**Basic programming exercises**

Write a C program to perform input/output of all basic data types.

Write a C program to enter two numbers and find their sum.

Write a C program to enter two numbers and perform all arithmetic operations.

Write a C program to enter length and breadth of a rectangle and find its perimeter.

Write a C program to enter length and breadth of a rectangle and find its area.

Write a C program to enter radius of a circle and find its diameter, circumference and area.

Write a C program to enter length in centimeter and convert it into meter and kilometer.

Write a C program to enter temperature in Celsius and convert it into Fahrenheit.

Write a C program to enter temperature in Fahrenheit and convert to Celsius

Write a C program to convert days into years, weeks and days.

Write a C program to find power of any number x ^ y.

Write a C program to enter any number and calculate its square root.

Write a C program to enter two angles of a triangle and find the third angle.

Write a C program to enter base and height of a triangle and find its area.

Write a C program to calculate area of an equilateral triangle.

Write a C program to enter marks of five subjects and calculate total, average and percentage.

Write a C program to enter P, T, R and calculate Simple Interest.

Write a C program to enter P, T, R and calculate Compound Interest.

**Bitwise operators**

Write a C program to check Least Significant Bit (LSB) of a number is set or not.

Write a C program to check Most Significant Bit (MSB) of a number is set or not.

Write a C program to get nth bit of a number.

Write a C program to set nth bit of a number.

Write a C program to clear nth bit of a number.

Write a C program to toggle nth bit of a number.

Write a C program to get highest set bit of a number.

Write a C program to get lowest set bit of a number.

Write a C program to count trailing zeros in a binary number.

Write a C program to count leading zeros in a binary number.

Write a C program to flip bits of a binary number using bitwise operator.

Write a C program to count total zeros and ones in a binary number.

Write a C program to rotate bits of a given number.

Write a C program to convert decimal to binary number system using bitwise operator.

Write a C program to swap two numbers using bitwise operator.

Write a C program to check whether a number is even or odd using bitwise operator.

Write a C program to swap two numbers using bitwise operator

Write a C program to put even and odd elements of array in two separate array

**Conditional operators**

Write a C program to find maximum between two numbers using conditional operator.

Write a C program to find maximum between three numbers using conditional operator.

Write a C program to check whether a number is even or odd using conditional operator.

Write a C program to check whether year is leap year or not using conditional operator.

Write a C program to check whether character is an alphabet or not using conditional operator.

**if – else Question**

Write a C program to find maximum between two numbers.

Write a C program to find maximum between three numbers.

Write a C program to check whether a number is negative, positive or zero.

Write a C program to check whether a number is divisible by 5 and 11 or not.

Write a C program to check whether a number is even or odd.

Write a C program to check whether a year is leap year or not.

Write a C program to check whether a character is alphabet or not.

Write a C program to input any alphabet and check whether it is vowel or consonant.

Write a C program to input any character and check whether it is alphabet, digit or special character.

Write a C program to check whether a character is uppercase or lowercase alphabet.

Write a C program to input week number and print week day.

Write a C program to input month number and print number of days in that month.

Write a C program to count total number of notes in given amount.

Write a C program to input angles of a triangle and check whether triangle is valid or not.

Write a C program to input all sides of a triangle and check whether triangle is valid or not.

Write a C program to check whether the triangle is equilateral, isosceles or scalene triangle.

Write a C program to find all roots of a quadratic equation.

Write a C program to calculate profit or loss.

Write a C program to input marks of five subjects Physics, Chemistry, Biology, Mathematics and Computer. Calculate percentage and grade according to following:

Percentage >= 90% : Grade A

Percentage >= 80% : Grade B

Percentage >= 70% : Grade C

Percentage >= 60% : Grade D

Percentage >= 40% : Grade E

Percentage < 40% : Grade F

Write a C program to input basic salary of an employee and calculate its Gross salary according to following:

Basic Salary <= 10000 : HRA = 20%, DA = 80%

Basic Salary <= 20000 : HRA = 25%, DA = 90%

Basic Salary > 20000 : HRA = 30%, DA = 95%

Write a C program to input electricity unit charges and calculate total electricity bill according to the given condition:

For first 50 units Rs. 0.50/unit

For next 100 units Rs. 0.75/unit

For next 100 units Rs. 1.20/unit

For unit above 250 Rs. 1.50/unit

An additional surcharge of 20% is added to the bill

Write a C program to calculate electricity bill.

