

Programming Python

This open access book offers an initial introduction to programming for scientific and computational applications using the Python programming language. The presentation is compact and example-based, making it suitable for students and researchers with little or no prior experience in programming. The book uses relevant examples from mathematics and the natural sciences to present programming as a practical toolbox that can quickly enable readers to write their own programs for data processing and mathematical modeling. The tools include file reading, plotting, simple text analysis, and using NumPy for numerical computations, which are fundamental building blocks of all programs in data science and computational science. At the same time, readers are introduced to the fundamental concepts of programming, including variables, functions, loops, classes, and object-oriented programming. Accordingly, the book provides a sound basis for further computer science and programming studies.

A guide to Python, the object-oriented scripting language, discusses the use of Python for Internet and web programming; address Python's C integration tools; and features many examples that expand as new topics are introduced. Original. (Intermediate/Advanced) This second edition of Foundations of Python Network Programming targets Python 2.6 through Python 2.7, the most popular production versions of the language. Python has made great strides since Apress released the first edition of this book back in the days of P

Online Library Programming Python

The advances required new chapters to be written from the ground up, and others to be extensively revised. You will learn fundamentals like IP, TCP, DNS and SSL by using working Python programs; you will also be able to familiarize yourself with infrastructure components like memcached and message queues. You can also delve into network security designs, and compare threaded approaches with asynchronous event-based solutions. The biggest change is this edition's expanded treatment of the web. The HTTP protocol is covered in extensive detail, with each feature accompanied by sample Python code. You can use your HTTP protocol expertise by studying an entire chapter on screen scraping and you can even test lxml and BeautifulSoup against a real-world web site. The chapter on web application programming now covers both the WSGI standard for component interoperability, as well as modern web frameworks like Django. Finally, all of the old favorites from the first edition are back: E-mail protocols like SMTP, POP, and IMAP get full treatment, as does XML-RPC. You can still learn how to code Python network programs using the Telnet and FTP protocols, but you are likely to appreciate the power of more modern alternatives like paramiko SSH2 library. If you are a Python programmer who needs to learn the network fundamentals, this is the book that you want by your side.

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 the basic concepts in computer science and programming. A large portion of the confusion is often blamed on the complexity of the tools and materials that are traditionally used to teach

Online Library Programming Python

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.

Python for Kids

Conceptual Programming with Python

Non-Programmers Tutorial For Python 2 and 3

Advanced Guide to Python 3 Programming

Introduction to Computing and Programming in Python

Tools and algorithms for analyzing images

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.

Introduce children to the popular Python programming language through relatable examples and fun projects! Python has now surpassed Java as the most commonly used programming language. As the language rises in popularity, this complete guide can teach basic Python concepts to kids with its simple, friendly format. *Bite-Size Python: An Introduction to Python Programming* provides children with a foundation in the Python language. This

Online Library Programming Python

unique book shares knowledge through easy-to-understand examples, fast exercises, and fun projects! As children learn, their parents, caregivers, and instructors can also join in their discoveries. Bite-Size Python is ideal for those who are new to programming, giving kids ages 9 and up a beginners ' approach to learning one of the most important programming languages. Gives an overview of Python Provides exciting programming projects Offers instruction on how to download and install Python Presents key programming language concepts Simplifies technical definitions With this playful guide to learning Python, readers can try out activities on their computers for a hands-on learning experience. The artwork in Bite-Size Python represents children of various backgrounds, so any child who picks up this book will be empowered to learn and young readers will love showing their projects to friends and family! This is the Python version of our book. See the website for links to the C++ and Java version. Have you ever... Wanted to work at an exciting futuristic company? Struggled with an interview problem that could have been solved in 15 minutes? Wished you could study real-world computing problems? If so, you need to read Elements of Programming Interviews (EPI). EPI is your comprehensive guide to interviewing for software development roles. The core of EPI is a collection of over 250 problems with detailed solutions. The problems

