**import** pandas **as** pd

**import** numpy **as** np

**import** seaborn **as** sns

**import** matplotlib.pyplot **as** plt

df **=** pd**.**read\_csv("iris.data")

print("--------------Describe the Dataframe----------------------")

print(df**.**describe())

print("\n")

print("--------------Shape of the Dataframe----------------------")

print(df**.**shape)

print("\n")

print("--------------First 5 rows of the Dataframe----------------------")

print(df**.**head())

print("\n")

print("--------------Last 5 rows of the Dataframe----------------------")

print(df**.**tail())

print("\n")

print("--------------Mean of the First Column----------------------")

print(df["5.1"]**.**mean())

print("\n")

print("--------------Histogram of the Dataframe (using 5 bins)----------------------")

df**.**hist(bins**=**5)

plt**.**show()

print("\n")

print("--------------Histogram of the Dataframe----------------------")

df**.**hist()

plt**.**show()

print("\n")

print("--------------Columns of the Dataframe----------------------")

print(df**.**columns)

print("\n")

print("--------------Minimum value from Each Column----------------------")

print(df**.**min())

print("\n")

print("--------------Maximum value from Each Column----------------------")

print(df**.**max())

print("\n")

print("--------------Quantile of the Dataframe----------------------")

print(df**.**quantile([0, 0.25, 0.5, 0.75, 1.0], numeric\_only**=True**))

print("\n")

print("--------------Correlation of the Dataframe----------------------")

iris\_long **=** pd**.**melt(df, id\_vars**=**'5.1')

ax **=** sns**.**boxplot(x**=**"5.1", y**=**"value", hue**=**"variable", data**=**iris\_long)

plt**.**show()

print("--------------Frequecy of each value in the first column----------------------")

print(df['5.1']**.**value\_counts())

print("\n")

print("--------------Density plot for 5.1 column----------------------")

df['5.1']**.**plot**.**density(color**=**'green')

plt**.**title('Density plot for 5.1 column')

plt**.**xlabel('Value')

plt**.**ylabel('Density')

plt**.**show()

print("\n")

print("--------------Heatmap for the Correlation----------------------")

subset\_df **=** df**.**iloc[:, :4]

plt**.**figure(figsize**=**(8, 6))

sns**.**heatmap(subset\_df**.**corr(), annot**=True**, cmap**=**'coolwarm', linewidths**=**0.5)

plt**.**title("Correlation Heatmap")

plt**.**show()