# Programming 1: Lab 7 : Strings and Loops

**Write the python code for the following questions. Handle all the valid and invalid test cases. Write down relevant comments in your code:**

1. To display all the characters in the English alphabet from ‘A’ to ‘Z’ using a loop and chr().
2. Find the length of an input string without using the inbuilt len() function.
3. Take a sentence as input and replace all the spaces (‘ ‘) with hyphens. Display the resultant string as output. Also, display the string in snake-case and camel-case formats.
4. Take a string as input and check if it is palindrome or not. Do not use any inbuilt functions except len().
5. Take a paragraph as input and find the count of digits, alphabets, and special characters present in the paragraph. For alphabets, also check how many of them are upper case and how many are lower case alphabets. Use inbuilt string functions to check.
6. Take a sentence as input and reverse the order of words in the sentence. Display the original and the reversed sentences.
7. Take a sentence as input and remove all the duplicate characters from the string.
8. Take a sentence and a word as input and check if the string contains the word in it. Also, count the number of times that word occurs in the string. Do this by using inbuilt string functions and then without using inbuilt string functions.
9. A program that takes a string as input and checks where the string is a pangram or not.
   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"
10. Write a Python program that accepts a hyphen-separated sequence of words as input and prints the words in a hyphen-separated sequence after sorting them alphabetically. Do not use any inbuilt sorting function.
    Sample String : green-red-yellow-black-white
    Expected Result : black-green-red-white-yellow
11. Repeatedly take input from the user in the range of 1 – 10 till the time they enter -1. It then displays the histogram shown as follows. Note that the percentage values are displayed till 2 decimal places:

    ```
    1 - 2:    # # # # # # # # # #  52.00 %
    3 – 4:    # # # # # #  28.00 %
    5 – 6:    #  4.00 %
    7 – 8:     0.00 %
    9 – 10:  # # # 16 %
    ```

12. Pattern based on input N.