

Expert Python Programming Second Edition

Creative Coding in Python presents over 30 creative projects that teach kids how to code in the easy and intuitive programming language, Python. Creative Coding in Python teaches the fundamentals of computer programming and demonstrates how to code 30+ fun, creative projects using Python, a free, intuitive, open-source programming language that's one of the top five most popular worldwide and one of the most popular Google search terms in the U.S. Computer science educator Sheena Vaidyanathan helps kids understand the fundamental ideas of computer programming and the process of computational thinking using illustrations, flowcharts, and pseudocode, then shows how to apply those essentials to code exciting projects in Python: Chatbots: Discover variables, strings, integers, and more to design conversational programs. Geometric art: Use turtle graphics to create original masterpieces. Interactive fiction: Explore booleans and conditionals to invent "create your own adventure" games. Dice games: Reuse code to devise games of chance. Arcade games and apps: Understand GUI (graphical user interfaces) and create your own arcade games and apps. What's next? Look at exciting ways to use your powerful new skills and expand your knowledge of coding in Python. Creative Coding in Python gives kids the tools they need to create their own computer programs. Become an ace Python programmer by learning best coding practices and advance-

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level concepts with Python 3.5 About This Book Based on the latest stable version of Python (version 3.5) Creating well manageable code that will run in various environments with different sets of dependencies Packed with advanced concepts and best practices to write efficient Python code Who This Book Is For The book would appeal to web developers and Python programmers who want to start using version 3.5 and write code efficiently. Basic knowledge of Python programming is expected. What You Will Learn Conventions and best practices that are widely adopted in the python community Package python code effectively for community and production use Easy and lightweight ways to automate code deployment on remote systems Improve your code's quality, reliability, and performance Write concurrent code in python Extend python with code written in different languages In Detail Python is a dynamic programming language, used in a wide range of domains by programmers who find it simple, yet powerful. Even if you find writing Python code easy, writing code that is efficient and easy to maintain and reuse is a challenge. The focus of the book is to familiarize you with common conventions, best practices, useful tools and standards used by python professionals on a daily basis when working with code. You will begin with knowing new features in Python 3.5 and quick tricks for improving productivity. Next, you will learn advanced and useful python syntax elements brought to this new version. Using advanced object-oriented concepts and mechanisms available in python, you will learn different approaches to implement metaprogramming. You will learn to

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choose good names, write packages, and create standalone executables easily. You will also be using some powerful tools such as buildout and virtualenv to release and deploy the code on remote servers for production use. Moving on, you will learn to effectively create Python extensions with C, C++, cython, and pyrex. The important factors while writing code such as code management tools, writing clear documentation, and test-driven development are also covered. You will now dive deeper to make your code efficient with general rules of optimization, strategies for finding bottlenecks, and selected tools for application optimization. By the end of the book, you will be an expert in writing efficient and maintainable code. Style and approach An easy-to-follow guide that covers industry followed best practices in Python programming

The second edition of this best-selling Python book (over 500,000 copies sold!) uses Python 3 to teach even the technically uninclined how to write programs that do in minutes what would take hours to do by hand. There is no prior programming experience required and the book is loved by liberal arts majors and geeks alike. If you've ever spent hours renaming files or updating hundreds of spreadsheet cells, you know how tedious tasks like these can be. But what if you could have your computer do them for you? In this fully revised second edition of the best-selling classic Automate the Boring Stuff with Python, you'll learn how to use Python to write programs that do in minutes what would take you hours to do by hand--no prior programming experience

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required. You'll learn the basics of Python and explore Python's rich library of modules for performing specific tasks, like scraping data off websites, reading PDF and Word documents, and automating clicking and typing tasks. The second edition of this international fan favorite includes a brand-new chapter on input validation, as well as tutorials on automating Gmail and Google Sheets, plus tips on automatically updating CSV files. You'll learn how to create programs that effortlessly perform useful feats of automation to:

- Search for text in a file or across multiple files
- Create, update, move, and rename files and folders
- Search the Web and download online content
- Update and format data in Excel spreadsheets of any size
- Split, merge, watermark, and encrypt PDFs
- Send email responses and text notifications
- Fill out online forms

Step-by-step instructions walk you through each program, and updated practice projects at the end of each chapter challenge you to improve those programs and use your newfound skills to automate similar tasks. Don't spend your time doing work a well-trained monkey could do. Even if you've never written a line of code, you can make your computer do the grunt work. Learn how in *Automate the Boring Stuff with Python, 2nd Edition*.

What do you need to learn to move from being a complete beginner to someone with advanced knowledge of Python Programming? Do you want to understand which ones are the best libraries to use, and why is Python considered the best language for machine learning? Do you want to use what you have learnt via step by step guides?

