Computer programming is fundamentally a creative activity. Good programmers use imagination, creativity, and experimentation to create novel, interesting, and effective programs. This text is designed to encourage the creative, hands-on, and experimental aspects of programming while teaching the fundamentals of the C++ programming language.

Each chapter begins by introducing several core elements of the C++ language, followed by a skeleton program that illustrates how those elements are used in practice. Detailed explanations of the programs allow students to easily understand how each piece of the programs works and how those pieces fit together. Students are led through a series of additions and modifications of each program, which reinforce the core concepts while encouraging the customization of the program. These initial modifications lead into open-ended exercises and problems.

Examples of projects introduced in the text include:

* A simple version of the game of NIM, which can be extended with computer generated commentary, more challenging versions of the game, and even a simple AI,
* A generic board game, which can be customized into anything from a Formula One racing game to a game requiring the players to survive the next Zombie Apocalypse,
* An interactive, Tamagotchi-like pet, which can be expanded with additional traits and behaviors,
* A simulated robot world, which can be programmed with its own traits and multiple, competing or cooperating, robots.

This text is designed for students with no, or extremely limited, prior programming experience. Topics covered include variables, I/O, conditionals, loops, functions, arrays, files, classes, pointers, and linked lists. Interludes between the core chapters introduce core programming topics, such as testing and software design.

The examples in the text are generic and do not rely on any special libraries or tools. This text can easily serve as either a course textbook or as a self-paced guide for readers wanting to learn C++ on their own.