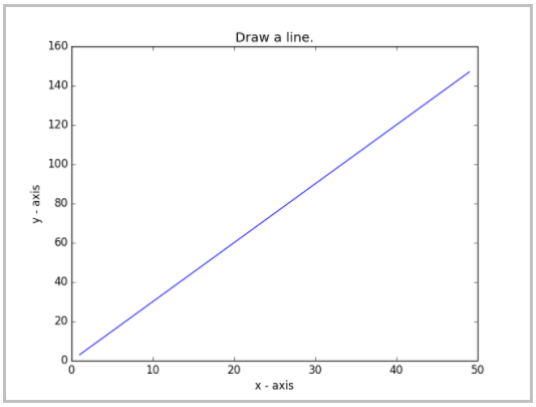
Session 3
Python Libraries Assignment

(Upload the code on the github repo, if unable to do so sent it on that whatsapp grp)

1. Write a NumPy program to create an array of 10 zeros,10 ones, 10 fives. Write a NumPy program to create an array of the integers from 30 to70.
2. Write a NumPy program to create a vector with values ranging from 15 to 55 and print all values except the first and last.
3. Write a NumPy program to create a vector with values from 0 to 20 and change the sign of the numbers in the range from 9 to 15.
4. Write a NumPy program to compute the x and y coordinates for points on a sine curve and plot the points using matplotlib.
5. Write a NumPy program to create a random 10x4 array and extract the first five rows of the array and store them into a variable. (hint: using numpy random module)
6. Draw flowing graph using matplotlib:



7. Write a Pandas program to get the powers of an array values element-wise.
   Note: First array elements raised to powers from second array
   Sample data: {'X':[78,85,96,80,86], 'Y':[84,94,89,83,86],'Z':[86,97,96,72,83]}
   Expected Output:
   X Y Z
   0 78 84 86
   1 85 94 97
   2 96 89 96
   3 80 83 72
   4 86 86 83