

*Functional Python Programming Discover The Power Of Functional Programming Generator Functions Lazy Evaluation The Built In Itertools Library And Monads 2nd Edition*

*Being familiar with object-oriented design is an essential part of programming in Python. This new edition includes all the topics that made Python Object-Oriented Programming an instant Packt classic. Moreover, it's packed with updated content to reflect more recent changes in the core Python libraries and cover modern third-party packages.*

*Explore the functional programming paradigm and the different techniques for developing better algorithms, writing more concise code, and performing seamless testing Key FeaturesExplore this second edition updated to cover features like async functions and transducers, as well as functional reactive programmingEnhance your functional programming (FP) skills to build web and server apps using JavaScriptUse FP to enhance the modularity, reusability, and performance of appsBook Description Functional programming is a paradigm for developing software with better performance. It helps you write concise and testable code. To help you take your programming skills to the next level, this comprehensive book will assist you in harnessing the capabilities of functional programming with JavaScript and writing highly maintainable and testable web and server apps using functional JavaScript. This second edition is updated and improved to cover features such as transducers, lenses, prisms and various other concepts to help you write efficient programs. By focusing on functional programming, you'll not only start to write but also to test pure functions, and reduce side effects. The book also specifically allows you to discover techniques for simplifying code and applying recursion for loopless coding. Gradually, you'll understand how to achieve immutability, implement design patterns, and work with data types for your application, before going on to learn functional reactive programming to handle complex events in your app. Finally, the book will take you through the design patterns that are relevant to functional programming. By the end of this book, you'll have developed your JavaScript skills and*

have gained knowledge of the essential functional programming techniques to program effectively. What you will learnSimplify JavaScript coding using function composition, pipelining, chaining, and transducingUse declarative coding as opposed to imperative coding to write clean JavaScript codeCreate more reliable code with closures and immutable dataApply practical solutions to complex programming problems using recursionImprove your functional code using data types, type checking, and immutabilityUnderstand advanced functional programming concepts such as lenses and prisms for data accessWho this book is for This book is for JavaScript developers who want to enhance their programming skills and build efficient web applications. Frontend and backend developers who use various JavaScript frameworks and libraries like React, Angular, or Node.js will also find the book helpful. Working knowledge of ES2019 is required to grasp the concepts covered in the book easily.

The easy way to learn programming fundamentals with Python Python is a remarkably powerful and dynamic programming language that's used in a wide variety of application domains. Some of its key distinguishing features include a very clear, readable syntax, strong introspection capabilities, intuitive object orientation, and natural expression of procedural code. Plus, Python features full modularity, supporting hierarchical packages, exception-based error handling, and modules easily written in C, C++, Java, R, or .NET languages, such as C#. In addition, Python supports a number of coding styles that include: functional, imperative, object-oriented, and procedural. Due to its ease of use and flexibility, Python is constantly growing in popularity—and now you can wear your programming hat with pride and join the ranks of the pros with the help of this guide. Inside, expert author John Paul Mueller gives a complete step-by-step overview of all there is to know about Python. From performing common and advanced tasks, to collecting data, to interacting with package—this book covers it all! Use Python to create and run your first application Find out how to troubleshoot and fix errors Learn to work with Anaconda and use Magic Functions Benefit from completely updated and revised information since the last edition If you've never used Python or are new to programming in general, *Beginning Programming with Python For Dummies* is a helpful resource that will set you up

*for success.*

*A Functional Start to Computing with Python enables students to quickly learn computing without having to use loops, variables, and object abstractions at the start. Requiring no prior programming experience, the book draws on Python's flexible data types and operations as well as its capacity for defining new functions. Along with the specifics of Python, the text covers important concepts of computing, including software engineering motivation, algorithms behind syntax rules, advanced functional programming ideas, and, briefly, finite state machines. Taking a student-friendly, interactive approach to teach computing, the book addresses more difficult concepts and abstractions later in the text. The author presents ample explanations of data types, operators, and expressions. He also describes comprehensions—the powerful specifications of lists and dictionaries—before introducing loops and variables. This approach helps students better understand assignment syntax and iteration by giving them a mental model of sophisticated data first. Web Resource The book's supplementary website at <http://functionalfirstpython.com/> provides many ancillaries, including: Interactive flashcards on Python language elements Links to extra support for each chapter Unit testing and programming exercises An interactive Python stepper tool Chapter-by-chapter points Material for lectures*

*Fluent Python*

*The Step by Step Guide to Learning to Program Functionally, Generator Functions, Built-in Itertools Library and Lazy Evaluation*

*Release 3. 6. 6rc1*

*Introduction to Python Programming for Business and Social Science Applications*

*Clear, Concise, and Effective Programming*

*Programming in Scala*

*How can you overcome JavaScript language oddities and unsafe features? With this book, you'll learn how to create code that's beautiful, safe, and simple to understand and test by using JavaScript's functional programming support. Author Michael Fogus shows you how to apply functional-style concepts with Underscore.js, a JavaScript library that facilitates functional programming techniques. Sample code is available on GitHub at <https://github.com/funjs/book->*

