

ANURAG ENGINEERING COLLEGE

(An Autonomous Institution)

I Year B.Tech. CSE - I Sem

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(CS107ES) PROGRAMMING FOR PROBLEM SOLVING LAB - I

Prerequisites: Computer Fundamentals & Mathematics

Course objectives:

- ☐ To be able to understand the fundamentals of programming in C Language.
- ☐ To be able to write, compile and debug programs in C.
- ☐ To be able to formulate problems and implement in C.

WEEK 1

1. DOS commands: Changing the default Drive, VER, VOL, DATE, TIME, PROMPT, CLS, DIR, MD or MKDIR, CHDIR or CD, COPY, CON, TYPE, MOVE, REN, COPY, EXIT.

WEEK 2

2. LINUX Commands: PWD, CAL, DATE, ECHO, LS, CD, MKDIR, CAT, HEAD, TAIL, MV, CP, WC, VI Editor.

WEEK 3

3. Designing of flowcharts using **raptor tool**
 - a) Areas of Polygons
 - b) Calculation of Simple and Compound Interest
 - c) Swapping of Two numbers with and without temporary variable
4.
 - a) Checking whether a number is even or odd
 - b) Sum of 'n' natural numbers
 - c) Checking a number whether it is divisible by any given number

WEEK 4

5.
 - a) Write a program using control strings %d %c %s %f %e %o %x %i %g %u
 - b) Write a program to print 3 student details S.No, Student name, SSC percent, Inter percent, Address using backslash constants
 - c) Write a program to swap two variables without using third variable
6.
 - a) Write a program to find displacement $s=ut+1/2 at^2$.
 - b) Write a program to read P, T, R and find Simple Interest(SI) and Compound Interest(CI)
 - c) Write a program to find area and circumference of a Circle.

WEEK 5

7.
 - a) Write a program using all relational and logical operators
 - b) Write a program using increment operator (pre and post) and decrement operator (pre and post)
8.
 - a) Write a program using bitwise operators
 - b) Write a program to find largest among three numbers using conditional operator
 - c) Write a program to illustrate the use of size of () operator.

WEEK 6

9.
 - a) Write a program to accept a number and print if it is an odd or even number.
 - b) Write a program to find roots of quadratic equation $ax^2+bx+c=0$
10.
 - a) Write a program to accept two integers for a coordinate point and determine its quadrant.
 - b) Write a program to accept three integers and print the largest among them.

WEEK 7

13. a) Write a program to find the sum of 'n' natural numbers.
b) Write a program to find the sum of individual digits of a given number where number is a +ve integer.
14. a) Write a program to accept a number and reverse it.
b) Write a program to generate the first 'n' terms of Fibonacci series.

15. a) Write a program to generate all prime numbers between 1 and n, where 'n' is a value supplied by user.
b) Write a program to print sum of all odd numbers between 1 and 50 using do while statement.

17. a) Write a program to find x power n using functions
b) Write a program to check whether a number is perfect number or not using functions
18. a) Write a program to find the factorial of a given number using functions
b) Write a program to find strong numbers between two given numbers using functions

19. a) Write a program to check whether the given number is armstrong or not using functions
b) Write a program to swap two values using functions
20. a) Write a program to calculate factorial of a given number using recursion
b) Write a program to find G.C.D using recursion

WEEK 14

23. Write a program to check whether the given string is palindrome or not
 24. Write a program to find the length of a string and copy to another string variable.

II INTERNALS**CO-PO Mapping:**

	PO 1	PO 2	PO 3	PO 4	PO 5	PO6	PO7	PO8	PO 9	PO 10	PO 11	PO 12
CO 1	✓	✓	✓	✓								
CO 2	✓	✓	✓	✓								
CO 3	✓	✓	✓	✓								
CO 4	✓	✓	✓	✓								
CO 5	✓	✓	✓	✓								
CO 6	✓	✓	✓	✓								