Object Oriented Programming School Of Computer Science

A Guide to MATLAB Object-Oriented Programming is the first book to deliver broad coverage of the documented and undocumented object-oriented features of MATLAB. Unlike the typical approach of other resources, this guide explains why each feature is important, demonstrates how each feature is used, and promotes an understanding of
The ideal beginner's guide to C# and object-oriented programming Wrox beginners' guides have the perfect formula for getting programming newcomers up and running. This one introduces beginners to object-oriented programming using C# to demonstrate all of the core constructs of this programming framework. Using real-world situations, you'll discover how to create, test, and deliver your programs and how to work with classes, arrays, collections, and all the elements of object-oriented programming. Covers exactly what beginners, even those with no prior programming experience, need to know to understand object-oriented programming and start writing programs in C# Explains the advantages and disadvantages of C#, and tips for understanding C# syntax Explores properties, encapsulation, and classes; value data types; operands and operators; errors and debugging; variables; and reference types Shows how to use statement repetition and program loops, understand arrays and collections, and write your own classes Also covers inheritance and polymorphism Beginning Object-Oriented Programming with C# uses the tried-and-true Wrox formula for making this popular programming method easy to learn.

Beginning C# Object-Oriented Programming brings you into the modern world of development as you master the fundamentals of programming with C# and learn to develop efficient, reusable, elegant code through the object-oriented programming (OOP) methodology. Take your skills out of the 20th century and into this one with Dan Clark's accessible, quick-paced guide to C# and object-oriented programming, completely updated for .NET 4.0 and C# 4.0. As you develop techniques and best practices for coding in C#, one of the world's most popular contemporary languages, you'll experience modeling a "real world" application through a case study, allowing you to see how both C# and OOP (a methodology you can use with any number of languages) come together to make your code reusable, modern, and efficient. With more than 30 fully hands-on activities, you'll discover how to transform a simple model of an application into a fully-functional C# project, including designing the user interface, implementing the business logic, and integrating with a relational database for data storage. Along the way, you will explore the .NET Framework, the creation of a Windows-based user interface, a web-based user interface, and service-oriented programming, all using Microsoft's industry-leading Visual Studio 2010, C#, Silverlight, the Entity Framework, and more.

Clean CodeA Handbook of Agile Software CraftsmanshipPearson Education

This book aims to present the concepts and techniques of object-oriented programming as simply as possible so that it can be easily understood and mastered by beginners. The

emphasis is on presenting concepts at the right time and with the right amount of detail to encourage learning and mastery of the material. The book does not focus on the Java programming language; rather, Java is used as a vehicle to implement the object-oriented concepts presented in the book.To help readers become familiar with the Java programming language, the book starts off by describing the basic features of the language. These include data types and variables, arrays, control structures (if, while, for, etc.), and performing input and output. Several exercises have been carefully designed so that readers can get up to speed with Java as quickly as possible.The book strikes a good balance between theory and practice. Some object-oriented concepts often require lengthy explanations for beginners to fully understand the concepts. Based on years of experience in teaching object-oriented programming, the book condenses long explanations in favour of providing real examples which show how the concepts are implemented in an object-oriented program. Thus, detailed code examples are liberally interspersed with theoretical descriptions throughout the book. One of the unique features of the book is that it contains five chapters (called "Programming Projects") which explain how to build a complete object-oriented program based on the material presented in the other chapters. These chapters appear when all the relevant material required for writing the program has been thoroughly discussed in the preceding chapters. Each of the five chapters starts by describing the problem in narrative form. The chapter then gives a detailed definition of the functionality required. Next, the chapter explains how the functionality can be implemented using the object-oriented concepts presented earlier in the book. The chapter ends with a complete working Java program that solves the problem described. Often, alternative solutions are presented so that readers will be aware that there are competing ways to implement an object-oriented program with different trade-offs. Another unique feature of the book is that that new material is not used or referenced before it has been discussed. The book is essentially incremental in nature so that new concepts being introduced always build on earlier concepts. Thus, readers are only exposed to new concepts or language features when pre-requisite material has been completely discussed. Also, great care has been taken to avoid the use of programming language features which, though very useful for advanced programmers, can make it harder for a beginner to focus on and learn the object-oriented principles being imparted.This book is based on the experience gained from many years of teaching object-oriented programming to beginners who know another programming language. It is likely to benefit readers who are looking for a good, practical introduction to object-oriented programming in Java, in an easy-to-understand format.

