

C# and Algorithmic Thinking for the Complete Beginner : Unlock the Power of Programming with C# and Algorithmic Thinking

Bouras, Aristides S., author

Packt Publishing, Limited, 2024

Monografía

Dive into the world of C# and algorithmic thinking with Aristides Bouras's comprehensive guide for complete beginners. Master fundamental concepts, from basic algorithms to advanced programming techniques, using Visual Studio. Key Features Comprehensive introduction to C# and algorithmic thinking with step-by-step guidance. Practical exercises with real-world applications, along with integration of Visual Studio Code. Detailed explanations and tips for mastering complex topics. Book Description This course takes you on a journey through the basics of C# programming and algorithmic thinking, tailored specifically for complete beginners. Starting with an understanding of how a computer works, you will explore integrated development environments, essential software packages, and basic algorithmic concepts. As you progress, you will delve deeper into key programming constructs such as variables, constants, input and output handling, operators, and control structures. The course emphasizes practical application, guiding you through exercises involving complex mathematical expressions, string manipulations, decision structures, and loop control structures. By the time you reach the advanced sections, you will have a comprehensive understanding of data structures, subprograms, and object-oriented programming. Designed to be engaging and informative, this course offers tips, tricks, and detailed explanations to help you master each concept. The use of Visual Studio Code is seamlessly integrated, providing you with hands-on experience in a real-world development environment. By the end of the course, you will be well-equipped to tackle more advanced programming challenges and continue your journey in the world of software development. What you will learn Understand how a computer works and the basics of C# Develop and debug programs using Visual Studio Master variables, constants, operators, and control structures Implement decision and loop control structures effectively Work with onedimensional and two-dimensional arrays Gain proficiency in subprograms and object-oriented programming Who this book is for This course is ideal for complete beginners with no prior programming experience. It caters to students just entering the field of computer science, hobbyists interested in exploring programming as a new pastime, and professionals from non-technical backgrounds aiming to transition into tech roles. Educators can use it as a structured teaching resource, while parents can support their children's coding interests. With basic familiarity with computers recommended but not required, this course opens the door to gain foundational knowledge in C# programming and algorithmic thinking

Título: C# and Algorithmic Thinking for the Complete Beginner Unlock the Power of Programming with C# and Algorithmic Thinking

Edición: 3rd revised edition

Editorial: Birmingham Packt Publishing, Limited 2024

Descripción física: 1 online resource (916 p.)

Nota general: Description based upon print version of record Exercise 7.4-1 Which C# Statements are Syntactically Correct?

Contenido: Intro -- Table of Contents -- Preface -- About the Author -- Acknowledgments -- How This Book is Organized -- Who Should Buy This Book? -- Conventions Used in This Book -- How to Report Errata -- Where to Download Material About this Book -- If you Like this Book -- Part I Introductory Knowledge -- Chapter 1 How a Computer Works -- 1.1 Introduction -- 1.2 What is Hardware? -- 1.3 What is Software? -- 1.4 How a Computer Executes (Runs) a Program -- 1.5 Compilers and Interpreters -- 1.6 What is Source Code? -- 1.7 Review Questions: True/False -- 1.8 Review Questions: Multiple Choice Chapter 2 C# and Integrated Development Environments --2.1 What is C#? -- 2.2 What is the Difference Between a Script and a Program? -- 2.3 Why You Should Learn C# --2.4 How C# Works -- 2.5 Integrated Development Environments -- 2.6 Microsoft Visual Studio -- Chapter 3 Software Packages to Install -- 3.1 What to Install -- Review in "Introductory Knowledge" -- Review Crossword Puzzles -- Review Questions -- Part II Getting Started with C# -- Chapter 4 Introduction to Basic Algorithmic Concepts -- 4.1 What is an Algorithm? -- 4.2 The Algorithm for Making a Cup of Tea 4.3 Properties of an Algorithm -- 4.4 Okay About Algorithms. But What is a Computer Program Anyway? -- 4.5 The Three Parties! --4.6 The Three Main Stages Involved in Creating an Algorithm -- 4.7 Flowcharts -- Exercise 4.7-1 Finding the Average Value of Three Numbers -- 4.8 What are "Reserved Words"? -- 4.9 What is the Difference Between a Statement and a Command? -- 4.10 What is Structured Programming? -- 4.11 The Three Fundamental Control Structures -- Exercise 4.11-1 Understanding Control Structures Using Flowcharts -- 4.12 Your First C# Program 4.13 What is the Difference Between a Syntax Error, a Logic Error, and a Runtime Error? -- 4.14 What "Debugging" Means -- 4.15 Commenting Your Code -- 4.16 User-Friendly Programs -- 4.17 Review Questions: True/False -- 4.18 Review Questions: Multiple Choice -- Chapter 5 Variables and Constants -- 5.1 What is a Variable? -- 5.2 What is a Constant? -- 5.3 How Many Types of Variables and Constants Exist? -- 5.4 Rules and Conventions for Naming Variables and Constants in C# -- 5.5 What Does the Phrase "Declare a Variable" Mean? --5.6 How to Declare Variables in C# 5.7 How to Declare Constants in C# -- 5.8 Review Questions: True/False -- 5.9 Review Questions: Multiple Choice -- 5.10 Review Exercises -- Chapter 6 Handling Input and Output -- 6.1 How to Output Messages and Results to a User's Screen? -- 6.2 How to Output Special Characters? -- 6.3 How to Prompt the User to Enter Data? -- 6.4 Review Questions: True/False -- 6.5 Review Questions: Multiple Choice -- Chapter 7 Operators -- 7.1 The Value Assignment Operator -- 7.2 Arithmetic Operators -- 7.3 What is the Precedence of Arithmetic Operators? -- 7.4 Compound Assignment Operators

ISBN: 9781836205630

Materia: C# (Computer program language) Computer algorithms

Baratz Innovación Documental

- Gran Vía, 59 28013 Madrid
- (+34) 91 456 03 60
- informa@baratz.es