DAY 6 - TASK

1. Write a program to loop through a list of numbers and add +2 to every value to elements in list

In [1]:
```
nums = [0,1,2,3,4,5,6]
print(nums)
nums = [i+2 for i in nums]
print("The updated list is:", nums)
```

```
[0, 1, 2, 3, 4, 5, 6]
The updated list is: [2, 3, 4, 5, 6, 7, 8]
```

2. Write a program to get the below pattern

```
54321
4321
321
21
1
```

In [2]:
```
x = 5
for i in range(0, x + 1):
    for j in range(x - i, 0, -1):
        print(j, end=' ')
    print()
```

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

3. Python Program to Print the Fibonacci sequence

In [3]:
```
n = int(input("Enter the number: "))
Fibonacci = [0, 1]
if n <= 0:
    print("The Fibonacci Series upto " + str(n) + " is: ", Fibonacci[0])
else:
    for x in range(2, n):
        num = Fibonacci[x-2] + Fibonacci[x-1]
        Fibonacci.append(num)
print("The Fibonacci series upto " + str(n) + " is:", Fibonacci)
```

```
Enter the number: 10
The Fibonacci series upto 10 is: [0, 1, 1, 2, 3, 5, 8, 13, 21, 34]
```

4. Explain Armstrong number and write a code with a function

In [4]:
```
def Armstrong(n):
    n = int(input("Enter the number: "))
    sum = 0
    temp = n

    while temp > 0:
       digit = temp % 10
       sum += digit ** 3
       temp //= 10

    if n == sum:
        print(n, "is an Armstrong number")
    else:
        print(n, "is not an Armstrong number")

print(Armstrong(n))
```

```
Enter the number: 143
143 is not an Armstrong number
None
```

5. Write a program to print the multiplication table of 9

In [7]:
```
ranges = int(input('Ranges till: \n'))
print('Multiplication tables of ', 9)
for i in range(1, ranges+1):
    print(9,"*",i,"=",9*i)
```

```
Ranges till:
20
Multiplication tables of  9
9 * 1 = 9
9 * 2 = 18
9 * 3 = 27
9 * 4 = 36
9 * 5 = 45
9 * 6 = 54
9 * 7 = 63
9 * 8 = 72
9 * 9 = 81
9 * 10 = 90
9 * 11 = 99
9 * 12 = 108
9 * 13 = 117
9 * 14 = 126
9 * 15 = 135
9 * 16 = 144
9 * 17 = 153
9 * 18 = 162
9 * 19 = 171
9 * 20 = 180
```

6. Check if a number is negative or positive

In [8]:
```
number = int(input('Enter a number : '))

if number > 0:
    print('The number is Positive')
elif number < 0:
    print('The number is negative')
elif number == 0:
    print('The number is Zero')
```

```
Enter a number : 7
The number is Positive
```

7. Write a program to convert the number of days to ages

In [9]:
```
days = int(input("Enter the number of days: "))
years = int(days/365)
weeks = int((days % 365) / 7)
print("The Age for",days,"days is",years,"years and",weeks,"weeks.")
```

```
Enter the number of days: 1441
The Age for 1441 days is 3 years and 49 weeks.
```

8. Solve Trigonometry problem using math function write a program to solve using math function

In [10]:
```
import math

theta = float(input('Enter the value of theta (in degrees) : '))
print('sin(',theta,') = ', math.sin(math.radians(theta)))
print('cos(',theta,') = ', math.cos(math.radians(theta)))
print('tan(',theta,') = ', math.tan(math.radians(theta)))
```

```
Enter the value of theta (in degrees) : 60
sin( 60.0 ) =  0.8660254037844386
cos( 60.0 ) =  0.5000000000000001
tan( 60.0 ) =  1.7320508075688767
```

9. Create a calculator only on a code level by using if condition (Basic arithmetic calculation)

In [11]:
```
print("Calculator")
print("Select: 1 -> Add  || 2 -> Substract || 3 -> Multiply || 4 -> Divide")
operation = int(input("Enter the operation choice: "))

if operation == 1:
    x = int(input("Enter operand 1:"))
    y = int(input("Enter operand 2:"))
    print("Addition of",x,"and",y,"is",x+y)
elif operation == 2:
    x = int(input("Enter operand 1:"))
    y = int(input("Enter operand 2:"))
    print("Subtraction of",x,"and",y,"is",x-y)
elif operation == 3:
    x = int(input("Enter operand 1:"))
    y = int(input("Enter operand 2:"))
    print("Multiplication of",x,"and",y,"is",x*y)
elif operation == 4:
    x = int(input("Enter operand 1:"))
    y = int(input("Enter operand 2:"))
    print("Division of",x,"and",y,"is",x/y)
else:
    print("Please make a valid Choice from 1 to 4")
```

```
Calculator
Select: 1 -> Add  || 2 -> Substract || 3 -> Multiply || 4 -> Divide
Enter the operation choice: 3
Enter operand 1:7
Enter operand 2:9
Multiplication of 7 and 9 is 63
```

Completed Day 6's notes & exercises

THANK YOU!

Check out My Repository at https://github.com/AakankshaJarode/BestEnlist_Python_Internship.git (https://github.com/AakankshaJarode/BestEnlist_Python_Internship.git)

Chech out My LinkedIn Page at https://www.linkedin.com/in/aakanksha-jarode-1b0195179 (https://www.linkedin.com/in/aakanksha-jarode-1b0195179)