# Python The Complete Reference

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 de?nition 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 ?avor 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.

Get complete instructions for manipulating, processing, cleaning, and crunching datasets in Python. Updated for Python 3.6, the second edition of this hands-on guide is packed with practical case studies that show you how to solve a broad set of data analysis problems effectively. You'll learn the latest versions of pandas, NumPy, IPython, and Jupyter in the process. Written by Wes McKinney, the creator of the Python pandas project, this book is a practical, modern introduction to data science tools in Python. It's ideal for analysts new to Python and for Python programmers new to data science and scientific computing. Data files and related material are available on GitHub. Use the IPython shell and Jupyter notebook for exploratory computing Learn basic and advanced features in NumPy (Numerical Python) Get started with data analysis tools in the pandas library Use flexible tools to load, clean, transform, merge, and reshape data Create informative visualizations with matplotlib Apply the pandas groupby facility to slice, dice, and summarize datasets Analyze and manipulate regular and irregular time series data Learn how to solve real-world data analysis problems with thorough, detailed examples

The Definitive Java Programming Guide Fully updated for Java SE 11, Java: The Complete Reference, Eleventh Edition explains how to develop, compile, debug, and run Java programs. Best-selling programming author Herb Schildt covers the entire Java language, including its syntax, keywords, and fundamental programming principles. You'll also find information on key portions of the Java API library, such as I/O, the Collections Framework, the stream library, and the concurrency utilities. Swing, JavaBeans, and servlets are examined and numerous examples demonstrate Java in action. Of course, the very important module system is discussed in detail. This Oracle Press resource also offers an introduction to JShell, Java's interactive programming tool. Best of all, the book is written in the clear, crisp, uncompromising style that has made Schildt the choice of millions worldwide. Coverage includes: •Data types, variables, arrays, and operators•Control statements•Classes, objects, and methods•Method overloading and overriding•Inheritance•Local variable type inference•Interfaces and packages•Exception handling•Multithreaded programming•Enumerations, autoboxing, and annotations•The I/O classes•Generics•Lambda expressions•Modules•String handling•The Collections Framework•Networking•Event handling•AWT•Swing •The Concurrent API•The Stream API•Regular expressions•JavaBeans•Servlets•Much, much more Code examples in the book are available for download at www.OraclePressBooks.com.

The programming language Python was conceived in the late 1980s, [1] and its implementation was started in December 1989[2] by Guido van Rossum at CWI in the Netherlands as a successor to the ABC (programming language) capable of exception handling and interfacing with the Amoeba operating system.[3] Van Rossum is Python's principal author, and his continuing central role in deciding the direction of Python is reflected in the title given to him by the Python community, Benevolent Dictator for Life (BDFL).[4][5] Python was named for the BBC TV show Monty Python's Flying Circus.[6] Python 2.0 was released on October 16, 2000, with many major new features, including a cycle-detecting garbage collector (in addition to reference counting) for memory management and support for Unicode. However, the most important change was to the development process itself, with a shift to a more transparent and community-backed process.[7] Python 3.0, a major, backwards-incompatible release, was released on December 3, 2008[8] after a long period of testing. Many of its major features have also been backported to the backwards-compatible Python 2.6 and 2.7.[9] In February 1991, van Rossum published the code (labeled version 0.9.0) to alt.sources.[10] Already present at this stage in development were classes with inheritance, exception handling, functions, and the core datatypes of list, dict, str and so on. Also in this initial release was a module system borrowed from Modula-3; Van Rossum describes the module as "one of Python's major programming units."[1] Python's exception model also resembles Modula-3's, with the addition of an else clause.[3] In 1994 comp.lang.python, the primary discussion forum for Python, was formed, marking a milestone in the growth of Python's userbase.[1] Python reached version 1.0 in January 1994. The major new features included in this release were the functional programming tools lambda, map, filter and reduce. Van Rossum stated that "Python acquired lambda, reduce(), filter() and map(), courtesy of a Lisp hacker who missed them and submitted working patches."[11] The last version released while Van Rossum was at CWI was Python 1.2. In 1995, Van Rossum continued his work on Python at the Corporation for National Research Initiatives (CNRI) in Reston, Virginia whence he released several versions. By version 1.4, Python had acquired several new features. Notable among these are the Modula-3 inspired keyword arguments (which are also similar to Common Lisp's keyword arguments) and built-in support for complex numbers. Also included is a basic form of data hiding by name mangling, though this is easily bypassed.[12] During Van Rossum's stay at CNRI, he launched the Computer Programming for Everybody (CP4E) initiative, intending to make programming more accessible to more people, with a basic "literacy" in programming languages, similar to the basic English literacy and mathematics skills required by most employers. Python served a central role in this: because of its focus on clean syntax, it was already suitable, and CP4E's goals bore similarities to its predecessor, ABC. The

