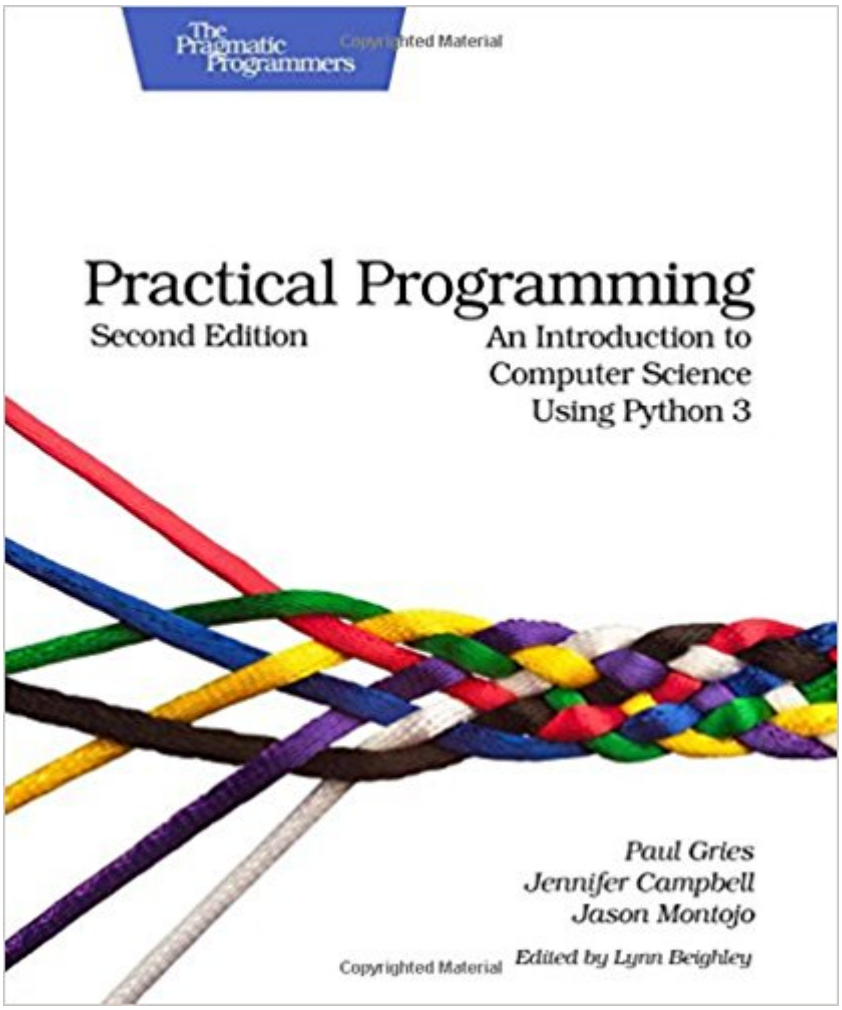
Practical Programming: An Introduction To Computer Science Using Python 3 (Pragmatic Programmers)



Synopsis

This book is for anyone who wants to understand computer programming. You'll learn to program in a language that' s used in millions of smartphones, tablets, and PCs. You'll code along with the book, writing programs to solve real-world problems as you learn the fundamentals of programming using Python 3. You'll learn about design, algorithms, testing, and debugging, and come away with all the tools you need to produce quality code. In this second edition, we've updated almost all the material, incorporating the lessons we've learned over the past five years of teaching Python to people new to programming.You don't need any programming experience to get started. First, you'll get a detailed introduction to Python and to programming. You'll find out exactly what happens when your programs are executed. Through real-world examples, you'll learn how to work with numbers, text, big data sets, and files. Then you'll see how to create and use your own data types.The incremental examples show you the steps and missteps that happen while developing programs, so you know what to expect when you tackle a problem on your own. Inspired by "How to Design Programs" (HtDP), you'll learn a six-step recipe for designing functions, which helps you as you start to learn the concepts--and becomes an integral part of writing programs by the end.As you learn to use the fundamental programming tools in the first half of the book, you'll see how to document and organize your code so that you and other programmers can more easily read and understand it. Beyond the basics, you'll learn how to ensure that your programs are reliable, and how to work with databases, download data from the web automatically, and build user interfaces. Most importantly, you'll learn how to think like a professional programmer.You'll need to download Python 3, available from "python.org". With that download comes IDLE, the editor we use for writing and running Python programs. (If you use Linux, you may need to installPython 3 and IDLE separately.)

