Programming Assignment_4

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

In [2]:
```
def fibo(number:int) -> int:
    if number == 0 or number == 1:
        return number
    output = 1
    while number != 0:
        output = output * number
        number -= 1
    return output
# Driver's code
print(fibo(5))
print(fibo(7))
```

```
120
5040
```

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

In [3]:
```
num = 10
for i in range(1, 11):
    print(f'{num} * {i} = {num * i}')
```

```
10 * 1 = 10
10 * 2 = 20
10 * 3 = 30
10 * 4 = 40
10 * 5 = 50
10 * 6 = 60
10 * 7 = 70
10 * 8 = 80
10 * 9 = 90
10 * 10 = 100
```

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

In [4]:
```
till_number = int(input("Please enter a number : "))
if till_number == 1:
    print('0')
elif till_number == 2:
    print('0 1')
else:
    list_of_numbers = [0, 1]
    number1 = 0
    number2 = 1
    while True:
        number3 = number1 + number2
        if number3 > till_number:
            break
```

```
        number1 = number2
        number2 = number3
        list_of_numbers.append(number3)
print(list_of_numbers)
```

```
Please enter a number : 10
[0, 1, 1, 2, 3, 5, 8]
```

4. Write a Python Program to Check Armstrong Number?

In [1]:
```
n = 153
s = n
b = len(str(n))
sum1 = 0
while n != 0:
    r = n % 10
    sum1 = sum1+(r**b)
    n = n//10
if s == sum1:
    print("The given number", s, "is armstrong number")
else:
    print("The given number", s, "is not armstrong number")
```

```
The given number 153 is armstrong number
```

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

In [9]:
```
# To take input from the user
lower = int(input("Enter lower range: "))
upper = int(input("Enter upper range: "))
for num in range(lower, upper + 1):
    # order of number
    order = len(str(num))
    # initialize sum
    sum = 0
    # find the sum of the cube of each digit
    temp = num
    while temp > 0:
        digit = temp % 10
        sum += digit ** order
        temp //= 10
        if num == sum:
            print(num, end = ' ')
```

```
Enter lower range: 1
Enter upper range: 1000
1 2 3 4 5 6 7 8 9 25 36 125 153 216 370 371 407 729
```

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

In [14]:
```
num = int(input("Enter the value of n: "))
hold = num
sum = 0
if num <= 0:
    print("Enter a whole positive number!")
```

```
else:
    while num > 0:
        sum = sum + num
        num = num - 1;
        Final=sum
        # displaying output
    print("Sum of first", hold, "natural numbers is: ", sum)
```

```
Enter the value of n: 10
Sum of first 10 natural numbers is:  55
```

In [ ]: