DELHI TECHNOLOGICAL UNIVERSITY

(Formerly Delhi College of Engineering)

Shahbad Daulatpur, Bawana Road, Delhi 110042

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CO327: MACHINE LEARNING

LAB FILE

Submitted To: **Submitted By:**

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Department of   **2K22/EC/49**
Computer Science Engineering   **Section-3, Group-2**

Code & OUTPUT

In [1]: `print("Experiment No 01 : To study about numpy, pandas and matplotlib libraries in python`

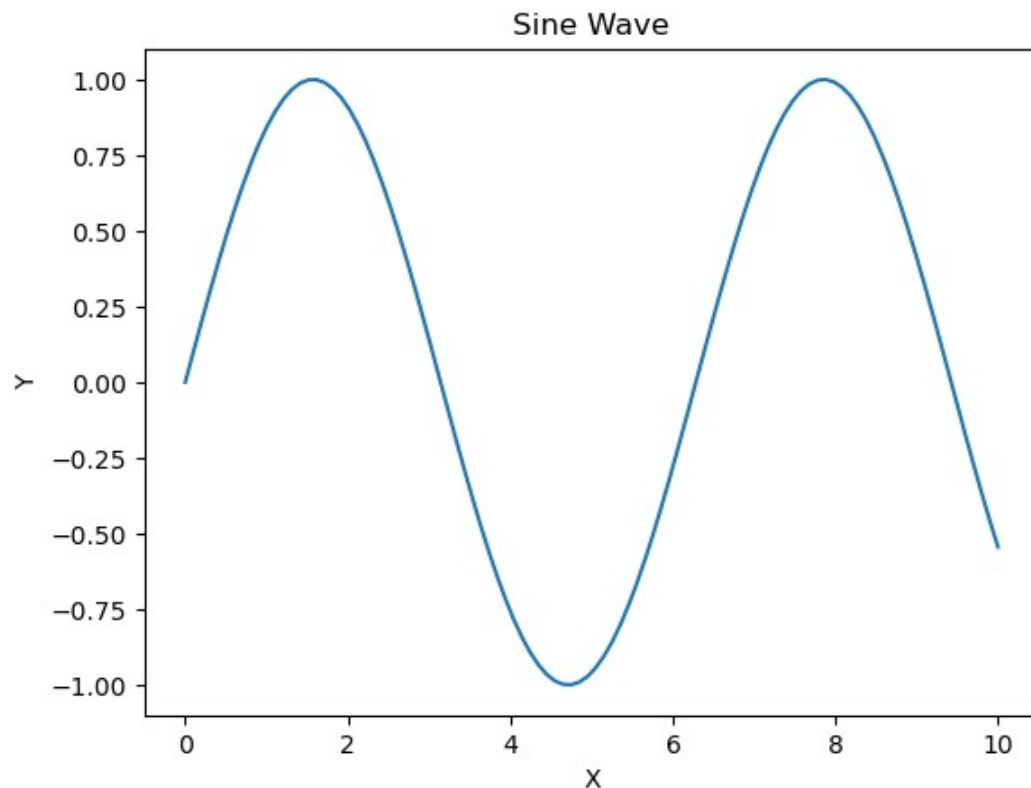Experiment No 01 : To study about numpy, pandas and matplotlib libraries in python.

