Learn Coding Essential Concepts For Beginners Who

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Learn to Code With JavaScript John Wiley & Sons
A comprehensive guide to get started with Java and gain insights into major concepts such as object-oriented, functional, and reactive programming Key Features Strengthen your knowledge of important programming concepts and the latest features in Java Explore core programming topics including GUI programming, concurrency, and error handling Learn the idioms and best practices for writing high-quality Java code Book Description Java is one of the preferred languages among developers, used in everything right from smartphones, and game consoles to even supercomputers, and its new features simply add to the richness of the language. This book on Java programming begins by helping you learn how to install the Java Development Kit. You will then focus on understanding object-oriented programming (OOP), with exclusive insights into concepts like abstraction, encapsulation, inheritance, and polymorphism, which will help you when programming for real-world apps. Next, you'll cover fundamental programming structures of Java such as data structures and algorithms that will serve as the building blocks for your apps. You will also delve into core programming topics that will assist you with error handling, debugging, and testing your apps. As you progress, you'll move on to advanced topics such as Java libraries, database management, and network programming, which will hone your skills in building professional-grade apps. Further on, you'll understand how to create a graphic user interface using JavaFX and learn to build scalable apps by taking advantage of reactive and functional programming. By the end of this book, you'll not only be well versed with Java 10, 11, and 12, but also gain a perspective into the future of this language and software development in general. What you will learn Learn and apply object-oriented principles Gain insights into data structures and understand how they are used in Java Explore multithreaded, asynchronous, functional, and reactive programming Add a user-friendly graphic interface to your application Find out what streams are and how they can help in data processing Discover the importance of microservices and use them to make your apps robust and scalable Explore Java design patterns and best practices to solve everyday problems Learn techniques and idioms for writing high-quality Java code Who this book is for Students, software developers, or anyone looking to learn new skills or even a language will find this book useful. Although this book is for beginners, professional programmers can benefit from it too. Previous knowledge of Java or any programming language is not required.
Learn Python 3 the Hard Way Pearson Education
I have been a professional programmer for the past 27 years and a part-time computer science professor for the past seven years. Programming is easy for me now, but I still remember the early days when it was a struggle. What I lacked was a basic understanding of the fundamental concepts found in most programming languages. I did not know how or why to use a loop or selection statement. I did not understand the true value of arrays. More importantly, I did not know how to combine the different concepts to complete a programming task. The Super Simple Programming Book is for anyone who wants to learn programming. No prior programming experience is required. This book teaches fundamental programming concepts through short, simple Python programs. It explains programming in a way that is easy to understand. My college students often tell me that programming is so much easier when I explain it to them. I have taken that approach while writing this book. The goal of this book is not to teach you everything about Python programming. Instead, the goal is to teach you how to program. Then you will be able to practice programming on your own and become a better programmer. Lastly, you can do this. There is nothing mystifying about programming. If you can follow instructions, think logically, or complete a puzzle, you can write a program. It is easier than you think. You just need to understand the basics. The Super Simple Programming Book will teach you the basics and make them seem simple.
Computer Programming (Edition 4) Rockridge Press
2D games are hugely popular across a wide range of platforms and the ideal place to start if you're new to game development. With Learn 2D Game Development with C#, you'll learn your way around the universal building blocks of game development, and how to put them together to create a real working game. C# is increasingly becoming the language of choice for new game developers. Productive and easier to learn than C++, C# lets you get your games working quickly and safely without worrying about tricky low-level details like memory management. This book uses MonoGame, an open source framework that's powerful, free to use and easy to handle, to further reduce low-level details, meaning you can concentrate on the most interesting and universal aspects of a game development: frame, camera, objects and particles, sprites, and the logic and simple physics that determines how they interact. In each chapter, you'll explore one of these key elements of game development in the context of a working game, learn how to implement the example for yourself, and integrate it into your own game library. At the end of the book, you'll put everything you've learned together to build your first full working game! And what's more, MonoGame is designed for maximum cross-platform support, so once you've mastered the fundamentals in this book, you'll be ready to explore and publish games on a wide range of platforms including Windows 8, MAC OSX, Windows Phone, iOS, Android, and Playstation Mobile. Whether you're starting a new hobby or considering a career in game development, Learn 2D Game Development with C# is the ideal place to start.
Machine Learning For Dummies Springer Science & Business Media
Learn to Code by Solving Problems is a practical introduction to programming using Python. It uses coding-competition challenges to teach you the mechanics of coding and how to think like a savvy programmer. Computers are capable of solving almost any problem when given the right instructions. That's where programming comes in. This beginner's book will have you writing Python programs right away. You'll solve interesting problems drawn from real coding competitions and build your programming skills as you go. Every chapter presents problems from coding challenge websites, where online judges test your solutions and provide targeted feedback. As you practice using core Python features, functions, and techniques, you'll develop a clear understanding of data structures, algorithms, and other programming basics. Bonus exercises invite you to explore new concepts on your own, and multiple-choice questions encourage you to think about how each piece of code works. You'll learn how to: • Run Python code, work with strings, and use variables • Write programs that make decisions • Make code more efficient with while and for loops • Use Python sets, lists, and dictionaries to organize, sort, and search data • Design programs using functions and top-down design • Create complete-search algorithms and use Big O notation to design more efficient code By the end of the book, you'll not only be proficient in Python, but you'll also understand how to think through problems and tackle them with code. Programming languages come and go, but this book gives you the lasting foundation you need to start thinking like a programmer.
C Programming Apress
This edited book is a collection of selected research papers presented at the 2021 2nd International Conference on Artificial Intelligence in Education Technology (AIET 2021), held in Wuhan, China on July 2-4, 2021. AIET establishes a platform for AI in education researchers to present research, exchange innovative ideas, propose new models, as well as demonstrate advanced methodologies and novel systems. Rapid developments in artificial intelligence (AI) and the disruptive potential of AI in educational use has drawn significant attention from the education community in recent years. For educators entering this uncharted territory, many theoretical and practical questions

