# LAB ASSIGNMENT – 1

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1. import numpy as np

V1 = np.random.rand(100)

print(V1)

V1\_sorted = np.sort(V1)

print(V1\_sorted)

1. print(V1\*3)
2. print(np.mean(V1))

print(np.std(V1))

1. import numpy as np

A = np.zeros((4,3))

A = np.random.randint(9, size = (4,3))

A\_1D = A.flatten()

print(f"1D array: {A\_1D}")

1. S1 = "I am a great learner. I am going to have an awesome life."

if "am" in S1:

print("The substring is present")

count = S1.count("am")

print(f"Number of times the substring occurred: {count}")

1. S1 = "I am a great learner. I am going to have an awesome life."

S2 = "I word hard and shall be rewarded well."

S3 = S1 + S2

print(f"New string: {S3}")

1. S3\_whitespace = S3.split(" ")

S3\_period = S3.split(".")

print(f"Length of the string with whitespace: {len(S3\_whitespace)}")

print(f"Length of the string with period: {len(S3\_period)}")

1. new\_array = [words for words in S3\_whitespace if words.lower() not in ["I", "Am", "to", "and"]]

new\_array = [words for words in new\_array if len(words) <= 6]

print(f"Length of the new array: {len(new\_array)}")

1. S = "01-JUN-2021"

S\_split = S.split("-")

print(S\_split)

print(f"Date: {S\_split[0]}, Month: {S\_split[1]}, Year: {S\_split[2]}")

1. import pandas as pd

df = pd.read\_excel("C:\\Users\\year2\\Downloads\\Cities.xlsx")

df['City&State'] = df['City'] + ', ' + df['State']

df.to\_excel("New cities.xlsx", index=False)

1. import matplotlib.pyplot as mpl

import numpy as np

V1 = np.random.rand(100)

V1\_sorted = np.sort(V1)

mpl.plot(V1\_sorted, 'r')

1. V2 = V1\*\*2

mpl.plot(V1)

mpl.plot(V2)