project was funded by DARPA.[13] As of 2007, the CP4E project is inactive, and while Python attempts to be easily learnable and not too arcane in its syntax and semantics, reaching out to non-programmers is not an active concern.[14] Here are what people are saying about the book: This is the best beginner's tutorial I've ever seen! Thank you for your effort. -- Walt Michalik The best thing i found was "A Byte of Python," which is simply a brilliant book for a beginner. It's well written, the concepts are well explained with self evident examples. -- Joshua Robin Excellent gentle introduction to programming #Python for beginners -- Shan Rajasekaran Best newbie guide to python -- Nickson Kaigi start to love python with every single page read -- Herbert Feutl perfect beginners guide for python, will give u key to unlock magical world of python

The Python Language Reference Release 3.6.4 describes the syntax and "core semantics" of the language. It is terse, but attempts to be exact and complete. The semantics of non-essential built-in object types and of the built-in functions and modules are described in library-index. For an informal introduction to the language, see tutorial-index. For C or C++ programmers, two additional manuals exist: extending-index describes the high-level picture of how to write a Python extension module, and the c-api-index describes the interfaces available to C/C++ programmers in detail. This book is available for free as a PDF at python.org.

Learn the ins and outs of Fireworks using this authoritative guide. You’ll get valuable tips and guidance on everything from streamlining workflow to creating interactive graphics for the Web and integrating Fireworks with other applications.

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 Essential Reference is the definitive reference guide to the Python programming language — the one authoritative handbook that reliably untangles and explains both the core Python language and the most essential parts of the Python library. Designed for the professional programmer, the book is concise, to the point, and highly accessible. It also includes detailed information on the Python library and many advanced subjects that is not available in either the official Python documentation or any other single reference source. Thoroughly updated to reflect the significant new programming language features and library modules that have been introduced in Python 2.6 and Python 3, the fourth edition of Python Essential Reference is the definitive guide for programmers who need to modernize existing Python code or who are planning an eventual migration to Python 3. Programmers starting a new Python project will find detailed coverage of contemporary Python programming idioms. This fourth edition of Python Essential Reference features numerous improvements, additions, and updates: Coverage of new language features, libraries, and modules Practical coverage of Python's more advanced features including generators, coroutines, closures, metaclasses, and decorators Expanded coverage of library modules related to concurrent programming including threads, subprocesses, and the new multiprocessing module Up-to-the-minute coverage of how to use Python 2.6’s forward compatibility mode to evaluate code for Python 3 compatibility Improved organization for even faster answers and better usability Updates to reflect modern Python programming style and idioms Updated and improved example code Deep coverage of low-level system and networking library modules — including options not covered in the standard documentation

