Basic C Programs

Print given statement  
2. Declare & print variables  
3. Find sum of numbers  
4. Difference of two numbers  
5. Multiplication of two numbers  
6. Division of two numbers  
7. Find last digit of number  
8. Add two digits of a number  
9. Sum of 3 digits of a number  
10. Sum of 4 digits of a number  
11. Reverse of a 4 digit number  
12. Swap using third variable  
13. Swap without third variable  
14. Average of three numbers  
15. Find total marks & percentage  
16. Solve mathematical expressions  
17. Swap with bitwise operator  
18. Demonstrate macro definition

19. Calculate area of circle

20 Find circumference of circle  
3. Calculate area of rectangle  
4. Calculate volume of sphere  
5. Find surface area of sphere  
6. Find area of square  
7. Find area of right angle triangle  
8. Find area of equilateral triangle  
9. Find perimeter of rectangle  
10. Find area of triangle  
11. Find simple interest  
12. Find compound interest  
13. Convert days into years  
14. Fahrenheit to Celsius conversion

## Programs on Decision and Loop

1. Check number is less than 10  
2. Check numbers are equivalent  
3. Check voting eligibility  
4. Check if number is even or odd  
5. Enter three angles & check if it is a triangle  
6. Find total marks & percentage  
7. Check for leap year  
8. Check number is +ve, -ve or zero  
9. Largest amongst three numbers  
10. Print grade of employee  
11. Print Color Name  
12. Print gross salary of employee  
13. Print division scored by student  
14. Find greatest among 3 numbers  
15. Check if student scored distinction  
16. Check type of triangle  
17. Check sum of digit greater than 10  
18. Print single digit number in words  
19. Print numbers in words  
20. Read a day of week in digit  
21. Perform arithmetic operations  
22. Check alphabet is vowel or consonant  
23. Check number is even or odd  
24. Right Shift & Left Shift Operations

## C Programs on Loops

1. Print 1 to 15 numbers  
2. Print 10 to 1 numbers  
3. Sum of first n even numbers  
4. Print factorial of a number  
5. Number perfectly dividing given number  
6. Square roots of 1 to 9 numbers  
7. Numbers not divisible by 2, 3, 5  
8. Harmonic sequence & its sum  
9. Arithmetic progression & its sum  
10. Exponential series & its sum  
11. Sum of Expanded Geometric Sequence  
12. Print right angle triangle pattern  
13. Print number pyramid pattern  
14. Print mixed right angle triangle  
15. Print inverted right angle triangle  
16. Print alphabet right angle triangle  
17. Print numbered inverted right angle triangle  
18. Print alphabet triangle pattern  
19. Print number triangle pattern  
20. Print star pyramid pattern  
21. Sum of first & last digit of number  
22. Sum of all digits of number  
23. Print reverse of a number  
24. Armstrong number  
25. Calculate sum of Fibonacci series  
26. Calculate H.C.F using while loop  
27. Check number is prime or not  
28. Print series skipping given numbers  
29. Add even & odd numbers  
30. Print total marks of student  
31. Sum of all +ve & -ve numbers  
32. Print odd number right angle triangle  
33. Print alphabetic right angle triangle  
34. Check if number is palindrome  
35. Display each digit in words  
36. Print numeric inverted right angle triangle  
37. Count zero, odd & even digits

## List of C Programs on Arrays

1. Find max & min array elements  
2. Count frequency of each element  
3. Decimal into Octal conversion  
4. Armstrong number in an array  
5. Separate out +ve, -ve and 0s  
6. Reverse the array elements  
7. Sum of 10 integers  
8. Compare sum of given elements  
9. Sum of even numbers in array  
10. Print odd numbers in array  
11. Find sum and average  
12. Print max & min array element  
13. Search a number in an array  
14. Sort array in ascending order  
15. Count occurrences of numbers  
16. Store & display prime number  
17. Sort array in descending order  
18. Reverse an array  
19. Print largest sum  
20. Print two dimensional array  
21. Count zeroes in a matrix  
22. Sum of two matrices  
23. Sum of all elements in matrix  
24. Sum of diagonal elements  
25. Find transpose of matrix  
26. Sum of middle row & column  
27. Find product of matrices  
28. Find difference of two matrices  
29. Sum of lower triangular elements  
30. Sum of upper triangular elements