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Python is currently one of the most popular programming languages and it's used by established companies such as Google, Instagram and Spotify. Its large popularity is explained by its truly easy learning mechanism. Everyone can learn to use it and write the first codes in just a couple of days. The main advantages of Python are: Python is a multiplatform which means it is suitable for windows, linux and IOS as long as Python interpreter is properly installed in the hardware You can access a very large selection of libraries - there are several libraries developed by third parties, apart those standard included in Python It's totally open source and and includes a wide community This book has been created specifically for those who want to use this language for the first time and it doesn't require any pre knowledge. The best way to learn a programming language is to understand the logic behind its creation, learn all the steps tailored to create a full project, apply the basic notions via practical examples which will help you to fix the concept learnt. And this is what you will learn in this book. The aim of this book is to elevate your python knowledge to a more advanced level which will enable you to stand out from the crowd. You will learn: How to install Python step by step How to write your first Python Program How to debug a Python Program Which ones are the best libraries and how to import them How machine learning works in 7 simple steps Multiple ways to access computing power in machine learning How to utilise the best Python libraries for machine learning and much more This book is full of practical examples and practices that will have an immediate and positive impact on your

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knowledge. Even if you have never tried to use a programming language or you found it very difficult, do not worry. Thanks to this book, you will be able to program python like a pro in a very short time. Would You Like To Know More? Scroll to the top of the page and select the BUY NOW button.

This book will guide you through the basic game development process using Python, covering game topics including graphics, sound, artificial intelligence, animation, game engines, etc. Real games are created as you work through the text and significant parts of a game engine are built and made available for download. New chapters on card games and a side-scroller. The companion files contain all of the resources described in the book, e.g., example code, game assets, video/sound editing software, and color figures. Instructor resources are available for use as a textbook. FEATURES: Teaches basic game development concepts using Python including graphics, sound, artificial intelligence, animation, game engines, collision detection, Web-based games, and more Includes code samples using Pygame Features new chapters on card games (Ch.11) and building a side-scrolling game (Ch.12) Includes a companion disc with example code, games assets, and color figures

This book builds on basic Python tutorials to explain various Python language features that aren't routinely covered: from reusable console scripts that play double duty as micro-services by leveraging entry points, to using asyncio efficiently to collate data from a large number of sources. Along the way, it covers type-hint based linting, low-

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overhead testing and other automated quality checking to demonstrate a robust real-world development process. Some powerful aspects of Python are often documented with contrived examples that explain the feature as a standalone example only. By following the design and build of a real-world application example from prototype to production quality you'll see not only how the various pieces of functionality work but how they integrate as part of the larger system design process. In addition, you'll benefit from the kind of useful asides and library recommendations that are a staple of conference Q&A sessions at Python conferences as well as discussions of modern Python best practice and techniques to better produce clear code that is easily maintainable. Advanced Python Development is intended for developers who can already write simple programs in Python and want to understand when it's appropriate to use new and advanced language features and to do so in a confident manner. It is especially of use to developers looking to progress to a more senior level and to very experienced developers who have thus far used older versions of Python. What You'll Learn Understand asynchronous programming Examine developing plugin architectures Work with type annotations Review testing techniques Explore packaging and dependency management Who This Book Is For Developers at the mid to senior level who already have Python experience. Learn how to use Python to create efficient applications About This Book Identify the bottlenecks in your applications and solve them using the best profiling techniques

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Write efficient numerical code in NumPy, Cython, and Pandas Adapt your programs to run on multiple processors and machines with parallel programming Who This Book Is For The book is aimed at Python developers who want to improve the performance of their application. Basic knowledge of Python is expected What You Will Learn Write efficient numerical code with the NumPy and Pandas libraries Use Cython and Numba to achieve native performance Find bottlenecks in your Python code using profilers Write asynchronous code using Asyncio and RxPy Use Tensorflow and Theano for automatic parallelism in Python Set up and run distributed algorithms on a cluster using Dask and PySpark In Detail Python is a versatile language that has found applications in many industries. The clean syntax, rich standard library, and vast selection of third-party libraries make Python a wildly popular language. Python High Performance is a practical guide that shows how to leverage the power of both native and third-party Python libraries to build robust applications. The book explains how to use various profilers to find performance bottlenecks and apply the correct algorithm to fix them. The reader will learn how to effectively use NumPy and Cython to speed up numerical code. The book explains concepts of concurrent programming and how to implement robust and responsive applications using Reactive programming. Readers will learn how to write code for parallel architectures using Tensorflow and Theano, and use a cluster of computers for large-scale computations using technologies such as Dask and PySpark. By the end of the book, readers will have learned to achieve performance and

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scale from their Python applications. Style and approach A step-by-step practical guide filled with real-world use cases and examples

