import pandas as pd

import seaborn as sns

df = sns.load\_dataset("iris")

df

df.head()

df.tail()

df.describe()

df.sepal\_length.mean()

df.sepal\_length.median()

df.species.mode()

#Group the DataFrame 'df' by the 'species' column and count the occurrences in each group

df.groupby(['species']).count()

df.sepal\_length.std()

df.sepal\_width.std()

df.petal\_length.std()

df.petal\_width.std()

# Create a DataFrame 'setosa\_stats' containing descriptive statistics for 'setosa' in the 'df'

setosa\_stats = df[df['species'] == 'setosa'].describe()

print("Setosa Statistics : \n")

print(setosa\_stats)

# Create a DataFrame 'versicolor\_stats' containing descriptive statistics for 'setosa' in the 'df'

versicolor\_stats = df[df['species'] == 'versicolor'].describe()

print("Versicolor Statistics : \n")

print(versicolor\_stats)

# Create a DataFrame 'virginica\_stats' containing descriptive statistics for 'setosa' in the 'df'

virginica\_stats = df[df['species'] == 'virginica'].describe()

print("Virginica Statistics : \n")

print(virginica\_stats)

# Import seaborn and matplotlib for data visualization

import seaborn as sns

import matplotlib.pyplot as plt

# Set the figure size for the box plot

plt.figure(figsize=(10,8))

# Create a box plot for sepal length, grouped by species

sns.boxplot(x='species',y='sepal\_length',data=df)

# Set the title of the box plot

plt.title('Box Plot of Sepal Length for all Species')

# Display the box plot

plt.show()