Competitive Coding Prerequisite

Basic

1. Write a program to convert days into years, weeks and days.
2. Write a program to enter two angles of a triangle and find the third angle.
3. Write a program to enter marks of five subjects and calculate total, average and percentage.
4. Write a program to enter P, T, R and calculate Simple Interest. (principle, time, rate)
5. Write a program to enter P, T, R and calculate Compound Interest.

Conditional/Ternary operator Problem

1. Write a C program to find maximum between two numbers using conditional/ternary operator.
2. Write a C program to find maximum between three numbers using conditional/ternary operator.
3. Write a C program to check whether a number is even or odd using conditional/ternary operator.
4. Write a C program to check whether year is leap year or not using conditional/ternary operator.
5. Write a C program to check whether character is an alphabet or not using conditional/ternary operator.

Bitwise Operators

1. Write a program to check Least Significant Bit (LSB) of a number is set or not.
2. Write a program to check Most Significant Bit (MSB) of a number is set or not.
3. Write a program to get nth bit of a number.
4. Write a program to set nth bit of a number.
5. Write a program to clear nth bit of a number.
6. Write a program to toggle nth bit of a number.
7. Write a program to get highest set bit of a number.
8. Write a program to get lowest set bit of a number.
9. Write a program to count trailing zeros in a binary number.
10. Write a program to count leading zeros in a binary number.
11. Write a program to flip bits of a binary number using bitwise operator.
12. Write a program to total number of zeros and ones in a binary number.
13. Write a program to convert decimal to binary number system using bitwise operator.
14. Write a program to swap two numbers using bitwise operator.
15. Write a program to check whether a number is even or odd using bitwise operator.

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Loops

1. Write a program to enter any number and calculate sum of all natural numbers between 1 to n.
2. Write a program to enter any number and find its first and last digit.
3. Write a program to enter any number and calculate sum of its digits.
4. Write a program to enter any number and calculate product of its digits.
5. Write a program to swap first and last digits of any number.
6. Write a program to enter any number and check whether the number is palindrome or not.
7. Write a program to enter any number and print it in words.
8. Write a program to print all ASCII character with their values.
9. Write a program to find power of any number using for loop.
10. Write a program to enter any number and find the sum of first and last digit of the number.
11. Write a program to find HCF (GCD) of two numbers.
12. Write a program to find LCM of two numbers.
13. Write a program to enter any number and check whether it is Prime number or not.
14. Write a program to enter any number and check whether it is Armstrong number or not.
15. Write a program to enter any number and check whether it is Perfect number or not.
16. Write a program to enter any number and check whether it is Strong number or not.
17. Write a program to print all Prime numbers between 1 to n.
18. Write a program to enter any number and print its prime factors.
19. Write a program to find sum of all prime numbers between 1 to n.
20. Write a program to print Fibonacci series up to n terms.
21. Write a program to find one's complement of a binary number.
22. Write a program to find two's complement of a binary number.
23. Write a program to convert Binary to Octal number system.
24. Write a program to convert Binary to Decimal number system.
25. Write a program to convert Binary to Hexadecimal number system.
26. Write a program to convert Octal to Binary number system.

Array Problems

1. Write a program to read and print elements of array. - using recursion.
2. Write a program to find sum of all array elements. - using recursion.
3. Write a program to find maximum and minimum element in an array. - using recursion.
4. Write a program to find second largest element in an array.
5. Write a program to copy all elements from an array to another array.

