Lab Assignments:-1

SET-A

1] python program to calculate the Area of a Triangle.

```
b = float (input ("Enter the base :"))
h = float (input (" enter the height :"))
  area = 1/2 * b*h
print( "area of triangle :: ", area)
```

output:-

Enter the base : 3
Enter the height : 6.8
Area of a triangle : 6.8

2] python program to swap Two variables

```
a = input ("Enter the value1: ")
b = input ( Enter the value2 :")
  Teamp a
   a=b
print (" swaping value 1:", a)
print (" swaping value 2:", b)
```

output:-

Enter the value 1 : 10
Enter the Valve : 20
swaping valve 1 : 20
swaping valve2 : 10

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3] python program to Generate a Random number

```
import random
print (random.randorm (1.9))
print (random.randrange (1,9,2))
```

output: 2
1

SET - B

1] write a python program to check if a number is positive negative or zero

```
num = int (input ("enter the number"))
if (num == 0):
print ("number is zero")
else if (Num > 0):
print ("number is positive")
else:
print ("number is negative")
```

output:-

Enter the number = 2^2
number is positive

2] write a python program to check if a number is odd or Even

```
num = int (input ("enter the number"))
if (num % 2 == 0):
```

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```
    print (" number is even")
else:
    print (" number is odd")
```

output :-

Enter the number : 4
number is even.

3] write a python program to check prime number

```
num = int (input ("enter the number"))
flag = 0
for i in rang (2, num):
    if ( num % i == 0);
        flag = 1
if ( flag == 0):
print ("Number is prime")
    else
    print ("Number is not prime")
```

output :-

Enter the number : 7
Number is prime

4] Write a python program to check Armstrong number

```
num = int (input (" Enter the number"))
    sum = 0
    num1 = num
while (num1 > 0):
    d = num1 % 10
    num1 = int (num1 / 10)
    sum = sum + d * d * d
    if (num == sum):
print( " number is armstrong")
else:
print ( "number is not armstrong")
```

Output :-

```
Enter the number : 153
number is armstrong
```

5] Write a python program to find the factorial of a number

```
num = int (input (" Enter the number "))
    fact = 1
for i in rang (1, num+1):
    fact = fact * i
printf ( " factorial = ", fact)
```

Output :-

```
Enter the number : 4
factorial = 24
```

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PROGRAMS FOR PRACTICE:-

1] python program to convert kilometers to miles

```
km = float (input (" Enter the kilo kilometers "))
mile = km * 0.62197
print ("miles :", mile)
```

output :

Enter the kilometers = 10
miles : 6.219699999.

2] python program to convert celsius to fahrenheit

```
cel = float (input ("enter the celcuius :"))
for = cel * (9/5) + 32
print ("fahrenhite:", far)
```

output :-

Enter the ~~celu~~ celcius : 184
fahrenite : 219.20000002

3] write a python to check leap year

```
yr = int (input ("Enter the year"))
if (yr % 4 == 0):
print ("leap year")
else:
print ("Not leap year")
```

output :- Enter the year : 2000
leap year.

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4] Write a python program to print all prime numbers in an Interval

```
a= int (input ("Enter the starting interval:"))
b= int (input ("Enter the ending interval:"))
for n in rang (a,b):
    flag=0
    for i in rang (2,n):
        if (n%.i==0):
            flag=1
            break
    if (flag==0):
        print (n)
```

Output:-

```
Enter the starting point:1
Enter the ending point:3
1
2
3
```

5] Write a python program to print the fibonacci sequence

```
F=0
s=1
print ("fibonacci series:", f, s, end = "\t")
for i in rang (1,10)
    t=f+s
    print (t, end = "\t")
    f=s
    s=t
```

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Output :-

fibonacci series :: 0 1 1 2 3 5 8 13 21 34 55

6] Write a python program to find Armstrong number in an Interval

```
a= int (input (" starting number::"))
b = int (input (" Ending number::"))
  for i in range (a,b):
        n=i
        s = 0
  while (n>0):
        d = n%10
        n = int (n/10)
        s= s+(d*d*d)
        if (s==i): print (i)
```

O/P Starting no = 1 , Ending no = 10000

1, 153, 370, 371, 407

7] Write a python program to find the sum of natural numbers

```
n = int (input ("starting number ::"))
n1 = int (input (" ending number ::"))
      s=0
  for i in range (n , n1+1):
        s= s+i
  print ( " sum of natural number:",s )
```

Output :- Starting point: 1

Ending point: 5

sum of natural number : 5