import matplotlib.pyplot as plt

import pandas as pd

#Function 1: line plot

def plot\_temperature\_over\_time(data\_path):

""" Defining the functions to read the data into dataframe and

to plot the line plot by customising it by using x and y axis labels, t

itle, legend and to show the plot"""

df\_temp = pd.read\_csv(data\_path)

df = pd.DataFrame(df\_temp[0:10], columns=["year", "jan", "feb", "mar"])

print(df)

plt.plot(df["year"], df["jan"], label='January')

plt.plot(df["year"], df["feb"], label='February')

plt.plot(df["year"], df["mar"], label='March')

plt.xlabel('Year')

plt.ylabel('Temperature')

plt.title('Climate: Temperature over Time')

plt.legend(loc=0)

plt.show()

def plot\_pie\_chart(file\_path):

""" Defining the functions to read the data into dataframe and

to plot the pie plot by customising it by using title,

and to show the plot"""

df\_temp = pd.read\_csv(file\_path)

df = pd.DataFrame(df\_temp[10:20], columns=["year", "spr"])

print(df)

plt.pie(df["spr"], autopct='%1.1f%%')

plt.title('Climate: Temperature during spring season')

plt.show()

def plot\_annual\_temperature(data\_file):

""" Defining the functions to read the data into dataframe and

to plot the bar plot by customising it by using tx and y axis labels,

title, legend and to show the plot"""

df\_temp = pd.read\_csv(data\_file)

df = pd.DataFrame(df\_temp[116:127], columns=["year", "ann"])

print(df)

plt.bar(df["year"], df["ann"])

plt.title('Climate: Annual Temperature Over Time')

plt.xlabel('Year')

plt.ylabel('Temperature')

plt.xticks(df["year"])

plt.show()

# Assign the filename to a variable

data\_path = '/Users/Kavi/Downloads/England Temp Data - Max.csv'

#calling the functions to plot the line plot

plot\_temperature\_over\_time(data\_path)

# Assign the filename to a variable

file\_path = '/Users/Kavi/Downloads/England Temp Data - Max.csv'

#calling the functions to plot the pie chart

plot\_pie\_chart(file\_path)

# Assign the filename to a variable

data\_file = '/Users/Kavi/Downloads/England Temp Data - Max.csv'

#calling the functions to plot the bar chart

plot\_annual\_temperature(data\_file)