

Fruto Academy C Development Course Syllabus

Course Overview:

Welcome to the Fruto Academy C Development Course! This comprehensive program will provide you with the skills and knowledge needed to become a proficient C developer. Throughout this course, you'll learn the fundamentals of C programming, memory management, and how to build various types of applications using C.

Course Duration: 12 weeks

Week 1-2: Introduction to C Programming

- Understanding programming concepts and paradigms
- Introduction to the C programming language
- Setting up C environment and IDE

Week 3-4: C Basics

- Variables, data types, and basic operators
- Control structures: conditionals and loops
- Functions and function pointers
- Memory allocation and deallocation

Week 5-6: Pointers and Memory Management

- Understanding pointers and references
- Dynamic memory allocation and freeing
- Handling memory leaks and memory errors

Week 7-8: Arrays and Strings

- Working with arrays and multidimensional arrays
- String manipulation and handling
- Pointers and arrays relationship

Week 9-10: File Handling and I/O in C

- Reading from and writing to files
- Binary and text file operations
- Standard I/O functions in C

Week 11: Data Structures and Algorithms in C

- Introduction to data structures (e.g., linked lists, stacks, queues)
- Implementing data structures in C
- Basic algorithm design and analysis

Week 12: Final Project and Application Development

- Applying C skills to a real-world project
- Building console-based applications

- Final project: Develop and deploy a complete C application

Assessment and Certification:

- Weekly coding assignments: 40%
- Midterm project (C application development): 20%
- Final project: 30%
- Participation and quizzes: 10%

Recommended Resources:

- "C Programming Absolute Beginner's Guide" by Perry and Miller
- "C Programming for the Absolute Beginner, Second Edition" by Vine
- Online tutorials and documentation for C programming

Note: This syllabus is subject to adjustment based on instructor discretion and the evolving landscape of C development.

For inquiries, contact us at info@frutoacademy.com or visit www.frutoacademy.com.