Line Plot

a) Create a list of x-values ranging from 0 to 10 with a step size of 0.1.

b) Define a function y = sin(x) using the NumPy library.

c) Plot the line graph of y = sin(x) against x using Matplotlib.

d) Label the x-axis as "x" and the y-axis as "y = sin(x)". e) Add a title to the plot as "Sine Function".

import numpy as np

import matplotlib.pyplot as plt

# Task 1a

x = np.arange(0, 10, 0.1)

# Task 1b

y = np.sin(x)

# Task 1c

plt.plot(x, y)

# Task 1d

plt.xlabel('x')

plt.ylabel('y = sin(x)')

# Task 1e

plt.title('Sine Function')

# Display the plot

plt.show()