*source. Fogus helps you think in a functional way to help you minimize complexity in the programs you build. If you're a JavaScript programmer hoping to learn functional programming techniques, or a functional programmer looking to learn JavaScript, this book is the ideal introduction. Use applicative programming techniques with first-class functions Understand how and why you might leverage variable scoping and closures Delve into higher-order functions—and learn how they take other functions as arguments for maximum advantage Explore ways to compose new functions from existing functions Get around JavaScript's limitations for using recursive functions Reduce, hide, or eliminate the footprint of state change in your programs Practice flow-based programming with chains and functional pipelines Discover how to code without using classes*

*Do you want to take your Python to the next level? Python is easy to learn. You can learn the basics in a day and be productive with it. But there are more advanced constructs that you will eventually run across if you spend enough time with it. Don't be confused by these. Learn them, embrace them, and improve your code and others.*

*Behind every programming language lies a vision of how programs should be built. The vision behind Clojure is of a radically simple language framework holding together a sophisticated collection of programming features. Learning Clojure involves much more than just learning the mechanics of the language. To really get Clojure you need to understand the ideas underlying this structure of framework and features. You need this book: an accessible introduction to Clojure that focuses on the ideas behind the language as well as the practical details of writing code. Clojure attracts developers on the cutting edge and is arguably the best language for learning to program in the functional style without compromise. But this comes with a steep learning curve. Getting Clojure directly addresses this by teaching you how to think functionally as it teaches you the language. You'll learn about Clojure's powerful data structures and high-level functions, but you'll also learn what it means for a language to be functional, and how to think in Clojure's functional way. Each chapter of Getting Clojure takes a feature or two or three from the language, explains the syntax and the mechanics behind that feature so that you can make it work before digging into the deeper questions: What is the thinking behind the feature? And how does it fit in with the rest of the language? In Getting Clojure you'll learn Clojure's very simple syntax, but you'll also learn why that syntax is integral the way the language is constructed. You'll discover that most data structures in Clojure are immutable, but also why that leads to more reliable programs. And you'll see how easy it is to write Clojure functions and also how you can use those functions to build complex and capable systems. With real-world examples of how working Clojure programmers use the language, Getting Clojure will help you see the challenges of programming through the eye of experienced Clojure developers. What You Need: You will need to some background in programming. To follow along with the examples in*

*the book, you will need Java 6 or new, Clojure 1.8 or 1.9, and Leiningen 2.*

*The official book on the Rust programming language, written by the Rust development team at the Mozilla Foundation, fully updated for Rust 2018. The Rust Programming Language is the official book on Rust: an open source systems programming language that helps you write faster, more reliable software. Rust offers control over low-level details (such as memory usage) in combination with high-level ergonomics, eliminating the hassle traditionally associated with low-level languages. The authors of The Rust Programming Language, members of the Rust Core Team, share their knowledge and experience to show you how to take full advantage of Rust's features--from installation to creating robust and scalable programs. You'll begin with basics like creating functions, choosing data types, and binding variables and then move on to more advanced concepts, such as:*

- Ownership and borrowing, lifetimes, and traits*
- Using Rust's memory safety guarantees to build fast, safe programs*
- Testing, error handling, and effective refactoring*
- Generics, smart pointers, multithreading, trait objects, and advanced pattern matching*

*Using Cargo, Rust's built-in package manager, to build, test, and document your code and manage dependencies*

- How best to use Rust's advanced compiler with compiler-led programming techniques*

*You'll find plenty of code examples throughout the book, as well as three chapters dedicated to building complete projects to test your learning: a number guessing game, a Rust implementation of a command line tool, and a multithreaded server. New to this edition: An extended section on Rust macros, an expanded chapter on modules, and appendixes on Rust development tools and editions.*

*Real-World Functional Programming*

*Hello! Python*

*Functional Programming in Python*

*Grokking Functional Programming*

*Python for Secret Agents - Volume II*

*Treading on Python Volume 1*

*Presents an introduction to the new programming language for the Java Platform.*

*Grokking Functional Programming is a practical book written especially for object-oriented programmers. Grokking Functional Programming teaches you first to break down problems in a new way so you can approach them from a FP mindset. Following carefully-selected examples with thorough, carefully-paced explanations, you'll immerse yourself in FP concept by concept. Along the way, exercises, checks for understanding, and even the*

occasional puzzler give you opportunities to think and practice what you're learning. *Grokking Functional Programming* is a practical book written especially for object-oriented programmers. It will help you map familiar ideas like objects and composition to FP concepts such as programming with immutable data and higher-order functions. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

