# C Programming Weekly Schedule

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| Day | Time | Topic | Activity/Focus |
| Day 1 | 1st Hour | Introduction to C | Overview, applications, and IDE setup. |
|  | 2nd Hour | Writing Your First Program | Write and run the `Hello, World!` program. |
|  | Break (15 min) |  |  |
|  | 3rd Hour | Data Types and Variables | Practice with `int`, `float`, `char`, `double`, and `printf`/`scanf`. |
|  | 4th Hour | Constants and Comments | Learn about `#define`, `const`, and commenting techniques. |
| Day 2 | 1st Hour | Operators | Arithmetic, relational, logical, and bitwise operations with examples. |
|  | 2nd Hour | Conditional Statements | Learn and practice `if`, `if-else`, and `switch-case`. |
|  | Break (15 min) |  |  |
|  | 3rd Hour | Loops (Part 1) | Introduction to `for`, `while`, and examples. |
|  | 4th Hour | Loops (Part 2) | Learn `do-while` and use break/continue statements. |
| Day 3 | 1st Hour | Functions | Basics of defining and calling functions. |
|  | 2nd Hour | Function Parameters | Learn pass-by-value and pass-by-reference with examples. |
|  | Break (15 min) |  |  |
|  | 3rd Hour | Recursion | Understand recursion with problems like Fibonacci and factorial. |
|  | 4th Hour | Scope and Storage Classes | Learn about local/global variables and `static`/`extern` keywords. |
| Day 4 | 1st Hour | Arrays | Practice single-dimensional arrays and basic operations. |
|  | 2nd Hour | Multi-dimensional Arrays | Learn 2D arrays with examples like matrix addition. |
|  | Break (15 min) |  |  |
|  | 3rd Hour | Strings (Part 1) | Basics of strings, input/output, and manipulation. |
|  | 4th Hour | Strings (Part 2) | Use string functions like `strlen`, `strcpy`, etc., with examples. |
| Day 5 | 1st Hour | Pointers | Learn pointer basics and pointer arithmetic. |
|  | 2nd Hour | Pointers and Arrays | Understand how to use pointers to access array elements. |
|  | Break (15 min) |  |  |
|  | 3rd Hour | Pointers and Functions | Pass pointers to functions with examples like swapping values. |
|  | 4th Hour | Dynamic Memory Allocation | Learn `malloc`, `calloc`, `realloc`, and `free` with practice. |
| Day 6 | 1st Hour | Structures | Learn structures with practical examples like a student record. |
|  | 2nd Hour | Array of Structures | Practice accessing data with arrays of structures. |
|  | Break (15 min) |  |  |
|  | 3rd Hour | File Handling (Part 1) | Opening/closing files, modes, and basic file operations. |
|  | 4th Hour | File Handling (Part 2) | Reading and writing files with examples. |
| Day 7 | 1st Hour | Preprocessors and Macros | Learn about `#include`, `#define`, and conditional compilation. |
|  | 2nd Hour | Enumerations and Typedef | Understand and use `enum` and `typedef`. |
|  | Break (15 min) |  |  |
|  | 3rd Hour | Command-line Arguments | Explore command-line arguments with examples. |
|  | 4th Hour | Practice and Mini-Project | Solve practice problems and build a small project (e.g., student record system, calculator). |