Build sophisticated web applications by mastering the art of Object-Oriented Javascript About This Book Learn popular Object-Oriented programming (OOP) principles and design patterns to build robust apps Implement Object-Oriented concepts in a wide range of frontend architectures Capture objects from real-world elements and create object-oriented code that represents them Learn the latest ES6 features and how to test and debug issues with JavaScript code using various modern mechanisms Who This Book Is For JavaScript developers looking to enhance their web developments skills by learning

object-oriented programming. What You Will Learn Get acquainted with the basics of JavaScript language constructs along with object-oriented programming and its application. Learn to build scalable server application in JavaScript using Node.js Generate instances in three programming languages: Python, JavaScript, and C# Work with a combination of access modifiers, prefixes, properties, fields, attributes, and local variables to encapsulate and hide data Master DOM manipulation, cross-browser strategies, and ES6 Identify and apply the most common design patterns such as Singleton, Factory, Observer, Model-View-Controller, and Mediator Patterns Design applications using a modular architecture based on SOLID principles In Detail JavaScript is the behavior, the third pillar in today's paradigm that looks at web pages as something that consists of : content (HTML), presentation (CSS), and behavior (JavaScript). Using JavaScript, you can create interactive web pages along with desktop widgets, browser, and application extensions, and other pieces of software. Object-oriented programming, which is popularly known as OOP, is basically based on the concept of objects rather than actions. The first module will help you master JavaScript and build futuristic web applications. You will start by getting acquainted with the language constructs and how to organize code easily. You develop concrete understanding of variable scoping, loops, and best practices on using types and data structures, as well as the coding style and recommended code organization patterns in JavaScript. The book will also teach you how to use arrays and objects as data structures. By the end of the book, you will understand how reactive JavaScript is going to be the new paradigm. The second module is an easy-to-follow course, which includes hands-on examples of solutions to common problems with object-oriented code. It will help to identify objects from real-life scenarios, to protect and hide data with the data encapsulation features of Python, JavaScript, and C#. You will discover the advantage of duck typing in both Python and JavaScript, while you work with interfaces and generics in C#. With a fair understanding of interfaces, multiple inheritance, and composition, you will move on to refactor existing code and to organize your source for easy maintenance and extension. The third module takes you through all the in-depth and exciting futures hidden behind the facade. You should read through this course if you want to be able to take your JavaScript skills to a new level of sophistication. Style and approach This course is a comprehensive guide where each chapter consists of best practices, constructive advice, and few easy-to-follow examples that will build up your skills as you advance through the book. Get object oriented with this course, which takes you on a journey to get acquainted with few useful hands-on tools, features, and ways to enhance your productivity using OOP techniques. It will also act as a reference guide with useful examples on resolving problems with object-oriented code in Python, JavaScript, and C#. This comprehensive examination of the main approaches to object-oriented language explains key features of the languages in use today. Class-based, prototypes and Actor languages are all examined and compared in terms of their semantic concepts. This book provides a unique overview of the main approaches to object-oriented languages. Exercises of varying length, some of which can be extended into mini-projects are included at the end of each chapter. This book can be used as part of courses on

Comparative Programming Languages or Programming Language Semantics at Second or Third Year Undergraduate Level. Some understanding of programming language concepts is required.

This engaging textbook provides an accessible introduction to coding and the world of Object-Oriented (OO) programming, using Java as the illustrative programming language. Emphasis is placed on what is most helpful for the first-time coder, in order to develop and understand their knowledge and skills in a way that is relevant and practical. The examples presented in the text demonstrate how skills in OO programming can be used to create applications and programs that have real-world value in daily life. Topics and features: presents an overview of programming and coding, a brief history of programming languages, and a concise introduction to programming in Java using BlueJ; discusses classes and objects, reviews various Java library objects and packages, and introduces the idea of the Application Programming Interface (API); highlights how OO design forms an essential role in producing a useful solution to a problem, and the importance of the concept of class polymorphism; examines what to do when code encounters an error condition, describing the exception handling mechanism and practical measures in defensive coding; investigates the work of arrays and collections, with a particular focus on fixed length arrays, the ArrayList, HashMap and HashSet; describes the basics of building a Graphical User Interface (GUI) using Swing, and the concept of a design pattern; outlines two complete applications, from conceptual design to implementation, illustrating the content covered by the rest of the book; provides code for all examples and projects at an associated website. This concise guide is ideal for the novice approaching OO programming for the first time, whether they are a student of computer science embarking on a one-semester course in this area, or someone learning for the purpose of professional development or self-improvement. The text does not require any prior knowledge of coding, software engineering, OO, or mathematics.