are representative of interview questions asked at leading software companies. The problems are illustrated with 200 figures, 300 tested programs, and 150 additional variants. The book begins with a summary of the nontechnical aspects of interviewing, such as strategies for a great interview, common mistakes, perspectives from the other side of the table, tips on negotiating the best offer, and a guide to the best ways to use EPI. We also provide a summary of data structures, algorithms, and problem solving patterns. Coding problems are presented through a series of chapters on basic and advanced data structures, searching, sorting, algorithm design principles, and concurrency. Each chapter starts with a brief introduction, a case study, top tips, and a review of the most important library methods. This is followed by a broad and thought-provoking set of problems. A practical, fun approach to computer science fundamentals, as seen through the lens of common programming interview questions. Jeff Atwood/Co-founder, Stack Overflow and Discourse Thorsten and Isaac have written this book based on a programming course we teach for Master's Students at the School of Computer Science of the University of Nottingham. The book is intended for students with little or no background in programming coming from different backgrounds educationally as well as culturally. It is not mainly a Python course but we use Python as a vehicle to

teach basic programming concepts. Hence, the words conceptual programming in the title. We cover basic concepts about data structures, imperative programming, recursion and backtracking, object-oriented programming, functional programming, game development and some basics of data science.

The comprehensive guide to building network applications with Python
An Introduction to the Python Computer Language and Computer Programming

128 Algorithms to Develop your Coding Skills

Introduction to Programming in Python

Practical Programming for Total Beginners

Build robust and maintainable software with object-oriented design patterns in Python 3.8

Uncover modern Python with this guide to Python data structures, design patterns, and effective object-oriented techniques
Key Features
In-depth analysis of many common object-oriented design patterns that are more suitable to Python's unique style
Learn the latest Python syntax and libraries
Explore abstract design patterns and implement them in Python 3.8
Book Description Object-oriented

programming (OOP) is a popular design paradigm in which data and behaviors are encapsulated in such a way that they can be manipulated together. This third edition of Python 3 Object-Oriented Programming fully explains classes, data encapsulation, and exceptions with an emphasis on when you can use each principle to develop well-designed software. Starting with a detailed analysis of object-oriented programming, you will use the Python programming language to clearly grasp key concepts from the object-oriented paradigm. You will learn how to create maintainable applications by studying higher level design patterns. The book will show you the complexities of string and file manipulation, and how Python distinguishes between binary and textual data. Not one, but two very powerful automated testing systems, unittest and pytest, will be introduced in this book. You'll get a comprehensive introduction to Python's concurrent programming ecosystem. By the end of the book, you will have thoroughly learned object-oriented principles using Python syntax and be able to create robust and reliable programs confidently. What you will learnImplement objects in Python by creating classes and defining methodsGrasp common concurrency

techniques and pitfalls in Python 3
Extend class functionality using inheritance
Understand when to use object-oriented features, and more importantly when not to use them
Discover what design patterns are and why they are different in Python
Uncover the simplicity of unit testing and why it's so important in Python
Explore concurrent object-oriented programming
Who this book is for
If you're new to object-oriented programming techniques, or if you have basic Python skills and wish to learn in depth how and when to correctly apply OOP in Python, this is the book for you. If you are an object-oriented programmer for other languages or seeking a leg up in the new world of Python 3.8, you too will find this book a useful introduction to Python. Previous experience with Python 3 is not necessary.
Practical Python 3 for experienced developers: use the right idioms, techniques, and features to write great code
** *Written from a completely 'Python 3' point of view: teaches best practices for making the most of today's newest version of Python.*
**Designed to help developers get productive fast... then learn how to write any program, use any library, create any library module.*
**Includes expert guidance on migrating Python 2 code to Python 3.*
Around the world,

