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| **Unit – 3** | | |
| **Day – 12** | | |
| **Lec #** | **Topics to be covered :** | **Assignments :** |
| 1 | Using function  Types of function | **Essential Assignment:**   1. Write a C program to calculate area of a circle using functions. 2. Write a C program to find greatest of three numbers using function 3. Write a C program to check a number is prime or not using function 4. Write a C program to calculate LCM of two number using function 5. Write a C program to check whether the given number is perfect or not using function.   Hint: A perfect number is a positive integer that is equal to the sum of its positive divisors, excluding the number itself. For example, 6 is a positive number that is completely divisible by 1, 2, and 3. When we add these divisors (1 + 2 + 3 = 6), it produces 6, which is equal to the number that we have considered. So, we can say that 6 is a perfect number.   1. Write a program to read an array of 8 integer numbers. Search the number in array and if the number is found then display "ELEMENT FOUND" or ELEMENT DOES NOT FOUND ". Take this number from the user. (Using function) 2. Write a C program to perform bubble sort using 1-D Array of 6 elements. Initialize each element with value between 0 to 100.(using function)   Hint: Bubble Sort is the sorting algorithm that works by repeatedly swapping the adjacent elements if they are in wrong order.)   1. Create two arrays named as matrix1 and matrix2 of 3X 3 size each. Initialize each element to 0 to 10 value Perform the matrix addition of the above two matrixes and store the answer in the third 3X3 matrix named as matrix3.(Using function)   **Desirable Assignment:**   1. Write a c program to check whether the given matrix is a magic square matrix or not. A matrix is magic square matrix, if all rows sum, columns sum and diagonals sum are equal.   **Example:** 8   1   6 3   5   7 4   9   2  The above matrix is the magic square matrix. As you can see numbers in first row add up to 15 (8 + 1 + 6), so do the numbers of 2nd row 3 + 5 + 7. Also the number in the last row 4 + 9 + 2. Similarly, the columns all add up to the same number 15. Hence, this matrix is a magic square matrix.   1. Write a C program to check palindrome number using Functions   Hint: Palindrome number: - If the Reverse of a number is equal to the same number then the number is called a palindrome number.  Example  5225 = 5225 So, 5225 is a palindrome number.  123 = 321 So, 123 is not a palindrome number   1. Write a C program to check if number is Krishnamurthy or not. Take this integer number from the user.   Hint: A Krishnamurthy number is a number whose sum of the factorial of digits is equal to the number itself. For example 145, 1! + 4! + 5! = 1 + (4\*3\*2\*1) + (5\*4\*4\*2\*1) = 1 + 24 + 120 = 145.   1. Write a C program to insert and delete an element in an array using function |
| 2 | Passing arrays to functions  Scope and extent |