concerning AI in education are raised, and issues on AI's technical, pedagogical, administrative and socio-cultural implications are being debated. The book provides a comprehensive picture of the current status, emerging trends, innovations, theory, applications, challenges and opportunities of current AI in education research. This timely publication is well-aligned with UNESCO's Beijing Consensus on Artificial Intelligence (AI) and Education. It is committed to exploring how best to prepare our students and harness emerging technologies for achieving the Education 2030 Agenda as we move towards an era in which AI is transforming many aspects of our lives. Providing a broad coverage of recent technology-driven advances and addressing a number of learning-centric themes, the book is an informative and useful resource for researchers, practitioners, education leaders and policy-makers who are involved or interested in AI and education.

Coding Concepts for Kids "O'Reilly Media, Inc."

Updated for Xcode 11, Swift 5, and iOS 13, iOS Programming: The Big Nerd Ranch Guide leads you through the essential concepts, tools, and techniques for developing iOS applications. After completing this book, you will have the know-how and the confidence you need to tackle iOS projects of your own. Based on Big Nerd Ranch's popular iOS training and its well-tested materials and methodology, this bestselling guide teaches iOS concepts and coding in tandem. The result is instruction that is relevant and useful. Throughout the book, the authors explain what's important and share their insights into the larger context of the iOS platform. You get a real understanding of how iOS development works, the many features that are available, and when and where to apply what you've learned.

Arrays Pearson Technology Group

✓ Are you looking for a comprehensive guide to take your very first step into programming? ✓ Want to find out which language is best suited to your needs? The importance of the first approach is crucial and taking the first steps by following a manual written by a professional programmer can certainly make a difference. Nowadays many can program sufficiently but having an established familiarity with several programming languages will give you an unfair advantage over your competitors in applying for a good job or over your colleagues or to start a new career as a Web Developer/Software Developer/ App Developer. This book is a comprehensive introduction to the world of programming, and you don't need any data science knowledge to read it. You will learn what a programming language is, how to use it, what are the differences between the 3 most used languages, and which one chooses to deepen according to your purposes. Inside: The most Common terms and their definition and what are data types, variables, and operators. What is exactly is a Programming Language and why do we need a one? Clearly Understand What Python Programming Is and How It Works to realize why it has much more advantages than the other programming languages. Know Why Java Is Still So Crucial And Fundamental In 2021 And How to Use It To Reach All Its Benefits to create Web applications and platforms Realize the Importance to Have At Least the Basics of C++ Language because it is useful for the low-level programming language and very efficient for general purpose. Discover how fun coding can be! ...& Lot More! You have no idea how many and what job opportunities you can have if you have a good understanding of programming. Very soon, being able to program will become a must for anyone who wants to build a career. Don't you want to find yourself one step ahead already? Click "Buy Now" and get started immediately!

