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3.10 An Introduction to Inheritance in C#; 3.11 Example: Two-factor Payoff Hierarchies and Interfaces; 3.12 Exception Handling; 3.13 Summary and Conclusions; 3.14 Exercises and Projects; 4 Classes and C# Advanced Features; 4.1 Introduction and Objectives; 4.2 Interfaces; 4.3 Using Interfaces: Vasicek and Cox-Ingersoll-Ross (CIR) Bond and Option Pricing; 4.3.1 Defining Standard Interfaces; 4.3.2 Bond Models and Stochastic Differential Equations; 4.3.3 Option Pricing and the Visitor Pattern; 4.4 Interfaces in .NET and Some Advanced Features; 4.4.1 Copying Objects; 4.4.2 Interfaces and Properties; 4.4.3 Comparing Abstract Classes and Interfaces; 4.4.4 Explicit Interfaces; 4.4.5 Casting an Object to an Interface; 4.5 Combining Interfaces, Inheritance and Composition; 4.5.1 Design Philosophy: Modular Programming; 4.5.2 A Model Problem and Interfacing; 4.5.3 Implementing the Interfaces; 4.5.4 Examples and Testing; 4.6 Introduction to Delegates and Lambda Functions; 4.6.1 Comparing Delegates and Interfaces; 4.7 Lambda Functions and Anonymous Methods; 4.8 Other Features in C#; 4.8.1 Static Constructors; 4.8.2 Finalisers; 4.8.3 Casting; 4.8.4 The var Keyword; 4.9 Advanced .NET Delegates; 4.9.1 Provides and Requires Interfaces: Creating Plug-in Methods with Delegates; 4.9.2 Multicast Delegates; 4.9.3 Generic Delegate Types; 4.9.4 Delegates versus Interfaces, Again; 4.10 The Standard Event Pattern in .NET and the Observer Pattern; 4.11 Summary and Conclusions; 4.12 Exercises and Projects; 5 Data Structures and Collections; 5.1 Introduction and Objectives; 5.2 Arrays; 5.2.1 Rectangular and Jagged Arrays; 5.2.2 Bounds Checking; 5.3 Dates, Times and Time Zones; 5.3.1 Creating and Modifying Dates; 5.3.2 Formatting and Parsing Dates; 5.3.3 Working with Dates; 5.4 Enumeration and Iterators

Sommario/riassunto

A practice-oriented guide to using C# to design and program pricing and trading models. In this step-by-step guide to software development for financial analysts, traders, developers and quants, the authors show both novice and experienced practitioners how to develop robust and accurate pricing models and employ them in real environments. Traders will learn how to design and implement applications for curve and surface modeling, fixed income products, hedging strategies, plain and exotic option modeling, interest rate options, structured bonds, unfunded structured products, and
