Code 1: Line plot

"""In this Python script, the Pandas and Matplotlib

libraries are used to visualize office data stored in a CSV file.

The datas that are include information about the usage period,

the number of files held, and the number of documents held."""

import matplotlib.pyplot as plt

import pandas as pd

def plot\_office\_data(csv\_file,save\_file):

# Read the data from the CSV file

data = pd.read\_csv(csv\_file)

#this script is use to extort the columns

x = data['UsagePeriod'][:35]

y1 = data['NumberOfFilesHeld'][:35]

y2 = data['NumberOfDocumentsHeld'][:35]

# The program creats te line plot by using plt.plot with x as the x-axis and y1 and y2 as the two y-axes

plt.plot(x, y1, label='Number Of Files Held')

plt.plot(x, y2, label='Number Of Documents Held')

#this use to Customize the plot

plt.xlabel('UsagePeriod')

plt.ylabel('Numbers')

plt.title('Total files held in the office over years')

plt.legend()

# This plot is use to save the plot in png form with given file name

plt.savefig(save\_file)

# Display the plot

plt.show()

plot\_office\_data('office\_data.csv', 'Total files held in the office over years.png')

Code 2: Bar chart

"""In this Python coding, the Pandas and Matplotlib

libraries are used to visualize Diabetics data stored in a excel file."""

import matplotlib.pyplot as plt

import pandas as pd

def plot\_Diabetics(excel\_file, save\_file):

# Commence the list for x and y

dp\_diabetics = pd.read\_excel(excel\_file)

print(dp\_diabetics)

#this is to create Data Frame

df = pd.DataFrame(dp\_diabetics, columns=["PDU code","PDU name",

"% with HbA1c<58mmol/mol (7.5%)", "Mean HbA1c (%)"])

print(df)

# Impute local variables X and Y

x = list(df["PDU code"].iloc[:10])

y = list(df["% with HbA1c<58mmol/mol (7.5%)"].iloc[:10])

labels = df["PDU code"].iloc[0:10]

# Bar Plot

plt.figure(figsize=(18,8))

color = ('lightblue', 'blue', 'purple', 'red', 'black','yellow', 'brown', 'purple', 'red', 'green')

# In the we using bar() method

plt.bar(x, y, color=color,label=labels)

plt.title("Patients Diabetics analysis done by the hospital")

plt.xlabel("Hospital code")

plt.ylabel(" Patients Diabetics level in % ")

plt.savefig(save\_file)

# Show the plot

plt.show()

#all the function with the excel file and desirable file name to save te png

plot\_Diabetics('Diabetics.xlsx', 'Patients Diabetics analysis done by the hospital.png')

Code3: Pie chart

"""In this Python script,We use the Pandas and also Matplotlib

to visualize GDP data stored in a excel file."""

import matplotlib.pyplot as plt

import pandas as pd

def plot\_economic\_distribution(excel\_file, save\_file):

# Read data from the Excel file

GDP = pd.read\_excel(excel\_file)

df = pd.DataFrame(GDP[:10],columns=["Country",

"E1: Economy",

"Total no.of patients ex-cluded from HbA1c out come analysis"])

print(df)

plt.figure(figsize=(30,15))

#this plot is used to make pie chart

plt.pie(df["E1: Economy"], labels=df["Country"], startangle=45, shadow=True, autopct='%1.1f%%')

plt.title("Economic distribution in different countries")

plt.legend()

plt.savefig(save\_file)

# Show the plot

plt.show()

# Call the function with your Excel file and desired save file name

plot\_economic\_distribution('GDP.xlsx', 'Economic distribution in different countries')