Explore Python’s GUI frameworks and create visually stunning and feature-rich applications Key Features Integrate stunning data visualizations using Tkinter Canvas and Matplotlib Understand the basics of 2D and 3D animation in GUI applications Explore PyQt’s powerful features to easily design and customize your GUI applications Book Description A responsive graphical user interface (GUI) helps you interact with your application, improves user experience, and enhances the efficiency of your applications. With Python, you’ll have access to elaborate GUI frameworks that you can use to build interactive GUIs that stand apart from the rest. This Learning Path begins by introducing you to Tkinter and PyQt, before guiding you through the application development process. As you expand your GUI by adding more widgets, you'll work with networks, databases, and graphical libraries that enhance its functionality. You'll also learn how to connect to external databases and network resources, test your code, and maximize performance using asynchronous programming. In later chapters, you'll understand how to use the cross-platform features of Tkinter and Qt5 to maintain compatibility across platforms. You’ll be able to mimic the platform-native look and feel, and build executables for deployment across popular computing platforms. By the end of this Learning Path, you'll have the skills and confidence to design and build high-end GUI applications that can solve real-world problems. This Learning Path includes content from the following Packt products: Python GUI Programming with Tkinter by Alan D. Moore Qt5 Python GUI Programming Cookbook by B. M. Harwani What you will learn Visualize graphs in real time with Tkinter’s animation capabilities Use PostgreSQL authentication to ensure data security for your application Write unit tests to avoid regression when updating code Handle different signals generated on mouse clicks using QSpinBox and sliders Employ network concepts, internet browsing, and Google Maps in UI Use graphics rendering to implement animations in your GUI Who this book is for If you’re an intermediate Python programmer looking to enhance your coding skills by writing powerful GUIs in Python using PyQT and Tkinter, this is an ideal Learning Path for you. A strong understanding of the Python language is a must to grasp the concepts explained in this book.

This is a printed edition of the official Python language reference manual from the Python 3.2 distribution. It describes the syntax of Python 3 and its built-in datatypes and operators. Python is an interpreted object-oriented programming language, suitable for rapid application development and scripting. This manual is intended for advanced users who need a complete description of the Python 3 language syntax and object system. A simpler tutorial suitable for new users of Python is available in the companion volume "An Introduction to Python (for Python version 3.2)" (ISBN 978-1-906966-13-3). For each copy of this manual sold USD 1 is donated to the Python Software Foundation by the publisher, Network Theory Ltd.

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 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.

Make the Leap From Beginner to Intermediate in Python... Python Basics: A Practical Introduction to Python 3 Your Complete Python Curriculum-With Exercises, Interactive Quizzes, and Sample Projects What should you learn about Python in the beginning to get a strong foundation? With Python Basics, you'll not only cover the core concepts you really need to know, but you'll also learn them in the most efficient order with the help of practical exercises and interactive quizzes. You'll know enough to be dangerous with Python, fast! Who Should Read This Book If you're new to Python, you'll get a practical, step-by-step roadmap on developing your foundational skills. You'll be introduced to each concept and language feature in a logical order. Every step in this curriculum is explained and illustrated with short, clear code samples. Our goal with this book is to educate, not to impress or intimidate. If you're familiar with some basic programming concepts, you'll get a clear and well-tested introduction to Python. This is a practical introduction to Python that jumps right into the meat and potatoes without sacrificing substance. If you have prior experience with languages like VBA, PowerShell, R, Perl, C, C++, C#, Java, or Swift the numerous exercises within each chapter will fast-track your progress. If you're a seasoned developer, you'll get a Python 3 crash course that brings you up to speed with modern Python programming. Mix and match the chapters that interest you the most and use the interactive quizzes and review exercises to check your learning progress as you go along. If you're a self-starter completely new to coding, you'll get practical and motivating examples. You'll begin by installing Python and setting up a coding environment on your computer from scratch, and then continue from there. We'll get you coding right away so that you become competent and knowledgeable enough to solve real-world problems, fast. Develop a passion for programming by solving interesting problems with Python every day! If you're looking to break into a coding or data-science career, you'll pick up the practical foundations with this book. We won't just dump a boat load of theoretical information on you so you can "sink or swim"-instead you'll learn from hands-on, practical examples one step at a time. Each concept is broken down for you so you'll always know what you can do with it in practical terms. If you're interested in teaching others "how to Python," this will be your guidebook. If you're looking to stoke the coding flame in your coworkers, kids, or relatives-use our material to teach them. All the sequencing has been done for you so you'll always know what to cover next and how to explain it. What Python Developers Say About The Book: "Go forth and learn this amazing language using this great book." - Michael Kennedy, Talk Python "The wording is casual, easy to understand, and makes the information flow well." - Thomas Wong, Pythonista "I floundered for a long time trying to teach myself. I slogged through dozens of incomplete online tutorials. I snoozed through hours of boring screencasts. I gave up on countless crufty books from big-time publishers. And then I found Real Python. The easy-to-follow, step-by-step instructions break the big concepts down into bite-sized chunks written in plain English. The authors never forget their audience and are consistently thorough and detailed in their explanations. I'm up and running now, but I constantly refer to the material for guidance." - Jared Nielsen, Pythonista

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 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.

PythonThe Complete ReferenceMcGraw-Hill Osborne Media

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/mdash;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 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

Maya Python for Games and Film is the first book to focus exclusively on how to implement Python with Maya. Written by trusted authorities in the field, this in-depth guide will help you master Maya Python, whether you're a seasoned technical artist looking to make the transition from MEL to Python or an aspiring artist not wanting to scramble for information.

This book will show you how to use Python to create graphic objects for technical illustrations and data visualization. Often, the function you need to produce the image you want cannot be found in a standard Python library. Knowing how to create your own graphics will free you from the chore of looking for a function that may not exist or be difficult to use. This book will give you the tools to eliminate that process and create and customize your own graphics to satisfy your own unique requirements. Using basic geometry and trigonometry, you will learn how to create math models of 2D and 3D shapes. Using Python, you will then learn how to project these objects onto the screen of your monitor, translate and rotate them in 2D and 3D, remove hidden lines, add shading, view in perspective, view intersections between surfaces, and display shadows cast from one object onto another. /div You will also learn how to visualize and analyze 2D and 3D data sets, fit lines, splines and functions. The final chapter includes demonstrations from quantum mechanics, astronomy and climate science. Includes Python programs written in a clear and open style with detailed explanation of the code. What You Will Learn How to create math and Python models of 2D and 3D shapes. How to rotate, view in perspective, shade, remove hidden lines, display projected shadows, and more. How to analyze and display data sets as curves and surfaces, fit lines and functions. Who This Book Is ForPython developers, scientists, engineers, and students using Python to produce technical illustrations, display and analyze data sets. Assumes familiarity with vectors, matrices, geometry and trigonometry.

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 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

"Havill's problem-driven approach introduces algorithmic concepts in context and motivates students with a wide range of interests and backgrounds." -- Janet Davis, Associate Professor and Microsoft Chair of Computer Science, Whitman College "This book looks really great and takes exactly the approach I think should be used for a CS 1 course. I think it really fills a need in the textbook landscape." -- Marie desJardins, Dean of the College of Organizational, Computational, and Information Sciences, Simmons University "Discovering Computer Science is a refreshing departure from introductory programming texts, offering students a much more sincere introduction to the breadth and complexity of this ever-growing field." -- James Deverick, Senior Lecturer, The College of William and Mary "This unique introduction to the science of computing guides students through broad and universal approaches to problem solving in a variety of contexts and their ultimate implementation as computer programs." -- Daniel Kaplan, DeWitt Wallace Professor, Macalester College Discovering Computer Science: Interdisciplinary Problems, Principles, and Python Programming is a problem-oriented introduction to computational problem solving and programming in Python, appropriate for a first course for computer science majors, a more targeted disciplinary computing course or, at a slower pace, any introductory computer science course for a general audience. Realizing that an organization around language features only resonates with a narrow audience, this textbook instead connects programming to students' prior interests using a range of authentic problems from the natural and social sciences and the digital humanities. The presentation begins with an introduction to the problem-solving process, contextualizing programming as an essential component. Then, as the book progresses, each chapter guides students through solutions to increasingly complex problems, using a spiral approach to introduce Python language features. The text also places programming in the context of fundamental computer science principles, such as abstraction, efficiency, testing, and algorithmic techniques, offering glimpses of topics that are traditionally put off until later courses. This book contains 30 well-developed independent projects that encourage students to explore questions across disciplinary boundaries, over 750 homework exercises, and 300 integrated reflection questions engage students in problem solving and active reading. The accompanying website — https://www.discoveringcs.net — includes more advanced content, solutions to selected exercises, sample code and data files, and pointers for further exploration.

