

C

1. Reading Input from the Keyboard

Problem Statement: User Input

Write a program that reads an integer and a floating-point number from the user's keyboard and prints them.

2. Prettier Printing on the Console

Problem Statement: Formatting Output

Create a program that prints a message with formatting, including line breaks and tabs.

3. First Algorithm

Problem Statement: Basic Algorithm

Develop a program that calculates the area of a rectangle using its length and width, and then prints the result.

4. Refactoring Code

Problem Statement: Code Improvement

Improve the previous program by defining a function to calculate the area of the rectangle.

5. Comments

Problem Statement: Adding Comments

Write a program that calculates the volume of a box using its dimensions, and add comments to explain the purpose of the code.

6. Shorthand Operators

Problem Statement: Using Shorthand Operators

Implement a program that uses shorthand operators to perform various arithmetic operations on a number.

7. The "if" Statement

Problem Statement: Conditional Statements

Develop a program that takes an integer as input and uses an "if" statement to determine if it's positive, negative, or zero.

8. Conditional Operators

Problem Statement: Conditional Operators Usage

Write a program that takes two integers as input and uses conditional operators to determine the larger number.

9. The "modulo" Operator

Problem Statement: Modulo Operator Usage

Create a program that checks whether an entered number is even or odd using the modulo operator.

10. Nested "if" Statements

Problem Statement: Nested Conditional Statements

Implement a program that takes an integer as input and uses nested "if" statements to determine if it's positive, negative, or zero.

11. The "while" Loop

Problem Statement: While Loop Implementation

Write a program that uses a "while" loop to print the numbers from 1 to 10.

12. Control the "while" Loop

Problem Statement: Loop Control

Develop a program that uses a "while" loop to print even numbers between 2 and 20.

13. The "for" Loop

Problem Statement: For Loop Implementation

Create a program that uses a "for" loop to print the multiplication table of a given number.

14. Algorithm with Loops

Problem Statement: Loop-based Algorithm

Implement a program that calculates the factorial of a given number using a loop.

15. Converting between "while" and "for" Loops

Problem Statement: Loop Conversion

Convert the previous factorial program from a "while" loop to a "for" loop.

16. The "float" Data Type

Problem Statement: Using Float Data Type

Write a program that calculates the area of a circle using its radius (floating-point number) and prints the result.

17. The "array" Data Structure

Problem Statement: Array Usage

Develop a program that stores 5 integers in an array and prints them.

18. The "array" Data Structure (2)

Problem Statement: Array Manipulation

Create a program that populates an array of integers with values, and then prints the sum of the array elements.

19. Array Initialization

Problem Statement: Initializing Arrays

Write a program that initializes an array of characters with a given string and displays it.

20. Finding All Odd Numbers in an Array

Problem Statement: Array Element Search

Implement a program that finds and prints all the odd numbers in an array of integers.

21. The "char" Data Type

Problem Statement: Using Char Data Type

Develop a program that takes a character as input and prints whether it's an uppercase letter, lowercase letter, or digit.

22. The "char" Data Type (2)

Problem Statement: Character Manipulation

Write a program that takes a character as input and converts it to uppercase if it's a lowercase letter. Print the result.

23. The "char" Data Type (3)

Problem Statement: Character Comparison

Create a program that takes two characters as input and checks if they are equal or not.

24. How to Check Properties about Characters

Problem Statement: Character Properties

Develop a program that determines if a given character is a vowel or consonant.

25. How to Check Properties about Characters (2)

Problem Statement: Character Properties (2)

Write a program that checks if a character is a special symbol (non-alphanumeric).

26. Initializing and Printing an Array of Characters

Problem Statement: Array of Characters

Implement a program that initializes an array of characters with a word and prints each character separately.

27. Initializing and Printing an Array of Characters (2)

Problem Statement: Array of Characters (2)

Extend the previous program by implementing a loop to print each character in the array.

28. Initializing and Printing an Array of Characters (3)

Problem Statement: Array of Characters (3)

Enhance the previous program by printing the characters in reverse order.

29. Manipulating Text

Problem Statement: String Manipulation

Write a program that takes a sentence as input and replaces all spaces with underscores.

30. Size of a String of Text

Problem Statement: String Length

Develop a program that calculates and prints the length of a given string.

31. Reading a Line of Text from the Keyboard

Problem Statement: Line Input

Create a program that reads a line of text from the user and prints it.

32. Copying Text from One Array to Another

Problem Statement: String Copy

Implement a program that copies the content of one string to another and prints the result.

33. Concatenating Text

Problem Statement: String Concatenation

Write a program that takes two strings as input and concatenates them, then prints the concatenated string.

34. Algorithm to Convert Text to Upper-case

Problem Statement: Uppercase Conversion

Develop a program that takes a string as input and converts it to uppercase, then prints the result.