Book Information

Series: Pragmatic Programmers
Paperback: 400 pages
Publisher: Pragmatic Bookshelf; 2 edition (October 4, 2013)
Language: English
ISBN-10: 1937785459
ISBN-13: 978-1937785451
Product Dimensions: 7.5 x 0.8 x 9.2 inches
Shipping Weight: 1.5 pounds (View shipping rates and policies)
Average Customer Review: 4.3 out of 5 stars 19 customer reviews

Best Sellers Rank: #14,996 in Books (See Top 100 in Books) #23 inÂ Books > Computers & Technology > Programming > Languages & Tools > Python #32 inÂ Books > Computers & Technology > Programming > Introductory & Beginning #34 inÂ Books > Computers & Technology > Programming > Web Programming

Customer Reviews

"I wish I could go back in time and give this book to my 10-year-old self when I first learned programming! Itâ ™s so much more engaging, practical, and accessible than the dry introductory programming books that I tried (and often failed) to comprehend as a kid. I love the authorsâ ™ hands-on approach of mixing explanations with code snippets that students can type into the Python prompt."- Philip Guo, Creator of Online Python Tutor and Assistant Professor, Department of Computer Science, University of Rochester "Practical Programming delivers just what it promises: a clear, readable, usable introduction to programming for beginners. This isnâ ™t just a guide to hacking together programs. The book provides foundations to lifelong programming skills: a crisp, consistent, and visual model of memory and execution and a design recipe that will help readers produce quality software."- Steven Wolfman Senior Instructor, Department of Computer Science, University of British Columbia "The second edition of this excellent text reflects the authorsâ ™ many years of experience teaching Python to beginning students. Topics are presented so that each leads naturally to the next, and common novice errors and misconceptions are explicitly addressed. The exercises at the end of each chapter invite interested students to explore computer science and programming language topics."- Kathleen Freeman, Director of Undergraduate Studies, Department of Computer and Information Science, University of Oregon

Paul Gries has been teaching in the Department of Computer Science at the University of Toronto for more than 15 years. During his time at UofT, Paul has won numerous teaching awards, including UofT’s most prestigious teaching award and an Ontario-wide teaching award. Paul has also co-authored two textbooks, has been a leader in departmental curriculum design and renewal, and, with Jen, got to teach Python to tens of thousands of students in a MOOC.Jennifer Campbell is a senior lecturer in the Department of Computer Science at the University of Toronto. Over the past 10 years, Jen’s primary focus has been on teaching and curriculum design of introductory courses. Jen is involved in several projects exploring student experiences in introductory computer science courses and the factors that contribute to success, including the effectiveness of the inverted classroom.Jason Montojo is a research officer at the Donnelly Centre for Cellular and Biomolecular

Research at the University of Toronto, where he develops scientific software for the Cytoscape and GeneMANIA projects. He has a strong interest in teaching computer science and frequently mentors students for Google's Summer of Code program.

The book is well written and the concepts are well explained. I just hope it went a little deeper. I am not beginner but not intermediate either. The book is real great for people who really don't know anything. But if you have some exposure or experience of programming then it lacks a little bit of content. However, it is one of the best CS books that I have read ^^ Also, it is a good book to supplement with other python courses or materials.

Lives up to what is promised. Want to learn Python 3.0 and this book teaches thebasics superbly. You can use the book with the online Coursera class thru the University of Toronto. The course is rapid pace and the book is a great help.

I ordered this book while taking the authors' course at Coursera, 'Learn to Program. The fundamentals' using Python. I felt a disconnect with the book while getting a much better feel of Python programming from the MOOC. This introduction(the book) seemed to be too cursory and did not flow well...

I like that this book provides a good foundation with many of the "under the hood" elements of Python, but it is sparse with examples. Still, the underlying concepts the author teaches are well worth getting this book. There are many "gotchya" in Python that the author informs you on that could save you a lot of time and headaches.

I tried several other books, but needed something where I could start a project and build on it actively. This book did that for me.

I wish there was a 4.5 rating. This book has well thought out examples that helped me recieve an excellent grade. The authors did an amazing job defining the multiple functions that python prompts. Highly recommended.

Well organized text. Great for the beginner programmer. Simple examples used to throughout the text. I purchased aftertaking the authors' course on Coursera

Good for getting started. This book mostly presents the information from a logical perspective. If you want to focus on data structure, this book is for you.

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Gentle Introduction to Numerical Simulations with Python (Texts in Computational Science and Engineering)