programmers appreciate Python for its simplicity, power, expressiveness, and the sheer pleasure of writing Python code. Python 3.1 is the newest and best version of the language yet: more convenient, more consistent, and easier to use. Mark Summerfield demonstrates how to write code that takes full advantage of the latest Python 3 features and idioms. Programming in Python 3, 2/e, brings together all the knowledge needed to write programs, use any library, and even create new library modules. The book teaches every aspect of the Python 3 language. It covers all the built-in functionality, as well as key components of Python's standard library. Structured so readers can write Python programs from chapter 1, each subsequent chapter provides further depth and broader coverage. Two new chapters have been added to this edition increasing the coverage to include parsing, debugging, testing, and profiling. Readers will master Python procedural and object-oriented techniques; creation of custom modules and packages; writing and reading files; multithreading; networking; database programming; GUIs; regular expressions; application debugging, testing, and profiling; and more. Detailed appendices include coverage of migrating applications from Python 2 to Python 3,

plus a complete language reference. All sample code has been tested with the final version of Python 3 on Windows, Linux, and Mac OS X. Based on the latest version of the language, this book offers a self-contained, concise and coherent introduction to programming with Python. The book's primary focus is on realistic case study applications of Python. Each practical example is accompanied by a brief explanation of the problem-terminology and concepts, followed by necessary program development in Python using its constructs, and simulated testing. Given the open and participatory nature of development, Python has a variety of incorporated data structures, which has made it difficult to present it in a coherent manner. Further, some advanced concepts (super, yield, generator, decorator, etc.) are not easy to explain. The book specially addresses these challenges; starting with a minimal subset of the core, it offers users a step-by-step guide to achieving proficiency.

Python Programming in Context, Third Edition provides a comprehensive and accessible introduction to Python fundamentals. Updated with the latest version of Python, the new Third Edition offers a thorough overview of multiple applied areas, including image

processing, cryptography, astronomy, the Internet, and bioinformatics. Taking an active learning approach, each chapter starts with a comprehensive real-world project that teaches core design techniques and Python programming while engaging students. 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.

Foundations of Python Network Programming

Cambridge IGCSE® and O Level Computer Science Programming Book for Python

The Insider's Guide

Programming Python

Competitive Programming in Python

Programming with Python

Gain a deep understanding of building, maintaining, packaging, and shipping robust Python applications
Key Features
Discover the new features of Python, such as dictionary merge, the zoneinfo module, and structural pattern matching
Create manageable code to run in various environments with different sets of dependencies
Implement effective Python data structures and algorithms

to write, test, and optimize code

Book Description This new edition of *Expert Python Programming* provides you with a thorough understanding of the process of building and maintaining Python apps. Complete with best practices, useful tools, and standards implemented by professional Python developers, this fourth edition has been extensively updated. Throughout this book, you'll get acquainted with the latest Python improvements, syntax elements, and interesting tools to boost your development efficiency. The initial few chapters v allow experienced programmers coming from different languages to transition to the Python ecosystem. You will explore common software design patterns and various programming methodologies, such as event-driven programming, concurrency, and metaprogramming. You will also go through complex code examples and try to solve meaningful problems by bridging Python with C and C++, writing extensions that benefit from the strengths of multiple languages. Finally, you will understand the complete lifetime of any application after it goes live, including packaging and testing automation. By the end of this book, you will have gained actionable Python programming insights that will help you effectively solve challenging problems. What you will learn

- Explore modern ways of setting up repeatable and consistent Python development environments
- Effectively package Python code for community and production use
- Learn modern syntax

elements of Python programming, such as f-strings, enums, and lambda functions
Demystify metaprogramming in Python with metaclasses
Write concurrent code in Python
Extend and integrate Python with code written in C and C++
Who this book is for
The Python programming book is intended for expert programmers who want to learn Python's advanced-level concepts and latest features. Anyone who has basic Python skills should be able to follow the content of the book, although it might require some additional effort from less experienced programmers. It should also be a good introduction to Python 3.9 for those who are still a bit behind and continue to use other older versions.