Want to learn the Python language without slogging your way through how-to manuals? With *Head First Python*, you'll quickly grasp Python's fundamentals, working with the built-in data structures and functions. Then you'll move on to building your very own webapp, exploring database management, exception handling, and data wrangling. If you're intrigued by what you can do with context managers, decorators, comprehensions, and generators, it's all here. This second edition is a complete learning experience that will help you become a bonafide Python programmer in no time. Why does this book look so different? Based on the latest research in cognitive science and learning theory, *Head First Python* uses a visually rich format to engage your mind, rather than a text-heavy approach that puts you to sleep. Why waste your time struggling with new concepts? This multi-sensory learning experience is designed for the way your brain really works. Python's simplicity lets you become productive quickly, but this often means you aren't using everything it has to offer. With this hands-on guide, you'll learn how to write effective, idiomatic Python code by leveraging its best—and possibly most neglected—features. Author Luciano Ramalho takes you through Python's core language features and libraries, and shows you how to make your code shorter, faster, and more readable at the same time. Many experienced programmers try to bend Python to fit patterns they learned from other languages, and never discover Python features outside of their experience. With this book, those Python programmers will thoroughly learn how to become proficient in Python 3. This book covers: Python data model: understand how special methods are the key to the consistent behavior of objects Data structures: take full advantage of built-in types, and understand the text vs bytes duality in the Unicode age Functions as objects: view Python functions as first-class objects, and understand

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how this affects popular design patterns Object-oriented idioms: build classes by learning about references, mutability, interfaces, operator overloading, and multiple inheritance Control flow: leverage context managers, generators, coroutines, and concurrency with the concurrent.futures and asyncio packages Metaprogramming: understand how properties, attribute descriptors, class decorators, and metaclasses work Introducing Functional Programming with Underscore.js

The Hitchhiker's Guide to Python

With examples in F# and C#

Architecture Patterns with Python

Mastering Functional Programming

Functional Python Programming

Well-respected text for computer science students provides an accessible introduction to functional programming. Cogent examples illuminate the central ideas, and numerous exercises offer reinforcement. Includes solutions. 1989 edition.

Treading on Python is designed to bring developers and others who are anxious to learn Python up to speed quickly. Not only does it teach the basics of syntax, but it condenses years of experience. You will learn warts, gotchas, best practices and hints that have been gleaned through the years in days. You will hit the ground running and running in the right way. Software -- Programming Techniques.

A comprehensive guide to help you understand the principles of Reactive and asynchronous programming and its benefits Key FeaturesExplore the advantages of Reactive programmingUse concurrency and parallelism in RxPY to build powerful reactive applicationsDeploy and scale your reactive applications using DockerBook Description Reactive programming is central to many concurrent systems, but it ' s famous for its steep learning curve, which makes most developers feel like they're hitting a wall. With this book, you will get to grips with reactive programming by steadily exploring various concepts This hands-on guide gets you started with Reactive Programming (RP) in Python. You will learn abouta the principles and benefits of using RP, which can be leveraged to build powerful concurrent applications. As you progress through the chapters, you will be introduced to the paradigm of Functional and Reactive Programming (FaRP), observables and observers, and concurrency and parallelism. The book will then take you through the implementation of an audio transcoding server and introduce you to a library that helps in the writing of FaRP code. You will understand how to use third-party services and dynamically reconfigure an application. By the end of the book, you will also have learned how to deploy and scale your applications with Docker and Traefik and explore the significant

potential behind the reactive streams concept, and you'll have got to grips with a comprehensive set of best practices. What you will learn Structure Python code for better readability, testing, and performance Explore the world of event-based programming Grasp the use of the most common operators in Rx Understand reactive extensions beyond simple examples Master the art of writing reusable components Deploy an application on a cloud platform with Docker and Traefik Who this book is for If you are a Python developer who wants to learn Reactive programming to build powerful concurrent and asynchronous applications, this book is for you. Basic understanding of the Python language is all you need to understand the concepts covered in this book.

Best Practices for Development

Elements of Functional Programming

Conceptual Programming with Python

Grokking Simplicity

Build Your Functional Skills One Idea at a Time

Build robust and maintainable object-oriented Python applications and libraries, 4th Edition

***In large projects, programmers tend to get overwhelmed by their complexity. It can be hard to keep track of all the interdependencies in the code-base and how its state changes on runtime. The solution to these problems is Functional Programming, a paradigm specifically designed to deal with the complexity of software development. Mastering ...***

***Get a comprehensive, in-depth introduction to the core Python language with this hands-on book. Based on author Mark Lutz's popular training course, this updated fifth edition will help you quickly write efficient, high-quality code with Python. It's an ideal way to begin, whether you're new to programming or a professional developer versed in other languages. Complete with quizzes, exercises, and helpful illustrations, this easy-to-follow, self-paced tutorial gets you started with both Python 2.7 and 3.3— the latest releases in the 3.X and 2.X lines—plus all other releases in common use today. You'll also learn some advanced language features that recently have become more common in Python code. Explore Python's major built-in object types such as numbers, lists, and dictionaries Create and process objects with Python statements, and learn Python's general syntax model Use functions to avoid code redundancy and package code for reuse Organize statements, functions, and other tools into larger components with modules Dive into classes: Python's object-oriented programming tool for structuring code Write large programs with Python's exception-handling model and development tools Learn advanced Python tools, including decorators, descriptors, metaclasses, and Unicode processing***



