C Programs (LIST – I)

Basics

C program to understand the structure of C program.

1. Write a simple C program to display a message on screen.

C programs to demonstrate the concept of I/O stream.

2. Write a simple program to take input from user (*integer/character/float*) and display it.

C program to demonstrate the use of operators.

3. Write C Programs to perform simple mathematical operations (addition, subtraction) etc.

4. Write a C program to swap the values of two variables (use assignment (=) operator).

Decisions

C programs to demonstrate the concept of decisions.

5. Write a C Program which demonstrate use of *if* statement.

6. Write a C Program which demonstrates use of *if-else* statement.

7. Write a C Program which demonstrates use of nesting of *if-else* statement.

8. Write a C program to compare two variables (entered by user) using *if-else* statement

9. Write a C program to add nos. of a larger integer (say 653 => 6+5+3 = 14) // use *if-else* in program.

10. Write a C program to check whether an integer is odd or even (use **%** modulo operator)

C programs to demonstrate the use of *switch – case* construct and *break* statement

11. Write a program which takes two integers as user inputs and perform the addition, multiplication and division based on choice (case value) entered by user.

12. Write a program which takes a character from user and distinguish it as vowel or consonant and print the message accordingly.

Loops

C program to demonstrate the use of *for* loop.

13. Write a program to print your name or number 5 times.

14. Write a program to print the table of any no. entered by user.

15. Write a program to print the countdown.

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16. Write a program to print Fibonacci series up-to n terms.

    0 1 1 2 3 5 8 13 21 ....

17. Write a program to print the factorial of no. entered by user.

C programs to demonstrate the use of *while* loop

18. Write a program to print the countdown.

19. Write a program to print the sum to n, using while loop.

20. Write a program to print the following output using while loop.

    1   1

    2   2

    3   3

C programs to demonstrate the use of *nesting of for*.

21. Write a program to print the following output using *for* loop. (Hint: Nesting of for)

    0, 0

    0, 1

    0, 2

    0, 3

    1, 0

    1, 1

    1, 2

    1, 3

22. Write a program to print the following output using *for* loop. (hint: Nesting of for)

    0, 0 , 0

    0, 0 , 1

    0, 0 , 2

    0, 0, 3

    1, 1 , 0

    1, 1 , 1

    1, 1 , 2

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1, 1, 3

23. Print the following pattern using *for* loop

```
    *
  * * *
  *   *   *
```

OR

```
    *
  *   *
  *   *   *
```

C programs to demonstrate the use of *do-while* loop

24. Write a program to print the summation of nos. entered by user till 0 is entered. (Use ***do-while***)

Arrays

C programs to demonstrate the concept of Arrays

25. Write a program to initialize the array elements and display individual elements.

26. Write a program to find the sum of array elements.

27. Write a program to print the sum of array elements. The inputs are taken from user.

28. Write a program to find the average of array elements.

29. Write a program to find the largest and smallest no. in array.

30. Write a program to print alternate element from array.

31. Write a program to separate the odd and even (index) elements of array into other arrays. (Assume size of array as 10)

C programs to demonstrate the 2D array.

32. Write a program to enter the elements in the 2D array and display the elements.

33. Write a program to add the elements of two 2D arrays and display the elements as third array.

34. Write a program to multiply the elements of two 2D arrays and display the elements as third array.

Strings

C programs to demonstrate the concept of Strings

35. Write a program to initialize and display the *char* string.

36. Write a program to get the string using the *gets* function and display the string using *puts* function.

37. Write a program to demonstrate the use of *getchar()* and *putchar()* functions.

38. Write a program is to print string in reverse order.

39. Write a program to demonstrate the usage of various string functions. strlen(), strrev() etc. (use at-least five functions)

Pointers

C programs to demonstrate the concept of C pointers

40. Write a program to initialize the pointer with some address value of a variable and get values pointed by pointers.

41. Write a program to change the values pointed by pointers by assigning the address of other variable to it.

42. Write a C program to add two values using pointers (pointed by .

Pointers with Arrays

C Program to access/display the Array (elements) with pointer.

43. Write a program in C to store n elements in an array and print the elements using pointer.

44. Write a program to find the largest element in array using pointers.

Pointers with Strings

C programs to demonstrate the concept of C Strings.

45. Write a program to access String with pointer.

46. Write a program to access String with pointer. The string must be entered using *gets* and *puts* function.

NOTE: There is a possibility that some of the programs conducted in classroom/lab are omitted in this list.

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