PYTHON FOR BEGINNERS MIT Press

UNIX, UNIX LINUX & UNIX TCL/TK. Write software that makes the most effective use of the Linux system, including the kernel and core system libraries. The majority of both Unix and Linux code is still written at the system level, and this book helps you focus on everything above the kernel, where applications such as Apache, bash, cp, vim, Emacs, gcc, gdb, glibc, ls, mv, and X exist. Written primarily for engineers looking to program at the low level, this updated edition of Linux System Programming gives you an understanding of core internals that makes for better code, no matter where it appears in the stack. -- Provided by publisher.

Coding Essentials Guidebook for Developers Computer Science Press, Incorporated

Computer technologies are forever evolving and it is vital that computer science educators find new methods of teaching programming in order to maintain the rapid changes occurring in the field. One of the ways to increase student engagement and retention is by integrating games into the curriculum. Gamification-Based E-Learning Strategies for Computer Programming Education evaluates the different approaches and issues faced in integrating games into computer education settings. Featuring emergent trends on the application of gaming to pedagogical strategies and technological tactics, as well as new methodologies and approaches being utilized in computer programming courses, this book is an essential reference source for practitioners, researchers, computer science teachers, and students pursuing computer science.

Basic Concepts in Information Theory and Coding Addison-Wesley Professional

This highly readable text provides a clear exposition of the implications and interpretations of the fundamentals of discrete information theory and coding. Focusing on the results of practical applications, the authors cover information measures, Shannon's channel capacity/coding theorems, and source and channel coding concepts. The clear, accessible text will serve as an introduction to the field for professionals and students in communication systems, computer science, and electrical systems science.

The Super Simple Programming Book SitePoint

Coding for kids without a computer--an offline skill-building book for ages 5 to 7 Coding helps kids develop analytical thinking, problem-solving abilities, and beyond! In this exciting guide to coding for kids, your child will discover the core concepts of coding through colorful games and activities--without using a computer. These fun challenges can be done right inside the book or with everyday objects to help kids practice the same skills coders use, like writing clear instructions, recognizing patterns, and working efficiently. There's even a place for your beginner to invent their own codes! This coding for kids book features: Coding fundamentals--Practice algorithms, loops, conditionals, optimization, debugging, and variables with games that help kids think like a computer programmer. Meet the coder crew--Explore coding for kids with a whole cast of characters, including Al the helper, Pixel the creative expert, Lo the problem-solver, Bug the pattern-spotter, and their robot dog Spot the Bot! On and off the page--Sharpen skills with fun on-the-page puzzles and off-the-page activities that give kids a chance to practice in different ways. Set your little ones up for success with coding for kids that only requires a pencil, paper, and their imagination.

Artificial Intelligence in Education: Emerging Technologies, Models and Applications "O'Reilly Media, Inc."

Welcome to the world of computer programming. Are you ready to learn to program and start coding within a week? Learning to write computer programs in many languages can be satisfying. If you work with a positive approach, this guide is perfect for you. The objective of this book is to introduce you to the basic concepts of several programming languages. It is to be mentioned that coding by using this guide requires no previous knowledge of programming languages and computer programming. We know that, as a beginner, programming can seem like something scary or creepy. This guide will help you to learn and understand the fundamentals of a few programming languages. Additionally, you have to remember that computer programming is not all about coding. It is also about creating algorithms, working on deadlines, communicating with the database, and debugging the bugs, etc. Most of these topics are covered in this guide in a way that is easy for beginners to understand. Furthermore, this guide does not just contain theory, but it includes examples that show programming in action. Most of the essential concepts are explained with examples. The following list shows some of the languages; you'll study in this guide. Basics of computer programming CC++C#SQLPythonIn the second book, the study of the Python language is deepened. We all know that Python is the most widely used programming language in the modern world. Its sentence-structure is simple yet professional. As far as this book is concerned, it's an ultimate guide to understand the fundamentals of Python Programming. Don't wait, Just Buy NOW your All in One Programming guide.