## C Programs on Functions

1. Perform Arithmetic Operations on integers  
2. Calculate simple interest  
3. Find cube of a number  
4. Area & perimeter of rectangle  
5. Calculate exponentiation  
6. Calculate x to the power of y  
7. Calculate sum of series  
8. Check if number is perfect number  
9. Perfect numbers between 1 to 50  
10. Prime numbers from 1 to 100  
11. Print Fibonacci series  
21. Print Sum of digits using recursion  
22. Find odd and even numbers  
23. Convert decimal to binary number  
24. Exchange two numbers  
25. Find factorial using recursion

## C Programs and on Strings

Calculate length of string  
2. Find frequency of a character  
3. Count number of digits in string  
4. No. of digits, alphabets & special characters  
5. Print string after deleting vowels  
6. Reverse a string  
7. Reverse string with recursion  
8. Check if string is palindrome  
9. Find occurrences of character  
10. Menu driven program  
11. Print ASCII value difference  
12. Sort names in alphabetical order  
13. Replace a character in string  
14. Convert string into uppercase & lowercase  
15. Check character is alphabet, digit or punctuation  
16. Alternate character in upper case  
17. Copy one string into another  
18. Menu driven library functions program  
19. Count number of white spaces  
20. Check character is digit or alphabet  
21. Display alternate characters  
22. Compare and change two strings  
23. Search name in 2D array

## Programs on Pointers

1. Swapping two variables  
2. Compare strings using pointer  
3. Find smallest number in array  
4. Find largest & smallest matrix number  
5. Find largest element in array  
6. Reverse an array using DMA  
7. Find sum of all matrix elements  
8. Sort numbers in ascending order  
9. Find sum of non-diagonal elements  
10. Find sum of diagonal elements  
11. Find sum of lower triangular elements

## C Programs and on Structures and Union

1. Accept & display employee details  
2. Calculate total payment of workers  
3. Calculate total runs  
4. Calculate age of student  
5. Print details of customers  
6. Details of highest paid employee  
7. Program for Library operations  
8. Arrange student record in descending order  
9. Menu driven program for a book shop  
10. Create structure & display elements  
11. Menu driven program for employee structure  
12. Arrange student data alphabetically

## C Program on Files I/O

1. Copy content of one file to another  
2. Create text file & print content  
3. Append contents of one file to another  
4. Copy file & change lower case to upper case  
5. Read & display data from file  
6. Store records in a file  
7. Display alternate characters from file

## C Programs and Code Examples on Linked List

1. Create & Sort a single linked list  
2. Create Odd & Even linked lists  
3. Insert node in doubly linked list  
4. Delete user specified node from circular linked list  
5. Search an element in linked list  
6. Print linked list in reverse order

## C Programs and Code Examples on Stack

1. Implement stack using linked list.  
2. Convert infix into postfix expression.  
3. Evaluate postfix expression.  
4. Push, pop & display stack elements  
5. Push & pop items from string stack  
6. Push & pop elements from multiple stack  
7. Check string is palindrome using stack  
8. Check expression is correctly parenthesized

## C Programs on Queue

1. Implement ascending priority queue  
2. Insert & delete queue elements  
3. Add, delete & display queue element  
4. Add & delete items from string queue  
5. Add & delete items from circular queue  
6. Add & delete elements from multiple queues

## C Programs on Binary Search

1. Find a word using binary search  
2. Create a binary search tree  
3. Search a number using binary search  
4. Search number using linear search

## C Programs and on Sorting

1. Sort data using Quick Sort  
2. Sort data using Selection Sort  
3. Sort numbers using bubble sort  
4. Sort elements using quick sort  
5. Sort elements using selection sort  
6. Sort elements using insertion sort  
7. Sort elements using heap sort  
8. Sort elements using radix sort