1. Implement Python Script to perform various operations on a string using string libraries.

Code

```
s = "heLLo world"

s2 = s.capitalize()

print(s2)

s3=s.upper()

print(s3)


s4=s.lower()

print(s4)
```

Output

```
Hello world

HELLO WORLD

hello world
```

2. Write a program to perform different arithmetic operations on numbers in python

Code

```
num1 = int(input('Enter First number: '))

num2 = int(input('Enter Second number '))

add = num1 + num2

dif = num1 - num2

mul = num1 * num2

div = num1 / num2

print('Sum of ',num1 ,'and' ,num2 ,'is :',add)

print('Difference of ',num1 ,'and' ,num2 ,'is :',dif)

print('Product of' ,num1 ,'and' ,num2 ,'is :',mul)

print('Division of ',num1 ,'and' ,num2 ,'is :',div)
```

Output

```
Enter First number: 5

Enter Second number 2
```

Sum of 5 and 2 is : 7

Difference of 5 and 2 is : 3

Product of 5 and 2 is : 10

Division of 5 and 2 is : 2.5

3. Implement Python Script to print the sum of N natural numbers.

Code

```python
num = int(input("Enter the limit: "))
if num < 0:
  print("Enter a positive number")
else:
  sum = 0
  while(num > 0):
    sum += num
    num -= 1
  print("The sum is", sum)
```

Output

Enter the limit: 16

The sum is 136

 4. Write a python program to print a number that is positive/negative using if-else.

Code

```python
num = float(input("Enter a number: "))
if num > 0:
  print("Positive number")
else:
  print("Negative number")
```

Output

Enter a number: 8

Positive number

5. Implement Python script to print factorial of a number.

Code

```
num = int(input("Enter a number: "))
factorial = 1
if num < 0:
   print("Sorry, factorial does not exist for negative numbers")
elif num == 0:
   print("The factorial of 0 is 1")
else:
   for i in range(1,num + 1):
      factorial = factorial*i
   print("The factorial of",num,"is",factorial)
```

Output

```
Enter a number: 4
The factorial of 4 is 24
>
```

6. Create a list and perform the following methods

insert()

remove()

append()

len()

pop()

clear()

Code

```
list=[1,2,3,4]
list.insert(3, '8')
print('List:', list)
```

```
list.remove(1)

print('List:', list)



list.append(6)

print('List:', list)



print(len(list))



list.pop()

print('List:', list)



list.clear()

print('List:', list)
```

Output

```
List: [1, 2, 3, '8', 4]

List: [2, 3, '8', 4]

List: [2, 3, '8', 4, 6]

5

List: [2, 3, '8', 4]

List: []
```

7. Create a dictionary and apply the following methods

Print the dictionary items

access items

 use get()

Change values

 Use len()

Code

```
Dict = {1: 'lisa', 2: 'elisabath'}

print(Dict)
```

```
x = Dict[1]

print(x)

x = Dict.get(2)

print(x)


Dict[3]="joji"

print(Dict)


print(len(Dict))
```

Output

```
{1: 'lisa', 2: 'elisabath'}

lisa

elisabath

{1: 'lisa', 2: 'elisabath', 3: 'joji'}

3
```