In [3]:
```python
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
array = np.array([1,2,3,4,5])
print("OUTPUT:\n\n")
print("Numpy Array :",array)
data={'Name':['John','Anna','Peter','Linda'],
      'Age':[28,24,35,32]}
df = pd.DataFrame(data)
print("Pandas DataFrame:\n",df)
x = np.linspace(0,10,100)
y=np.sin(x)
plt.plot(x,y)
plt.title("Sine Wave")
plt.xlabel("X")
plt.ylabel("Y")
```
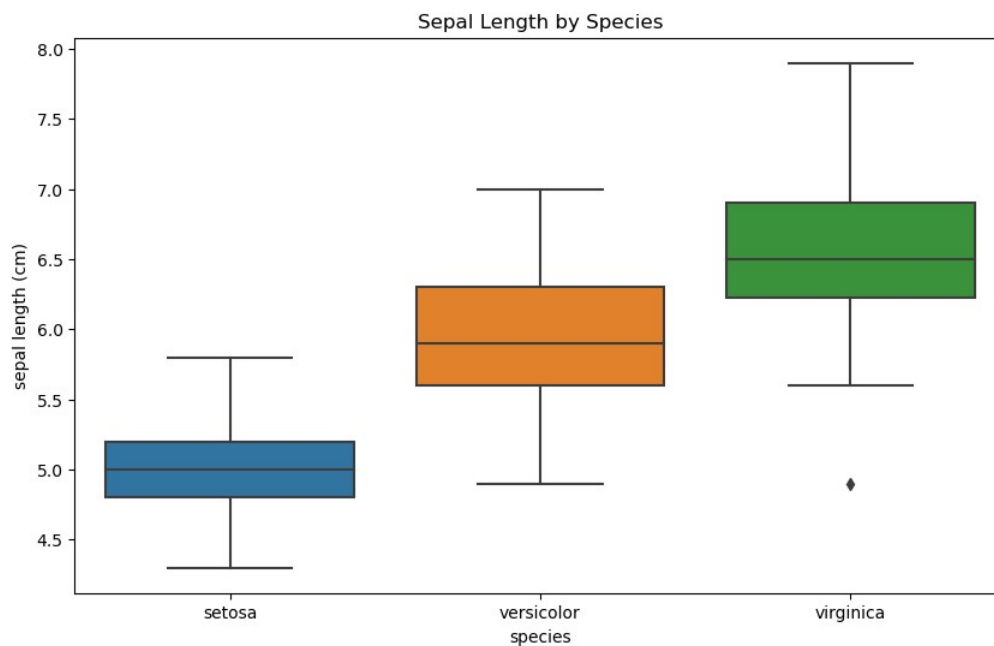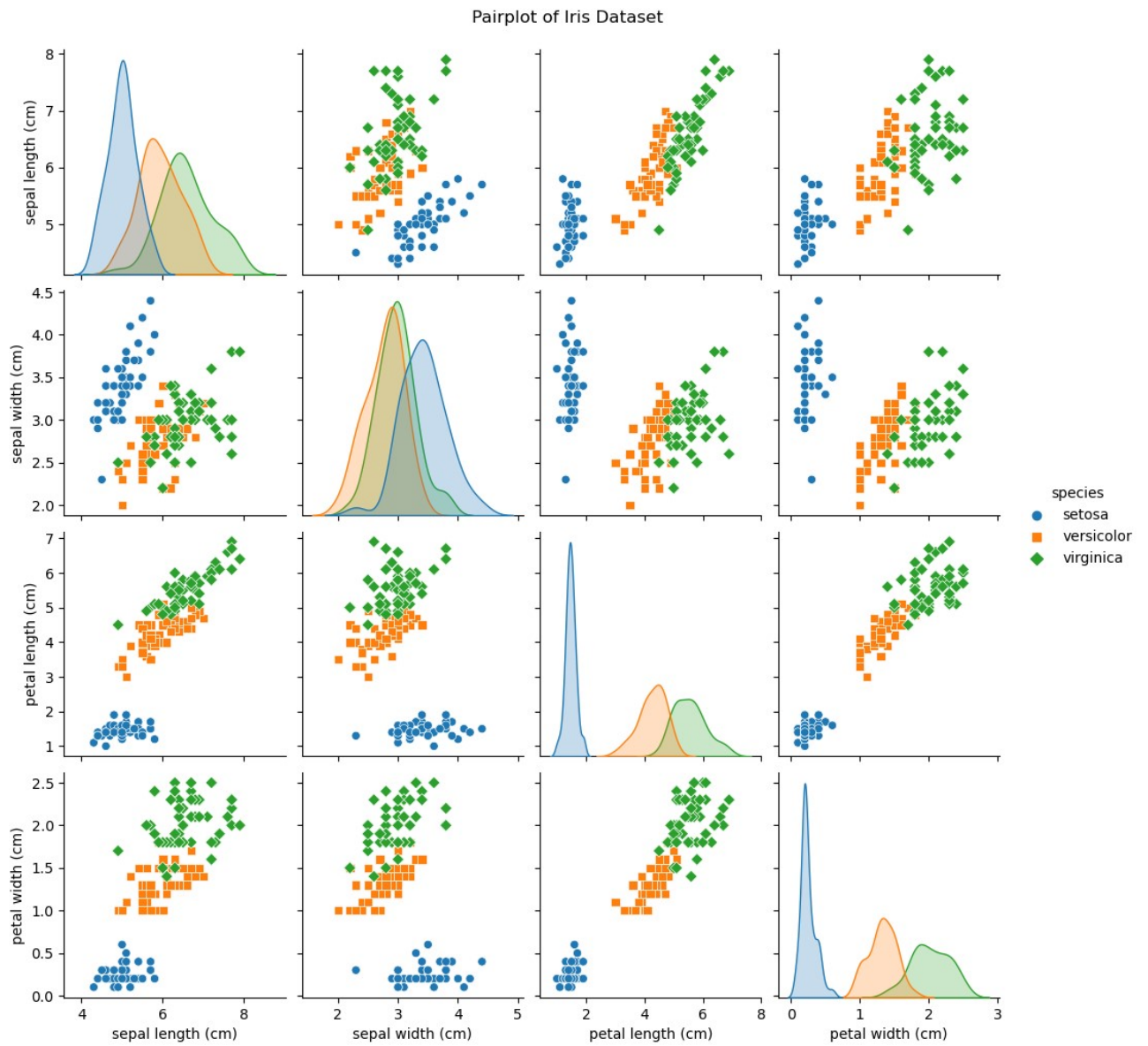