Learning Functional Programming Packt Publishing Ltd

*** Get Your Copies TODAY for $33.95 instead of $44.99! 55% OFF - Limited Offer! *** ARE YOU LOOKING FOR A COMPLETE GUIDE PYTHON? THEN KEEP READING... Programming has come a long way. The world of programming may have started quite some time ago; it was only a couple of decades ago that it gained attention from computer experts from across the globe. This sudden shift saw some great minds who contributed to the entire age of programming far greater than most. We saw the great GNU project take shape during this era. We came across the rather brilliant Linux. New programming languages were born as well, and people certainly enjoyed these to the utmost. While most of these programming languages worked, there was something that was missing. Surely, something could be done to make coding a less tedious task to do and carry out. That is exactly what a revolutionary new language, named after Monty Python's Flying Circus, did for the world. Immediately, coding became so much easier for programmers. The use of this language started gaining momentum, and today, it is set to overtake the only language that stands before it to claim the prestigious spot of being the world's most favored language. This language was the brainchild of Guido Van Rossum. Created in the year 1991, Python has become a byword for efficient and user-friendly programming. This language is what connected the dots and gave programmers the much-needed ease of coding that they have since been yearning for. Naturally, the language was received well by the programming community. Today, it is one of the most important languages for both professionals and students who aim to excel in fields like Machine Learning, automation, artificial intelligence, and so much more. With real-life examples showing a wide variety of use, Python is now living and breathing in almost every major social platform, web application, and website. All of this sounds interesting and exciting at the same time, but what if you have no prior knowledge about programming? What if you have no understanding of basic concepts and you wish to learn Python? This book covers: Python - The First Impressions Getting ready for Python The world of Variables and Operators Making Your Program Interactive List, Tuples and dictionaries Functions and Modules Working with Files Object Oriented Programming And much more. I am happy to report that this book will provide you with every possible chance of learning Python and allow you to jump-start your journey into the world of programming. This book is ideally meant for people who have zero understanding of programming and/or may have never coded a single line of program before. I will walk you through all the basic steps from installation to application. We will look into various aspects of the language and hopefully provide you with real-life examples to further explain the importance of such aspects. The idea of this book is to prepare you as you learn the core concepts of Python. ** Take advantage of this deal and let your customers fall in LOVE with this book! **

Gamification-Based E-Learning Strategies for Computer Programming Education Workman Publishing Company

This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. Used by sites as varied as Twitter, GitHub, Disney, and Airbnb, Ruby on Rails is one of the most popular frameworks for developing web applications, but it can be challenging to learn and use. Whether you're new to web development or new only to Rails, Ruby on Rails™ Tutorial, Fourth Edition, is the solution. Best-selling author and leading Rails developer Michael Hartl teaches Rails by guiding you through the development of three example applications of increasing sophistication. The tutorial's examples focus on the general principles of web development needed for virtually any kind of website. The updates to this edition include full compatibility with Rails 5, a division of the largest chapters into more manageable units, and a huge number of new exercises interspersed in each chapter for maximum reinforcement of the material. This indispensable guide provides integrated tutorials not only for Rails, but also for the essential Ruby, HTML, CSS, and SQL skills you need when developing web applications. Hartl explains how each new technique solves a real-world problem, and then he demonstrates it with bite-sized code that's simple enough to understand, yet novel enough to be useful. Whatever your previous web development experience, this book will guide you to true Rails mastery. This book will help you Install and set up your Rails development environment, including pre-installed integrated development environment (IDE) in the cloud Go beyond generated code to truly understand how to build Rails applications from scratch Learn testing and test-driven development (TDD) Effectively use the Model-View-Controller (MVC) pattern Structure applications using the REST architecture Build static pages and transform them into dynamic ones Master the Ruby programming skills all Rails developers need Create high-quality site layouts and data models Implement registration and authentication systems, including validation and secure passwords Update, display, and delete users Upload images in production using a cloud storage service Implement account activation and password reset, including sending email with Rails Add social features and microblogging, including an introduction to Ajax Record version changes with Git and create a secure remote repository at Bitbucket Deploy your applications early and often with Heroku

Python Machine Learning By Example Cambridge University Press

You Will Learn Python 3! Zed Shaw has perfected the world's best system for learning Python 3. Follow it and you will succeed—just like the millions of beginners Zed has taught to date! You bring the discipline, commitment, and persistence; the author supplies everything else. In Learn Python 3 the Hard Way, you'll learn Python by working through 52 brilliantly crafted exercises. Read them. Type their code precisely. (No copying and pasting!) Fix your mistakes. Watch the programs run. As you do, you'll learn how a computer works; what good programs look like; and how to read, write, and think about code. Zed then teaches you even more in 5+ hours of video where he shows you how to break, fix, and debug your code—live, as he's doing the exercises. Install a complete Python environment Organize and write code Fix and break code Basic mathematics Variables Strings and text Interact with users Work with files Looping and logic Data structures using lists and dictionaries Program design Object-oriented programming Inheritance and composition Modules, classes, and objects Python packaging Automated testing Basic game development Basic web development It'll be hard at first. But soon, you'll just get it—and that will feel great! This course will reward you for every minute you put into it. Soon, you'll know one of the world's most powerful, popular programming languages. You'll be a Python programmer. This Book Is Perfect For Total beginners with zero programming experience Junior developers who know one or two languages Returning professionals who haven't written code in years Seasoned professionals looking for a fast, simple, crash course in Python 3

