

List of 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.

List of bitwise operators exercises

Below is a set of programming exercises that can be used by a beginner or an intermediate programmer to master their skills on bitwise operator.

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.

List of conditional operators
programming exercises

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 character is an alphabet or not using conditional operator.

check whether year is leap year or not using conditional operator.

hacker Rank

List of if...else programming exercises

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

List of switch case programming exercises

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.

List of 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.

Recommended posts

Hollow Square Star Pattern with Diagonal

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Rhombus Star Pattern

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*   *
*   *
*   *
*****
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Hollow Rhombus Star Pattern

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*****
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Mirrored Rhombus Star Pattern

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*   *
*   *
*   *
*****
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Hollow Mirrored Rhombus Star Pattern

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Right Triangle Star Pattern

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* *
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* *
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*****
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Hollow Right Triangle Star Pattern

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*  *
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Hollow Inverted Right Triangle Star Pattern

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Inverted Mirrored Right Triangle Star Pattern

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*  *
*  *
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*
```

Hollow Inverted Mirrored Right Triangle Star Pattern

```

*
**
*** 
****
```

Mirrored Right Triangle Star Pattern

```

*
**
*  *
*  *
*****
```

Hollow Mirrored Right Triangle Star Pattern

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Inverted Pyramid Star Pattern

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Hollow Inverted Pyramid Star Pattern

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Half Diamond Star Pattern

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Mirrored Half Diamond Star Pattern

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Diamond Star Pattern

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*** ***
**** ****

Hollow Diamond Star Pattern

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Right Arrow Star Pattern

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*
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Left Arrow Star Pattern

+
+
+
+
+
++++++
+
+
+
+

Plus Star Pattern

* *
· ·

Eight Star Pattern

Heart Star Pattern

Heart Star Pattern with Name

List of Number pattern programming exercises	10101 Number pattern 6
Square number patterns	11011 11011
11111	00000
11111	11011
11111	11011
11111	Number pattern 7
11111	
Number pattern 1	10001 01010
11111	00100
00000	01010
11111	10001
00000	Number pattern 8
11111	
Number pattern 2	
01010	01110 10001
01010	10001
01010	10001
01010	10001
01010	01110
Number pattern 3	Number pattern 9
11111	
10001	11111 22222
10001	33333
10001	44444
11111	55555
Number pattern 4	Number pattern 10
11111	
11111	12345 12345
11011	12345
11111	12345
11111	12345
Number pattern 5	Number pattern 11
11111	
12345	12345 23456 34567 45678 56789
12345	Number pattern 12

55555

54444

54333

54322

54321

Number pattern 14

12345

23455

34555

45555

55555

Number pattern 15

12345

23451

34521

45321

54321

Number pattern 16

12345

21234

32123

43212

54321

Number pattern 17

5 5 5 5 5 5 5 5 5

5 4 4 4 4 4 4 4 5

5 4 3 3 3 3 3 4 5

5 4 3 2 2 2 3 4 5

5 4 3 2 1 2 3 4 5

5 4 3 2 2 2 3 4 5

5 4 3 3 3 3 3 4 5

5 4 4 4 4 4 4 4 5

5 5 5 5 5 5 5 5 5

Number pattern 18

1 2 3 4 5

16 17 18 19 6

15 24 25 20 7

14 23 22 21 8

13 12 11 10 9

Number pattern 19

Triangle Easy Number Patterns

1	5	
22	54	13579
333	543	3579
4444	5432	579
55555	54321	79
Number pattern 20	Number pattern 28	9
55555	54321	Number
4444	5432	pattern 34
333	543	
22	54	
1	5	
Number pattern 21	Number pattern 29	
11111	5	
2222	45	
333	345	
44	2345	
5	12345	
Number pattern 22	Number pattern 30	
5	12345	
44	2345	
333	345	
2222	45	
11111	5	
Number pattern 23	Number pattern 31	
1	1	
12	23	
123	345	
1234	4567	
12345	56789	
Number pattern 24	Number pattern 32	
12345	56789	
1234	4567	
123	345	
12	23	
1	1	
Number pattern 25	Number pattern 33	

101	Number pattern 42
1010	
10101	
Number pattern 35	1
	121
	12321
	1234321
	123454321
	Number pattern 43
1	1
00	32
111	4543
0000	567654
11111	67898765
Number pattern 36	Number pattern 44
1	1
01	2 3
010	4 5 6
1010	7 8 9 10
10101	11 12 13 14 15
Number pattern 37	Number pattern 45
1	1
11	21
101	123
1001	4321
11111	12345
Number pattern 38	Number pattern 46
Triangle Hard Number Patterns	
1	1
123	23
12345	4567
1234567	89123456
123456789	7891234567891234
Number pattern 39	Number pattern 47
1	1 1
24	12 21
135	123 321
2468	1234 4321
13579	1234554321
Number pattern 40	Number pattern 48

2	6	1
3	7 10	123
4	8 11 13	12345
5	9 12 14 15	1234567
Number pattern 49		123456789
1		1234567
2	4	12345
7	11 16	123
22	29 37 46	1
56	67 79 92 106	Number pattern 56
Number pattern 50		
1		1
3	2	121
4	5 6	12321
10	9 8 7	1234321
11	12 13 14 15	123454321
Number pattern 51		1234321
1		12321
22		121
333		1
2222		Number pattern 57
11111		
Number pattern 52		
N = 12345		
12345		*
1234		*1*
123		*121*
12		*12321*
1		*1234321*
Number pattern 53		*123454321*
N = 12345		*1234321*
12345		*12321*
2345		*121*
345		*1*
45		*
5		Number pattern 58
Number pattern 54		
Tricky Number Patterns		
1	1	1
2	2	2
3	3	3
4	4	4
5		5
4	4	4
3	3	3
2	2	2
1	1	1
Number pattern 59		

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.

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.

List of matrix programming exercises

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.

Required knowledge

Basic C programming, Array, Pointer, Functions, Strings

List of string programming exercises

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 reverse every word in a sentence.

List of file handling exercises

Write a C program to create a file and write contents, save and close the file.

Write a C program to read file contents and display on console.

Write a C program to read numbers from a file and write even, odd and prime numbers to separate file.

Write a C program to append content to a file.

Write a C program to compare two files.

Write a C program to copy contents from one file to another file.

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

Write a C program to count characters, words and lines in a text file.

Write a C program to remove a word from text file.

Write a C program to remove specific line from a text file.

Write a C program to remove empty lines from a text file.

Write a C program to find occurrence of a word in a text file.

Write a C program to count occurrences of a word in a text file.

Write a C program to count occurrences of all words in a text file.

Write a C program to find and replace a word in a text file.

Write a C program to replace specific line in a text file.

Write a C program to print source code of same program.

Write a C program to convert uppercase to lowercase character and vice versa in a text file.

Write a C program to find properties of a file using stat() function.

Write a C program to check if a file or directory exists.

Write a C program to rename a file using rename() function.

Write a C program to list all files and sub-directories recursively.