Write a C program to print fibonacci series upto n terms.

**Switch case**

Write a C program to print day of week name using switch case.

Write a C program print total number of days in a month using switch case.

Write a C program to check whether an alphabet is vowel or consonant using switch case.

Write a C program to find maximum between two numbers using switch case.

Write a C program to check whether a number is even or odd using switch case.

Write a C program to check whether a number is positive, negative or zero using switch case.

Write a C program to find roots of a quadratic equation using switch case.

Write a C program to create Simple Calculator using switch case.

**loop programming exercises**

Write a C program to print all natural numbers from 1 to n. – using while loop

Write a C program to print all natural numbers in reverse (from n to 1). – using while loop

Write a C program to print all alphabets from a to z. – using while loop

Write a C program to print all even numbers between 1 to 100. – using while loop

Write a C program to print all odd number between 1 to 100.

Write a C program to find sum of all natural numbers between 1 to n.

Write a C program to find sum of all even numbers between 1 to n.

Write a C program to find sum of all odd numbers between 1 to n.

Write a C program to print multiplication table of any number.

Write a C program to count number of digits in a number.

Write a C program to find first and last digit of a number.

Write a C program to find sum of first and last digit of a number.

Write a C program to swap first and last digits of a number.

Write a C program to calculate sum of digits of a number.

Write a C program to calculate product of digits of a number.

Write a C program to enter a number and print its reverse.

Write a C program to check whether a number is palindrome or not.

Write a C program to find frequency of each digit in a given integer.

Write a C program to enter a number and print it in words.

Write a C program to print all ASCII character with their values.

Write a C program to find power of a number using for loop.

Write a C program to find all factors of a number.

Write a C program to calculate factorial of a number.

Write a C program to find HCF (GCD) of two numbers.

Write a C program to find LCM of two numbers.

Write a C program to check whether a number is Prime number or not.

Write a C program to print all Prime numbers between 1 to n.

Write a C program to find sum of all prime numbers between 1 to n.

Write a C program to find all prime factors of a number.

Write a C program to check whether a number is Armstrong number or not.

Write a C program to print all Armstrong numbers between 1 to n.

Write a C program to check whether a number is Perfect number or not.

Write a C program to print all Perfect numbers between 1 to n.

Write a C program to check whether a number is Strong number or not.

Write a C program to print all Strong numbers between 1 to n.

Write a C program to print Fibonacci series up to n terms.

Write a C program to find one’s complement of a binary number.

Write a C program to find two’s complement of a binary number.

Write a C program to convert Binary to Octal number system.

Write a C program to convert Binary to Decimal number system.

Write a C program to convert Binary to Hexadecimal number system.

Write a C program to convert Octal to Binary number system.

Write a C program to convert Octal to Decimal number system.

Write a C program to convert Octal to Hexadecimal number system.

Write a C program to convert Decimal to Binary number system.

Write a C program to convert Decimal to Octal number system.

Write a C program to convert Decimal to Hexadecimal number system.

Write a C program to convert Hexadecimal to Binary number system.

Write a C program to convert Hexadecimal to Octal number system.

Write a C program to convert Hexadecimal to Decimal number system.

Write a C program to print Pascal triangle upto n rows.

Star pattern programs – Write a C program to print the given star patterns.

Number pattern programs – Write a C program to print the given number patterns.

**Function and recursion Question**

Write a C program to find cube of any number using function.

Write a C program to find diameter, circumference and area of circle using functions.

Write a C program to find maximum and minimum between two numbers using functions.

Write a C program to check whether a number is even or odd using functions.

Write a C program to check whether a number is prime, Armstrong or perfect number using functions.

Write a C program to find all prime numbers between given interval using functions.

Write a C program to print all strong numbers between given interval using functions.

Write a C program to print all Armstrong numbers between given interval using functions.

Write a C program to print all perfect numbers between given interval using functions.

Write a C program to find power of any number using recursion.

Write a C program to print all natural numbers between 1 to n using recursion.

Write a C program to print all even or odd numbers in given range using recursion.

Write a C program to find sum of all natural numbers between 1 to n using recursion.

Write a C program to find sum of all even or odd numbers in given range using recursion.

Write a C program to find reverse of any number using recursion.

Write a C program to check whether a number is palindrome or not using recursion.

Write a C program to find sum of digits of a given number using recursion.

Write a C program to find factorial of any number using recursion.

Write a C program to generate nth Fibonacci term using recursion.

Write a C program to find GCD (HCF) of two numbers using recursion.

Write a C program to find LCM of two numbers using recursion.

Write a C program to display all array elements using recursion.

Write a C program to find sum of elements of array using recursion.

Write a C program to find maximum and minimum elements in array using recursion.

**Array Question**

Write a C program to read and print elements of array. – using recursion.

Write a C program to print all negative elements in an array.

Write a C program to find sum of all array elements. – using recursion.

Write a C program to find maximum and minimum element in an array. – using recursion.

Write a C program to find second largest element in an array.

Write a C program to count total number of even and odd elements in an array.

Write a C program to count total number of negative elements in an array.

Write a C program to copy all elements from an array to another array.

Write a C program to insert an element in an array.

Write a C program to delete an element from an array at specified position.

Write a C program to count frequency of each element in an array.

Write a C program to print all unique elements in the array.

Write a C program to count total number of duplicate elements in an array.

Write a C program to delete all duplicate elements from an array.

Write a C program to merge two array to third array.

Write a C program to find reverse of an array.

Write a C program to put even and odd elements of array in two separate array.

Write a C program to search an element in an array.

Write a C program to sort array elements in ascending or descending order.

Write a C program to sort even and odd elements of array separately.

Write a C program to left rotate an array.

Write a C program to right rotate an array.

**2D Array Question**

Write a C program to add two matrices.

Write a C program to subtract two matrices.

Write a C program to perform Scalar matrix multiplication.

Write a C program to multiply two matrices.

Write a C program to check whether two matrices are equal or not.

Write a C program to find sum of main diagonal elements of a matrix.

Write a C program to find sum of minor diagonal elements of a matrix.

Write a C program to find sum of each row and column of a matrix.

Write a C program to interchange diagonals of a matrix.

Write a C program to find upper triangular matrix.

Write a C program to find lower triangular matrix.

Write a C program to find sum of upper triangular matrix.

Write a C program to find sum of lower triangular matrix.

Write a C program to find transpose of a matrix.

Write a C program to find determinant of a matrix.

Write a C program to check Identity matrix.

Write a C program to check Sparse matrix.

Write a C program to check Symmetric matrix.

**String Question**

Write a C program to find length of a string.

Write a C program to copy one string to another string.

Write a C program to concatenate two strings.

Write a C program to compare two strings.

Write a C program to convert lowercase string to uppercase.

Write a C program to convert uppercase string to lowercase.

Write a C program to toggle case of each character of a string.

Write a C program to find total number of alphabets, digits or special character in a string.

Write a C program to count total number of vowels and consonants in a string.

Write a C program to count total number of words in a string.

Write a C program to find reverse of a string.

Write a C program to check whether a string is palindrome or not.

Write a C program to reverse order of words in a given string.

Write a C program to find first occurrence of a character in a given string.

Write a C program to find last occurrence of a character in a given string.

Write a C program to search all occurrences of a character in given string.

Write a C program to count occurrences of a character in given string.

Write a C program to find highest frequency character in a string.

Write a C program to find lowest frequency character in a string.

Write a C program to count frequency of each character in a string.

Write a C program to remove first occurrence of a character from string.

Write a C program to remove last occurrence of a character from string.

Write a C program to remove all occurrences of a character from string.

Write a C program to remove all repeated characters from a given string.

Write a C program to replace first occurrence of a character with another in a string.

Write a C program to replace last occurrence of a character with another in a string.

Write a C program to replace all occurrences of a character with another in a string.

Write a C program to find first occurrence of a word in a given string.

Write a C program to find last occurrence of a word in a given string.

Write a C program to search all occurrences of a word in given string.

Write a C program to count occurrences of a word in a given string.

Write a C program to remove first occurrence of a word from string.

Write a C program to remove last occurrence of a word in given string.

Write a C program to remove all occurrence of a word in given string.

Write a C program to trim leading white space characters from given string.

Write a C program to trim trailing white space characters from given string.

Write a C program to trim both leading and trailing white space characters from given string.

Write a C program to remove all extra blank spaces from given string.