***Functional Python Programming Discover the power of functional programming, generator functions, lazy evaluation, the built-in itertools library, and monads, 2nd Edition Packt Publishing Ltd***  
***The Hitchhiker's Guide to Python takes the journeyman Pythonista to true expertise. More than any other language, Python was created with the philosophy of simplicity and parsimony. Now 25 years old, Python has become the primary or secondary language (after SQL) for many business users. With popularity comes diversity—and possibly dilution. This guide, collaboratively written by over a hundred members of the Python community, describes best practices currently used by package and application developers. Unlike other books for this audience, The Hitchhiker's Guide is light on reusable code and heavier on design philosophy, directing the reader to excellent sources that already exist.***

***Event-driven development unraveled with RxPY***

***The Rust Programming Language (Covers Rust 2018)***  
***The Science of Functional Programming (draft version)***  
***Powerful Object-Oriented Programming***  
***Getting Clojure***

Python is an easy to learn, powerful programming language. It has efficient high-level data structures and a simple but effective approach to object-oriented programming. Python's elegant syntax and dynamic typing, together with its interpreted nature, make it an ideal language for scripting and rapid application development in many areas on most platforms. The Python interpreter and the extensive standard library are freely available in source or binary form for all major platforms from the Python Web site, <https://www.python.org/>, and may be freely distributed. The same site also contains distributions of and pointers to many free third party Python modules, programs and tools, and additional documentation. The Python interpreter is easily extended with new functions and data types implemented in C or C++ (or other languages callable from C). Python is also suitable as an extension language for customizable applications. This tutorial introduces the reader informally to the basic concepts and features of the python language and system. It helps to have a Python interpreter handy for hands-on experience, but all examples are self contained, so the tutorial can be read off-line as well. For a description of standard objects and modules, see [library-index](#). [reference-index](#) gives a more formal definition of the language. To write extensions in C or C++, read [extending-index](#) and [c-api-index](#). There are also several books covering Python in depth. This tutorial does not attempt to be comprehensive and cover every single feature, or even every commonly used feature. Instead, it introduces many of Python's most noteworthy features, and will give you a good idea of the language's flavor and style. After reading it, you will be able to read and write Python modules and programs, and you will be ready to learn more about the various Python library modules described in [library-index](#). The Glossary is also worth going through.

📖📖📖📖 50% DISCOUNT FOR BOOKSTORES 📖📖📖📖 Create succinct and expressive implementations with functional programming in

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Python Key Features Learn how to choose between imperative and functional approaches based on expressiveness, clarity, and performance Get familiar with complex concepts such as monads, concurrency, and immutability. Apply functional Python to common Exploratory Data Analysis (EDA) programming problems Book Description If you're a Python developer who wants to discover how to take the power of functional programming (FP) and bring it into your own programs, then this book is essential for you, even if you know next to nothing about the paradigm. Starting with a general overview of functional concepts, you'll explore common functional features such as first-class and higher-order functions, pure functions, and more. You'll see how these are accomplished in Python 3.6 to give you the core foundations you'll build upon. After that, you'll discover common functional optimizations for Python to help your apps reach even higher speeds. You'll learn FP concepts such as lazy evaluation using Python's generator functions and expressions. Moving forward, you'll learn to design and implement decorators to create composite functions. You'll also explore data preparation techniques and data exploration in-depth and see how the Python standard library fits the functional programming model. Finally, to top off your journey into the world of functional Python, you'll look at the PyMonad project and some larger examples to put everything into perspective. What you will learn Use Python's generator functions and generator expressions to work with collections in a non-strict (or lazy) manner. Utilize Python library modules including itertools, functools, multiprocessing, and concurrent features to ensure efficient functional programs Use Python strings with object-oriented suffix notation and prefix notation Avoid stateful classes with families of tuples Design and implement decorators to create composite functions Use functions such as max(), min(), map(), filter(), and sorted() Write higher-order functions Who This Book Is For This book is for Python developers who would like to perform Functional programming with Python. Python Programming knowledge is assumed. Table of Contents Understanding Functional Programming Introducing essential functional concepts Functions, Iterators, and Generators Working with Collections Higher-Order Functions Recursions and Reductions Additional tuple techniques The itertools Module More Itertools Techniques The functools Module Decorator Design Techniques The Multiprocessing and Threading Modules The Operator Module The PyMonad Library A Functional Approach to Web Services Optimizations and Improvements

Your guide to the functional programming paradigm Functional programming mainly sees use in math computations, including those used in Artificial Intelligence and gaming. This programming paradigm makes algorithms used for math calculations easier to understand and provides a concise method of coding algorithms by people who aren't developers. Current books on the market have a significant learning curve because they're written for developers, by developers—until now. Functional Programming for Dummies explores the differences between the pure (as represented by the Haskell language) and impure (as represented by the Python language) approaches to functional programming for readers just like you. The pure approach is best suited to researchers who have no desire to create production code but do need to test algorithms fully and demonstrate their usefulness to peers. The impure approach is best suited to production environments because it's possible to mix coding paradigms in a single application to produce a result more quickly. Functional Programming For Dummies uses this two-pronged approach to give you an all-in-one approach to a coding methodology that can otherwise be hard to grasp. Learn pure and impure when it comes to coding Dive into the processes that most functional programmers use to derive, analyze and prove the worth of algorithms Benefit from examples that are provided in both Python and Haskell Glean the expertise of an expert author who has written some of the market-leading programming books to date If you're ready to massage data to understand how things work in new ways, you've come to the right place!

