



भारतीय सूचना प्रौद्योगिकी संस्थान गुवाहाटी
Indian Institute of Information Technology Guwahati

COMPUTER PROGRAMMING LAB (CS110)
ASSIGNMENTS-9

1. Write a function for matrix multiplication which takes two matrices as parameter and returns the resultant matrix. Dynamically allocate memory for all matrices.
2. Write a menu-based (use do... while loop to create the menu) program in C to perform following operations on strings.
 - i. Concatenate two strings without using the `strcat` function. The strings are user inputs.
 - ii. Compare two strings without using the `strcmp` function. The strings are user inputs.
 - iii. Calculate length of a string without using the `strlen` function. The string is a user input.
 - iv. Copy one string to another string without using the `strcpy` function. The string is user input.
 - v. "exit" to terminate the program.
3. Write a program in C to calculate the number of vowels in a string. The string is user input.
4. Write a program in C to check if a string is a palindrome or not. The string is user input.
5. Write a program in C to reverse a string. The string is user input. Without using `string.h`
6. Write a program in C to count the number of words in a function.
7. Write a program in C to search the location (index) of given word in a sentence.
8. Write a program in C to word-wise reverse a string. The string is user input. For instance for input string

This is an example.

the output should be

example. an is This

9. Dynamically allocate memory for n number of strings. Take n strings as input from the user. Write a function to display them. Strings can be of different length.
10. Write a function to sort the strings in the previous program alphabetically.
11. Given a non-negative integer $n \in [0, 100000000]$, write a program in C to print it in words. For instance, for the input integer $n = 19450274$, the output should be

One Crore Ninety Four Lakh Fifty Thousand Two Hundred Seventy Four