NOTE: You are purchasing a standalone product; MyProgrammingLab does not come packaged with this content. If you would like to purchase both the physical text and MyProgrammingLab search for ISBN-10: 0133050556/ISBN-13: 9780133050554. That package includes ISBN-10: 0132747189/ISBN-13: 9780132747189 and ISBN-10: 0133019861/ISBN-13: 9780133019865 . MyProgrammingLab should only be purchased when required by an instructor.

Introduction to Programming Using Python is intended for use in the introductory to programming course. Daniel Liang is known for his "fundamentals-first" approach to teaching programming concepts and techniques. "Fundamentals-first" means that students learn fundamental programming concepts like selection

statements, loops, and functions, before moving into defining classes. Students learn basic logic and programming concepts before moving into object-oriented programming, and GUI programming. Another aspect of Introduction to Programming Using Python is that in addition to the typical programming examples that feature games and some math, Liang gives an example or two early in the chapter that uses a simple graphic to engage the students. Rather than asking them to average 10 numbers together, they learn the concepts in the context of a fun example that generates something visually interesting. Using the graphics examples is optional in this textbook. Turtle graphics can be used in Chapters 1-5 to introduce the fundamentals of programming and Tkinter can be used for developing comprehensive graphical user interfaces and for learning object-oriented programming.

The book begins with the very foundations of OOP and then uses practical examples to show how to correctly implement Object Oriented Programming in Python. Many examples are taken from real-world projects. The book focuses on high-level design as well as the gritty details of the Python syntax. The provided exercises inspire the reader to think about his or her own code, rather than providing solved problems. If you're new to Object Oriented Programming techniques, or if you have basic Python skills and wish to learn in depth how and

Online Library Programming Python

when to correctly apply Object Oriented Programming in Python, this is the book for you. If you are an object-oriented programmer for other languages, you too will find this book a useful introduction to Python, as it uses terminology you are already familiar with. Python 2 programmers seeking a leg up in the new world of Python 3 will also find the book beneficial, and you need not necessarily know Python 2.

This resource is written to follow the updated IGCSE® Computer Science syllabus 0478 with examination from June and November 2016. Cambridge IGCSE® and O Level Computer Science Programming Book for Python accompanies the Cambridge IGCSE and O Level Computer Science coursebook, and is suitable for students and teachers wishing to use Python in their studies. It introduces and develops practical skills to guide students in developing coding solutions to the tasks presented in the book. Starting from simple skills and progressing to more complex challenges, this book shows how to approach a coding problem using Structure Diagrams and Flow Charts, explains programming logic using pseudocode, develops Python programming skills and gives full solutions to the tasks set.

Python Programming Fundamentals

A Primer on Scientific Programming with Python

Online Library Programming Python

Python Programming for Beginners

The Python Programming Language

30+ Programming Projects in Art, Games, and More

Introduction to Scientific Programming with Python

Advanced Guide to Python 3 Programming delves deeply into a host of subjects that you need to understand if you are to develop sophisticated real-world programs. Each topic is preceded by an introduction followed by more advanced topics, along with numerous examples, that take you to an advanced level. There are nine different sections within the book covering Computer Graphics (including GUIs), Games, Testing, File Input and Output, Databases Access, Logging, Concurrency and Parallelism, Reactive programming, and Networking. Each section is self-contained and can either be read on its own or as part of the book as a whole. This book is aimed at the those who have learnt the basics of the Python 3 language but want to delve deeper into Python's eco system of additional libraries and modules, to explore concurrency and parallelism, to create impressive looking

graphical interfaces, to work with databases and files and to provide professional logging facilities.