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Gather, analyze, and decode data to reveal hidden facts using Python, the perfect tool for all aspiring secret agents About This Book Discover the essential features of Python programming: statements, variables, expressions, and many of the built-in data types Use Python's standard library to do more sophisticated data gathering and analysis Written by a Python programming expert, with over 35 years' experience as a consultant, teacher, author and software developer Who This Book Is For This book is for Secret Agents who have some exposure to Python. Our focus is on the Field Agents who are ready to do more sophisticated and complex programming in Python. We'll stick to simple statistics for the most part. A steady hand with a soldering iron is not required, but a skilled field agent should be able to assemble a working Arduino circuit to gather their own sensor data. What You Will Learn Upgrade Python to the latest version and discover its latest and greatest tools Use Python libraries to extract data from log files that are designed more for people to read than for automated analysis Summarize log files and extract meaningful information Gather data from social networking sites and leverage your experience of analyzing log files to summarize the data you find Extract text and images from social networking sites Parse the complex and confusing data structures in a PDF file to extract meaningful text that we can analyze Connect small, intelligent devices to our computer to use them as remote sensors Use Python to analyze measurements from sensors to calibrate them and use sensors efficiently In Detail Python is easy to learn and extensible programming language that allows any manner of secret agent to work with a variety of data. Agents from beginners to seasoned veterans will benefit from Python's simplicity and sophistication. The standard library provides numerous packages that move beyond simple beginner missions. The Python ecosystem of related packages and libraries supports deep information processing. This book will guide you through the process of upgrading your Python-based toolset for intelligence gathering, analysis, and communication. You'll explore the ways Python is used to analyze web logs to discover the trails of activities that can be found in web and database servers. We'll also look at how we can use Python to discover details of the social network by looking at the data available from social networking websites. Finally, you'll see how to extract history from PDF files, which opens up new sources of data, and you'll learn about the ways you can gather data using an Arduino-based sensor device. Style and approach Each chapter will include a background briefing that covers an essential Python technology. After some in-depth exploration of the features, the chapter will conclude with a mission that is a concrete application of the Python tools and techniques covered.

Functional Python Programming - Second Edition

Foundations of Python

Functional Programming in Scala

Mastering JavaScript Functional Programming

Treading on Python Volume 2

Python Tutorial

Python 3 is the best version of the language yet: It is more powerful, convenient, consistent, and expressive than ever before. Now, leading Python programmer Mark Summerfield demonstrates how to write code that takes full advantage of Python 3's features and idioms. The first book written from a completely "Python 3" viewpoint, Programming in Python 3 brings together all the

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knowledge you need to write any program, use any standard or third-party Python 3 library, and create new library modules of your own. Summerfield draws on his many years of Python experience to share deep insights into Python 3 development you won't find anywhere else. He begins by illuminating Python's "beautiful heart": the eight key elements of Python you need to write robust, high-performance programs. Building on these core elements, he introduces new topics designed to strengthen your practical expertise—one concept and hands-on example at a time. This book's coverage includes Developing in Python using procedural, object-oriented, and functional programming paradigms Creating custom packages and modules Writing and reading binary, text, and XML files, including optional compression, random access, and text and XML parsing Leveraging advanced data types, collections, control structures, and functions Spreading program workloads across multiple processes and threads Programming SQL databases and key-value DBM files Utilizing Python's regular expression mini-language and module Building usable, efficient, GUI-based applications Advanced programming techniques, including generators, function and class decorators, context managers, descriptors, abstract base classes, metaclasses, and more Programming in Python 3 serves as both tutorial and language reference, and it is accompanied by extensive downloadable example code—all of it tested with the final version of Python 3 on Windows, Linux, and Mac OS X.

Would you like to gather big datasets, analyze them, and visualize the results, all in one program? If this describes you, then Introduction to Python Programming for Business and Social Science Applications is the book for you. Authors Frederick Kaefer and Paul Kaefer walk you through each step of the Python package installation and analysis process, with frequent exercises throughout so you can immediately try out the functions you've learned. Written in straightforward language for those with no programming background, this book will teach you how to use Python for your research and data analysis. Instead of teaching you the principles and practices of programming as a whole, this application-oriented text focuses on only what you need to know to research and answer social science questions. The text features two types of examples, one set from the General Social Survey and one set from a large taxi trip dataset from a major metropolitan area, to help readers understand the possibilities of working with Python. Chapters on installing and working within a programming environment, basic skills, and necessary commands will get you up and running quickly, while chapters on programming logic, data input and output, and data frames help you establish the basic framework for conducting analyses.