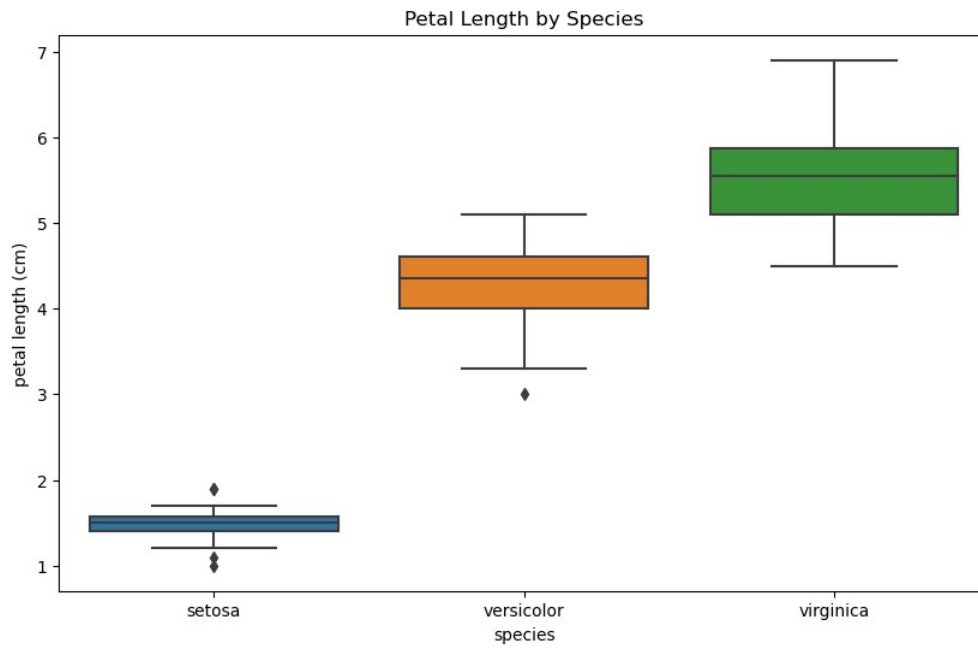
OUTPUT:
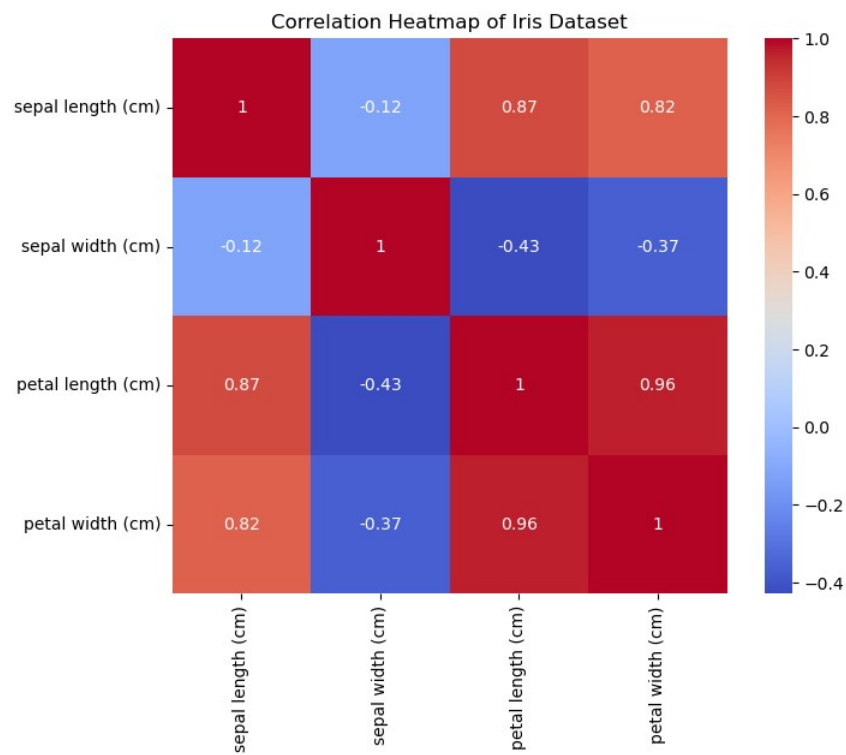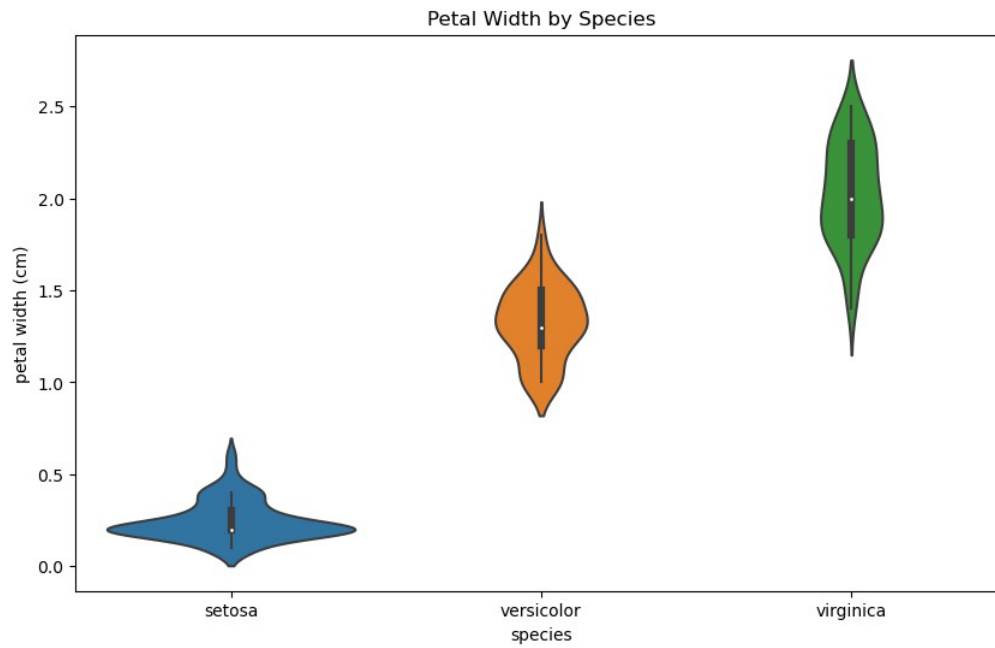
```
Numpy Array : [1 2 3 4 5]
Pandas DataFrame:
      Name  Age
0    John   28
