Lab Manual
Fundamentals of Programming Using C - 05101104

**** Note : Students have to implemented all the program and not it down in separate note book**

1) Before writing a program first, you need to write the algorithm of the given program.
2) After that draw flowchart for the same program
3) Then start with C program in you notebook

**** Note : Students have to implement all the program but for highlighted program respected Faculty only gives idea (hint)**

1. Write a C Program to print your introduction like Name, address, city, district and other details about you.
2. Write a Program to read integer numbers and print it.
3. Write a Program to read float value and print it.
4. Write a Program to perform addition of two numbers.
5. **Write a Program to perform arithmetic operation for two numbers. (take input of number from keyboard using scanf()) (perform addition, subtraction, multiplication, division and also find modulo)**
6. Write a program to print ASCII value of entered character and Character for entered ASCII value between 0-127.
7. **Write a Program to find quotient and remainder using (/ and %).**
8. Write a Program to SWAP value of two variable using temp variable.
9. Write a Program to SWAP value of two variable without using temp variable.
10. Write a Program to find area and perimeter of Square.
11. **Write a program to find area and perimeter of Triangle.**
12. **Write a program to find area and perimeter of Circle.**
13. **Write a program to find area and perimeter of Rectangle.**

    ****like this you can find area and perimeter of any shapes.**

14. **Write a program to find simple interest. (formula interest = (PRN) / 100)**
15. **Write a program to find if the number is positive or not.**
16. Write a program to check if the number is odd or even.
17. **Write a program to find roots of quadratic equation.**
18. Write a program to find Gross salary and print it in proper format. (take HRA = 10% of basic, MA = 5% of Basic, TA = 2% of Basic, PF = 10% of Basic, Prof_tax = 200, overtime = 50 rs. Per hour)
19. For the above program find class like (Distinction, First class, Second class, Pass Class Write a program to input marks of 5 subject, calculate total and percentage.and grade or class using ladder if statement (if else if else – (ladder if)).
20. Write a program to find sum of all natural numbers using loop (also use **while loop**, for loop and **do while loop**).
21. Program to perform arithmetic operation using switch case. (Create Calculator)

22. **Write a menu-driven program using Switch case to calculate the following Area of circle, Square,Triangle, Rectangle, Semicircle.**
23. Write program to print ASCII table for upper case and lower case using loop.
24. Write a Program to find factorial of entered number using loop. (use for, **while and do loop**)
25. Write a program to print Fibonacci series using loop (use for, **while and do while loop**)
26. Write a program to find GCD and LCM. **(Program of LCM implement by Students)**
27. Write a program to print number in reverse order.
28. Write a program to find number is palindrome or not palindrome.
29. Write a Program to find number is prime or not.
30. Write a Program to print list of prime numbers between given interval.
31. Write a Program to find entered number is perfect or not.
32. Write a Program to find entered number is magic number or not.
33. Write a Program to find entered number is armstrong or not.
34. Write a Program to print different Pattern using star, numbers and alphabets.
35. Write a Program to print Pyramid of star, numbers and alphabets.
36. Write a Program to print Pascal triangle.
37. Write a program to perform addition of all elements store in 1D array.
38. Write a program to sort 1D array.
39. Write a program to find maximum and minimum value from 1D array.
40. Write a program to print array in reverse order.
41. Write a program to store string using 1D array.
42. Write a program to perform a search operation on 1D array print index value if element is found else print proper message if element is not found.
43. Write a program to perform searching operation on 2D array.
44. Write a program to find maximum and minimum Element from 2D array.
45. Write a program to do addition of all the elements of the 2D array.
46. Write a program to perform Matrix Addition.
47. Write a program to perform Matrix Subtraction.
48. Write a program to perform Matrix Multiplication.
49. WAP to calculate square and cube of a given number using function
50. WAP to swap two numbers using function
51. WAP to calculate area of circle using function and with all four categories
52. WAP to add two distance using function.(Use inch and feet for the calculation)
53. WAP to calculate sum of elements of 1D array using function
54. WAP to find factorial of a number using function
55. WAP to add two 2D arrays using function
56. WAP to store records for book and also display using structure.
57. WAP to print and display records of employee details using array of structure
58. WAP to display marks of 3 subjects for 3 students and then calculate total for subject wise and then make grand total, also print grade.
59. WAP to display Id, name and percentage of a student using structure and function passing by value

60. Write a C program to create a structure student, containing name and roll. Ask user the name and roll of a student in main function. Pass this structure to a function and display the information in that function
61. WAP to access addresses of different types of variable using pointer. (Include all type of variables)
62. WAP to swap two integers using pointers
63. WAP to compute area and perimeter of rectangle using pointers as parameter to function
64. WAP to store values of array and display it using pointers
65. Write a C program to read string from terminal. Using scanf(), gets to read a string
66. WAP to pass string to a function and find length of it
67. WAP to concatenate two strings and copy the string 1 to string 2
68. WAP to sort elements in lexicographical order (dictionary order ascending order)
69. WAP to convert binary numbers to decimal and vice a versa
70. Write a C program to read name and marks of n number of students from user and store them in a file
71. Write a C program to read name and marks of n number of students from user and store them in a file. If the file previously exits, add the information of n student
72. Write a C program to write all the members of an array of structures to a file using fwrite(). Read the array from the file and display on the screen.

** Later on other program may be added

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