Lab Report

Pre-Lab

Task 1

As per requirements of the task basic plotting in python is as follows:

```
import numpy as np
import matplotlib.pyplot as plt


values = np.random.randn(50)
plt.plot(values)
plt.xlim(0,50)
plt.title('Random Nose using Test Program')
plt.xlabel('x axis')
plt.ylabel('y axis')
plt.show()
```

Output:

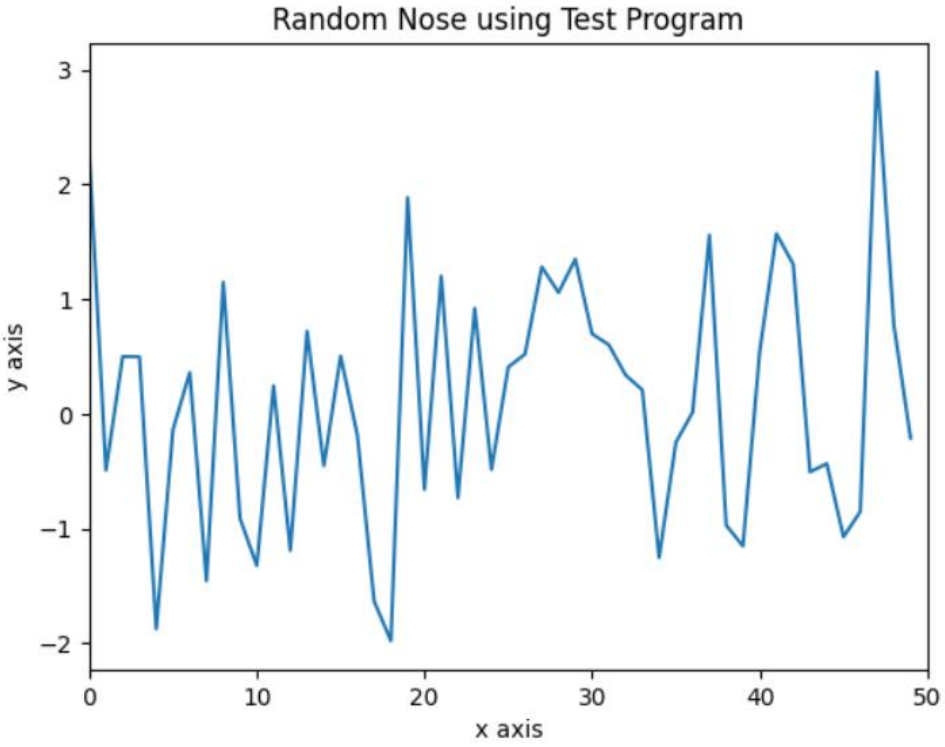

Figure 1: Figure 1 for code.

In-Lab

Task 1

```
print('''Hello World
My name is Ahsan Yousaf
My registration is FA20-BCE-082
My First AI Lab''')
```

Output:

```
In [8]: runfile('C:/Users/ahsan/.spyder-py3/
temp.py', wdir='C:/Users/ahsan/.spyder-py3')
Hello World
My name is Ahsan Yousaf
My registration is FA20-BCE-082
My First AI Lab
```

Figure 2: InLab Task 1.

Task 2

```
#%%
#cell-1
print("HELLO WORLD")

#%%
#cell-2
print("AHSAN")
```

Output:

```
In [14]: runcell(1, 'C:/Users/ahsan/.spyder-py3/temp.py')
HELLO WORLD

In [15]: runcell(2, 'C:/Users/ahsan/.spyder-py3/temp.py')
AHSAN
```

Figure 3: InLab Task 2.

Task 3

```
x = 1
if x == 1:
    print("x is 1")
```

Output:

```
In [3]: runfile('C:/Users/ahsan/.spyder-py3/
temp.py', wdir='C:/Users/ahsan/.spyder-py3')
x is 1
```

Figure 4: InLab Task 3.

Post Lab

Task 1

```
# Example of a for loop
for i in range(5):
    print("This is iteration", i + 1)
```

Output:

```
In [4]: runfile('C:/Users/ahsan/.spyder-py3/
temp.py', wdir='C:/Users/ahsan/.spyder-py3')
This is iteration 1
This is iteration 2
This is iteration 3
This is iteration 4
This is iteration 5
```

Figure 5: Post Lab Task 1.

Task 2

```
count = 0
while count < 5:
    print("This is while iteration", count + 1)

    count += 1
```

Output:

```
In [6]: runfile('C:/Users/ahsan/.spyder-py3/
temp.py', wdir='C:/Users/ahsan/.spyder-py3')
This is while iteration 1
This is while iteration 2
This is while iteration 3
This is while iteration 4
This is while iteration 5
```

Figure 6: Post Lab Task 2.

Task 3

```
# Example of an if condition
x = 10
if x > 5:
    print("x is greater than 5")
else:
    print("x is not greater than 5")
```

Output:

```
In [7]: runfile('C:/Users/ahsan/.spyder-py3/
temp.py', wdir='C:/Users/ahsan/.spyder-py3')
x is greater than 5
```

Figure : Post Lab Task 3.