Demonstrates the programming language's strength as a Web development tool, covering syntax, data types, built-ins, the Python standard module library, and real world examples.

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 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.

The Python Quick Syntax Reference is the "go to" book that contains an easy to read and use guide to Python programming and development. This condensed code and syntax reference presents the Python language in a well-organized format designed to be used time and again. You won't find jargon, bloated samples, case studies, or history of Hello World and computer theory in this handy reference. This Python syntax reference is packed with useful information and is a must-have for any Python developer.

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

This comprehensive volume is fully updated for C# 2.0 -- the newest version of Microsoft's revolutionary programming language.The changes found in C# 2.0 bring Java-like power to millions of Windows programmers worldwide. With expertly crafted explanations, insider tips, and hundreds of examples, this book fully explains every aspect of C# 2.0. Written in the clear, uncompromising style that has made master programming author Herb Schildt the choice of millions, the book covers all the new and existing features of this major programming language.

Learn the most popular software programming language in easy steps KEY FEATURES ? Extensive coverage on fundamentals and core concepts of Python programming. ? A complete reference guide to crack Python Interviews and exams. ? Includes ample MCQs and solved examples to prepare you for theory and practical exams. ? Easy-to-understand text with explanatory illustrations. DESCRIPTION Basic Core Python Programming is an absolute beginners book. It focuses on the fundamentals of Python programming and simplifies coding concepts. This book makes it easy to learn the concepts of Python variables, Expressions, Decision structures, and Iteration. Equipped with a lot of exercises and Q&As, you don’t just practice the programming but also gain an in-depth understanding of the basic concepts of Python. You will start your journey right from how to go about Python installation and start using its interactive development environment and go on to learn how to build logic and implement it with coding. You will explore different types of data, operators, and in-built functions. This book covers numerous coding examples that will help you understand the importance of each data type, how to work with each one of them, and when to use them. You can learn some more practical useful concepts like how to implement control structures and use them for decision making and controlling the program flow. WHAT YOU WILL LEARN ? Stronghold on Python variables, expressions, decision structures, and iterations. ? Practical knowledge on how to work with various data types, operators, and in-built functions. ? Learn to implement strings, lists, arrays, and control structures. ? Learn how to control the program flow and how to use it for decision-making. ? A great reference book on Python basics for software programmers. WHO THIS BOOK IS FOR This book is highly appealing to all tech-savvy students, programming enthusiasts, IT undergraduates, and computer science students. You do not need any prior knowledge of programming to begin with this book as long as you have the interest to learn to program. TABLE OF CONTENTS 1. Introduction 2. Python Basics 3. Numbers, Operators, and In-built Functions 4. Strings 5. Lists and Arrays 6. Tuples and Dictionaries 7. Sets and Frozen Sets 8. Program Flow Control in Python

