

CSE108 – Computer Programming Lab.**Lab 8****String Manipulation****25/04/2025**

Part 1. Reverse a string (30 pts): Implement the function `void reverseString(char str[])` that reverses the given string in-place.

- Ask the user to enter a string (maximum 100 characters).
- Call your `reverseString()` function on the input string.
- Print the reversed string to the screen.
- Modify the string in-place without using extra arrays.

Enter a string: hello
Reversed string: olleh

Enter a string: programming
Reversed string: gnimmargorp

Part 2. Compress a string (40 pts): Implement the function `void compressString(const char* str, char* result)` that compresses repeated consecutive characters as character + repetition count. If the compressed string is not shorter than the original string, copy the original string into result without compression.

- Ask the user to enter a string (maximum 100 characters).
- Call your `compressString()` function with the input string and display the compressed result.

Enter a string: aaabbcc
Compressed string: a3b2c2

Enter a string: abc
Compressed string: abc

Enter a string: aabbccccc
Compressed string: a2b2c5

Enter a string: a
Compressed string: a

Part 3. Remove Duplicate Characters from a String (30 pts) Implement the function `void removeDuplicates(char* str)` that removes duplicate characters from a string, keeping only the first occurrence.

- Ask the user to enter a string.
- Call your `removeDuplicates()` function.
- Print the resulting string.

Enter a string: programming
String after removing duplicates: progamin

Enter a string: Hello World
String after removing duplicates: Helo Wrld

Enter a string: CSE108
String after removing duplicates: CSE108