gcc program.c # Compiles program.c and generates a default executable named a.out **./a.out** # Runs the compiled program
gcc program.c -o my_program # Compiles program.c and creates an executable named my_program **./my_program** # Runs the compiled program
gcc program.c -o input_program # it takes inputs from input1.txt and displays the result in the terminal. **./input_program < input.txt**
gcc program.c -o io_program **./io_program < input.txt > output.txt** # it takes the inputs from input1.txt and creates the myoutput.txt document and writes the result here.
diff output1.txt myoutput.txt # compares the document output1.txt with the document myoutput.txt.
diff --ignore-all-space output1.txt myoutput.txt # compares the document output1.txt with the document myoutput.txt without ignoring the spaces.

QUESTION 1

A singly linked list will be created using ***n*** integers entered by the user. Using the ***Average*** function, each node in the list (except the first and last) will have its value updated to the arithmetic mean of its left and right neighbors, excluding itself.

NOTE: The first and last nodes must remain unchanged. Only the intermediate nodes will be modified.

Input1: **5 ⟶ 10 ⟶ 20 ⟶ 40 ⟶ 80 ⟶ NULL**

(5 ⟶ (5+20)/2 = 12.5 ⟶ (10+40)/2 = 25 ⟶ (20+80)/2 = 50 ⟶ 80) ⟶ NULL

Output1: **5 ⟶ 12.5 ⟶ 25 ⟶ 50 ⟶ 80 ⟶ NULL**