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 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 Your Guide to Learning PythonIllustrated Guide to Learning 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.Learn Python QuicklyPython is an incredible language. It is powerful and applicable in many areas. It is used for automation of simple or complex tasks, numerical processing, web development, interactive games and more. Whether you are a programmer coming to Python from another language, managing Python programmers or wanting to learn to program, it makes sense to cut to the chase and learn Python the right way. You could scour blogs, websites and much longer tomes if you have time. Treading on Python lets you learn the hints and tips to be Pythonic quickly.Packed with Useful Hints and TipsYou'll learn the best practices without wasting time searching or trying to force Python to be like other languages. I've collected all the gems I've gleaned over years of writing and teaching Python for you.A No Nonsense Guide to Mastering Basic PythonPython is a programming language that lets you work more quickly and integrate your systems more effectively. You can learn to use Python and see almost immediate gains in productivity and lower maintenance costs.What you will learn: Distilled best practices and tips How interpreted languages work Using basic types such as Strings, Integers, and Floats Best practices for using the interpreter during development The difference between mutable and

immutable data Sets, Lists, and Dictionaries, and when to use each Gathering keyboard input How to define a class Looping constructs Handling Exceptions in code Slicing sequences Creating modular code Using libraries Laying out code Community prescribed conventions

If you are one of them who easily get scared of Python's long, complicated code, then this e-book is for you. Python is a powerful programming language used on various platforms like video streaming and file hosting services. Getting proficient in Python language means you are capable of creating scientific applications, data sciences or machine learning algorithm. The biggest advantage of Python is that it is a free language, and anyone can change, correct or improve the algorithm. If you want to learn Python real fast, this course can be helpful to you. It extracted some complex concepts of Python and explained them into simple steps. The e-book made Python so simple that you can easily master the Python language even if you have never coded before. The e-book has covered various Python coding concepts like classes, objects, tuples, strings, and so on. The examples are chosen carefully to illustrate all the Python concepts in easy to understand for beginners. The book also links to the additional course, guidance and tutorials for further reference. Even kids can use this e-book as a Python dictionary, where they can quickly learn Python programming concepts. Table Of Content Chapter 1: Install Python Chapter 2: Creating Your First Python Program Chapter 3: Python Main Function Chapter 4: Variables Chapter 5: Strings Chapter 6: TUPLE Chapter 7: Python Dictionary Chapter 8: Operators Chapter 9: Functions Chapter 10: IF Statement Chapter 11: Loops Chapter 12: Class & Objects Chapter 13: Regular Expressions Chapter 14: Date, time and datetime classes in Python Chapter 15: Calendar Chapter 16: Reading and Writing Files in Python Chapter 17: If File or Directory Exists Chapter 18: Python COPY File Chapter 19: Python Rename File Chapter 20: Python ZIP file Chapter 21: Accessing Internet Data with Python Chapter 22: Manipulating XML with Python The e-book has used screenshot and graphics explicitly for explaining code examples. With this Python crash course, you will discover that Python is not what that lengthy books, expensive online courses or complicated Python tutorial books have projected. After reading this Python book, you will not only gain knowledge but able to retain the knowledge for longer.

If you want to learn how to program but dont know where to start, this is the right book and the right language for you. From the first page, our self-paced approach will help you build competence and confidence in your programming skills. And Python is the best language ever for learning how to program because of its simplicity and breadthtwo features that are hard to find in a single language. But this isnt just a book for beginners! Our self-paced approach also works for experienced programmers, helping you learn Python faster and better than youve ever learned a language before. By the time youre through, you will have mastered the key Python skills that are needed on the job, including those for object-oriented, database, and GUI programming. To make all of this possible, section 1 presents an 8-chapter course that will get anyone off to a great start with Python. Section 2 builds on that base by presenting the other essential skills that every Python programmer should have. Section 3 shows you how to develop object-oriented programs, a critical skillset in todays world. And section 4 shows you how to apply all of the skills that youve already learned as you build database and GUI programs for the real world.

