PRE LAB

LAB TASK 1:

```
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")

print(values)
plt.show()
```

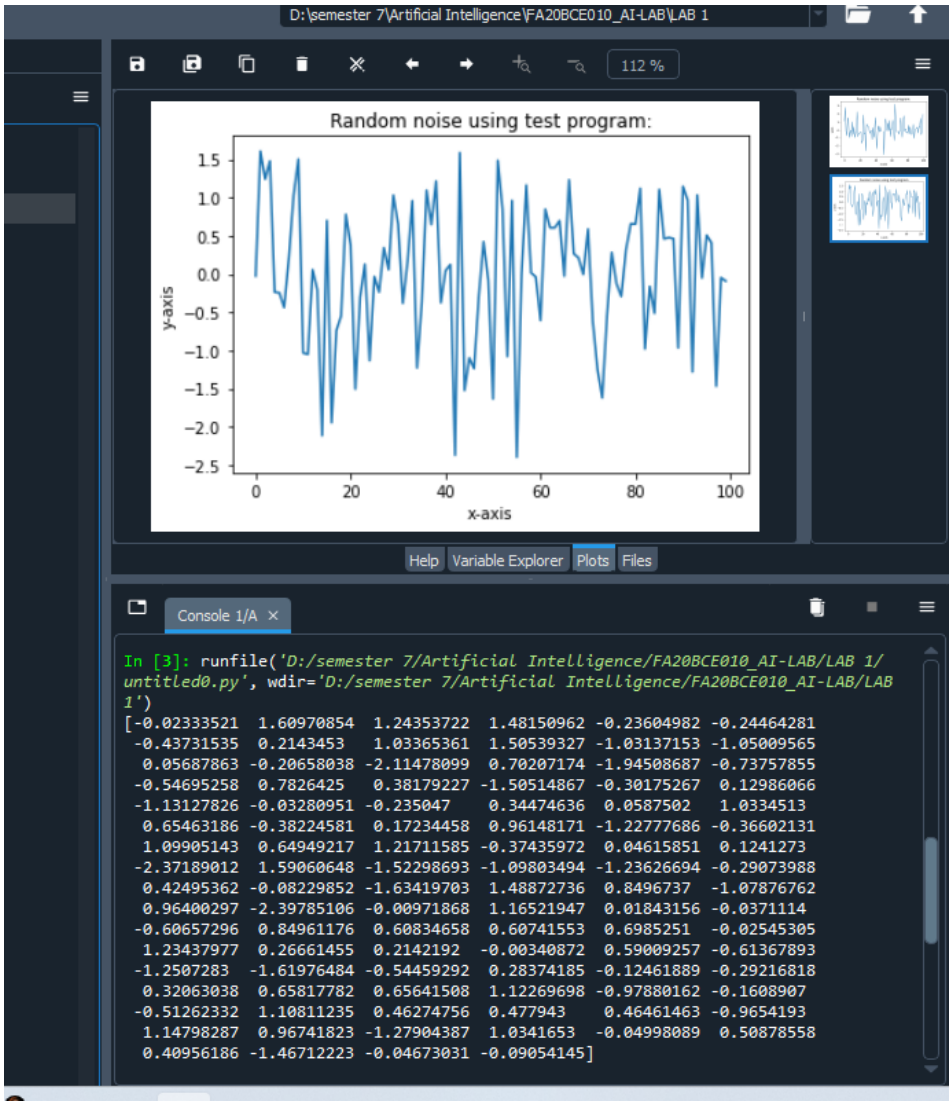


Figure 1 ploting random numbers

LAB TASK 2:

```
print("Hello World !!")

print("MY NAME IS MUHAMMAD BILAL")

print("MY REGISTRATION NUMBER IS FA20-BCE-010")

print("MY FIRST AI LAB")
```

