import pandas as pd

# Load the dataset

df = pd.read\_csv("iris.csv")

# Inspect the first few rows

print(df.head())

# Data types

print(df.dtypes)

# Check for missing values

print(df.isnull().sum())

# Example: Dropping rows with missing values

df\_cleaned = df.dropna()

# Example: Filling missing values

df\_filled = df.fillna(0)

task 2

print(df.describe())

# Example: Group by species and calculate mean

group\_mean = df.groupby("species").mean()

print(group\_mean)

task3

import matplotlib.pyplot as plt

# Example: Line chart for trends

plt.plot(df['sepal\_length'])

plt.title('Sepal Length Trends')

plt.xlabel('Index')

plt.ylabel('Sepal Length')

plt.show()

# Example: Bar chart comparing average petal length per species

group\_mean['petal\_length'].plot(kind='bar', title='Average Petal Length per Species')

plt.xlabel('Species')

plt.ylabel('Petal Length')

plt.show()

# Example: Histogram for sepal length distribution

df['sepal\_length'].plot(kind='hist', title='Sepal Length Distribution')

plt.xlabel('Sepal Length')

plt.show()

# Example: Scatter plot for sepal vs petal length

plt.scatter(df['sepal\_length'], df['petal\_length'])

plt.title('Sepal Length vs Petal Length')

plt.xlabel('Sepal Length')

plt.ylabel('Petal Length')

plt.show()