Data science libraries, frameworks, modules, and toolkits are great for doing data science, but they’re also a good way to dive into the discipline without actually understanding data science. In this book, you’ll learn how many of the most fundamental data science tools and algorithms work by implementing them from scratch. If you have an aptitude for mathematics and some programming skills, author Joel Grus will help you get comfortable with the math and statistics at the core of data science, and with hacking skills you need to get started as a data scientist. Today’s messy glut of data holds answers to questions no one’s even thought to ask. This book provides you with the know-how to dig those answers out. Get a crash course in Python Learn the basics of linear algebra, statistics, and probability—and understand how and when they're used in data science Collect, explore, clean, munge, and manipulate data Dive into the fundamentals of machine learning Implement models such as k-nearest Neighbors, Naive Bayes, linear and logistic regression, decision trees, neural networks, and clustering Explore recommender systems, natural language processing, network analysis, MapReduce, and databases

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 Pythonuses 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.

For many researchers, Python is a first-class tool mainly because of its libraries for storing, manipulating, and gaining insight from data. Several resources exist for individual pieces of this data science stack, but only with the Python Data Science Handbook do you get them all—IPython, NumPy, Pandas, Matplotlib, Scikit-Learn, and other related tools. Working scientists and data crunchers familiar with reading and writing Python code will find this comprehensive desk reference ideal for tackling day-to-day issues: manipulating, transforming, and cleaning data; visualizing different types of data; and using data to build statistical or machine learning models. Quite simply, this is the must-have reference for scientific computing in Python. With this handbook, you’ll learn how to use: IPython and Jupyter: provide computational environments for data scientists using Python NumPy: includes the ndarray for efficient storage and manipulation of dense data arrays in Python Pandas: features the DataFrame for efficient storage and manipulation of labeled/columnar data in Python Matplotlib: includes capabilities for a flexible range of data visualizations in Python Scikit-Learn: for efficient and clean Python implementations of the most important and established machine learning algorithms

Python is an intergrated, object-orientated development language for use in computer programming. This text is split into distinct sections, each concentrating on a core angle of the language. The book also contains sections for Web and application development, the two most popular uses for Python. It is designed to teach a programmer how to use Python by explaining the mechanics of Python. The appendixes offer a quick guide to the main features of the Python language, as well as additional guides to non-essential systems such as the IDLE development environment and general guidelines for migrating from another language.

This reference identifies and explains the cultural, historical, and topical allusions in the film Monty Python’s Meaning of Life, the Pythons’ third and final original feature as a complete group. In this resource, virtually every allusion and reference that appears in the film is identified and explained —from Britain’s waning Empire through the Winter of Discontent to Margaret Thatcher’s second-term mandate, from playing fields to battle fields, and from accountant pirates to sacred sperm. Organized chronologically by scene, the entries cover literary and metaphoric allusions, symbolisms, names, peoples, and places; as well as the many social, cultural, and historical elements that populate this film, and the Pythons’ work in general.

Building desktop applications doesn't have to be difficult. Using Python & Qt5 you can create fully functional desktop apps in minutes. This is the 4th Edition of Create GUI Applications, updated for 2020 & PySide2 Starting from the very basics, this book takes you on a tour of the key features of PySide2 you can use to build real-life applications. Learn the fundamental building blocks of Qt applications — Widgets, Layouts & Signals and learn how Qt uses the event loop to handle and respond to user input. Design beautiful UIs with Qt Designer and customize the look and feel of your applications with Qt Style Sheets and custom widgets. Use Qt's MVC-like ModelViews framework to connect data sources to your widgets, including SQL databases, numpy and pandas data tables, to build-data driven application. Visualize data using matplotlib & PyQtGraph and connect with external data sources to build live dashboards. Learn how to use threads and processes to manage long-running tasks and communicate with external services. Parse data and visualize the output in logs and progress bars. The book includes usability and architectural tips to help you build maintainable and usable PySide2 applications from the start. Finally, once your application is ready to be released, discover how to package it up into professional-quality installers, ready to ship. The book includes - 665 pages of hands-on PySide2 exercises - 211 code examples to experiment with - Support forum for all readers - Includes 4 example apps - Compatible with Python 3.4+ - Code free to reuse in your own projects

