import pandas as pd

import matplotlib.pyplot as plt

# Your existing data

data = {

"Year": [2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024],

"India Population (in billions)": [1.307, 1.322, 1.338, 1.354, 1.369, 1.383, 1.396, 1.407, 1.417, 1.428, 1.441],

"Gujarat Population (in millions)": [63.5, 64.5, 65.0, 66.0, 67.3, 68.2, 69.1, 70, 70.9, 71.7, 72.65]

}

df = pd.DataFrame(data)

# Plotting the bar graph

plt.figure(figsize=(12, 6)) # Adjust figure size as needed

# Bar width

width = 0.35

# Plotting bars for India and Gujarat

plt.bar(df["Year"] - width/2, df["India Population (in billions)"], width, label="India")

plt.bar(df["Year"] + width/2, df["Gujarat Population (in millions)"] / 1000, width, label="Gujarat (in billions)")

# Dividing by 1000 to convert to billions for better visualization

# Customizing the plot

plt.xlabel("Year")

plt.ylabel("Population (in billions)")

plt.title("Population Growth of India and Gujarat (2014-2024)")

plt.xticks(df["Year"]) # Set x-axis ticks to the years

plt.legend()

plt.grid(True) # Add gridlines for better readability

# Displaying the plot

plt.tight\_layout() # Adjust layout for better spacing

plt.show()

