**Assignment 4**

Q1. Write a Python Program to Find the Factorial of a Number?

Sol. 1st Method: Using Function:

def factor(num):

return 1 if(n==0 or n==1) else num \* factor(n-1)

num = 6

print(f"Factorial of {num} is {factorial(num)}")

2nd Method using Builtin function:

def factor(num)

return(math. Factorial(num))

num = 6

print(f"Factorial of {num} is {factorial(num)}")

Q2. Write a Python Program to Display the multiplication Table?

Sol.

n = int(input("Enter table Name: "))

for i in range(1,11):

    r = n\*i

    print(n, "\*", i, "=" , r)

Q3. Write a Python Program to Print the Fibonacci sequence?

Sol.

n = int(input("En4ter the limit of Fabonacci series: "))

a = 0

b = 1

if (n < 0):

    print("Enter positive number Greator than '0' ")

elif (n == 0):

    print("Enter number Greator than '0'")

for i in range(2, n+2):

    c = a+b

    a = b

    b = c

    print(b, end = " ")

Q4. Write a Python Program to Check Armstrong Number?

Sol. 153 = (1\*1\*1) + (5\*5\*5) + (3\*3\*3)

n = 153

n = s

b = len(str(n))

while n! = 0:

r = n%10

sum = sum + (r \*\* b)

n = n//10

if(sum == s):

print(“Number is Armstrong”)

else:

print(“Number is Not Armstrong”).

Q5. Write a Python Program to Find Armstrong Number in an Interval?

Sol.

lower = 100

upper = 2000

for n in range(lower, upper+1):

    b = len(str(n))

    sum = 0

    while n > 0:

        r = n%10

        sum = sum + (r\*\*b)

        n = n//10

if (n==sum):

        print("Yes, It's an Armsrong number")

else:

    print("no")

Q6. Write a Python Program to Find the Sum of Natural Numbers?

Sol.

n = int(input("Enter the limit of the series of natural numbers: "))

sum = 0

for i in range(1, n+1):

    sum = sum + i

print(sum)