PROGRAMMING IN C SYLLABUS FOR 60 DAYS CLASS

Week 1-2: Module 1 (Basics of Computer Hardware and Software)

1. Day 1-2: Basics of Computer Architecture
    - Processor, Memory, Input & Output Devices.
2. Day 3-4: Application Software & System Software
    - Compilers, Interpreters, High-level and Low-level languages.
3. Day 5-6: Structured Programming Introduction
    - Flowcharts and Algorithms.
4. Day 7-8: Pseudo Code
    - Bubble Sort Algorithm and Linear Search Algorithm.

Week 3-4: Module 2 (Program Basics)

1. Day 9-10: Basic Structure of a C Program
    - Character Set, Tokens, Identifiers, Variables, and Data types.
2. Day 11-12: Constants and Console I/O Operations
    - `printf` and `scanf`.
3. Day 13-14: Operators and Expressions
    - Arithmetic, Relational, Logical, Conditional, Assignment, Bitwise Operators, and Operator Precedence.
4. Day 15-16: Control Flow Statements (Part 1)
    - `if` and `switch` Statements.
5. Day 17-18: Control Flow Statements (Part 2)
    - Loops: `while`, `do-while`, `for`, and Unconditional Branching (`goto`, `break`, `continue`).

Week 5-6: Module 3 (Arrays and Strings)

1. Day 19-20: Arrays Basics
    a. Declaration, Initialization, 1D and 2D Arrays.
2. Day 21-22: String Processing
    a. Built-in String Handling Functions (`strlen`, `strcpy`, `strcat`, `strcmp`, `puts`, `gets`).
3. Day 23-24: Linear Search and Bubble Sort Programs.
4. Day 25-26: Practice Problems with Arrays and Strings.

Week 7-8: Module 4 (Working with Functions)

1. Day 27-28: Modular Programming
    - Writing Functions, Formal and Actual Parameters, Pass by Value.
2. Day 29-30: Recursion
    - Understanding and Writing Recursive Programs.
3. Day 31-32: Arrays as Function Parameters.
4. Day 33-34: Structures and Unions.
5. Day 35-36: Storage Classes, Scope, and Lifetime of Variables.
6. Day 37-38: Practice Problems with Functions.

Week 9-10: Module 5 (Pointers and Files)

1. Day 39-40: Basics of Pointers
    - Declaring Pointers, Accessing Data, NULL Pointer.
2. Day 41-42: Array Access Using Pointers and Pass by Reference.
3. Day 43-44: File Operations
    - Opening, Closing, Reading, Writing, Appending Files.
4. Day 45-46: Sequential and Random File Access
    - Built-in Functions (`rewind`, `fseek`, `ftell`, `feof`, `fread`, `fwrite`).
5. Day 47-48: Practice Problems with Pointers and Files.

Week 11-12: Revision and Practice

1. Day 49-54: Module-wise Revision
    a. 2 Days for Each Module (1-5).
2. Day 55-58: Comprehensive Practice Problems.
3. Day 59-60: Final Revision and Doubt Clearing.