Expert Python ProgrammingPackt Publishing Ltd

"It's easy to start writing code with Python: that's why the language is so immensely popular. However, Python has unique strengths, charms, and expressivity that can be hard to grasp at first -- as well as hidden pitfalls that can easily trip you up if you aren't aware of them. Effective Python will help you harness the full power of Python to write exceptionally robust, efficient, maintainable, and well-performing code. Utilizing the concise, scenario-driven style pioneered in Scott Meyers's best-selling Effective C++, Brett Slatkin brings together 53 Python best practices, tips, shortcuts, and realistic code examples from expert programmers. Through realistic examples, Slatkin uncovers little-known Python quirks, intricacies, and idioms that powerfully impact code behavior and performance. You'll learn how to choose the most efficient and effective way to accomplish key tasks when multiple options exist, and how to write code that's easier to understand, maintain, and improve. Drawing on his deep understanding of Python's capabilities, Slatkin offers practical advice for each major area of development with both Python 3.x and Python 2.x. Coverage includes: * Algorithms * Objects * Concurrency * Collaboration * Built-in modules * Production techniques * And more Each section contains specific, actionable guidelines organized into items, each with carefully worded advice supported by detailed technical arguments and illuminating examples. Using

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Effective Python, you can systematically improve all the Python code you write: not by blindly following rules or mimicking incomprehensible idioms, but by gaining a deep understanding of the technical reasons why they make sense."--[Source inconnue].

The second edition of the best-selling Python book in the world (over 1 million copies sold!). A fast-paced, no-nonsense guide to programming in Python. Updated and thoroughly revised to reflect the latest in Python code and practices. Python Crash Course is the world's best-selling guide to the Python programming language. This fast-paced, thorough introduction to programming with Python will have you writing programs, solving problems, and making things that work in no time. In the first half of the book, you'll learn basic programming concepts, such as variables, lists, classes, and loops, and practice writing clean code with exercises for each topic. You'll also learn how to make your programs interactive and test your code safely before adding it to a project. In the second half, you'll put your new knowledge into practice with three substantial projects: a Space Invaders-inspired arcade game, a set of data visualizations with Python's handy libraries, and a simple web app you can deploy online. As you work through the book, you'll learn how to:

- Use powerful Python libraries and tools, including Pygame, Matplotlib, Plotly, and Django
- Make 2D games that respond to keypresses and mouse clicks, and that increase in difficulty
- Use data to generate interactive visualizations
- Create and customize web apps and deploy them safely online
- Deal with mistakes and errors so you can solve your own

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programming problems If you've been thinking about digging into programming, Python Crash Course will get you writing real programs fast. Why wait any longer? Start your engines and code!

Python Programming Professional Made Easy 2nd Edition! Sam Key back at it again with his upgraded version of Python Going from beginner to professional? Want to skip the learning curve? Need the jargon removed so you can understand in your terms? From various programming languages to statements and Basic Operators Everything you need to know with functions and flow controls! Don't waste anytime and jump on board of Python! Start your programming right now! **PURCHASE NOW DO NOT WAIT! GRAB YOUR COPY OF SUCCESS RIGHT NOW!**

Create distributed applications with clever design patterns to solve complex problems
Key Features Set up and run distributed algorithms on a cluster using Dask and PySpark Master skills to accurately implement concurrency in your code Gain practical experience of Python design patterns with real-world examples Book Description This Learning Path shows you how to leverage the power of both native and third-party Python libraries for building robust and responsive applications. You will learn about profilers and reactive programming, concurrency and parallelism, as well as tools for making your apps quick and efficient. You will discover how to write code for parallel architectures using TensorFlow and Theano, and use a cluster of computers for large-scale computations using technologies such as Dask and PySpark. With the knowledge

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of how Python design patterns work, you will be able to clone objects, secure interfaces, dynamically choose algorithms, and accomplish much more in high performance computing. By the end of this Learning Path, you will have the skills and confidence to build engaging models that quickly offer efficient solutions to your problems. This Learning Path includes content from the following Packt products: Python High Performance - Second Edition by Gabriele Lanaro Mastering Concurrency in Python by Quan Nguyen Mastering Python Design Patterns by Sakis Kasampalis What you will learn Use NumPy and pandas to import and manipulate datasets Achieve native performance with Cython and Numba Write asynchronous code using asyncio and RxPy Design highly scalable programs with application scaffolding Explore abstract methods to maintain data consistency Clone objects using the prototype pattern Use the adapter pattern to make incompatible interfaces compatible Employ the strategy pattern to dynamically choose an algorithm Who this book is for This Learning Path is specially designed for Python developers who want to build high-performance applications and learn about single core and multi-core programming, distributed concurrency, and Python design patterns. Some experience with Python programming language will help you get the most out of this Learning Path.

Learn the fundamentals of Python (3.7) and how to apply it to data science, programming, and web development. Fully updated to include hands-on tutorials and projects. Key Features Learn the fundamentals of Python programming with interactive

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projects Apply Python to data science with tools such as IPython and Jupyter Utilize Python for web development and build a real-world app using Django Book Description Learn Python Programming is a quick, thorough, and practical introduction to Python - an extremely flexible and powerful programming language that can be applied to many disciplines. Unlike other books, it doesn't bore you with elaborate explanations of the basics but gets you up-and-running, using the language. You will begin by learning the fundamentals of Python so that you have a rock-solid foundation to build upon. You will explore the foundations of Python programming and learn how Python can be manipulated to achieve results. Explore different programming paradigms and find the best approach to a situation; understand how to carry out performance optimization and effective debugging; control the flow of a program; and utilize an interchange format to exchange data. You'll also walk through cryptographic services in Python and understand secure tokens. Learn Python Programming will give you a thorough understanding of the Python language. You'll learn how to write programs, build websites, and work with data by harnessing Python's renowned data science libraries. Filled with real-world examples and projects, the book covers various types of applications, and concludes by building real-world projects based on the concepts you have learned. What you will learn Get Python up and running on Windows, Mac, and Linux Explore fundamental concepts of coding using data structures and control flow Write elegant, reusable, and efficient code in any situation Understand when to use the

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functional or OOP approach Cover the basics of security and concurrent/asynchronous programming Create bulletproof, reliable software by writing tests Build a simple website in Django Fetch, clean, and manipulate data Who this book is for Learn Python Programming is for individuals with relatively little experience in coding or Python. It's also ideal for aspiring programmers who need to write scripts or programs to accomplish tasks. The book shows you how to create a full-fledged application. 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 how this affects popular design patterns Object-oriented idioms: build classes by learning about references, mutability, interfaces, operator

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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

Master the art of writing beautiful and powerful Python by using all of the features that Python 3.5 offers About This Book Become familiar with the most important and advanced parts of the Python code style Learn the trickier aspects of Python and put it in a structured context for deeper understanding of the language Offers an expert's-eye overview of how these advanced tasks fit together in Python as a whole along with practical examples Who This Book Is For Almost anyone can learn to write working script and create high quality code but they might lack a structured understanding of what it means to be 'Pythonic'. If you are a Python programmer who wants to code efficiently by getting the syntax and usage of a few intricate Python techniques exactly right, this book is for you. What You Will Learn Create a virtualenv and start a new project Understand how and when to use the functional programming paradigm Get familiar with the different ways the decorators can be written in Understand the power of generators and coroutines without digressing into lambda calculus Create metaclasses and how it makes working with Python far easier Generate HTML documentation out of documents and code using Sphinx Learn how to track and optimize application performance, both memory and cpu Use the multiprocessing

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library, not just locally but also across multiple machines Get a basic understanding of packaging and creating your own libraries/applications In Detail Python is a dynamic programming language. It is known for its high readability and hence it is often the first language learned by new programmers. Python being multi-paradigm, it can be used to achieve the same thing in different ways and it is compatible across different platforms. Even if you find writing Python code easy, writing code that is efficient, easy to maintain, and reuse is not so straightforward. This book is an authoritative guide that will help you learn new advanced methods in a clear and contextualised way. It starts off by creating a project-specific environment using venv, introducing you to different Pythonic syntax and common pitfalls before moving on to cover the functional features in Python. It covers how to create different decorators, generators, and metaclasses. It also introduces you to functools.wraps and coroutines and how they work. Later on you will learn to use asyncio module for asynchronous clients and servers. You will also get familiar with different testing systems such as py.test, doctest, and unittest, and debugging tools such as Python debugger and faulthandler. You will learn to optimize application performance so that it works efficiently across multiple machines and Python versions. Finally, it will teach you how to access C functions with a simple Python call. By the end of the book, you will be able to write more advanced scripts and take on bigger challenges. Style and Approach This book is a comprehensive guide that covers advanced features of the Python language, and communicate them with an

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authoritative understanding of the underlying rationale for how, when, and why to use them.

Praise for Core Python Programming The Complete Developer's Guide to Python New to Python? The definitive guide to Python development for experienced programmers Covers core language features thoroughly, including those found in the latest Python releases—learn more than just the syntax! Learn advanced topics such as regular expressions, networking, multithreading, GUI, Web/CGI, and Python extensions Includes brand-new material on databases, Internet clients, Java/Jython, and Microsoft Office, plus Python 2.6 and 3 Presents hundreds of code snippets, interactive examples, and practical exercises to strengthen your Python skills Python is an agile, robust, expressive, fully object-oriented, extensible, and scalable programming language. It combines the power of compiled languages with the simplicity and rapid development of scripting languages. In Core Python Programming, Second Edition , leading Python developer and trainer Wesley Chun helps you learn Python quickly and comprehensively so that you can immediately succeed with any Python project. Using practical code examples, Chun introduces all the fundamentals of Python programming: syntax, objects and memory management, data types, operators, files and I/O, functions, generators, error handling and exceptions, loops, iterators, functional programming, object-oriented programming and more. After you learn the core fundamentals of Python, he shows you what you can do with your new skills, delving

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into advanced topics, such as regular expressions, networking programming with sockets, multithreading, GUI development, Web/CGI programming and extending Python in C. This edition reflects major enhancements in the Python 2.x series, including 2.6 and tips for migrating to 3. It contains new chapters on database and Internet client programming, plus coverage of many new topics, including new-style classes, Java and Jython, Microsoft Office (Win32 COM Client) programming, and much more. Learn professional Python style, best practices, and good programming habits Gain a deep understanding of Python's objects and memory model as well as its OOP features, including those found in Python's new-style classes Build more effective Web, CGI, Internet, and network and other client/server applications Learn how to develop your own GUI applications using Tkinter and other toolkits available for Python Improve the performance of your Python applications by writing extensions in C and other languages, or enhance I/O-bound applications by using multithreading Learn about Python's database API and how to use a variety of database systems with Python, including MySQL, Postgres, and SQLite Features appendices on Python 2.6 & 3, including tips on migrating to the next generation!

Updated for both Python 3.4 and 2.7, this convenient pocket guide is the perfect on-the-job quick reference. You'll find concise, need-to-know information on Python types and statements, special method names, built-in functions and exceptions, commonly used standard library modules, and other prominent Python tools. The handy index lets you

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pinpoint exactly what you need. Written by Mark Lutz—widely recognized as the world’s leading Python trainer—Python Pocket Reference is an ideal companion to O’Reilly’s classic Python tutorials, Learning Python and Programming Python, also written by Mark. This fifth edition covers: Built-in object types, including numbers, lists, dictionaries, and more Statements and syntax for creating and processing objects Functions and modules for structuring and reusing code Python’s object-oriented programming tools Built-in functions, exceptions, and attributes Special operator overloading methods Widely used standard library modules and extensions Command-line options and development tools Python idioms and hints The Python SQL Database API

The new edition of an introductory text that teaches students the art of computational problem solving, covering topics ranging from simple algorithms to information visualization. This book introduces students with little or no prior programming experience to the art of computational problem solving using Python and various Python libraries, including PyLab. It provides students with skills that will enable them to make productive use of computational techniques, including some of the tools and techniques of data science for using computation to model and interpret data. The book is based on an MIT course (which became the most popular course offered through MIT's OpenCourseWare) and was developed for use not only in a conventional classroom but in in a massive open online course (MOOC). This new edition has been

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updated for Python 3, reorganized to make it easier to use for courses that cover only a subset of the material, and offers additional material including five new chapters. Students are introduced to Python and the basics of programming in the context of such computational concepts and techniques as exhaustive enumeration, bisection search, and efficient approximation algorithms. Although it covers such traditional topics as computational complexity and simple algorithms, the book focuses on a wide range of topics not found in most introductory texts, including information visualization, simulations to model randomness, computational techniques to understand data, and statistical techniques that inform (and misinform) as well as two related but relatively advanced topics: optimization problems and dynamic programming. This edition offers expanded material on statistics and machine learning and new chapters on Frequentist and Bayesian statistics.

This fast-paced introduction to Python moves from the basics to advanced concepts, enabling readers to gain proficiency quickly.

This book is an authoritative exploration of Python best practices and applications of agile methodologies to Python, illustrated with practical, real-world examples. This book is for Python developers who are already building applications, but want to build better ones by applying best practices and new development techniques to their projects. The reader is expected to have a sound background in Python programming.

"Have you always wanted to learn computer programming but are afraid it'll be too

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difficult for you? Or perhaps you know other programming languages but are interested in learning the Python language fast? This book is for you"--Page 4 of cover.

The user-friendly, object-oriented programming language Python is quickly becoming the most popular introductory programming language for both students and instructors. This updated Second Edition of Python Programming in Context provides a comprehensive, accessible introduction to Python fundamentals. An ideal first language for learners entering the rapidly expanding field of computer science, Python gives students a solid platform of key problem-solving skills that translate easily across programming languages. Building on essential concepts of computer science, and offering a plenitude of real-world examples, Python Programming in Context, Second Edition offers a thorough overview of multiple applied areas, including image processing, cryptography, astronomy, the Internet, and bioinformatics. The text's emphasis on problem-solving, extrapolation, and development of independent exploration and solution-building provides students with a unique and innovative approach to learning programming. Python Programming in Context, Second Edition is the ideal introductory text for those delving into computer programming. Key Features - Utilizes Python 3 - Provides a clear, accessible, and skill-focused approach to programming with Python - Contains problem sets based on real-world examples and problem-solving rather than language features - Offers a variety of exercises that develop independent skill-building and exploration - Every new copy of the text is

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packaged with full student access to Turing's Craft Custom CodeLab. Customized to match the organization of the text, CodeLab offers students hands-on Python programming experience with immediate feedback. - Accompanied by a full suite of instructor support material, including solutions to the exercises in the text, downloadable source code, PowerPoint Lecture Outlines, and a complete Test Bank. This book is suitable for use in a university-level first course in computing (CS1), as well as the increasingly popular course known as CS0. It is difficult for many students to master basic concepts in computer science and programming. A large portion of the confusion can be blamed on the complexity of the tools and materials that are traditionally used to teach CS1 and CS2. This textbook was written with a single overarching goal: to present the core concepts of computer science as simply as possible without being simplistic.

Become an ace Python programmer by learning best coding practices and advance-level concepts with Python 3.5

About This Book- Based on the latest stable version of Python (version 3.5)- Creating well manageable code that will run in various environments with different sets of dependencies- Packed with advanced concepts and best practices to write efficient Python code

Who This Book Is For The book would appeal to web developers and Python programmers who want to start using version 3.5 and write code efficiently. Basic knowledge of Python programming is expected.

What You Will Learn- Conventions and best practices that are widely adopted in the python

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community- Package python code effectively for community and production use- Easy and lightweight ways to automate code deployment on remote systems- Improve your code's quality, reliability, and performance- Write concurrent code in python- Extend python with code written in different languages

In Detail Python is a dynamic programming language, used in a wide range of domains by programmers who find it simple, yet powerful. Even if you find writing Python code easy, writing code that is efficient and easy to maintain and reuse is a challenge. The focus of the book is to familiarize you with common conventions, best practices, useful tools and standards used by python professionals on a daily basis when working with code. You will begin with knowing new features in Python 3.5 and quick tricks for improving productivity. Next, you will learn advanced and useful python syntax elements brought to this new version. Using advanced object-oriented concepts and mechanisms available in python, you will learn different approaches to implement metaprogramming. You will learn to choose good names, write packages, and create standalone executables easily. You will also be using some powerful tools such as buildout and virtualenv to release and deploy the code on remote servers for production use. Moving on, you will learn to effectively create Python extensions with C, C++, cython, and pyrex. The important factors while writing code such as code management tools, writing clear documentation, and test-driven development are also covered. You will now dive deeper to make your code efficient with general rules of optimization, strategies for finding

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bottlenecks, and selected tools for application optimization. By the end of the book, you will be an expert in writing efficient and maintainable code. Style and approach An easy-to-follow guide that covers industry followed best practices in Python programming. 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 is a general-purpose interpreted, interactive, object-oriented, and high-level programming language. It was created by Guido van Rossum during 1985 - 1990 and first released in 1991. Python's design philosophy emphasizes code

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readability with its notable use of significant whitespace. Its language constructs and object-oriented approach aim to help programmers write clear, logical code for small and large-scale projects.

An indispensable collection of practical tips and real-world advice for tackling common Python problems and taking your code to the next level. Features interviews with high-profile Python developers who share their tips, tricks, best practices, and real-world advice gleaned from years of experience. Sharpen your Python skills as you dive deep into the Python programming language with *Serious Python*. You'll cover a range of advanced topics like multithreading and memorization, get advice from experts on things like designing APIs and dealing with databases, and learn Python internals to help you gain a deeper understanding of the language itself. Written for developers and experienced programmers, *Serious Python* brings together over 15 years of Python experience to teach you how to avoid common mistakes, write code more efficiently, and build better programs in less time. As you make your way through the book's extensive tutorials, you'll learn how to start a project and tackle topics like versioning, layouts, coding style, and automated checks. You'll learn how to package your software for distribution, optimize performance, use the right data structures, define functions efficiently, pick the right libraries, build future-proof

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programs, and optimize your programs down to the bytecode. You'll also learn how to:

- Make and use effective decorators and methods, including abstract, static, and class methods
- Employ Python for functional programming using generators, pure functions, and functional functions
- Extend flake8 to work with the abstract syntax tree (AST) to introduce more sophisticated automatic checks into your programs
- Apply dynamic performance analysis to identify bottlenecks in your code
- Work with relational databases and effectively manage and stream data with PostgreSQL

If you've been looking for a way to take your Python skills from good to great, *Serious Python* will help you get there. Learn from the experts and get seriously good at Python with *Serious Python*!

This Python coding book will help you understand the problems that arise due to inefficient code, demonstrating to you how to correct them.

Immerse yourself in learning Python and introductory data analytics with this book's project-based approach. Through the structure of a ten-week coding bootcamp course, you'll learn key concepts and gain hands-on experience through weekly projects. Each chapter in this book is presented as a full week of topics, with Monday through Thursday covering specific concepts, leading up to Friday, when you are challenged to create a project using the skills learned throughout the week. Topics include Python basics and essential intermediate

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concepts such as list comprehension, generators and iterators, understanding algorithmic complexity, and data analysis with pandas. From beginning to end, this book builds up your abilities through exercises and challenges, culminating in your solid understanding of Python. Challenge yourself with the intensity of a coding bootcamp experience or learn at your own pace. With this hands-on learning approach, you will gain the skills you need to jumpstart a new career in programming or further your current one as a software developer. What You Will Learn Understand beginning and more advanced concepts of the Python language Be introduced to data analysis using pandas, the Python Data Analysis library Walk through the process of interviewing and answering technical questions Create real-world applications with the Python language Learn how to use Anaconda, Jupyter Notebooks, and the Python Shell Who This Book Is For Those trying to jumpstart a new career into programming, and those already in the software development industry and would like to learn Python programming. Learn core concepts of Python and unleash its power to script highest quality Python programs About This Book Develop a strong set of programming skills with Python that you will be able to express in any situation, on every platform, thanks to Python's portability Stop writing scripts and start architecting programs by applying object-oriented programming techniques in Python Learn the trickier

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aspects of Python and put it in a structured context for deeper understanding of the language

Who This Book Is For This course is meant for programmers who wants to learn Python programming from a basic to an expert level. The course is mostly self-contained and introduces Python programming to a new reader and can help him become an expert in this trade.

What You Will Learn Get Python up and running on Windows, Mac, and Linux in no time Grasp the fundamental concepts of coding, along with the basics of data structures and control flow Understand when to use the functional or the object-oriented programming approach Extend class functionality using inheritance Exploit object-oriented programming in key Python technologies, such as Kivy and Django Understand how and when to use the functional programming paradigm Use the multiprocessing library, not just locally but also across multiple machines

In Detail Python is a dynamic and powerful programming language, having its application in a wide range of domains. It has an easy-to-use, simple syntax, and a powerful library, which includes hundreds of modules to provide routines for a wide range of applications, thus making it a popular language among programming enthusiasts. This course will take you on a journey from basic programming practices to high-end tools and techniques giving you an edge over your peers. It follows an interesting learning path, divided into three modules. As you complete

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each one, you'll have gained key skills and get ready for the material in the next module. The first module will begin with exploring all the essentials of Python programming in an easy-to-understand way. This will lay a good foundation for those who are interested in digging deeper. It has a practical and example-oriented approach through which both the introductory and the advanced topics are explained. Starting with the fundamentals of programming and Python, it ends by exploring topics, like GUIs, web apps, and data science. In the second module you will learn about object oriented programming techniques in Python. Starting with a detailed analysis of object-oriented technique and design, you will use the Python programming language to clearly grasp key concepts from the object-oriented paradigm. This module fully explains classes, data encapsulation, inheritance, polymorphism, abstraction, and exceptions with an emphasis on when you can use each principle to develop well-designed software. With a good foundation of Python you will move onto the third module which is a comprehensive tutorial covering advanced features of the Python language. Start by creating a project-specific environment using venv. This will introduce you to various Pythonic syntax and common pitfalls before moving onto functional features and advanced concepts, thereby gaining an expert level knowledge in programming and teaching how to script highest quality Python programs. Style

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and approach This course follows a theory-cum-practical approach having all the ingredients that will help you jump into the field of Python programming as a novice and grow-up as an expert. The aim is to create a smooth learning path that will teach you how to get started with Python and carry out expert-level programming techniques at the end of course.

An Essential Reference for Intermediate and Advanced R Programmers
Advanced R presents useful tools and techniques for attacking many types of R programming problems, helping you avoid mistakes and dead ends. With more than ten years of experience programming in R, the author illustrates the elegance, beauty, and flexibility at the heart of R. The book develops the necessary skills to produce quality code that can be used in a variety of circumstances. You will learn: The fundamentals of R, including standard data types and functions Functional programming as a useful framework for solving wide classes of problems The positives and negatives of metaprogramming How to write fast, memory-efficient code This book not only helps current R users become R programmers but also shows existing programmers what's special about R. Intermediate R programmers can dive deeper into R and learn new strategies for solving diverse problems while programmers from other languages can learn the details of R and understand why R works the way it does.

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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.

Looking for a reliable way to learn how to program on your own, without being overwhelmed by confusing concepts? Head First Programming introduces the core concepts of writing computer programs -- variables, decisions, loops, functions, and objects -- which apply regardless of the programming language. This book offers concrete examples and exercises in the dynamic and versatile Python language to demonstrate and reinforce these concepts. Learn the basic tools to start writing the programs that interest you, and get a better understanding of what software can (and cannot) do. When you're finished, you'll have the necessary foundation to learn any programming language or tackle any software project you choose. With a focus on programming concepts, this book teaches you how to: Understand the core features of all programming languages, including: variables, statements, decisions, loops, expressions, and operators Reuse code with functions Use library code to save time and effort Select the best data structure to manage complex data Write programs that talk to the Web Share your data with other programs Write programs that test themselves and help you avoid embarrassing coding errors We think your time is too valuable to waste struggling with new

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concepts. Using the latest research in cognitive science and learning theory to craft a multi-sensory learning experience, Head First Programming uses a visually rich format designed for the way your brain works, not a text-heavy approach that puts you to sleep.

Learn Python Quickly, A Programmer-Friendly Guide DESCRIPTION Most Programmer's learning Python are usually comfortable with some or the other programming language and are not interested in going through the typical learning curve of learning the first programming language. Instead, they are looking for something that can get them off the ground quickly. They are looking for similarities and differences in a feature that they have used in other language(s). This book should help them immediately. It guides you from the fundamentals of using module through the use of advanced object orientation. KEY FEATURES Strengthens the foundations, as detailed explanation of programming language concepts are given in simple manner. Lists down all the important points that you need to know related to various topics in an organized manner. Prepares you for coding related interview and theoretical questions. Provides In depth explanation of complex topics and Questions. Focuses on how to think logically to solve a problem. Follows a systematic approach that will help you to prepare for an interview in short duration of time. Exercises are exceptionally useful to complete the reader's understanding of a topic. WHAT WILL YOU LEARN Data types, Control flow instructions, console & File Input/Output Strings, list & tuples, List comprehension Sets & Dictionaries, Functions & Lambdas Dictionary Comprehension Modules, classes and objects, Inheritance Operator overloading, Exception handling Iterators & Generators, Decorators, Command-line Parsing WHO THIS BOOK IS FOR Students, Programmers, researchers, and software developers who wish to learn the basics of Python programming language. Table of

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Contents 1. Introduction to Python 2. Python Basics 3. Strings 4. Decision Control Instruction 5. Repetition Control Instruction 6. Console Input/Output 7. Lists 8. Tuples 9. Sets 10. Dictionaries 11. Comprehensions 12. Functions 13. Recursion 14. Functional Programming 15. Modules and Packages 16. Namespaces 17. Classes and Objects 18. Intricacies of Classes and Objects 19. Containership and Inheritance 20. Iterators and Generators 21. Exception Handling 22. File Input/Output 23. Miscellany 24. Multi-threading 25. Synchronization

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

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you up for success.

Refine your Python programming skills and build professional grade applications with this comprehensive guide

Key Features

- Create manageable code that can run in various environments with different sets of dependencies
- Implement effective Python data structures and algorithms to write optimized code
- Discover the exciting new features of Python 3.7

Book Description

Python is a dynamic programming language that's used in a wide range of domains thanks to its simple yet powerful nature. Although writing Python code is easy, making it readable, reusable, and easy to maintain is challenging. Complete with best practices, useful tools, and standards implemented by professional Python developers, the third edition of *Expert Python Programming* will help you overcome this challenge. The book will start by taking you through the new features in Python 3.7. You'll then learn the advanced components of Python syntax, in addition to understanding how to apply concepts of various programming paradigms, including object-oriented programming, functional programming, and event-driven programming. This book will also guide you through learning the best naming practices, writing your own distributable Python packages, and getting up to speed with automated ways of deploying your software on remote servers. You'll discover how to create useful Python extensions with C, C++, Cython, and CFFI. Furthermore, studying about code management tools, writing clear documentation, and exploring test-driven development will help you write clean code. By the end of the book, you will have become an expert in writing efficient and maintainable Python code. What you will learn

- Explore modern ways of setting up repeatable and consistent development environments
- Package Python code effectively for community and production use
- Learn modern syntax elements of Python programming such as f-strings,

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enums, and lambda functions Demystify metaprogramming in Python with metaclasses Write concurrent code in Python Extend Python with code written in different languages Integrate Python with code written in different languages Who this book is for This book will appeal to you if you're a programmer looking to take your Python knowledge to the next level by writing efficient code and learning the latest features of version 3.7 and above.

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

Python is currently used in many different areas. In all of these areas, experienced professionals can find examples of inefficiency, problems, and other perils, as a result of bad

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code. After reading this book, readers will understand these problems, and more importantly, understand how to correct them.

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 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

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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 This third revision of Manning's popular *The Quick Python Book* offers a clear, crisp updated introduction to the elegant Python programming language and its famously easy-to-read syntax. Written for programmers new to Python, this latest edition includes new exercises throughout. It covers features common to other languages concisely, while introducing Python's comprehensive standard functions library and unique features in detail. Foreword by Nicholas Tollervey, Python Software Foundation. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

About the Technology Initially Guido van Rossum's 1989 holiday project, Python has grown into an amazing computer language. It's a joy to learn and read, and powerful enough to handle everything from low-level system resources to advanced applications like deep learning. Elegantly simple and complete, it also boasts a massive ecosystem of libraries and frameworks. Python programmers are in high demand—;you can't afford not to be fluent!

About the Book *The Quick Python Book, Third Edition* is a comprehensive guide to the Python language by a Python authority, Naomi Ceder. With the personal touch of a skilled teacher, she beautifully balances details of the language with the insights and advice you need to handle any task. Extensive, relevant examples and learn-by-doing exercises help you master each important concept the first time through. Whether you're scraping websites or playing around with nested

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tuples, you'll appreciate this book's clarity, focus, and attention to detail. What's Inside Clear coverage of Python 3 Core libraries, packages, and tools In-depth exercises Five new data science-related chapters About the Reader Written for readers familiar with programming concepts--no Python experience assumed. About the Author Naomi Ceder is chair of the Python Software Foundation. She has been learning, using, and teaching Python since 2001. Table of Contents PART 1 - STARTING OUT 1. About Python 2. Getting started 3. The Quick Python overview PART 2 - THE ESSENTIALS 4. The absolute basics 5. Lists, tuples, and sets 6. Strings 7. Dictionaries 8. Control flow 9. Functions 10. Modules and scoping rules 11. Python programs 12. Using the filesystem 13. Reading and writing files 14. Exceptions PART 3 - ADVANCED LANGUAGE FEATURES 15. Classes and object-oriented programming 16. Regular expressions 17. Data types as objects 18. Packages 19. Using Python libraries PART 4 - WORKING WITH DATA 20. Basic file wrangling 21. Processing data files 22. Data over the network 23. Saving data 24. Exploring data

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