1    Anna   24
2   Peter   35
3   Linda   32
```
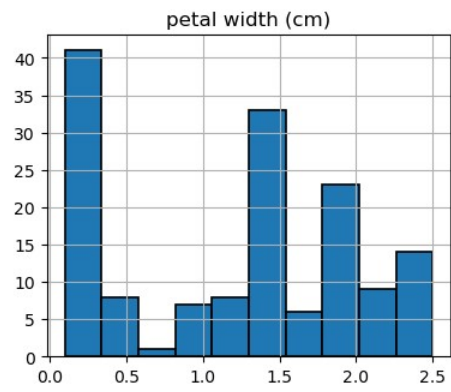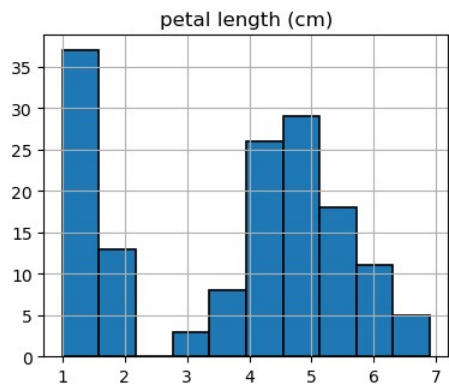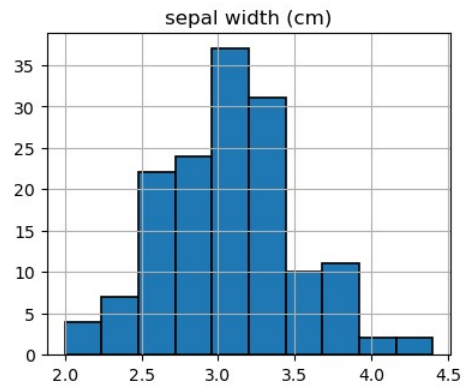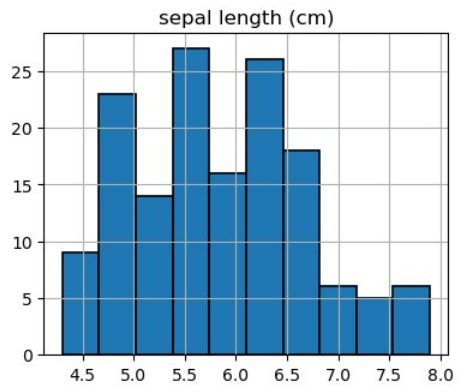
Pairplot of Iris Dataset

