

EXP-31

Aim: To create a stacked bar plot with error bars for two group (men or women) to visualize the men values along with standard deviation errors

pseudocode:

- ↓ import the necessary libraries
- ↓ mean and standard deviation for men and
- ↓ create a list of index positions for the bars
- ↓ plot the men's bars with error bars
- ↓ stack the women's bars on top the men's bars using the bottom parameter
- ↓ Display the plot

sample input:

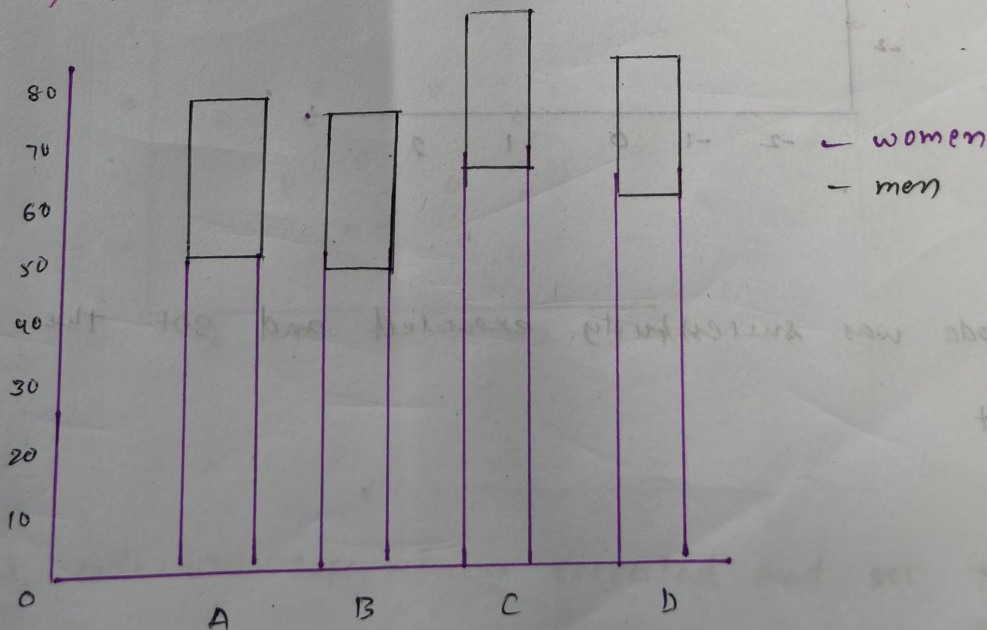
men_means = [22, 30, 35, 35, 26]

women_means = [25, 30, 30, 35, 29]

men_std = [4, 3, 4, 1, 5]

women_std = [2, 5, 2, 3, 3]

Sample output:



Result:

This code was successfully executed and got the output

```

means_women = [25, 32, 36, 33, 25]
std_men = [4, 3, 4, 1, 5]
std_women = [3, 5, 2, 3, 3]
# X-axis positions
ind = np.arange(len(means_men))
# Plotting
fig, ax = plt.subplots()
ax.bar(ind, means_men, yerr=std_men, label='Men', color='blue', alpha=0.6)
ax.bar(ind, means_women, yerr=std_women, bottom=means_men, label='Women', color='orange', alpha=0.6)
# Labels and title
ax.set(xlabel="Group", ylabel="Scores", title="Stacked Bar Plot with Error Bars", xticks=ind, xticklabels=['G1', 'G2', 'G3', 'G4', 'G5'])
ax.legend()
# Show plot
plt.show()

```

