Pre-Lab

Task 1

Code

```
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.ylabel('y-axis')
plt.show()
```

The execution of the code resulted a plot which is shown below:

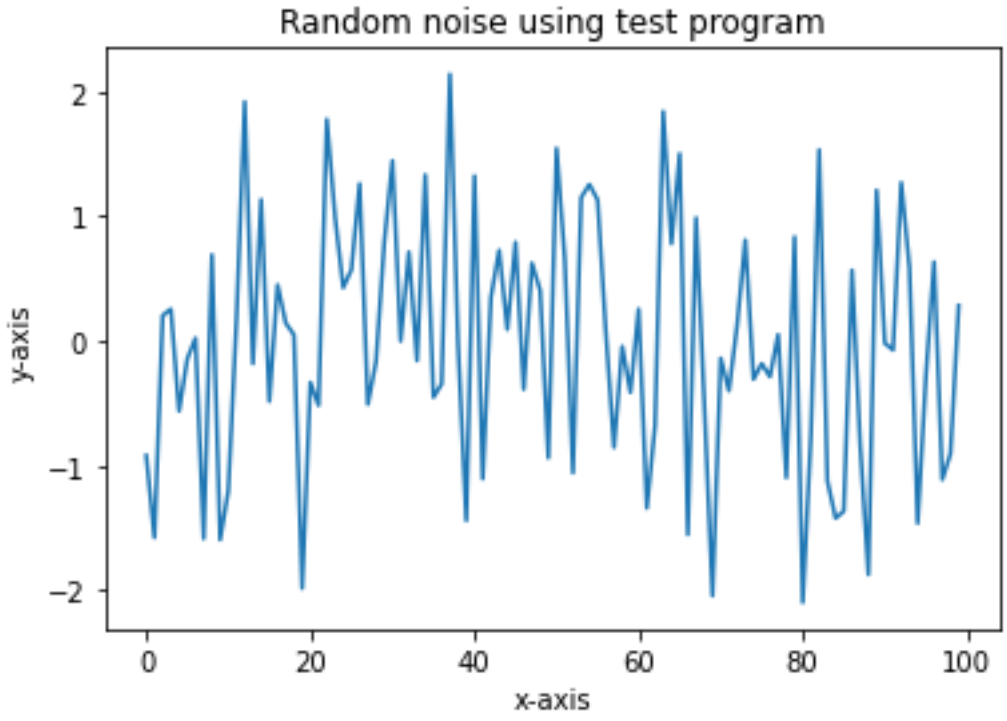

Figure 1

In-Lab

Task 1

```
print("My name is Ali Ahmad\nMy
Registeration number is FA21-
BCE-047\nMy First AI Lab")
```

` The execution of the code resulted a output which is shown below:

```
In [2]: runfile('P:/Python_Lab/Lab1/Lab_Task1.py',
wdir='P:/Python_Lab/Lab1')
My name is Ali Ahmad
My Registeration number is FA21-BCE-047
My First AI Lab
```

Figure 2

Task 2

The execution of the code resulted a output which is shown below:

```
a = 10
if a == 1:
   print("The value of a is 1")
else:
   print("The value of a is  equal to
10")
```

```
In [3]: runfile('P:/Python_Lab/Lab1/Lab_Task3.py',
wdir='P:/Python_Lab/Lab1')
The value of a is  equal to 10
```

Figure 3

Task 3

The execution of the code resulted a output which is shown below:

```
print('Print value of Integer... ')
integer_us = 5
print(integer_us)

print('Class of the integer is')
print(type(integer_us))

print('Print Value of Float...')
float_us = 7.9
print(float_us)
```

```
myfloat = float(integer_us)
print(myfloat)

print('Convert Value of float to
integer...')
myint = int(float_us)
print(myint)

mystring = "Hello World!"
print(mystring)


one = 1
two = 2
three = one + two
print(three)

hello = "Hello, "
world = "World!"
helloworld = hello +"  "+ world
print(helloworld)

a, b = 3,4
print(a,b)
```

```
In [4]: runfile('P:/Python_Lab/Lab1/Lab_Task4.py',
wdir='P:/Python_Lab/Lab1')
Print value of Integer...
5
Class of the integer is
<class 'int'>
Print Value of Float...
7.9
5.0
Convert Value of float to integer...
7
Hello World!
3
Hello,   World!
3 4
```

Figure 4

Task 4

The execution of the code resulted a output which is shown below:

```
myList = []
myList.append(1)
myList.append(2)
myList.append(3)

print(myList[-1])

names = ["Ali", 1, "Ahmed", 2,
"Farhan", 3, "Abdullah", 4]
print("Number of names in list:
{}".format(len(names)))


new_list = []

for x in names:
    if isinstance(x, str):
        new_list.append(x)
print("updated List with number of
only names in
list:{}".format(len(new_list)))

for x in new_list:
    print("{}".format(x))
```

```
In [5]: runfile('P:/Python_Lab/Lab1/Lab_Task5.py',
wdir='P:/Python_Lab/Lab1')
3
Number of names in list: 8
updated List with number of only names in list:4
Ali
Ahmed
Farhan
Abdullah
```

Figure 5