

C Programming Lab Manual

<i>Section</i>	Program No.	Title of the Program	Index
<i>A. Basic I/O & Operators</i>	1	Display “Hello, World!”	
	2	Input and display student details (name, roll, marks)	
	3	Add, subtract, multiply, and divide two numbers	
	4	Calculate Simple Interest	
	5	Convert temperature from Celsius to Fahrenheit	
	6	Find area and circumference of a circle	
	7	Convert days into years, weeks, and days	
	8	Swap two numbers using a third variable	
	9	Swap two numbers without using a third variable	
	10	Calculate average and percentage of five subjects	
<i>B. Decision Making (if–else, switch)</i>	11	Check whether a number is even or odd	
	12	Find the greatest among three numbers	
	13	Check whether a number is positive, negative, or zero	
	14	Check voting eligibility (age \geq 18)	
	15	Check whether a year is leap year or not	
	16	Simple calculator using switch–case	
	17	Check vowel or consonant	
	18	Find roots of a quadratic equation	
	19	Identify character type (uppercase/lowercase/digit/symbol)	
	20	Determine grade of student based on marks	
<i>C. Looping Constructs</i>	21	Print first N natural numbers	
	22	Print multiplication table of a number	
	23	Calculate factorial of a number	
	24	Display Fibonacci series up to N terms	

D. Functions (User- Defined)	25	Find sum of digits of a number	
	26	Reverse a number	
	27	Check whether a number is palindrome	
	28	Check whether a number is Armstrong	
	29	Display all prime numbers between 1 and N	
	30	Find LCM and GCD of two numbers	
	31	Find factorial using a function	
	32	Find sum of digits using a function	
	33	Check prime number using a function	
	34	Swap two numbers using call by value	
	35	Swap two numbers using call by reference	
	36	Display Fibonacci series using a function	
	37	Calculate power of a number using a function	
	38	Perform arithmetic operations using functions	
	39	Check Armstrong number using a function	
	40	Check palindrome string using a function	
E. Recursion	41	Find factorial using recursion	
	42	Display Fibonacci series using recursion	
	43	Find sum of first N numbers using recursion	
	44	Find GCD of two numbers using recursion	
	45	Reverse a string using recursion	
	46	Convert decimal number to binary using recursion	
F. Arrays & Strings	47	Find sum and average of array elements	
	48	Find largest and smallest element in array	
	49	Search element in array (linear search)	
	50	Sort elements in ascending order (Bubble Sort)	
	51	Add two matrices of order 3×3	
	52	Find transpose of a matrix	

***G. Pointers
&
Structures***

53	Find length of string using pointer	
54	Concatenate two strings without using strcat()	
55	Count vowels, consonants, digits, and spaces in a string	
56	Display address and value of a variable using pointer	
57	Add two numbers using pointers	
58	Find sum of array elements using pointers	
59	Swap two numbers using pointers	
60	Input and display student details using structure	