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Further chapters on web scraping, statistical analysis, machine learning, and data visualization help you apply your skills to your research. More advanced information on developing graphical user interfaces (GUIs) help you create functional data products using Python to inform general users of data who don't work within Python. First there was IBM® SPSS®, then there was R, and now there's Python. Statistical software is getting more aggressive - let authors Frederick Kaefer and Paul Kaefer help you tame it with Introduction to Python Programming for Business and Social Science Applications.

This textbook on Python 3 explains concepts such as variables and what they represent, how data is held in memory, how a for loop works and what a string is. It also introduces key concepts such as functions, modules and packages as well as object orientation and functional programming. Each section is prefaced with an introductory chapter, before continuing with how these ideas work in Python. Topics such as generators and coroutines are often misunderstood and these are explained in detail, whilst topics such as Referential Transparency, multiple inheritance and exception handling are presented using examples. A Beginners Guide to Python 3 Programming provides all you need to know about Python, with numerous examples provided throughout including several larger worked case studies illustrating the ideas presented in the previous chapters.

In this document, we'll take a tour of Python's features suitable for implementing programs in a functional style. After an introduction to the concepts of functional programming, we'll look at language features such as iterators and generators and relevant library modules such as itertools and functools.

Python Object-Oriented Programming

I Guess We're Doing Functional Programming Now

Programming in Python 3

Head First Python

Discover the power of functional programming, generator functions, lazy evaluation, the built-in itertools library, and monads, 2nd Edition

A Brain-Friendly Guide

**This book follows a standard tutorial approach with approximately 750 code samples spread through the 19 chapters. This amounts to over 5,900 lines of code that illustrate each concept. This book is aimed at programmers who have already learned the basics of object-oriented Python**

and need to write more sophisticated, flexible code that integrates seamlessly with the rest of Python. This book assumes a computer science background, with experience of common Python design patterns.

Functional programming languages like F#, Erlang, and Scala are attracting attention as an efficient way to handle the new requirements for programming multi-processor and high-availability applications. Microsoft's new F# is a true functional language and C# uses functional language features for LINQ and other recent advances. Real-World Functional Programming is a unique tutorial that explores the functional programming model through the F# and C# languages. The clearly presented ideas and examples teach readers how functional programming differs from other approaches. It explains how ideas look in F#—a functional language—as well as how they can be successfully used to solve programming problems in C#. Readers build on what they know about .NET and learn where a functional approach makes the most sense and how to apply it effectively in those cases. The reader should have a good working knowledge of C#. No prior exposure to F# or functional programming is required. Purchase of the print book comes with an offer of a free PDF, ePub, and Kindle eBook from Manning. Also available is all code from the book.

As Python continues to grow in popularity, projects are becoming larger and more complex. Many Python developers are now taking an interest in high-level software design patterns such as hexagonal/clean architecture, event-driven architecture, and the strategic patterns prescribed by domain-driven design (DDD). But translating those patterns into Python isn't always straightforward. With this hands-on guide, Harry Percival and Bob Gregory from MADE.com introduce proven architectural design patterns to help Python developers manage application complexity—and get the most value out of their test suites. Each pattern is illustrated with concrete examples in beautiful, idiomatic Python, avoiding some of the verbosity of Java and C# syntax. Patterns include: Dependency inversion and its links to ports and adapters (hexagonal/clean architecture) Domain-driven design's distinction between entities, value objects, and aggregates Repository and Unit of Work patterns for persistent storage Events, commands, and the message bus Command-query responsibility segregation (CQRS) Event-driven architecture and reactive microservices

Create succinct and expressive implementations with functional programming in Python About This Book Learn how to choose between imperative and functional approaches based on expressiveness,

clarity, and performance Get familiar with complex concepts such as monads, concurrency, and immutability Apply functional Python to common Exploratory Data Analysis (EDA) programming problems Who This Book Is For This book is for Python developers who would like to perform Functional programming with Python. Python Programming knowledge is assumed. What You Will Learn Use Python's generator functions and generator expressions to work with collections in a non-strict (or lazy) manner Utilize Python library modules including itertools, functools, multiprocessing, and concurrent features to ensure efficient functional programs Use Python strings with object-oriented suffix notation and prefix notation Avoid stateful classes with families of tuples Design and implement decorators to create composite functions Use functions such as max(), min(), map(), filter(), and sorted() Write higher-order functions In Detail If you're a Python developer who wants to discover how to take the power of functional programming (FP) and bring it into your own programs, then this book is essential for you, even if you know next to nothing about the paradigm. Starting with a general overview of functional concepts, you'll explore common functional features such as first-class and higher-order functions, pure functions, and more. You'll see how these are accomplished in Python 3.6 to give you the core foundations you'll build upon. After that, you'll discover common functional optimizations for Python to help your apps reach even higher speeds. You'll learn FP concepts such as lazy evaluation using Python's generator functions and expressions. Moving forward, you'll learn to design and implement decorators to create composite functions. You'll also explore data preparation techniques and data exploration in depth, and see how the Python standard library fits the functional programming model. Finally, to top off your journey into the world of functional Python, you'll at look at the PyMonad project and some larger examples to put everything into perspective. Style and approach This book provides a general overview of functional concepts and then delves deeper into the functional features, showing you how the Python standard library fits the functional programming model. It also dem ...

Enabling Test-Driven Development, Domain-Driven Design, and Event-Driven Microservices

Explore What Functional Programming Is, How It Is Used, and the Features of Python That Support It

Learning Python

An Introduction to Functional Programming Through Lambda Calculus

Python Programming

## Intermediate Python

*Summary Functional Programming in Scala is a serious tutorial for programmers looking to learn FP and apply it to the everyday business of coding. The book guides readers from basic techniques to advanced topics in a logical, concise, and clear progression. In it, you'll find concrete examples and exercises that open up the world of functional programming. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Functional programming (FP) is a style of software development emphasizing functions that don't depend on program state. Functional code is easier to test and reuse, simpler to parallelize, and less prone to bugs than other code. Scala is an emerging JVM language that offers strong support for FP. Its familiar syntax and transparent interoperability with Java make Scala a great place to start learning FP. About the Book Functional Programming in Scala is a serious tutorial for programmers looking to learn FP and apply it to their everyday work. The book guides readers from basic techniques to advanced topics in a logical, concise, and clear progression. In it, you'll find concrete examples and exercises that open up the world of functional programming. This book assumes no prior experience with functional programming. Some prior exposure to Scala or Java is helpful. What's Inside Functional programming concepts The whys and hows of FP How to write multicore programs Exercises and checks for understanding About the Authors Paul Chiusano and Rúnar Bjarnason are recognized experts in functional programming with Scala and are core contributors to the Scalaz library. Table of Contents PART 1 INTRODUCTION TO FUNCTIONAL PROGRAMMING What is functional programming? Getting started with functional programming in Scala Functional data structures Handling errors without exceptions Strictness and laziness Purely functional state PART 2 FUNCTIONAL DESIGN AND COMBINATOR LIBRARIES Purely functional parallelism Property-based testing Parser combinators PART 3 COMMON STRUCTURES IN FUNCTIONAL DESIGN Monoids Monads Applicative and traversable functors PART 4 EFFECTS AND I/O External effects and I/O Local effects and mutable state Stream processing and incremental I/O*

*Even experienced developers struggle with software systems that sprawl across distributed servers and APIs, are filled with redundant code, and are difficult to reliably test and modify. Grokking Simplicity is a friendly, practical guide that will change the way you approach software design and development. Even experienced developers struggle with software systems that sprawl across distributed servers and APIs, are filled with redundant code, and are difficult to reliably test and modify. Grokking Simplicity is a friendly, practical guide that will change the way you approach software design and development. Grokking Simplicity guides you to a crystal-clear understanding of why certain features of modern software are so prone to complexity and introduces you to the functional techniques you can use to simplify these systems so that they're easier to read, test, and debug. Through hands-on examples, exercises, and numerous self-assessments, you'll learn to organize your code for maximum reusability and internalize methods to keep unwanted complexity out of your codebase. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. Create succinct and expressive implementations with functional programming in Python Key Features Learn how to choose between imperative and functional approaches based on expressiveness, clarity, and performance Get familiar with complex concepts such as monads, concurrency, and immutability Apply functional Python to common Exploratory Data Analysis (EDA) programming problems Book Description If you're a Python developer who wants to discover how to take the power of functional programming (FP) and bring it into your own programs, then this book is essential for you, even if you know next to nothing about the paradigm. Starting with a general overview of functional concepts, you'll explore common functional features such as first-class and higher-order functions, pure functions, and more. You'll see how these are accomplished in Python 3.6 to give you the core foundations you'll build upon. After that, you'll discover common functional optimizations for Python to help your apps reach even higher speeds. You'll learn FP concepts such as lazy evaluation using Python's generator functions and expressions. Moving forward, you'll learn to design and implement decorators to*



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*create composite functions. You'll also explore data preparation techniques and data exploration in depth, and see how the Python standard library fits the functional programming model. Finally, to top off your journey into the world of functional Python, you'll at look at the PyMonad project and some larger examples to put everything into perspective. What you will learn Use Python's generator functions and generator expressions to work with collections in a non-strict (or lazy) manner Utilize Python library modules including itertools, functools, multiprocessing, and concurrent features to ensure efficient functional programs Use Python strings with object-oriented suffix notation and prefix notation Avoid stateful classes with families of tuples Design and implement decorators to create composite functions Use functions such as max(), min(), map(), filter(), and sorted() Write higher-order functions Who this book is for This book is for Python developers who would like to perform Functional programming with Python. Python Programming knowledge is assumed.*

