

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!'
```

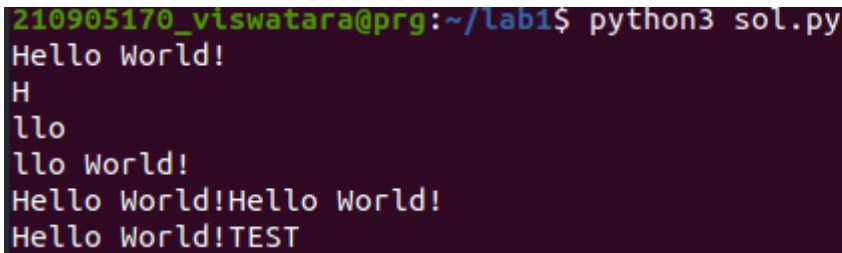
```
print (str) # Prints complete string
```

```
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')
```

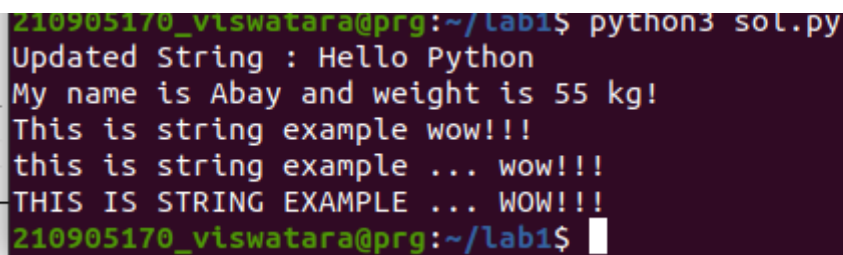
```
str.find('example')
```

```
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.

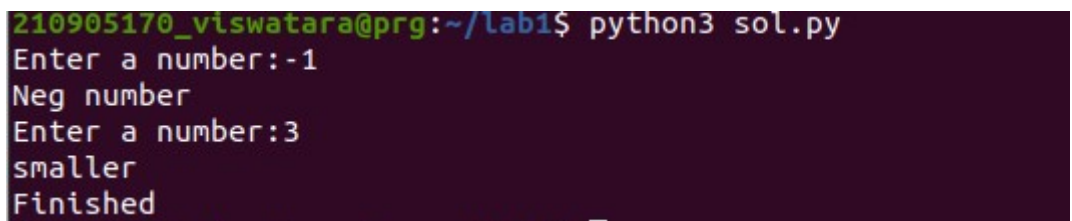
```
num=float(input('Enter a number:'))
if num>0:
    print('pos number')
elif num==0:
```

```

        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_vlswatara@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_vlswatara@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)
```

```
10903170_vtswata@gmail: ~/tab1$ python3 soc.py
5
4
3
2
1
Done
Hello: Ram
Hello: Vijay
Hello: Nithya
Hello: Anu
Hello: Ramesh
Hello: suja
done
0
Done with i 0
1
Done with i 1
2
Done with i 2
3
Bigger than 2
Done with i 3
4
Bigger than 2
Done with i 4
Enter a number:4
1
2
4
74
3
5
5
1.0
41
74
[ 0. 41.  0.  0. 74.  0.]
price is 100
1
2
3
4
5
Enter a number: 5
Enter a number: 0
```