Variational Object-Oriented Programming Beyond Classes and Inheritance
Fundamentals of Object-Oriented Programming in Java
ECOOP 2006 - Object-Oriented Programming
17th European Conference, Darmstadt, Germany, July 21-25, 2003. Proceedings
Advanced Object-Oriented Programming in R
Object-Oriented Programming and Java
ECOOP '99 - Object-Oriented Programming
A Handbook of Agile Software Craftsmanship
Informatics Education - Supporting Computational Thinking
Program Development in Java
A First Course in Computational Physics and Object-Oriented Programming with C++ Hardback with CD-ROM
Object-Oriented Programming Languages: Interpretation

A programmer's complete guide to Visual Basic .NET. Starting with a sample application and a high-level map, the book jumps right into showing how the parts of .NET fit with Visual Basic .NET. Topics include the common language runtime, Windows Forms, ASP.NET, Web Forms,

Web Services, and ADO.NET.

Unleash the power of Python 3 objects About This Book Stop writing scripts and start architecting programs Learn the latest Python syntax and libraries A practical, hands-on tutorial that teaches you all about abstract design patterns and how to implement them in Python 3 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 object-oriented programming in Python to design software, this is the book for you. What You Will Learn Implement objects in Python by creating classes and defining methods Separate related objects into a taxonomy of classes and describe the properties and behaviors of those objects via the class interface 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 Grasp common concurrency techniques and pitfalls in Python 3 Exploit object-oriented programming in key Python technologies such as Kivy and Django. Object-oriented programming concurrently with asyncio In Detail Python 3 is more versatile and easier to use than ever. It runs on all major platforms in a huge array of use cases. Coding in Python minimizes development time and increases productivity in comparison to other languages. Clean, maintainable code is easy to both read and write using Python's clear, concise syntax. Object-oriented programming is a popular design paradigm in which data and behaviors are encapsulated in such a way that they can be manipulated together. Many modern programming languages utilize the powerful concepts behind object-oriented programming and Python is no exception. Starting with a detailed analysis of object-oriented analysis and design, you will use the Python programming language to clearly grasp key concepts from the object-oriented paradigm. This book fully explains classes, data encapsulation, inheritance, polymorphism, abstraction, and exceptions with an emphasis on when you can use each principle to develop well-designed software. You'll get an in-depth analysis of many common object-oriented design patterns that are more suitable to Python's unique style. This book will not just teach Python syntax, but will also build your confidence in how to program. You will also learn how to create maintainable applications by studying higher level design patterns. Following this, you'll learn 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 will be introduced in the book. After you discover the joy of unit testing and just how easy it can be,

you'll study higher level libraries such as database connectors and GUI toolkits and learn how they uniquely apply object-oriented principles. You'll learn how these principles will allow you to make greater use of key members of the Python eco-system such as Django and Kivy. This new edition includes all the topics that made Python 3 Object-oriented Programming an instant Packt classic. It's also packed with updated content to reflect recent changes in the core Python library and covers modern third-party packages that were not available on the Python 3 platform when the book was first published. Style and approach Throughout the book you will learn key object-oriented programming techniques demonstrated by comprehensive case studies in the context of a larger project.

Introduction to Programming with Greenfoot: Object-Oriented Programming in Java with games and Simulations is ideal for introductory courses in Java Programming or Introduction to Computer Science. The only textbook to teach Java programming using Greenfoot—this is "Serious Fun." Programming doesn't have to be dry and boring. This book teaches Java programming in an interactive and engaging way that is technically relevant, pedagogically sound, and highly motivational for students. Using the Greenfoot environment, and an extensive collection of compelling example projects, students are given a unique, graphical framework in which to learn programming.

This book constitutes the refereed proceedings of the Third International Conference on Informatics in Secondary Schools - Evolution and Perspectives, ISSEP 2008, held in Torun, Poland in July 2008. The 28 revised full papers presented together with 4 invited papers were carefully reviewed and selected from 63 submissions. A broad variety of topics related to teaching informatics in secondary schools is addressed ranging from national experience reports to paedagogical and methodological issues. The papers are organized in topical sections on informatics, a challenging topic, didactical merits of robot-based instruction, transfer of knowledge and concept formation, working with objects and programming, strategies for writing textbooks and teacher education, national and international perspectives on ICT education, as well as e-learning.

Textbook and reference work on the application of C++ in science and engineering.