Sepal Length by Species

Petal Length by Species

Sepal Width by Species

Petal Width by Species

Correlation Heatmap of Iris Dataset

Feature Distributions

sepal length (cm)

sepal width (cm)

petal length (cm)

petal width (cm)

K-Means Clustering on Iris Dataset
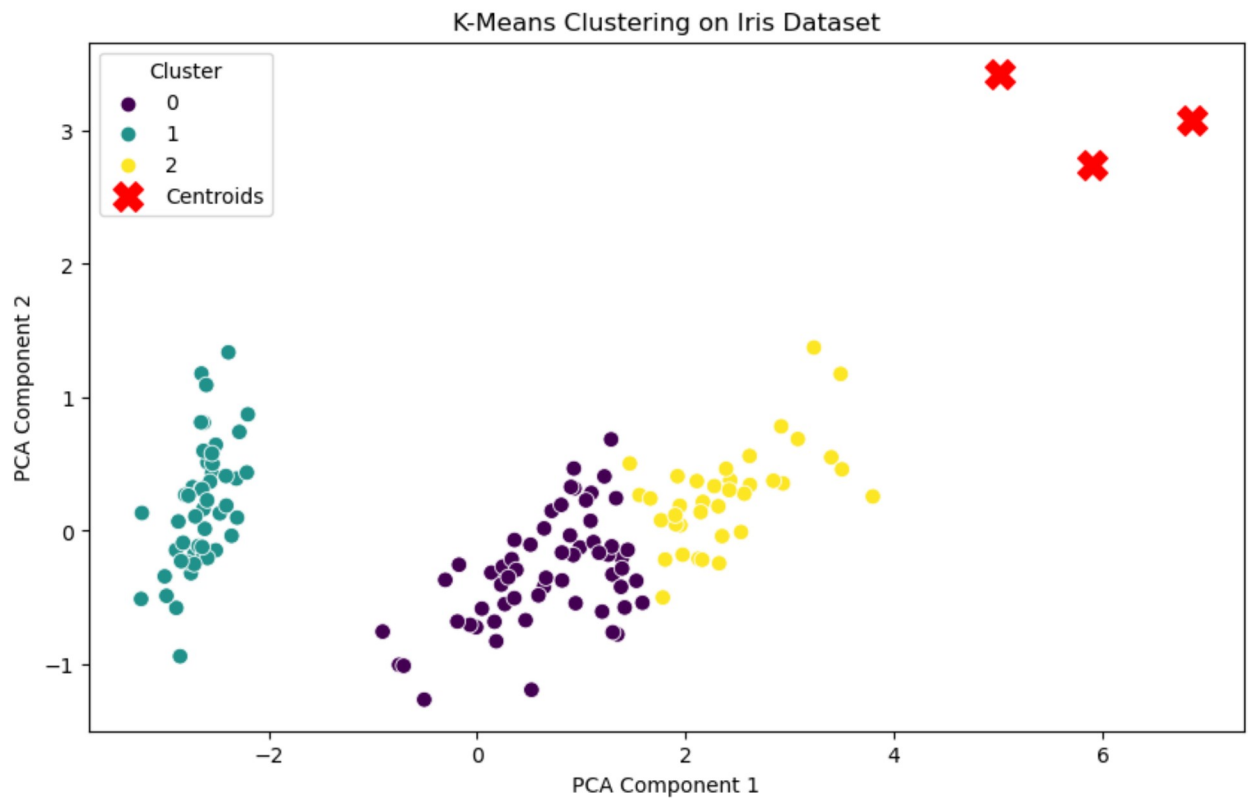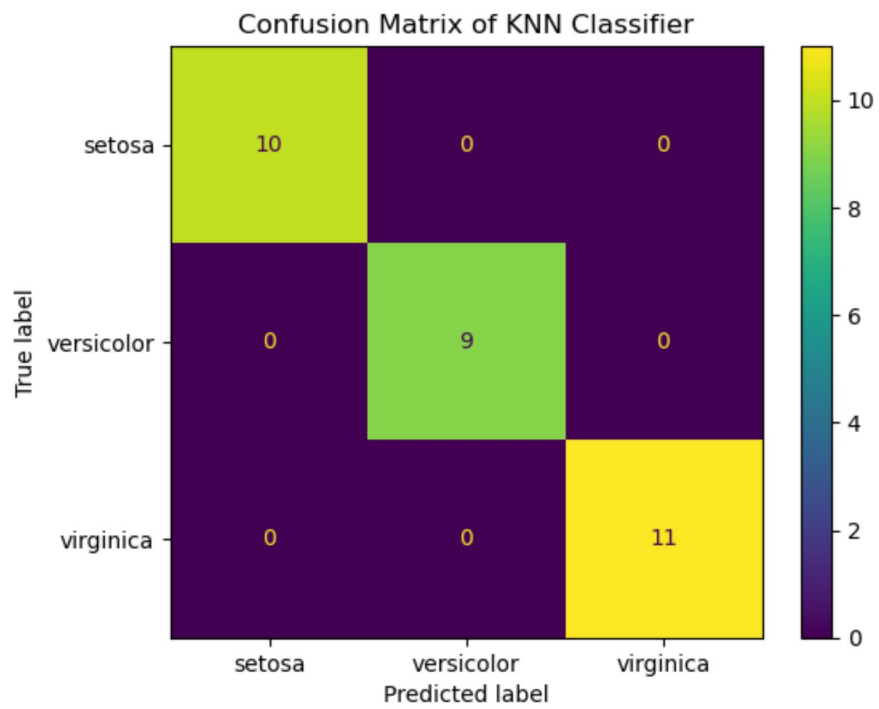
```
Confusion Matrix:
[[ 0 50  0]
 [48  0  2]
 [14  0 36]]
```

In [ ]:

Confusion Matrix of KNN Classifier

In [ ]: