

SE 1105 PROGRAMMING AND PROBLEM SOLVING I

Task 1: String Cipher

In this task, you will create a C program that implements a simple cipher. The program will contain functions to **encode** and **decode** a given character array using a provided key. Encoding involves shifting each character in the array forward by a certain number of positions, while decoding reverses this process.

Instructions:

- Write a function **encode** that takes a char array (str[]) and an integer (key) as parameters. The function should shift all the characters in the array by the value of the key, encoding the string.
- Write a function **decode** that takes a char array (str[]) and an integer (key) as parameters. The function should shift back all the characters in the array by the value of the key, decoding the string.
- Call **encode** function and print the string.
- Call **decode** function and print the string.

Task 2: Count Consonants

Write a function that takes a char array(string) and a char array vowels as a parameter. The function should return the count of consonants in the given string using vowels.

Task 3: Longest Word

Write a function that takes a char array(string) as a parameter. The function should return the length of the longest word in the string.