If you want a basic understanding of computer vision's underlying theory and algorithms, this hands-on introduction is the ideal place to start. You'll learn techniques for object recognition, 3D reconstruction, stereo imaging, augmented reality, and other computer vision applications as you follow clear examples written in Python. Programming Computer Vision with Python explains computer vision in broad terms that won't bog you down in theory. You get complete code samples with explanations on how to reproduce and build upon each example, along with exercises to help you apply what you've learned. This book is ideal for students, researchers, and enthusiasts with basic programming and standard mathematical skills. Learn techniques used in robot navigation, medical image analysis, and other computer vision applications Work with image mappings and transforms, such as texture warping and panorama creation Compute 3D reconstructions from several

images of the same scene Organize images based on similarity or content, using clustering methods Build efficient image retrieval techniques to search for images based on visual content Use algorithms to classify image content and recognize objects Access the popular OpenCV library through a Python interface

Have you ever... - Wanted to work at an exciting futuristic company? - Struggled with an interview problem that could have been solved in 15 minutes? - Wished you could study real-world computing problems? If so, you need to read Elements of Programming Interviews (EPI). EPI is your comprehensive guide to interviewing for software development roles. The core of EPI is a collection of over 250 problems with detailed solutions. The problems are representative of interview questions asked at leading software companies. The problems are illustrated with 200 figures, 300 tested programs, and 150 additional variants. The book begins with a summary of the nontechnical aspects of interviewing, such as strategies for a great interview, common mistakes,

perspectives from the other side of the table, tips on negotiating the best offer, and a guide to the best ways to use EPI. We also provide a summary of data structures, algorithms, and problem solving patterns. Coding problems are presented through a series of chapters on basic and advanced data structures, searching, sorting, algorithm design principles, and concurrency. Each chapter starts with a brief introduction, a case study, top tips, and a review of the most important library methods. This is followed by a broad and thought-provoking set of problems. A practical, fun approach to computer science fundamentals, as seen through the lens of common programming interview questions. Jeff Atwood/Co-founder, Stack Overflow and Discourse 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. Automate the Boring Stuff with Python, 2nd Edition

With Application to Understanding Data

Learn Python Programming

An Introduction to Python Programming

Programming Python, 3/E

A Playful Introduction To Programming

Powerful, flexible, and easy to use, Python is an ideal language for building software tools and applications for life science research and development. This unique book shows you how to program with Python, using code examples taken directly from bioinformatics. In a short time, you'll be using sophisticated techniques and Python modules that are particularly effective for bioinformatics programming. Bioinformatics Programming Using Python is perfect for anyone involved with bioinformatics -- researchers, support staff, students, and software developers interested in writing bioinformatics applications. You'll find it useful whether you already use Python, write code in another language, or have no programming experience at all. It's an excellent self-instruction tool, as well as a handy reference when facing the challenges of real-life programming tasks. Become familiar with Python's fundamentals, including ways to develop simple applications. Learn how to use Python modules for pattern matching, structured text processing, online data retrieval, and database access. Discover generalized patterns that cover a large

Online Library Programming Python

proportion of how Python code is used in bioinformatics Learn how to apply the principles and techniques of object-oriented programming Benefit from the "tips and traps" section in each chapter

About Book Python programming language book. This book contains every details regarding python basic knowledge. From installation of Python software in computer to Data file handling in Python. Every topic is covered. Pictorial explanation is also provided. Solved programs, unsolved questions for reader is also given. Every topic is explained in best possible way. content is from scratch to database handling.

Today, anyone in a scientific or technical discipline needs programming skills. Python is an ideal first programming language, and Introduction to Programming in Python is the best guide to learning it. Princeton University's Robert Sedgewick, Kevin Wayne, and Robert Dondero have crafted an accessible, interdisciplinary introduction to programming in Python that emphasizes important and engaging applications, not toy problems. The authors supply the tools needed for students to learn that programming is a natural, satisfying, and creative experience. This example-driven guide focuses on Python's most useful features and brings programming to life for every student in the sciences, engineering, and computer science. Coverage includes Basic elements of programming: variables, assignment statements,

