LAB 1 Viswatara Kalamsetty, 210905170, Roll no 29, CSE Sem 6, Section A

1.

```
counter = 100 # An integer assignment
miles = 1000.0 # A floating point
name = "John" # A string
print (counter)
print (miles)
print (name)
```

```
210905170_viswatara@prg:~/lab1$ python3 sol.py
100
1000.0
John
```

2.

```
a = b = c = 1
print(a)
print(b)
print (c)
a, b, c = 1, 2, "john"
print(a)
print(b)
print (c)
```

```
210905170_viswatara@prg:~/lab1$ python3 sol.py
1
1
1
1
2
john
```

3.

```
a = 5
b= 4.56

print (5*a)
print (a/2)
print(a**2)
```

```
210905170_viswatara@prg:~/lab1$ python3 sol.py
25
2.5
25
```

4.

```
str = 'Hello World!'
print (str) # Prints complete string
print (str[0]) # Prints first character of the string
print (str[2:5]) # Prints characters starting from 3rd to 5th
print (str[2:]) # Prints string starting from 3rd character
```

```
print (str * 2) # Prints string two times
print (str + "TEST") # Prints concatenated string
```

```
210905170_viswatara@prg:~/lab1$ python3 sol.py
Hello World!
H
llo
llo World!
Hello World!Hello World!
Hello World!TEST
```

5.

```
var1 = 'Hello World!'
print ("Updated String :", var1[:6] + 'Python')

print( "My name is %s and weight is %d kg!" % ('Abay', 55))

str = "this is string example wow!!!";
print (str.capitalize())

str = "this is string example ... wow!!!";
str.count( 's')

str.find('example')

str = "THIS IS STRING EXAMPLE ... WOW!!!";
print (str.lower())

str = "this is string example
print (str.swapcase())
```

```
210905170_viswatara@prg:~/lab1$ python3 sol.py
Updated String : Hello Python
My name is Abay and weight is 55 kg!
This is string example wow!!!
this is string example ... wow!!!
THIS IS STRING EXAMPLE ... WOW!!!
210905170_viswatara@prg:~/lab1$
```

6.

```
list = [ 'abcd', 786 , 2.23, 'john', 70.2 ]
tinylist = [123, 'john']
print (list) # Prints complete list
print (list[0]) # Prints first element of the list
print (list[1:3]) # Prints elements starting from 2nd till 3rd
print (list[2:]) # Prints elements starting from 3rd element
print (tinylist * 2) # Prints list two times
print (list + tinylist) # Prints concatenated lists
```

```
210905170_viswatara@prg:~/lab1$ python3 sol.py
['abcd', 786, 2.23, 'john', 70.2]
abcd
[786, 2.23]
[2.23, 'john', 70.2]
[123, 'john', 123, 'john']
['abcd', 786, 2.23, 'john', 70.2, 123, 'john']
```

7.

```
list = ['physics', 'chemistry', 1997, 2000];
list.append('maths')
print(list)
del list[2]
print(list)
print('physics' in list)
print(('english' in list))
print(len(list))
print(list.count('physics'))
```

```
210905170_viswatara@prg:~/lab1$ python3 sol.py
['physics', 'chemistry', 1997, 2000, 'maths']
['physics', 'chemistry', 2000, 'maths']
True
False
4
1
```

8.

```
list = ['physics', 'chemistry', 1997, 2000];
list.pop()
print(list)

list.insert (2, 'maths')
print(list)

list.remove('chemistry')
print(list)

list.reverse()
print(list)
```

```
210905170_viswatara@prg:~/lab1$ python3 sol.py
['physics', 'chemistry', 1997]
['physics', 'chemistry', 'maths', 1997]
['physics', 'maths', 1997]
[1997, 'maths', 'physics']
```

9.

```
num=float(input('Enter a number:'))
if num>0:
        print('pos number')
elif num==0:
```

```
        print('zero')
else:
        print('Neg number')

x=float(input('Enter a number:'))
if x<10:
        print('smaller')
if x>20:
        print('bigger')
print('Finished')
```

```
210905170_viswatara@prg:~/lab1$ python3 sol.py
Enter a number:-1
Neg number
Enter a number:3
smaller
Finished
```

10.

```
x=5
print('Before 5')
if x==5:
        print ('this is 5')
        print('still 5')
print('After 5')
print('Before 6')
if x==6:
        print('this is 6')
print ('After 6')

x=float(input('Enter a number:'))
if x<20:
        print('Below 20')
elif x<10:
        print('Below 10')
else:
        print('something else')

x=42
if x>1:
        print('above one')
        if x<100:
                print('less than 100')
print('All done')

age=15
b=('kid' if age<18 else 'adult')
print(b)
#this will print ‘kid’
```

```
210905170_viswatara@prg:~/lab1$ python3 sol.py
Before 5
this is 5
still 5
After 5
Before 6
After 6
Enter a number:18
Below 20
above one
less than 100
All done
kid
```

11.

```
for val in [5,4,3,2,1]:
        print(val)
print ('Done')

stud=['Ram','Vijay','Nithya','Anu','Ramesh','suja']
for k in stud:
        print('Hello:', k)
print('done')

for i in range(5):
        print(i)
        if i>2:
                print('Bigger than 2')
        print('Done with i',i)

x=int(input('Enter a number:'))
for i in range(1,x+1):
        if x%i ==0:
                print(i)
x=10


from math import *
x= [9, 41, 12, 3, 74, 15]
Largest=-inf
for i in x:
        if i>Largest:
                Largest=i
print(Largest)

from math import *
x= [9, 41, 12, 3, 74, 15]
smallest=inf
for i in x:
        if i<smallest:
                smallest=i
```

```
print(smallest)

from math import *
x= [9, 41, 12, 3, 74, 15]
count=sum=avg=0
for i in x:
        count=count+1
        sum=sum+1
avg=sum/count
print(count)
print(sum)
print(avg)

from math import *
x= [9, 41, 12, 3, 74, 15]
for i in x:
        if i>20:
                print (i)

from math import *
x= [9, 41, 12, 3, 74, 15]
res=[]
for i in x:
        if i>20:
                res.append(i)
import numpy as np
y=np.zeros(len(x))
for i in range(len(x)):
        if x[i]>20:
                y[i]=x[i]
print(y)

price = 100
if price > 100:
        print("price is greater than 100")
elif price == 100:
        print("price is 100")
elif price < 100:
        print("price is less than 100")

# initialize the variable
i = 1
n = 5
# while loop from i = 1 to 5
while i <= n:
 print(i)
 i = i + 1

total = 0
number = int(input('Enter a number: '))
```

```
# add numbers until number is zero
while number != 0:
 total += number # total = total + number
# take integer input again
 number = int(input('Enter a number: '))
 print('total =', total)
```