31.Write a Python program to create a stacked bar plot with error bars.

Note: Use bottom to stack the women?s bars on top of the men?s bars.

Sample Data:

Means (men) = (22, 30, 35, 35, 26)

Means (women) = (25, 32, 30, 35, 29)

Men Standard deviation = (4, 3, 4, 1, 5)

Women Standard deviation = (3, 5, 2, 3, 3)

Program:

import numpy as np

import matplotlib.pyplot as plt

N = 5

menMeans = (22, 30, 35, 35, 26)

womenMeans = (25, 32, 30, 35, 29)

menStd = (4, 3, 4, 1, 5)

womenStd = (3, 5, 2, 3, 3)

ind = np.arange(N)

width = 0.35

p1 = plt.bar(ind, menMeans, width, yerr=menStd, color='red')

p2 = plt.bar(ind, womenMeans, width,

bottom=menMeans, yerr=womenStd, color='green')

plt.ylabel('Scores')

plt.xlabel('Groups')

plt.title('Scores by group\n' + 'and gender')

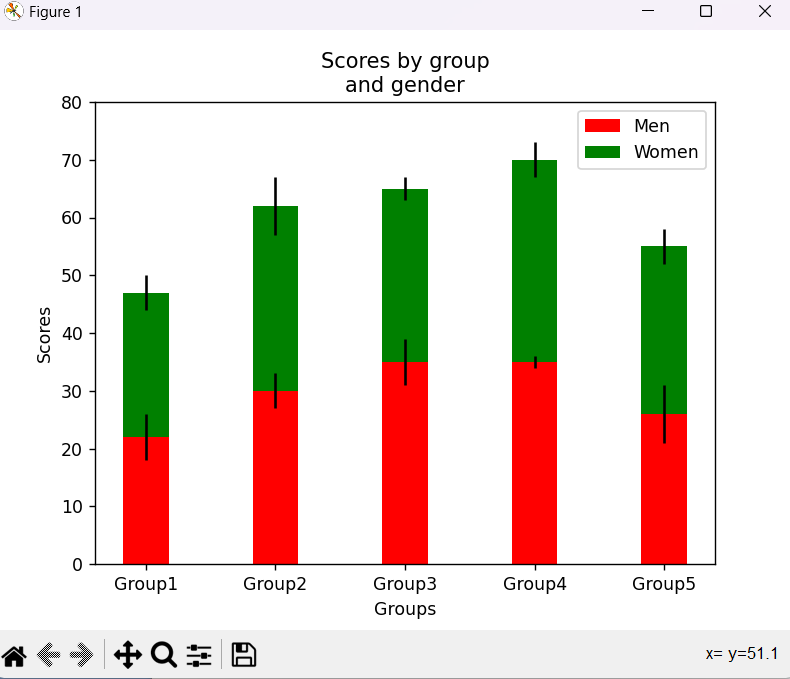
plt.xticks(ind, ('Group1', 'Group2', 'Group3', 'Group4', 'Group5'))

plt.yticks(np.arange(0, 81, 10))

plt.legend((p1[0], p2[0]), ('Men', 'Women'))

plt.show()

Output:

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