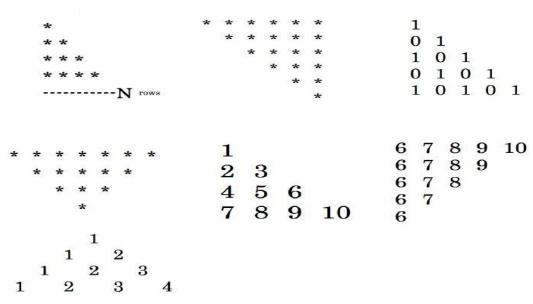# STRUCTURAL PROGRAMMING LANGUAGE LAB
Course code: CSE1122
Program list on C

1. Write a program to compute the roots of a quadratic equation $ax^2 + bx + c = 0$ use following conditions.
   - i. There is only one root, if a =0 (x = -c/b).
   - ii. There are no real roots, if b^2-4ac is negative.
   - iii. If b^2-4ac is positive there are two roots
2. Given a mark ranging from 0 to 100, write a program to find the grade using **switch** statement.
3. Write a program that can say the name of weekdays by receiving 1 to 7. Using
   - i. If-else statement, and
   - ii. Switch Statement
4. Write a program to check the Leap Year in C
5. Write a program that convert temperature to from Fahrenheit to Celsius.
6. Write a program to check vowel and consonant using **switch case** statement.
7. Swapping between two numbers using a temporary variable.
8. Write C program to find Factorial
9. Write a C program using **recursion** to prints Fibonacci numbers.
10. PATTERN MATCHING

```
*                    *  *  *  *  *  *          1
* *                     *  *  *  *  *          0  1
* * *                      *  *  *  *          1  0  1
* * * *                       *  *  *          0  1  0  1
-----------N rows                *  *          1  0  1  0  1
                                    *
```

```
* * * * * * *          1                6  7  8  9  10
  * * * * *            2  3             6  7  8  9
    * * *              4  5  6          6  7  8
      *                7  8  9  10       6  7
                                        6
            1
         1     2
      1     2     3
   1     2     3     4
```

11. Given a number, write a program using while loop to reverse the digits of the number
12. Palindrome Number Program in C using string functions
13. C program for palindrome without using string functions

14. Program to Calculate 1 + 2 + 3 + 4 + 5 + ... + n series (sum of any types of series)
15. Write a program that will read a positive integer determine and print its binary equivalent
16. Write a program that finds maximum and minimum between two numbers. If the number is equal it gives a message "Equal".
17. Write a program that takes a number from keyboard and finds whether the number is positive, negative or zero.
18. Write a program that takes a number from keyboard and prints 'Y' if the number is greater than or equal 30 and not equal to 50. Otherwise it prints 'No'.
19. Write a program to check EVEN and ODD number using **array**.
20. Write a program to check Prime and Non-prime number using **array**
21. Print numbers from 1 to 10 using goto statement without any loop
22. Write a C program to multiply/addition two **matrixes**
23. Write a C program to Insert a new element in a specific position in an array where position & new element given through the keyboard
24. Write a C program to sort an array by using **bubble sort** method
25. Search a specific number of an array element and say its position if it is found using binary search
26. Implementation of Stack Using Array in C
27. Copy string in C without using strcpy () function
28. Given a string from the keyboard. Write a program to calculate the length of a string
29. C Program to Count All Occurrence of a Character in a String
30. C Program To Count the Occurrence of a Substring in String
31. Given two integer numbers are we have to swap their values using pointers in C language.
32. Store Student Information and Display it Using Structure
33. Find Largest Element Using Dynamic Memory Allocation - calloc()
34. Demonstrate the Dynamic Memory Allocation for Structure
35. A Simple C Program to open, read and close the file

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