Online Library Programming Python

built-in data types, conditionals, loops, arrays, and I/O, including graphics and sound Functions, modules, and libraries: organizing programs into components that can be independently debugged, maintained, and reused Object-oriented programming and data abstraction: objects, modularity, encapsulation, and more Algorithms and data structures: sort/search algorithms, stacks, queues, and symbol tables Examples from applied math, physics, chemistry, biology, and computer science--all compatible with Python 2 and 3 Drawing on their extensive classroom experience, the authors provide Q&As, exercises, and opportunities for creative practice throughout. An extensive amount of supplementary information is available at introcs.cs.princeton.edu/python. With source code, I/O libraries, solutions to selected exercises, and much more, this companion website empowers people to use their own computers to teach and learn the material.

NOTE: You are purchasing a standalone product; MyProgrammingLab does not come packaged with this content. If you would like to purchase both the physical text and MyProgrammingLab search for 0134059840 / 9780134059846 Introduction to Computing and Programming in Python plus MyProgrammingLab with Pearson eText -- Access Card Package, 4/e Package consists of: 0205891454 / 9780205891450 MyProgrammingLab with Pearson eText -- Access Card -- for Introduction to Computing and Programming in

Python 0134025547 / 9780134025544 Introduction to Computing and Programming in Python, 4/e MyProgrammingLab should only be purchased when required by an instructor. Social Computing and Programming with Python Introduction to Computing and Programming in Python is a uniquely researched and up-to-date volume that is widely recognized for its successful introduction to the subject of Media Computation. Emphasizing creativity, classroom interaction, and in-class programming examples, Introduction to Computing and Programming in Python takes a bold and unique approach to computation that engages students and applies the subject matter to the relevancy of digital media. The Fourth Edition teaches students to program in an effort to communicate via social computing outlets, providing a unique approach that serves the interests of a broad range of students. Also Available with MyProgrammingLab® This title is also available with MyProgrammingLab -- an online homework, tutorial, and assessment program designed to work with this text to engage students and improve results. Within its structured environment, students practice what they learn, test their understanding, and pursue a personalized study plan that helps them better absorb course material and understand difficult concepts. Students, if interested in purchasing this title with MyProgrammingLab, ask your instructor for the correct package ISBN and Course ID. Instructors, contact your Pearson representative for

more information.

Elements of Programming Interviews in Python

An Interdisciplinary Approach

Programming Computer Vision with Python

Introduction to Programming Using Python

Introduction to Computation and Programming Using Python, second edition

Python Programming

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

All the algorithms, proofs, and implementations in Python you need to know for tech job interviews and coding competitions.

Whether you're a novice or an advanced practitioner, you'll find this refreshed book more than lives up to its reputation. Programming Python, Third Edition teaches you the right way to code. It explains Python language syntax and programming techniques in a clear and concise manner, with numerous examples that illustrate both correct usage and common idioms. By reading this comprehensive guide, you'll learn how to apply Python in real-world problem domains such as:

The book serves as a first introduction to computer programming of scientific applications, using the high-level Python language. The exposition is example and problem-oriented, where the applications are taken from mathematics, numerical

calculus, statistics, physics, biology and finance. The book teaches "Matlab-style" and procedural programming as well as object-oriented programming. High school mathematics is a required background and it is advantageous to study classical and numerical one-variable calculus in parallel with reading this book. Besides learning how to program computers, the reader will also learn how to solve mathematical problems, arising in various branches of science and engineering, with the aid of numerical methods and programming. By blending programming, mathematics and scientific applications, the book lays a solid foundation for practicing computational science. From the reviews: Langtangen ... does an excellent job of introducing programming as a set of skills in problem solving. He guides the reader into thinking properly about producing program logic and data structures for modeling real-world problems using objects and functions and embracing the object-oriented paradigm. ... Summing Up: Highly recommended. F. H. Wild III, Choice, Vol. 47 (8), April 2010 Those of us who have learned scientific programming in Python 'on the streets' could be a little jealous of students who have the opportunity to take a course out of Langtangen's Primer." John D. Cook, The Mathematical Association of America, September 2011 This book goes through Python in particular, and programming in general, via tasks that scientists will likely perform. It contains valuable information for students new to scientific computing and would be the perfect bridge between an introduction to programming and an advanced course on numerical methods or computational science. Alex Small, IEEE, CiSE Vol. 14 (2), March /April 2012 "This

