WEEK 4 Exercise

1. Make a Python function that takes x as argument and returns y, where y = 6x2 + 3x + 2

call the function with x = 2 and print the results

2. Write a Python function that takes a list and returns a new list with unique elements of the first list.

Sample List : [1,2,3,3,3,3,4,5]  
Unique List : [1, 2, 3, 4, 5]

3. Write a Python function that accepts a string and calculate the number of upper case letters and lower case letters.   
Sample String : 'abc ABC'  
Expected Output :   
No. of Upper case characters : 3  
No. of Lower case Characters : 3

1. Write a function takes a two-word string and returns True if both words begin with same letter

Example: animal\_crackers('Levelheaded Llama') --> True

animal\_crackers('Crazy Kangaroo') --> False

1. Write a Python function to check whether a number falls in a given range (a, b).
2. Given a sentence, return a sentence with the words reversed

*Reverse\_string(‘I am home’) --> ‘home am I’*

1. Write a Python function to calculate the factorial of a number (a non-negative integer). The function accepts the number as an argument.
2. Write a Python function to check whether a number is perfect or not.

*In number theory, a perfect number is a positive integer that is equal to the sum of its proper positive divisors, that is, the sum of its positive divisors excluding the number itself.*

*Example : The first perfect number is 6, because 1, 2, and 3 are its proper positive divisors, and 1 + 2 + 3 = 6. Equivalently, the number 6 is equal to half the sum of all its positive divisors: ( 1 + 2 + 3 + 6 ) / 2 = 6. The next perfect number is 28 = 1 + 2 + 4 + 7 + 14. This is followed by the perfect numbers 496 and 8128*

1. Write a Python function to check whether a string is a pangram or not. Go to the editor

*Note : Pangrams are words or sentences containing every letter of the alphabet at least once. For example : "The quick brown fox jumps over the lazy dog"*