Assignment 6: Program 1

- Write a program to read a string from *stdin* of arbitrary length (from 0 to 255) using *fgets.* Strip off \n character which is present at end. Now write the following functions (such that there is just one function in each file), compile separately and link

I. The main program must only contain fgets, printf and only function calls. And no other major statements.

II. String length – strlen(), string copy – strcpy(), string concatenation – strcat(), string comparison - strcmp()

Assignment 6: Program 2

- Write a program on Collatz sequence to check how many iterations are needed for an integer *n* (starting from 1) to reach 1. Output the number *n* when the number of iterations exceeds 20 the first time. Repeat for 50 and 100.

$$a_{n+1} = \begin{cases} a_n/2 & \text{for } a_n \text{ even} \\ 3a_n + 1 & \text{for } a_n \text{ odd} \end{cases}$$

- Submit all program files (*.c files) on moodle
- Deadline: Monday, Sept 30, 2019, 5:00 pm