fourth edition is a wonderful, inclusive textbook that covers pretty much everything one needs to know to go from zero to fairly sophisticated scientific programming in Python...” Joan Horvath, Computing Reviews, March 2015

The no-nonsense, beginner's guide to programming, data science, and web development with Python 3.7, 2nd Edition

An Introduction to Computer Science

Bite-Size Python

Harness the Power of Python 3 Objects

Python 3 Object Oriented Programming

Bioinformatics Programming Using Python

Today, anyone in a scientific or technical discipline needs programming skills. Python is an ideal first programming language, and Introduction to Programming in Python is the best guide to learning it. Princeton University's Robert Sedgewick, Kevin Wayne, and Robert Dondero have crafted an accessible, interdisciplinary introduction to programming in Python that emphasizes important and engaging applications, not toy problems. The authors supply the tools needed for students to learn that programming is a natural, satisfying, and creative experience. This example-driven guide focuses on Python's most useful features and brings programming to life for every student in the sciences, engineering, and computer science. Coverage includes Basic elements of programming: variables, assignment statements, built-

Online Library Programming Python

in data types, conditionals, loops, arrays, and I/O, including graphics and sound Functions, modules, and libraries: organizing programs into components that can be independently debugged, maintained, and reused Object-oriented programming and data abstraction: objects, modularity, encapsulation, and more Algorithms and data structures: sort/search algorithms, stacks, queues, and symbol tables Examples from applied math, physics, chemistry, biology, and computer science—all compatible with Python 2 and 3 Drawing on their extensive classroom experience, the authors provide Q&As, exercises, and opportunities for creative practice throughout. An extensive amount of supplementary information is available at introc.cs.princeton.edu/python. With source code, I/O libraries, solutions to selected exercises, and much more, this companion website empowers people to use their own computers to teach and learn the material.

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.

An excellent supplement to Computer Science Illuminated, as well as a superb primer, Computer Science: The Python Programming Language offers a clear introduction to this user-friendly language. This overview describes the fundamentals of the interactive Python environment, the structure of Python programs, how Python supports object-oriented programming, and much more. Beginning programmers will be relieved that this modern programming language is not only easy to learn but easy to use as well!

Build a solid foundation in coding by utilizing the language and its core characteristics Key Features Leverage the features of Python

programming through easy-to-follow examples Develop a strong set of programming skills that can be applied on all platforms Create GUIs and data science-based applications Book Description Learn Python Programming creates a foundation for those who are interested in developing their skills in Python programming. The book starts with the fundamentals of programming with Python and ends by exploring different topics such as GUIs and real-world apps. You will begin by exploring the foundations of and fundamental topics on Python and learn to manipulate them. Then, you'll explore different programming paradigms that will allow you to find the best approach to a situation, and you'll also understand how to carry out performance optimization as well as effective debugging. As you make your way through the chapters, you'll control the flow of a program, and persist and utilize an interchange format to exchange data. You'll also walk through cryptographic services in Python and understand secure tokens. Throughout, the book covers various types of applications, and it concludes with building real-world applications based on all the concepts that you learned. By the end of the book, you'll have a proper understanding of the Python language and a solid grasp on how to work with data. You'll know how to quickly build a website and harness the power of Python's renowned data science libraries. What you will learn Get Python up and running on Windows,

Online Library Programming Python

Mac, and Linux Grasp fundamental concepts of coding using data structures and control flow Write elegant, reusable, and efficient code in any situation Understand when to use the functional or object-oriented programming (OOP) approach Walk through the basics of security and concurrent/asynchronous programming Create bulletproof, reliable software by writing tests Explore examples of GUIs, scripting, and data science 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 takes you all the way to creating a full-fledged application.