6. Write a program to insert an element in an array.
7. Write a program to delete an element from an array at specified position.
8. Write a program to count total number of duplicate elements in an array.
9. Write a program to delete all duplicate elements from an array.
10. Write a program to print all unique elements in the array.
11. Write a program to merge two array to third array.
12. Write a program to find reverse of an array.
13. Write a program to count frequency of each element in an array.
14. Write a program to put even and odd elements of array in two separate array.
15. Write a program to search an element in an array.
16. Write a program to sort array elements in ascending order.
17. Write a program to sort array elements in descending order.
18. Write a program to sort even and odd elements of array separately.
19. Write a program to add two matrices.
20. Write a program to subtract two matrices.
21. Write a program to perform Scalar matrix multiplication.
22. Write a program to multiply two matrices.
23. Write a program to check whether two matrices are equal or not.
24. Write a program to find sum of main diagonal elements of a matrix.
25. Write a program to find sum of minor diagonal elements of a matrix.
26. Write a program to find sum of each row and column of a matrix.
27. Write a program to interchange diagonals of a matrix.
28. Write a program to find upper triangular matrix.
29. Write a program to find lower triangular matrix.
30. Write a program to find sum of upper triangular matrix.
31. Write a program to find transpose of a matrix.
32. Write a program to find determinant of a matrix.
33. Write a program to check Identity matrix.
34. Write a program to check Sparse matrix.
35. Write a program to check Symmetric matrix.

String Problem

1. Write a C program to find length of a string.
2. Write a C program to copy one string to another string.
3. Write a C program to concatenate two strings.
4. Write a C program to compare two strings.
5. Write a C program to convert lowercase string to uppercase.
6. Write a C program to convert uppercase string to lowercase.
7. Write a C program to toggle case of each character of a string.
8. Write a C program to find total number of alphabets, digits or special character in a string.
9. Write a C program to count total number of vowels and consonants in a string.

10. Write a C program to count total number of words in a string.
11. Write a C program to find reverse of a string.
12. Write a C program to check whether a string is palindrome or not.
13. Write a C program to find first occurrence of a character in a given string.
14. Write a C program to find last occurrence of a character in a given string.
15. Write a C program to search all occurrences of a character in given string.
16. Write a C program to count occurrences of a character in given string.
17. Write a C program to find highest frequency character in a string.
18. Write a C program to find lowest frequency character in a string.
19. Write a C program to count frequency of each character in a string.
20. Write a C program to remove first occurrence of a character from string.
21. Write a C program to remove last occurrence of a character from string.
22. Write a C program to remove all occurrences of a character from string.
23. Write a C program to remove all repeated characters from a given string.
24. Write a C program to replace first occurrence of a character with another in a string.
25. Write a C program to replace last occurrence of a character with another in a string.
26. Write a C program to replace all occurrences of a character with another in a string.
27. Write a C program to find first occurrence of a word in a given string.
28. Write a C program to find last occurrence of a word in a given string.
29. Write a C program to search all occurrences of a word in given string.
30. Write a C program to count occurrences of a word in a given string.
31. Write a C program to remove first occurrence of a word from string.
32. Write a C program to remove last occurrence of a word in given string.
33. Write a C program to remove all occurrence of a word in given string.
34. Write a C program to trim leading white space characters in a string.
35. Write a C program to trim trailing white space characters in a string.
36. Write a C program to trim both leading and trailing white space characters in a string.
37. Write a C program to remove all extra blank spaces from a given string.

Pointers

1. Write a C program to copy one string to another string using pointers
2. Write a C program to concatenate two strings using pointers
3. Write a C program to compare two strings using pointers
4. Write a C program to find reverse of a string using pointers
5. Write a C program to check whether a string is palindrome or not using pointers

6. Write a C program to search all occurrences of a character in given string using pointers
7. Write a C program to find highest frequency character in a string using pointers
8. Write a C program to remove all repeated characters from a given string using pointers
9. Write a C program to find first occurrence of a word in a given string using pointers
10. Check if two given strings are isomorphic to each other using pointers: Two strings str1 and str2 are called isomorphic if there is a one to one mapping possible for every character of str1 to every character of str2. And all occurrences of every character in 'str1' map to same character in 'str2'
11. Write a C program to print all unique elements in the array using pointers
12. Write a C program to merge two array to third array using pointers
13. Write a C program to add two matrices using double pointers
14. Write a C program to subtract two matrices using double pointers
15. Write a C program to interchange diagonals of a matrix using double pointers
16. Write a C program to find common words in multiple strings using double pointers
17. Write a C Program to find if a substring is there in s string or not using pointers
18. Write a c program to find if a string is Pangram – using every letter in alphabets using pointers
19. Find common characters in two strings using pointers