

# Contents

S.No	Programs to	Page No	Teacher sign
1.	Input temperature in Fahrenheit and convert it into Degree Celsius.		
2.	Interchange (swap) the contents of two variables with and without using a third variable.		
3.	Input a number & reverse it.		
4.	Input a number & to obtain the sum of its first and last digit.		
5.	Input three angles of a triangle and check whether the triangle is valid or not.		
6.	Input an alphabet and convert it into its equivalent opposite case.		
7.	A library fines for late book returns: 50 paisa for 1-5 days, ₹1 for 6-10 days, and ₹5 for over 10 days. Membership is cancelled if a book is over 30 days late. Write a program to input days late and display the fine or message.		
8.	Input any no. and check it is Palindrome or not.		
9.	Input any no. and check it is Prime or not.		
10.	Input any no. and check it is Armstrong no. or not.		
11.	Print the following pattern:  <pre> *   *   *   *   *   *   *   *   * *   *   *   *       *   *   *   * *   *   *           *   *   * *   *               *       * *                   *           * *   *               *       * *   *   *   *       *   *   * *   *   *   *   *   *   *   * *   *   *   *   *   *   *   * </pre>		
12.	Print the following pattern:  <pre> A   B   C   D   E   D   C   B   A A   B   C   D       D   C   B   A A   B   C           C   B   A A   B               B   A A   B               B   A A   B   C           D   C   B   A A   B   C   D   E   D   C   B   A A   B   C   D   E   D   C   B   A </pre>		

13.	Calculate and print roots of a quadratic equation $ax^2 + bx + c = 0$ ( $a \neq 0$ ). The coefficients of quadratic equations a, b, c are received as parameters.		
14.	Enter a positive integer and its base. Write a program to display the number, base, and its converted form.		
15.	Input ten characters and count how many are uppercase, lowercase, digits & special symbols.		
16.	Input two nos. and print their sum using function.		
17.	Enter two dates in dd-mm-yy format. Write a program to calculate the difference in days.		
18.	Show the use of recursion in calculation of power. e.g. $a^b$ .		
19.	Print Fibonacci series up to 10 terms using recursive function.		
20.	Search for a particular no. in an array of 10 nos. using Linear Search.		
21.	Search for a particular no. in an array of 10 nos. using Binary Search.		
22.	Sort the elements of any array of 10 nos. in ascending order using Selection Sort.		
23.	Sort the elements of any array of 10 nos. in ascending order using Bubble Sort.		
24.	Store elements in a 2D array & display the elements in metrics form.		
25.	Store elements in a 2D array & transpose the elements.		
26.	Store elements in a 2D array & find highest element of each row.		
27.	Store elements in a 2D array & find sum of each diagonal and compare which is greater.		
28.	Check whether two arrays (of characters) are identical.		
29.	Input a string and check it is palindrome or not.		
30.	Input two string and check whether the two strings are equal or not.		
31.	Concatenate two inputted strings.		
32.	Extract 'm' characters from a string, starting at the 'nth' character, and print it.		
33.	Define a Circle structure with a radius. Write a C program to calculate and display the area and perimeter of two circles.		
34.	Define a structure named 'Employee' with employee ID, name, and salary. Write a program to input data for three employees, find the one with the highest salary, and display their details.		

35.	Define a structure named "Date" with members day, month, and year & input two dates and find the difference in days between them.		
36.	Create a structure named Complex to represent a complex number with real and imaginary parts & write program to add and multiply two complex numbers.		
37.	Write a program to copy one file to another. It should take file names from the user and refuse to copy if the target file already exists.		
38.	Write a program to read characters from the keyboard. Store lowercase letters in LOWER, uppercase letters in UPPER, and other characters in OTHER.		
39.	Search the name and address of person having age more than 30 years in the file 'persons.txt'.		
40.	Append the contents of one file to another. Have the program take the filename from the user.		