With detailed notes, tables, and examples, this handy reference will help you navigate the basics of structured machine learning. Author Matt Harrison delivers a valuable guide that you can use for additional support during training and as a convenient resource when you dive into your next machine learning project. Ideal for programmers, data scientists, and AI engineers, this book includes an overview of the machine learning process and walks you through classification with structured data. You’ll also learn methods for clustering, predicting a continuous value (regression), and reducing dimensionality, among other topics. This pocket reference includes sections that cover: Classification, using the Titanic dataset Cleaning data and dealing with missing data Exploratory data analysis Common preprocessing steps using sample data Selecting features useful to the model Model selection Metrics and classification evaluation Regression examples using k-nearest neighbor, decision trees, boosting, and more Metrics for regression evaluation Clustering Dimensionality reduction Scikit-learn pipelines

If you need help writing programs in Python 3, or want to update older Python 2 code, this book is just the ticket. Packed with practical recipes written and tested with Python 3.3, this unique cookbook is for experienced Python programmers who want to focus on modern tools and idioms. Inside, you’ll find complete recipes for more than a dozen topics, covering the core Python language as well as tasks common to a wide variety of application domains. Each recipe contains code samples you can use in your projects right away, along with a discussion about how and why the solution works. Topics include: Data Structures and Algorithms Strings and Text Numbers, Dates, and Times Iterators and Generators Files and I/O Data Encoding and Processing Functions Classes and Objects Metaprogramming Modules and Packages Network and Web Programming Concurrency Utility Scripting and System Administration Testing, Debugging, and Exceptions C Extensions

This Box Set Includes 3 Books: Python Programming For Beginners - Learn The Basics Of Python In 7 Days! Python Programming For Intermediates - Learn The Basics Of Python In 7 Days! Python Programming For Advanced - Learn The Basics Of Python In 7 Days! Python Programming For Beginners - Learn The Basics Of Python In 7 Days! Here's what you'll learn from this book:?Introduction ?Understanding Python: A Detailed Background ?How Python Works ?Python Glossary ?How to Download and Install Python ?Python Programming 101: Interacting With Python in Different Ways ?How to Write Your First Python Program ?Variables, Strings, Lists, Tuples, Dictionaries ?About User-Defined Functions ?How to Write User-Defined Functions in Python ?About Coding Style ?Practice Projects: The Python Projects for Your Practice Python Programming For Intermediates - Learn The Basics Of Python In 7 Days! Here's what you'll learn from this book:? Shallow copy and deep copy ? Objects and classes in Python-including python inheritance, multiple inheritances, and so on ? Recursion in Python ? Debugging and testing ? Fibonacci sequence (definition) and Memoization in Python in Python ? Arguments in Python ? Namespaces in Python and Python Modules ? Simple Python projects for Intermediates Python Programming For Advanced - Learn The Basics Of Python In 7 Days! Here's what you'll learn from this book:?File management?Python Iterator?Python Generator?Regular Expressions ?Python Closure?Python Property?Python Assert, and?Simple recap projects Start Coding Now!

Python for Software Design is a concise introduction to software design using the Python programming language. The focus is on the programming process, with special emphasis on debugging. The book includes a wide range of exercises, from short examples to substantial projects, so that students have ample opportunity to practice each new concept.

Python for Everybody is designed to introduce students to programming and software development through the lens of exploring data. You can think of the Python programming language as your tool to solve data problems that are beyond the capability of a spreadsheet.Python is an easy to use and easy to learn programming language that is freely available on Macintosh, Windows, or Linux computers. So once you learn Python you can use it for the rest of your career without needing to purchase any software.This book uses the Python 3 language. The earlier Python 2 version of this book is titled "Python for Informatics: Exploring Information".There are free downloadable electronic copies of this book in various formats and supporting materials for the book at www.pythonlearn.com. The course materials are available to you under a Creative Commons License so you can adapt them to teach your own Python course.