Computer Programming for Absolute Beginners MIT Press

Learning how to code properly sometimes can be very perplexing and needlessly complicated. Or even worse, boring. Instead of

actively learning new programs or exciting new applications of your code, you are forced to go through hundreds of boring texts, all filled with confusing texts and hopelessly mysterious symbols. This wasn't what you expected! Surely there must be a better way to learn how to program and make coding more fun! And there is. There exists one simple solution that, in one fell swoop can transform learning how to code from an insanely boring experience to an entertaining pleasant journey. How you wonder? By making the whole experience a game. In this book Coding Games, we will show you what coding is, its fundamental concepts, and how you can master the basic principles of coding through games. For anyone tired of learning to code boringly, or just someone looking for a more fun way to attract their young ones into computer programming, this book will be quite an illuminating read for you!

Learn to Code by Solving Problems Packt Publishing Ltd

When it comes to writing efficient code, every software professional needs to have an effective working knowledge of algorithms. In this practical book, author George Heineman (Algorithms in a Nutshell) provides concise and informative descriptions of key algorithms that improve coding in multiple languages. Software developers, testers, and maintainers will discover how algorithms solve computational problems creatively. Each chapter builds on earlier chapters through eye-catching visuals and a steady rollout of essential concepts, including an algorithm analysis to classify the performance of every algorithm presented in the book. At the end of each chapter, youâ??ll get to apply what youâ??ve learned to a novel challenge problemâ??simulating the experience you might find in a technical code interview. With this book, you will: Examine fundamental algorithms central to computer science and software engineering Learn common strategies for efficient problem solvingâ??such as divide and conquer, dynamic programming, and greedy approaches Analyze code to evaluate time complexity using big O notation Use existing Python libraries and data structures to solve problems using algorithms Understand the main steps of important algorithms

Essentials of Programming Languages Addison-Wesley

This book is written from the point of view that the best way to study and understand programming languages is to focus on a few essential concepts. The book includes such topics as variables, expressions, statements, typing, scope, procedures, data types, exception handling and concurrency. By understanding what these concepts are and how they are realized in different programming languages, the reader arrives at a level of comprehension far greater than can be achieved by writing programs in various languages. Moreover, knowledge of these concepts provides a framework for understanding future language designs.--

C++ Primer Springer Nature

Grasp machine learning concepts, techniques, and algorithms with the help of real-world examples using Python libraries such as TensorFlow and scikit-learn Key FeaturesExploit the power of Python to explore the world of data mining and data analyticsDiscover machine learning algorithms to solve complex challenges faced by data scientists todayUse Python libraries such as TensorFlow and Keras to create smart cognitive actions for your projectsBook Description The surge in interest in machine learning (ML) is due to the fact that it revolutionizes automation by learning patterns in data and using them to make predictions and decisions. If you’re interested in ML, this book will serve as your entry point to ML. Python Machine Learning By Example begins with an introduction to important ML concepts and implementations using Python libraries. Each chapter of the book walks you through an industry adopted application. You’ll implement ML techniques in areas such as exploratory data analysis, feature engineering, and natural language processing (NLP) in a clear and easy-to-follow way. With the help of this extended and updated edition, you’ll understand how to tackle data-driven problems and implement your solutions with the powerful yet simple Python language and popular Python packages and tools such as TensorFlow, scikit-learn, gensim, and Keras. To aid your understanding of popular ML algorithms, the book covers interesting and easy-to-follow examples such as news topic modeling and classification, spam email detection, stock price forecasting, and more. By the end of the book, you’ll have put together a broad picture of the ML ecosystem and will be well-versed with the best practices of applying ML techniques to make the most out of new opportunities. What you will learnUnderstand the important concepts in machine learning and data scienceUse Python to explore the world of data mining and analyticsScale up model training using varied data complexities with Apache SparkDelve deep into text and NLP using Python libraries such NLTK and gensimSelect and build an ML model and evaluate and optimize its performanceImplement ML algorithms from scratch in Python, TensorFlow, and scikit-learnWho this book is for If you’re a machine learning aspirant, data analyst, or data engineer highly passionate about machine learning and want to begin working on ML assignments, this book is for you. Prior knowledge of Python coding is assumed and basic familiarity with statistical concepts will be beneficial although not necessary.

Learning How to Learn IGI Global

Provides instructions for writing C code to create games and mobile applications using the new C11 standard.