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| **Unit – 3** | | |
| **Day – 14** | | |
| **Lec #** | **Topics to be covered :** | **Assignments :** |
| 1 | **Pointer Arithmetic, Use of Pointers** – Returning more than one value from the function (Call by value and call by References concept). | **Essential Assignment**   1. Write a C program to Swapping two integer numbers using function call by value and call by reference. 2. Write a function using pointers to add two matrices and to return the resultant matrix to the calling function. 3. Write a program in C to find string length using pointer.   Note: Create user define function to implement it.   1. Write a program in C using pointer to count vowels using in given string. 2. Write a program in C and make a user define function to append a string. [Add one string into another].   **Desirable Assignment**   1. Write a function using pointers to multiply two matrices and to return the resultant matrix to the calling function. 2. Write a C program that takes 9 elements of 3\*3 matrix as input from user (at run-time) and calculate the sum of all the matrix elements using pointer. 3. Write a program in C using pointer that will read a single word and rewrite it in the alphabetical order. I.e. the word STRING should be written as GINRST. 4. Write a program in C to find position of character in string using pointer.   Input :  Enter String : I am fine  Enter Character : m  Output :  Character position : 4  OR  Character Not found   1. Write a program in C to replace character from given string using pointer.   Input :  Enter String : I am fine  Find : am  Replace : are  Output :  I are out   1. Write a program in C that will read a sentence and count all occurrences of a particular word.   Enter String: This is Class Room. This is my pen.  Output :  This : 2  is = 2  Class = 1  Room = 1  pen = 1 |
| 2 | **Pointers and Arrays** – One dimensional Arrays and pointers, Difference between array name and pointers, passing one dimensional and two dimensional array to functions, Pointers for character array(strings), Array of pointers 2-D Array and pointer, pointer to function. |