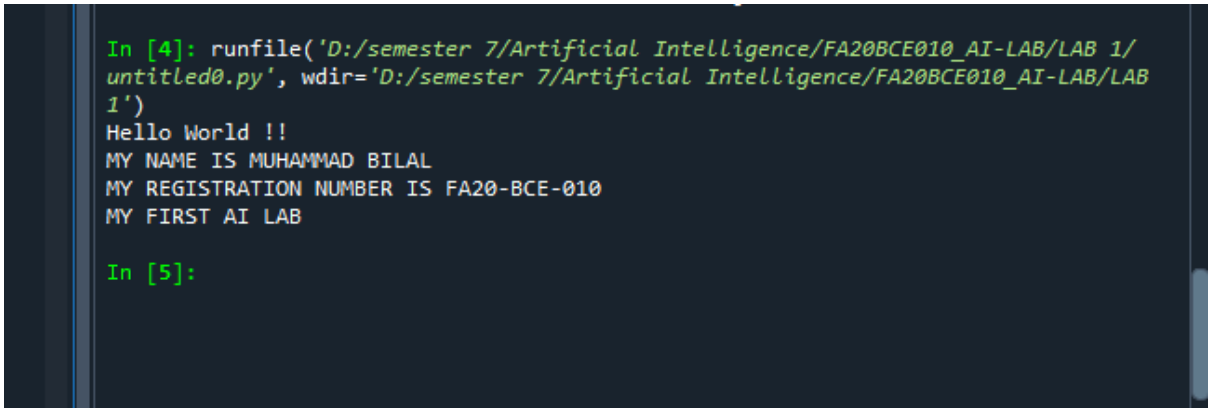


Figure 2 simple print command

LAB TASK 3:

```
X= 1
if X==1 :
   print('X IS EQUAL TO 1')
```

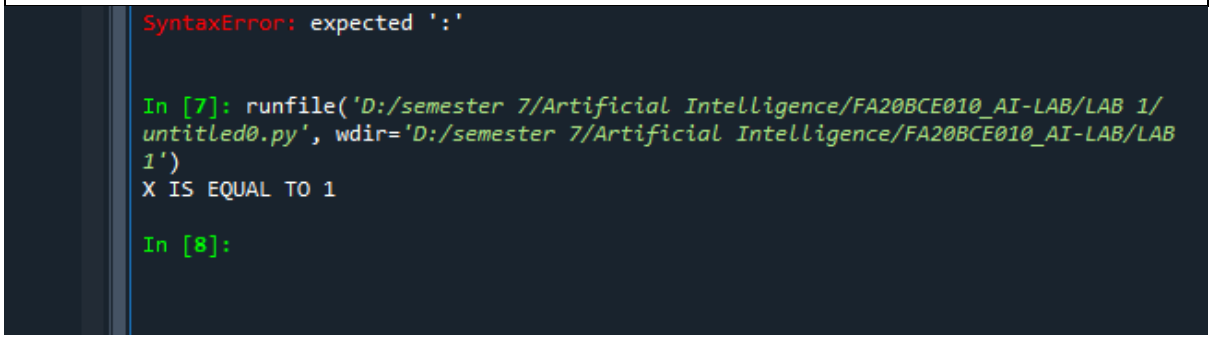


Figure 3 indentation and if statement

IN LAB

TASK 4: NUMBERS

```
print('print value of integer')
integer_us = 4;
print(integer_us)

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

print('Print value of float ')
float_us = 7.5
print(float_us)

myfloat = float(integer_us)

print(myfloat)

print('Convert value of float to integer')

myint = int(float_us)

print(myint)
```

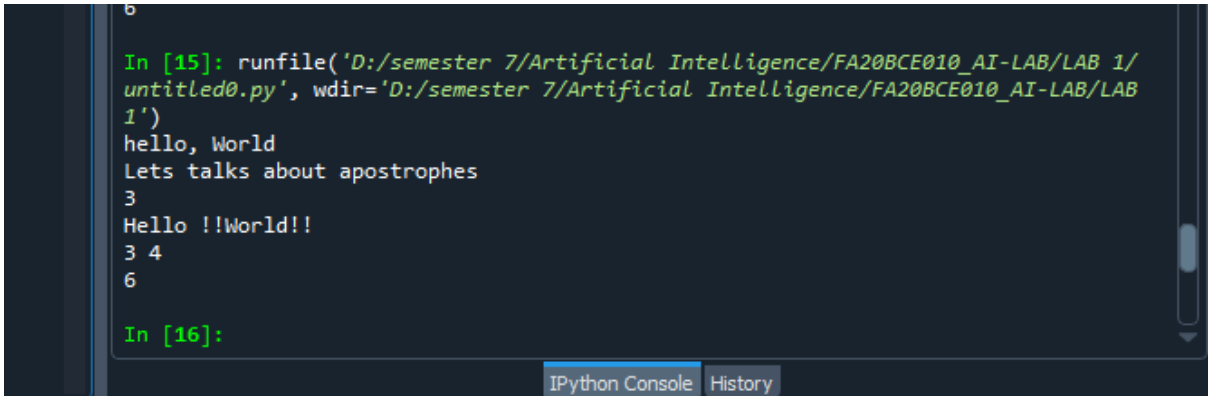
```
4

In [9]: runfile('D:/semester 7/Artificial Intelligence/FA20BCE010_AI-LAB/LAB 1/
untitled0.py', wdir='D:/semester 7/Artificial Intelligence/FA20BCE010_AI-LAB/LAB
1')
print value of integer
4
Class of integer is :
<class 'int'>
Print value of float
7.5
4.0
Convert value of float to integer
7

In [10]:
```

Figure 4 use of type keyword and conversion from int to float vice versa

TASK 4: STRINGS

```
mystring = 'hello, World'
print(mystring)

mystring = "Lets talks about apostrophes"
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)

print( one + two + three)
```



TASK 4: LISTS

```
mylist  = []
mylist.append(13)
mylist.append(25)
mylist.append(38)
mylist.append(39)
mylist.append(40)
# first element of list
print(mylist[0])

# last element of list
print(mylist[-1])

# subset of list
print(mylist[1:3])
```

```
In [19]: runfile('D:/semester 7/Artificial Intelligence/FA20BCE010_AI-LAB/LAB 1/
untitled0.py', wdir='D:/semester 7/Artificial Intelligence/FA20BCE010_AI-LAB/LAB
1')
13
40
[25, 38]

In [20]:
```

Figure 5 use of list and their ordered elements

```
names = ['james', 3423, 343, 443, 'eric' ,43,'jessica',
       54325322, 'lois ', 563]

print('number of names in list : {}'.format(len(names)))

new_names = []

for n in names:
   if isinstance(n, str):
      new_names.append(n)

new_names.sort()
print('Cleaned up number of names in list : {}' . format(len(new_names)))


for i , n in enumerate(new_names):
   print('{}. {}'.format(i+1, n))
```

```
In [21]: runfile('D:/semester 7/Artificial
Intelligence/FA20BCE010_AI-LAB/LAB 1/untitled0.py',
wdir='D:/semester 7/Artificial Intelligence/
FA20BCE010_AI-LAB/LAB 1')
number of names in list : 10
Cleaned up number of names in list : 4
1. eric
2. james
3. jessica
4. lois

In [22]:
```

Figure 6 data handling or extracting from object with multiple type of elements