C Programming and Object-Oriented Concepts - Full Course Summary

Module 0: Historical Context & Transition from Python to C

This module provides a comprehensive overview of topic 0 and integrates exercises, assignments, quizzes, and real-world analogies to reinforce core C programming skills and system-level thinking.

Module 1: A Tutorial Introduction (K&R Style)

This module provides a comprehensive overview of topic 1 and integrates exercises, assignments, quizzes, and real-world analogies to reinforce core C programming skills and system-level thinking.

Module 2: Types, Operators, and Expressions

This module provides a comprehensive overview of topic 2 and integrates exercises, assignments, quizzes, and real-world analogies to reinforce core C programming skills and system-level thinking.

Module 3: Control Flow

This module provides a comprehensive overview of topic 3 and integrates exercises, assignments, quizzes, and real-world analogies to reinforce core C programming skills and system-level thinking.

Module 4: Functions and Program Structure

This module provides a comprehensive overview of topic 4 and integrates exercises, assignments, quizzes, and real-world analogies to reinforce core C programming skills and system-level thinking.

Module 5: Pointers and Arrays

This module provides a comprehensive overview of topic 5 and integrates exercises, assignments, quizzes, and real-world analogies to reinforce core C programming skills and system-level thinking.

Module 6: Structures

This module provides a comprehensive overview of topic 6 and integrates exercises, assignments, quizzes, and real-world analogies to reinforce core C programming skills and system-level thinking.

Module 7: Object-Oriented Programming Concepts in C

This module provides a comprehensive overview of topic 7 and integrates exercises, assignments, quizzes, and real-world analogies to reinforce core C programming skills and system-level thinking.

Module 8: Encapsulation and Abstraction in Practice

This module provides a comprehensive overview of topic 8 and integrates exercises, assignments, quizzes, and real-world analogies to reinforce core C programming skills and system-level thinking.

Module 9: Data Structures - Tree Maps and Hash Maps

This module provides a comprehensive overview of topic 9 and integrates exercises, assignments, quizzes, and real-world analogies to reinforce core C programming skills and system-level thinking.

Module 10: File Handling in C

This module provides a comprehensive overview of topic 10 and integrates exercises, assignments, quizzes, and real-world analogies to reinforce core C programming skills and system-level thinking.

Module 11: Memory Management in C

This module provides a comprehensive overview of topic 11 and integrates exercises, assignments, quizzes, and real-world analogies to reinforce core C programming skills and system-level thinking.

Module 12: Preprocessor and Macros

This module provides a comprehensive overview of topic 12 and integrates exercises, assignments, quizzes, and real-world analogies to reinforce core C programming skills and system-level thinking.

Module 13: Advanced C Concepts - Recursion, Bitwise Ops, CLI Args

This module provides a comprehensive overview of topic 13 and integrates exercises, assignments, quizzes, and real-world analogies to reinforce core C programming skills and system-level thinking.

Module 14: Building and Linking in C - Makefiles & Multi-File Projects

This module provides a comprehensive overview of topic 14 and integrates exercises, assignments, quizzes, and real-world analogies to reinforce core C programming skills and system-level thinking.

Module 15: Epilogue - Capstone Project and Review

This module provides a comprehensive overview of topic 15 and integrates exercises, assignments, quizzes, and real-world analogies to reinforce core C programming skills and system-level thinking.