Powerful Object-Oriented Programming

Learning Python

Programming in Python 3

Creative Coding in Python

Beginning Programming with Python For Dummies

Expert Python Programming

Python Programming for Beginners doesn't make any assumptions about your background or knowledge of Python or computer programming. You need no prior knowledge to benefit from this book. You will be guided step by step using a logical and systematic approach. As new concepts, commands, or jargon are encountered they are explained in plain language, making it easy for anyone to understand.--Publisher's

description.

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

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

Online Library Programming Python

hierarchical packages, exception-based error handling, and modules easily written in C, C++, Java, R, or .NET languages, such as C#. In addition, Python supports a number of coding styles that include: functional, imperative, object-oriented, and procedural. Due to its ease of use and flexibility, Python is constantly growing in popularity—and now you can wear your programming hat with pride and join the ranks of the pros with the help of this guide. Inside, expert author John Paul Mueller gives a complete step-by-step overview of all there is to know about Python. From performing common and advanced tasks, to collecting data, to interacting with package—this book covers it all! Use Python to create and run your first application Find out how to troubleshoot and fix errors Learn to work with Anaconda and use Magic Functions Benefit from completely updated and revised information since the last edition If you've never used Python or are new to programming in general, *Beginning Programming with Python For Dummies* is a helpful resource that will set you up for success.

Python is a powerful, expressive programming language that's easy to learn and fun to use! But books about learning to program in Python can be kind of dull, gray, and boring, and that's no fun for anyone. *Python for Kids* brings Python to life and brings you (and your parents) into the world of programming. The ever-patient Jason R. Briggs will guide you through the basics as you experiment with unique (and often hilarious) example programs that feature ravenous monsters, secret agents, thieving ravens, and more. New terms are defined; code is colored, dissected, and explained; and quirky, full-color illustrations keep things on the lighter side. Chapters end with programming puzzles designed to stretch your brain and strengthen your understanding. By the end

Online Library Programming Python

of the book you'll have programmed two complete games: a clone of the famous Pong and "Mr. Stick Man Races for the Exit"—a platform game with jumps, animation, and much more. As you strike out on your programming adventure, you'll learn how to:

- Use fundamental data structures like lists, tuples, and maps
- Organize and reuse your code with functions and modules
- Use control structures like loops and conditional statements
- Draw shapes and patterns with Python's turtle module
- Create games, animations, and other graphical wonders with tkinter

Why should serious adults have all the fun? Python for Kids is your ticket into the amazing world of computer programming. For kids ages 10+ (and their parents) The code in this book runs on almost anything: Windows, Mac, Linux, even an OLPC laptop or Raspberry Pi!

A Multimedia Approach

Programming With Python

Python Programming in Context

Murach's Python Programming (2nd Edition)

Python 3 Object-Oriented Programming

A Complete Introduction to the Python Language

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*. This easy-to-follow and classroom-tested textbook guides the reader through the fundamentals of programming with Python, an accessible language which can be

learned incrementally. Features: includes numerous examples and practice exercises throughout the text, with additional exercises, solutions and review questions at the end of each chapter; highlights the patterns which frequently appear when writing programs, reinforcing the application of these patterns for problem-solving through practice exercises; introduces the use of a debugger tool to inspect a program, enabling students to discover for themselves how programs work and enhance their understanding; presents the Tkinter framework for building graphical user interface applications and event-driven programs; provides instructional videos and additional information for students, as well as support materials for instructors, at an associated website.

Master Python by learning the best coding practices and advanced programming concepts, 4th Edition

Learning Scientific Programming with Python