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|  | **Write a program in C to print a triangle of numbers as** |  |  |  |
|  | **follows (take number of lines from user):** |
|  | **1** |
| **13.** | **01** |
|  | **101** |
|  | **0101** |
|  | **10101** |
|  | **010101** |
|  | **1010101** |

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|  | **Write a program in C to print a triangle of stars as** |  |  |  |
|  | **follows (take number of lines from user):** |
| **14.** | **\*** |
|  | **\*\*\*** |
|  | **\*\*\*\*\*** |
|  | **\*\*\*\*\*\*\*** |
|  | **\*\*\*\*\*\*\*\*\*** |
|  | **Write a program in C to print a triangle of stars as** |  |  |  |
|  | **follows (take number of lines from user):** |
| **15.** | **\***  **\*\*\*** |
|  | **\*\*\*\*\*** |
|  | **\*\*\*\*\*\*\*** |
|  | **\*\*\*\*\*\*\*\*\*** |
|  | **Write a program in C to print a triangle of stars as** |  |  |  |
|  | **follows (take number of lines from user):** |
| **16.** | **\* \***  **\*\* \*\*** |
|  | **\*\*\* \*\*\*** |
|  | **\*\*\*\* \*\*\*\*** |
|  | **\*\*\*\*\* \*\*\*\*\*** |
|  | **\*\*\*\*\*\*\*\*\*\*\*** |
| **17.** | **Write a program in C to print the elements of Pascal triangle (take number of lines from user):** |  |  |  |
| **18.** | **Write a program in C to compute the sum of the first n terms of the following series:**  **S = 1+1/2+1/3+1/4+……...** |  |  |  |
| **19.** | **Write a program in C to compute the sum of the first n terms of the following series:**  **S = 1-2+3-4+5……...** |  |  |  |
| **20.** | **Write a program in C to implement exp(x).** |  |  |  |
| **21.** | **Write a program in C to implement sin(x) and cos(x).** |  |  |  |
| **22.** | **Write a program in C to convert a given Decimal number to its corresponding Roman number.** |  |  |  |
| **23.** | **Write a program in C to implement Base conversion.** |  |  |  |
| **24.** | **Write a program in C to implement basic calculator with function and Switch Case.** |  |  |  |

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| **25.** | **Write a program in C to implement Call by value and Call by reference.** |  |  |  |
| **26.** | **Write a program in C to check whether a given number is Krishnamurti number or not using function.** |  |  |  |
| **27.** | **Write a program in C to print twin prime numbers within a given range using function (Range should be supplied by the user).** |  |  |  |
| **28.** | **Write a program in C to calculate the factorial of a given number using Recursive function.** |  |  |  |
| **29.** | **Write a program in C to display Fibonacci series using Recursion.** |  |  |  |
| **30.** | **Write a program in C to calculate GCD of two numbers using Recursion.** |  |  |  |
| **31.** | **Write a program in C to perform following actions on an array entered by the user:**   1. **Print the even-valued elements.** 2. **Print the odd-valued elements.** 3. **Calculate and print the sum and the average of the elements of an array.** 4. **Print the maximum and minimum elements of an array.** 5. **Remove the duplicates from the array.** 6. **Print the array in reverse order the program should present a menu, to the user and ask for one of the options. The menu should also include options to re- enter array and quit the program.** |  |  |  |
| **32.** | **Given two ordered arrays of integers, write a program in C to merge the two arrays to get an ordered array.** |  |  |  |
| **33.** | **Write a program in C to find sum of n elements entered by the user. To write this program, allocate memory dynamically using malloc() / calloc() functions.** |  |  |  |
| **34.** | **Write a function that reserves the elements of an array in place. The function must accept only one pointer value and return void.** |  |  |  |
| **35.** | **Write a program that will read 10 integers from user and store them in an array. Implement array using pointers. The program will print the array elements in ascending and descending order.** |  |  |  |

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| **36.** | **Write a menu driven program to perform following operations on strings:**   1. **Show address of each character in string.** 2. **Concatenate two strings using strcat function.** 3. **Compare two strings.** 4. **Calculate length of the string (use pointers).** 5. **Convert all lowercase characters to uppercase.** 6. **Convert all uppercase characters to lowercase.** |  |  |  |
| **37.** | **Write a program in C to implement string concatenation without using strcat function.** |  |  |  |
| **38.** | **Write a program in C to check whether a string is Palindrome or not.** |  |  |  |
| **39.** | **Write a program in C to count the number of Vowels, Consonants and Space in a sentence.** |  |  |  |
| **40.** | **Write a program in C to check if the substring (given by the user) is present in the given string or not.** |  |  |  |
| **41.** | **Write a program in C that prints a table indicating the number of occurrences of each alphabet in the text entered as command line arguments.** |  |  |  |
| **42.** | **Write a program in C to create Matrix by using a menu-driven program to perform following M<atrix operations (2-D array implementation):**   1. **Sum.** 2. **Difference.** 3. **Product.** 4. **Transpose.** |  |  |  |
| **43.** | **Write a program in C to read some lines from the user and write in a file. After that read the same file.** |  |  |  |
| **44.** | **Write a program in C to copy the contents of one text file to another file, after removing all whitespaces.** |  |  |  |
| **45.** | **Write a program in C to count the number of characters, vowels, consonants and special characters of a file. Take the same ‘.c’ file that you have written to solve this program as the input.** |  |  |  |