Name : Muhammad Husnain Tariq
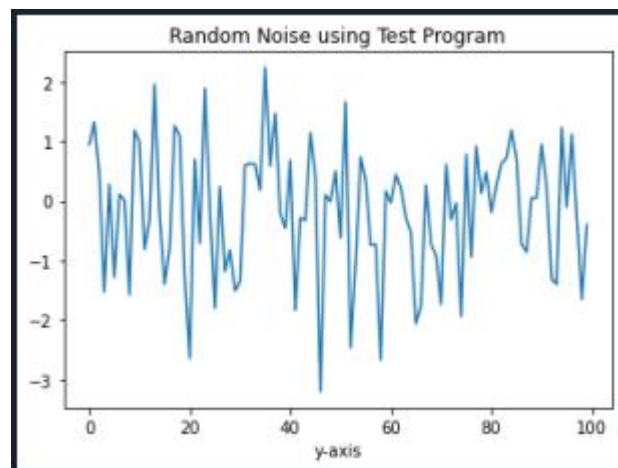
Reg No: FA20-BCE-024

LAB REPORT 1

Pre lab Tasks:

Task 1:

Execute a simple python program to check the python installation and environment setup.

import numpy as np

import matplotlib.pyplot as plt

values = np.random.randn(100)

plt.plot(values)

plt.title('Random Noise using Test Program')

plt.xlabel('x-axis')

plt.xlabel('y-axis')

plt.show()

After executing the program, you should see an output similar to the following image.

In lab Tasks :

Task 1:

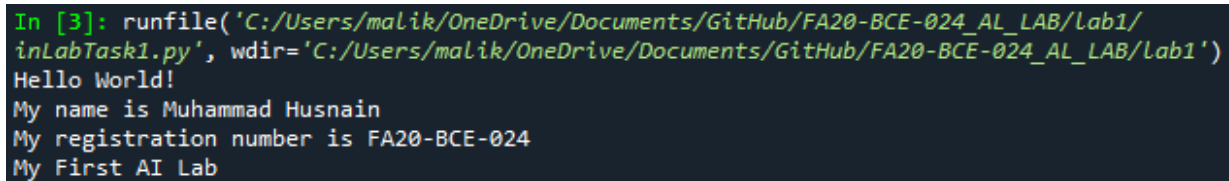**Print the following lines using one print command.**
-*- coding: utf-8 -*-

"""
Created on Thu Sep 28 04:10:04 2023

@author: Muhammad Husnain
"""

print('Hello World!\nMy name is Muhammad Husnain\nMy registration number is FA20-BCE-024\nMy First AI Lab')

After executing the program, you should see an output similar to the following image.

```
In [3]: runfile('C:/Users/malik/OneDrive/Documents/GitHub/FA20-BCE-024_AL_LAB/lab1/
inLabTask1.py', wdir='C:/Users/malik/OneDrive/Documents/GitHub/FA20-BCE-024_AL_LAB/lab1')
Hello World!
My name is Muhammad Husnain
My registration number is FA20-BCE-024
My First AI Lab
```
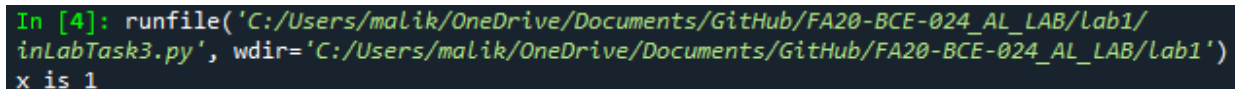
Task 3:

Assign a variable with a specific value
x = 1
if x == 1:
    print("x is 1")

After executing the program, you should see an output similar to the following image.

```
In [4]: runfile('C:/Users/malik/OneDrive/Documents/GitHub/FA20-BCE-024_AL_LAB/lab1/
inLabTask3.py', wdir='C:/Users/malik/OneDrive/Documents/GitHub/FA20-BCE-024_AL_LAB/lab1')
x is 1
```

Task 4:

Number:
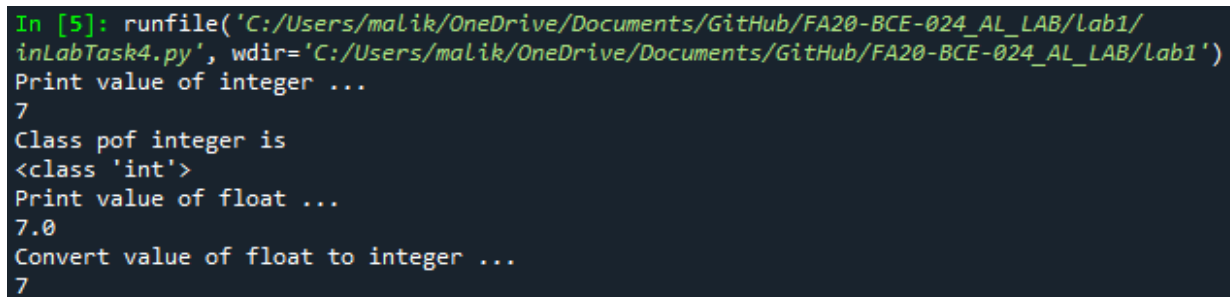
print('Print value of integer ...')

integer_us = 7

print(integer_us)

print('Class pof integer is ')

print(type(integer_us))

```python
print('Print value of float ...')

float_us = 7.0

print(float_us)

print('Convert value of float to integer ... ')

myint = int(7.3)

print(myint)
```

After executing the program, you should see an output similar to the following image.

```
In [5]: runfile('C:/Users/malik/OneDrive/Documents/GitHub/FA20-BCE-024_AL_LAB/Lab1/
inLabTask4.py', wdir='C:/Users/malik/OneDrive/Documents/GitHub/FA20-BCE-024_AL_LAB/lab1')
Print value of integer ...
7
Class pof integer is
<class 'int'>
Print value of float ...
7.0
Convert value of float to integer ...
7
```

Strings:

```python
mystring = "Hello, World!"

print (mystring)

one = 1

two = 2

three = one + two

print(three)

hello= "Hello,"

world = "World!"

helloworld = hello + " " + world

a, b = 3, 4

print (a, b)
```

After executing the program, you should see an output similar to the following image.

```
In [7]: runfile('C:/Users/malik/OneDrive/Documents/GitHub/FA20-BCE-024_AL_LAB/lab1/
untitled3.py', wdir='C:/Users/malik/OneDrive/Documents/GitHub/FA20-BCE-024_AL_LAB/lab1')
Hello, World!
3
3 4
```

List :

mylist = []

mylist.append(1)

mylist.append(2)

mylist.append(3)

print(mylist[-1])

names = ["Zaid", 3234, 2342, 3323, "jb", 234, "Husnain", 734978234, "Lois", 2384]

print("Number of names in list: {}".format(len(names)))

After executing the program, you should see an output similar to the following image.

```
In [9]: runfile('C:/Users/malik/OneDrive/Documents/GitHub/FA20-BCE-024_AL_LAB/lab1/
inLabTask4L.py', wdir='C:/Users/malik/OneDrive/Documents/GitHub/FA20-BCE-024_AL_LAB/lab1')
3
Number of names in list: 10
```