

Assignment-2(RID: 001,Madhur Jodhwani)

1. Create a module named as Arithmetic which contains 4 functions as Add() for addition, Sub() for subtraction, Mult() for multiplication and Div() for division. All functions accept two parameters as number and perform the operation. Write a python program which calls all the functions from Arithmetic module by accepting the parameters from user.

```
#Calc.py
def Add(no1,no2):
    return no1+no2

def Sub(no1,no2):
    return no1-no2

def Mult(no1,no2):
    return no1*no2

def Div(no1,no2):
    return no1/no2
```

```
#My.py
import Calc

num1=int(input())
num2=int(input())

ans_add=Calc.Add(num1,num2)
ans_sub=Calc.Sub(num1,num2)
ans_mult=Calc.Mult(num1,num2)
ans_div=Calc.Div(num1,num2)
print(ans_add)
print(ans_sub)
print(ans_mult)
print(ans_div)
```

2. Write a program which accepts one number and displays the below pattern.

Input : 5

Output :

* * * * *

* * * * *

* * * * *

* * * * *

* * * * *

```
def Pattern(num):
    i=0
    while i<num:
        j=0
        while j<num:
            print("*",end=" ")
            j=j+1
        print()
        i=i+1

no=int(input())

Pattern(no)
```

3. Write a program which accept one number from user and return its factorial.

Input : 5 Output : 120

```
def Factorial(num):
    i=1
    while num>0:
        i=i*num
        num=num-1
    return i

no=int(input())
ans=Factorial(no)
print(ans)
```

4. Write a program which accept one number from user and return addition of its factors.

Input : 12 Output : 16 (1+2+3+4+6)

```
import math

def SumF(num):
    if num==1:
        return 1
    sum=0
```

```

    for i in range(2,(int)(math.sqrt(num))+1):
        if num%i==0:
            if i==(num/i):
                sum=sum+i
            else:
                sum=sum+(i+num//i)
    return sum+1

no=int(input())
ans=SumF(no)
print(ans)

```

5. Write a program which accept one number for user and check whether number is prime or not.

Input : 5

Output : It is Prime Number

```

def ChkPrime(num):
    if num > 1:
        for i in range(2, num):
            if (num % i) == 0:
                print(num, "is not a prime number")
                break
        else:
            print(num, "is a prime number")
    else:
        print(num, "is not a prime number")

no=int(input())
ChkPrime(no)

```

6. Write a program which accept one number and display below pattern.

Input : 5

Output :

```

* * * * *

* * * *

* * *

* *

*

```

```
def SlopePattern(num):
    i=num
    while i>0:
        j=0
        while j<i:
            print("*",end=" ")
            j=j+1
        print()
        i=i-1

no=int(input())
SlopePattern(no)
```

7. Write a program which accept one number and display below pattern.

Input : 5

Output :

1 2 3 4 5

1 2 3 4 5

1 2 3 4 5

1 2 3 4 5

1 2 3 4 5

```
def PrintNums(num):
    i=0
    while i<num:
        j=1
        while j<=num:
            print(j,end=" ")
            j=j+1
        print()
        i=i+1

no=int(input())
PrintNums(no)
```

8. Write a program which accept one number and display below pattern.

Input : 5

Output :

1
1 2
1 2 3
1 2 3 4
1 2 3 4 5

```
def PrintSlope(num):  
    i=1  
    while i<=num:  
        j=1  
        while j<=i:  
            print(j,end=" ")  
            j=j+1  
        print()  
        i=i+1  
  
no=int(input())  
PrintSlope(no)
```

9. Write a program which accept number from user and return number of digits in that number.

Input : 5187934

Output : 7

```
def numLen(num):  
    i=0  
    while num != 0:  
        i=i+1  
        num=num//10  
    print(i)  
  
no=int(input())  
numLen(no)
```

10. Write a program which accept number from user and return addition of digits in that number.

Input : 5187934 Output : 37

```
def SumDigits(num):  
    sum=0  
    while num>0:  
        i=num%10  
        sum=sum+i
```

```
        num=num//10
    print(sum)

no=int(input())
SumDigits(no)
```