TASK BASED ON LIVE SESSION 1

(ADDED MORE OPERATORS - POWER, SQUARE, CUBE, PERCENTAGE)

Creating a Class

In [1]:
```
class adv_cal():
    def addition(a,b) :
        c = a + b
        return c
    def subtraction(a,b) :
        c = a - b
        return c
    def multiplication(a,b) :
        c = a * b
        return c
    def division(a,b) :
        c = a / b
        return c
    def power(a,b):
        c = 1
        for i in range(1,b+1):
            c = c * a
        return c
    def square(a):
        c = a * a
        return c
    def cube(a):
        c = a * a * a
        return c
    def percentage(a,b):
        c = (a * 100) / b
        return c
```

Module for Storing Data from Users

In [2]:
```
def data(N):
    user_data = []
    for i in range (0,N):
        numeric = int(input("Enter a Number : "))
        user_data.append(numeric)
    return user_data
```

Alpha Version of Application (Accept User Choice for Operator)

In [3]:
```
print("OPERATORS AVAILABLE : add, sub, mul, div, pow, sqr, cub, prc")
user_operator = input("Enter any of the operator name given in above list : ")
if((user_operator.lower() == 'add') or (user_operator.lower() == 'sub') or\
 (user_operator.lower() == 'mul') or (user_operator.lower() == 'div') or \
 (user_operator.lower() == 'pow') or (user_operator.lower() == 'prc')):
    data_from_function = data(2)
    a = data_from_function[0]
    b = data_from_function[1]

    if user_operator.lower() == 'add':
        print(a," + ",b," = ",adv_cal.addition(a,b))
        print("Addition Successful !")
    elif user_operator.lower() == 'sub':
        print(a," - ",b," = ",adv_cal.subtraction(a,b))
        print("Subtraction Successful !")
    elif user_operator.lower() == 'mul':
        print(a," * ",b," = ",adv_cal.multiplication(a,b))
        print("Multiplication Successful !")
    elif user_operator.lower() == 'div':
        print(a," / ",b," = ",adv_cal.division(a,b))
        print("Division Successful !")
    elif user_operator.lower() == 'pow':
        print(a," ^ ",b," = ",adv_cal.power(a,b))
        print("Power Calculation Successful !")
    else:
        print(a," is ",adv_cal.percentage(a,b),"% of ",b)
        print("Percentage Calculation Successful !")

elif ((user_operator.lower() == 'sqr') or (user_operator.lower() == 'cub')):
    data_from_function = data(1)
    a = data_from_function[0]

    if user_operator.lower() == 'sqr':
        print(a," ^ 2 = ",adv_cal.square(a))
        print("Square Calculation Successful !")
    else:
        print(a," ^ 3 = ",adv_cal.cube(a))
        print("Cube Calculation Successful !")

else:
    print("The Input is Not Valid. Re-run the program !")
```

```
OPERATORS AVAILABLE : add, sub, mul, div, pow, sqr, cub, prc
Enter any of the operator name given in above list : CUB
Enter a Number : 25
25  ^ 3 =  15625
Cube Calculation Successful !
```

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