*Summary Hello! Python fully covers the building blocks of Python programming and gives you a gentle introduction to more advanced topics such as object-oriented programming, functional programming, network programming, and program design. New (or nearly new) programmers will learn most of what they need to know to start using Python immediately. About this Book Programmers love Python because it's fast and efficient. Shouldn't learning Python be just the same? Hello! Python starts quickly and simply, with a line of Python code. You'll learn the basics the right way--by writing your own programs. Along the way, you'll get a gentle introduction to more advanced concepts and new programming styles.> No experience with Python needed. Exposure to another programming language is helpful but not required. Purchase of the print book comes with an offer of a free PDF, ePub, and Kindle eBook from Manning. Also available is all code from the book. What Makes Hello! Python special Learn Python fast Even if you've never written a line of code before, you'll be writing real Python apps in just an hour or two. Great examples There's something new in every chapter, including games, web programming with Django, databases, and more. User Friendly guides Using lots of illustrations and a down-to-earth writing style, this book invites you to explore Python along with half-a-dozen traveling companions from the User Friendly cartoon strip.*

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*Functional techniques for sequential and parallel programming with Scala*

*A Functional Start to Computing with Python*

*Write clean, robust, and maintainable web and server code using functional JavaScript, 2nd Edition*

*Mastering Object-oriented Python*

*Beginning Programming with Python For Dummies*

*A Complete Introduction to the Python Language*

**Learn functional programming concepts and techniques to build Python applicationsKey Features\* Study in detail all aspects of functional programming, including immutability, generators, and more\* Reinforce your learning through elaborate examples\* Learn how to implement advanced topics like closures, memoization, and monads in your applicationsBook DescriptionPython supports four programming paradigms - imperative, procedural, object-oriented, and functional. Of these, functional programming is probably the least understood and the least used. This book covers**

several topics that are directly and indirectly related to functional programming. After a quick overview of functional programming and its characteristics, *Functional Programming in Python* explains the various concepts of Python, starting with functions. You'll learn how to change the value of an object by using mutability. You'll then look at recursion as a more functional alternative to looping for certain algorithms, and learn how memoization alleviates the limitations of recursion in certain situations. The book further explains how to use closures as function factories and how to handle errors and exceptions with functors and monads. By the end of this book, you'll have all the knowledge you need for developing your applications with functional programming in Python.

**What you will learn\***

- Understand the advantages and disadvantages of functional programming\*
- Use closures in your code to dynamically create functions\*
- Create your own iterators\*
- Use the general-purpose `functools` to create your own specialized reducing functions\*
- Study and implement list and generator comprehensions to create lists\*
- Create customized iterators with generators

Who this book is for If you are a developer looking to create applications in Python using functional programming, this book is ideal for you. You will only need a basic knowledge of Python. Prior knowledge or experience of functional programming is not required.

Thorsten and Isaac have written this book based on a programming course we teach for Master's Students at the School of Computer Science of the University of Nottingham. The book is intended for students with little or no background in programming coming from different backgrounds educationally as well as culturally. It is not mainly a Python course but we use Python as a vehicle to teach basic programming concepts. Hence, the words *conceptual programming* in the title. We cover basic concepts about data structures, imperative programming, recursion and backtracking, object-oriented programming, functional programming, game development and some basics of data science.

**Uncover the secrets of functional programming using C# and change the way you approach your applications forever**

**About This Book** This book focuses on the functional paradigm of C#, which will give you a whole new angle on coding with C#. It illustrates the advantages that functional programming brings to the table and the associated coding benefits. This practical guide covers all the aspects of functional programming and provides solutions that can be applied in business scenarios.

**Who This Book Is For** This book is suitable for C# developers with basic prior knowledge of C# and with no functional programming experience at all.

**What You Will Learn**

- Develop an application using the functional approach
- Implement unit testing to functionally program code
- Create efficient code using functional programming
- Work through a LINQ query so you can work with data

**Compose asynchronous programs to create a responsive application Use recursion in function programming in order to simplify code Optimize the program code using Laziness and Caching Techniques In Detail Functional programming makes your application faster, improves performance, and increases your productivity. C# code is written at a higher level of abstraction, so that code will be closer to business requirements, abstracting away many low-level implementation details. This book bridges the language gap for C# developers by showing you how to create and consume functional constructs in C#. We also bridge the domain gap by showing how functional constructs can be applied in business scenarios. We'll take you through lambda expressions and extension methods, and help you develop a deep understanding of the concepts and practices of LINQ and recursion in C#. By the end of the book, you will be able to write code using the best approach and will be able to perform unit testing in functional programming, changing how you write your applications and revolutionizing your projects. Style and approach This book takes a pragmatic approach and shows you techniques to write better functional constructs in C#. We'll also show you how these concepts can be applied in business scenarios.**

**Functional Programming For Dummies**

**Functional C#**

**Functional JavaScript**

**A Beginners Guide to Python 3 Programming**

**Hands-On Reactive Programming with Python**

**Taming Complex Software with Functional Thinking**