

C

1. Libraries and Main

Problem Statement: Using Libraries and Main Function

Write a program that includes the `stdio.h` library and defines a `main()` function. Inside the function, print a simple message using `printf()`.

2. Custom Inclusions

Problem Statement: Custom Header File Inclusion

Create a header file named `myheader.h` containing a user-defined function prototype. Implement the function in a separate `.c` file and include the header in the main program to use the function.

3. Data Types

Problem Statement: Data Type Usage

Develop a program that declares variables of different data types (`int`, `float`, `char`) and assigns values to them. Print the values and their data types using `printf()`.

4. Format Specifiers

Problem Statement: Format Specifier Usage

Write a program that demonstrates the usage of different format specifiers for displaying variables of different data types using `printf()`.

5. Variables & Constants

Problem Statement: Variable and Constant Usage

Implement a program that uses variables to perform arithmetic operations and constants to store fixed values.

6. Arrays

Problem Statement: Array Manipulation

Create a program that uses an array of integers to store temperatures for a week. Calculate the average temperature and display it.

7. Arithmetic Operators

Problem Statement: Arithmetic Operation

Develop a program that takes two numbers as input and performs arithmetic operations (addition, subtraction, multiplication, division) on them.

8. Logical Operators

Problem Statement: Logical Operation

Write a program that takes two boolean values (0 or 1) as input and demonstrates the usage of logical operators (&&, ||, !).

9. Custom Functions

Problem Statement: User-defined Functions

Define a function that calculates the square of a number. Use the function in the main program to calculate and print the squares of several numbers.

10. If Statements

Problem Statement: Conditional Statements

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

11. Loops in C

Problem Statement: Loop Implementation

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

12. Switch Statements in C

Problem Statement: Switch Statement Usage

Develop a program that takes a number as input and uses a switch statement to determine the day of the week corresponding to that number.

13. Pointers

Problem Statement: Pointer Usage

Implement a program that declares a pointer and uses it to store the address of an integer variable. Print the value using the pointer.

14. Writing and Reading Files (Windows)

Problem Statement: File Handling (Windows)

Write a program that writes text to a file and then reads and prints the contents of the file using file handling functions (fopen, fprintf, fscanf, fclose).

15. Reading Files (MAC)

Problem Statement: Reading Files (MAC)

Develop a program that reads the contents of a text file named input.txt and prints them using file handling functions.

16. Writing Files (MAC)

Problem Statement: Writing Files (MAC)

Create a program that writes a series of lines to a file named output.txt using file handling functions.