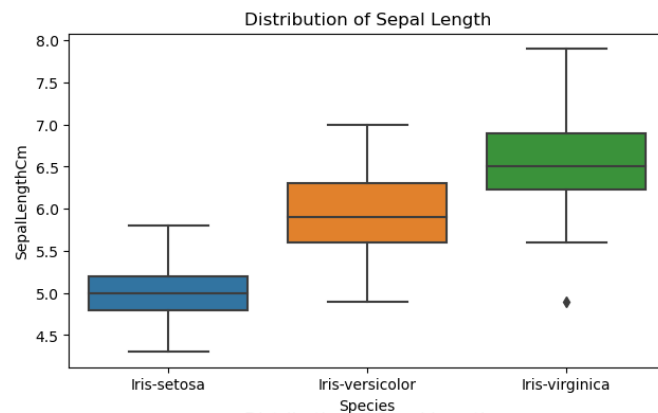


```
In [22]: fig, axes = plt.subplots(2, 2, figsize=(16,9))
         axes[0,0].set_title("Distribution of Sepal Length")
         ...="SepalLengthCm", x="Species", data=df, orient='v', ax=axes[0,0])
```

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```
axes[0,1].set_title("Distribution of Sepal Length")
sns.boxplot(y="SepalWidthCm", x="Species", data=df, orient='v', ax=axes[0,1])
axes[1,0].set_title("Distribution of Sepal Length")
sns.boxplot(y="PetalLengthCm", x="Species", data=df, orient='v', ax=axes[1,0])
axes[1,1].set_title("Distribution of Sepal Length")
sns.boxplot(y="PetalWidthCm", x="Species", data=df, orient='v', ax=axes[1,1])
plt.show()
```


In [ ]: