

Write a program to perform input/output of all basic data types.
Write a program to enter two numbers and find their sum.
Write a program to enter two numbers and perform all arithmetic operations.
Write a program to enter length and breadth of a rectangle and find its perimeter.
Write a program to enter length and breadth of a rectangle and find its area.
Write a program to enter radius of a circle and find its diameter, circumference and area.
Write a program to enter length in centimeter and convert it into meter and kilometer.
Write a program to enter temperature in Celsius and convert it into Fahrenheit.
Write a program to enter temperature in Fahrenheit and convert to Celsius
Write a program to convert days into years, weeks and days.
Write a program to find power of any number x^y .
Write a program to enter any number and calculate its square root.
Write a program to enter two angles of a triangle and find the third angle.
Write a program to enter base and height of a triangle and find its area.
Write a program to calculate area of an equilateral triangle.
Write a program to enter marks of five subjects and calculate total, average and percentage.
Write a program to enter P, T, R and calculate Simple Interest.
Write a program to enter P, T, R and calculate Compound Interest.

Conditionals:

Write a program to find maximum between two numbers.
Write a program to find maximum between three numbers.
Write a program to check whether a number is negative, positive or zero.
Write a program to check whether a number is divisible by 5 and 11 or not.
Write a program to check whether a number is even or odd.
Write a program to check whether a year is leap year or not.
Write a program to check whether a character is alphabet or not.
Write a program to input any alphabet and check whether it is vowel or consonant.
Write a program to input any character and check whether it is alphabet, digit or special character.
Write a program to check whether a character is uppercase or lowercase alphabet.
Write a program to input week number and print week day.
Write a program to input month number and print number of days in that month.
Write a program to count total number of notes in given amount.
Write a program to input angles of a triangle and check whether triangle is valid or not.
Write a program to input all sides of a triangle and check whether triangle is valid or not.
Write a program to check whether the triangle is equilateral, isosceles or scalene triangle.
Write a program to find all roots of a quadratic equation.

Write a program to calculate profit or loss.

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

Percentage $\geq 90\%$: Grade A

Percentage $\geq 80\%$: Grade B

Percentage $\geq 70\%$: Grade C

Percentage $\geq 60\%$: Grade D

Percentage $\geq 40\%$: Grade E

Percentage $< 40\%$: Grade F

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

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

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

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

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

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

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

Write a program to create Simple Calculator using switch case.

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

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

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

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

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

Looping

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

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

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

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

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

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

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

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

Write a program to print multiplication table of any number.

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

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

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

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

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

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

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

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

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

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

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

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

Write a program to find all factors of a number.

Write a program to calculate factorial of a number.

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

Write a program to find LCM of two numbers.

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

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

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

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

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

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

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

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

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

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

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

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

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

Write a program to convert Binary to Octal number system.

Write a program to convert Binary to Decimal number system.

Write a program to convert Binary to Hexadecimal number system.

Write a program to convert Octal to Binary number system.

Write a program to convert Octal to Decimal number system.

Write a program to convert Octal to Hexadecimal number system.

Write a program to convert Decimal to Binary number system.

Write a program to convert Decimal to Octal number system.

Write a program to convert Decimal to Hexadecimal number system.

Write a program to convert Hexadecimal to Binary number system.
Write a program to convert Hexadecimal to Octal number system.
Write a program to convert Hexadecimal to Decimal number system.
Write a program to print Pascal triangle upto n rows.
Star pattern programs - Write a program to print the given star patterns.
Number pattern programs - Write a program to print the given number patterns.

Bitwise:

Write a program to check Least Significant Bit (LSB) of a number is set or not.
Write a program to check Most Significant Bit (MSB) of a number is set or not.
Write a program to get nth bit of a number.
Write a program to set nth bit of a number.
Write a program to clear nth bit of a number.
Write a program to toggle nth bit of a number.
Write a program to get highest set bit of a number.
Write a program to get lowest set bit of a number.
Write a program to count trailing zeros in a binary number.
Write a program to count leading zeros in a binary number.
Write a program to flip bits of a binary number using bitwise operator.
Write a program to count total zeros and ones in a binary number.
Write a program to rotate bits of a given number.
Write a program to convert decimal to binary number system using bitwise operator.
Write a program to swap two numbers using bitwise operator.
Write a program to check whether a number is even or odd using bitwise operator.

Array:

Write a program to read and print elements of array. - using recursion.
Write a program to print all negative elements in an array.
Write a program to find sum of all array elements. - using recursion.
Write a program to find maximum and minimum element in an array. - using recursion.
Write a program to find second largest element in an array.
Write a program to count total number of even and odd elements in an array.
Write a program to count total number of negative elements in an array.
Write a program to copy all elements from an array to another array.
Write a program to insert an element in an array.

Write a program to delete an element from an array at specified position.
Write a program to count frequency of each element in an array.
Write a program to print all unique elements in the array.
Write a program to count total number of duplicate elements in an array.
Write a program to delete all duplicate elements from an array.
Write a program to merge two array to third array.
Write a program to find reverse of an array.
Write a program to put even and odd elements of array in two separate array.
Write a program to search an element in an array.
Write a program to sort array elements in ascending or descending order.
Write a program to sort even and odd elements of array separately.
Write a program to left rotate an array.
Write a program to right rotate an array.

Matix

Write a program to add two matrices.
Write a program to subtract two matrices.
Write a program to perform Scalar matrix multiplication.
Write a program to multiply two matrices.
Write a program to check whether two matrices are equal or not.
Write a program to find sum of main diagonal elements of a matrix.
Write a program to find sum of minor diagonal elements of a matrix.
Write a program to find sum of each row and column of a matrix.
Write a program to interchange diagonals of a matrix.
Write a program to find upper triangular matrix.
Write a program to find lower triangular matrix.
Write a program to find sum of upper triangular matrix.
Write a program to find sum of lower triangular matrix.
Write a program to find transpose of a matrix.
Write a program to find determinant of a matrix.
Write a program to check Identity matrix.
Write a program to check Sparse matrix.
Write a program to check Symmetric matrix.

Strings

Write a program to find length of a string.
Write a program to copy one string to another string.
Write a program to concatenate two strings.
Write a program to compare two strings.
Write a program to convert lowercase string to uppercase.
Write a program to convert uppercase string to lowercase.

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

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

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

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

Write a program to find reverse of a string.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Functions:

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

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

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

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

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

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

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

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

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

10. Recursion

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

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

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

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

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

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

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

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

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

Write a program to generate nth Fibonacci term using recursion.

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

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

Write a program to display all array elements using recursion.

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

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