While there are many books used to teach introduction to programming, very few books combine the elements of 1) teaching computer programming from an application developer perspective, 2) teaching Object-Oriented Programming (OOP) by integrating it throughout the text, and 3) using C# as the programming language to teach concepts and techniques. C# has quickly become the fastest

growing programming language in the industry today. Therefore, An Information Systems Approach to Object-Oriented Programming Using Microsoft Visual C# .NET has been designed to fill the need for a book that teaches the object-oriented approach to programming as well as the C# programming language to beginning programmers in the CIS market. This book will empower readers to explain OOP concepts and develop practical/useful programs written in C#.

\My tailor is Object-Oriented". Most software systems that have been built - cently are claimed to be Object-Oriented. Even older software systems that are still in commercial use have been upgraded with some OO ?avors. The range of areas where OO can be viewed as a \must-have" feature seems to be as large as the number of elds in computer science. If we stick to one of the original views of OO, that is, to create cost-e ective software solutions through modeling ph- ical abstractions, the application of OO to any eld of computer science does indeed make sense. There are OO programming languages, OO operating s- tems, OO databases, OO speci cations, OO methodologies, etc. So what does a conference on Object-Oriented Programming really mean? I honestly don't know. What I do know is that, since its creation in 1987, ECOOP has been attracting a large number of contributions, and ECOOP conferences have ended up with high-quality technical programs, featuring interesting mixtures of theory and practice. Among the 183 initial submissions to ECOOP'99, 20 papers were selected for inclusion in the technical program of the conference. Every paper was reviewed by three to ve referees. The selection of papers was carried out during a t- day program committee meeting at the Swiss Federal Institute of Technology in Lausanne. Papers were judged according to their originality, presentation qu- ity, and relevance to the conference topics.

This book is designed for people with some experience in basic programming practices. It is also assumed that they have some basic experience using R and are familiar using the command line in an R environment. Our primary goal is to raise a beginner to a more advanced level to make him/her more comfortable creating programs and extending R to solve common problems.

Abstraction, Specification, and Object-oriented Design

Advanced R

Hands-On Object-Oriented Programming with C#

Third International Conference on Informatics in Secondary Schools - Evolution and Perspectives, ISSEP 2008 Torun Poland, July 1-4, 2008 Proceedings

Beginning C# Object-Oriented Programming

A Guide to MATLAB Object-Oriented Programming

R Object-oriented Programming
What Every Programmer Should Know about Object-oriented Design
Learning Scala Programming
Python Tricks
ECOOP 2003 - Object-Oriented Programming
Build maintainable software with reusable code using C#

This book constitutes the refereed proceedings of the 21st European Conference on Object-Oriented Programming, ECOOP 2007, held in Berlin, Germany in July/August 2007. The 25 revised full papers, presented together with 3 invited talks were carefully reviewed and selected from a total of 135 final submissions. The papers are organized in topical sections on types, runtime implementation, empirical studies, programs and predicates, language design, inheritance and derivation, aspects, as well as language about language.

Covering the latest in Java technologies, Object-Oriented Programming and Java teaches the subject in a systematic, fundamentals-first approach. It begins with the description of real-world object interaction scenarios and explains how they can be translated, represented and executed using object-oriented programming paradigm. By establishing a solid foundation in the understanding of object-oriented programming concepts and their applications, this book provides readers with the pre-requisites for writing proper object-oriented programs using Java.

This book is designed to introduce object-oriented programming (OOP) in C++ and Java, and is divided into four areas of coverage: Preliminaries: Explains the basic features of C, C++, and Java such as data types, operators, control structures, storage classes, and array structures. Part I : Covers classes, objects, data abstraction, function overloading, information hiding, memory management, inheritance, binding, polymorphism, class template using working illustrations based on simple concepts. Part II : Discusses all the paradigms of Java programming with ready-to-use programs. Part III : Contains eight Java packages with their full structures. The book offers straightforward explanations of the concepts of OOP and discusses the use of C++ and Java in OOP through small but effective illustrations. It is ideally suited for undergraduate/postgraduate courses in computer science. The IT professionals should also find the book useful.

The first three chapters of C++ Object Oriented Programming present the iostreams, structures, reference variables, pointers and the use of dynamic memory allocations. These chapters serve as a complete review for those already familiar with C++ basics; however, for those only familiar with C programming, these chapters cover all of the basic extensions of the C++ language. Thus, by the start of chapter 4, all readers should be ready for the OOP portion of the language. The construction of C++ classes are covered in the next two chapters. The approach begins with very simple classes and gradually become more complex as more and more features are added in a gradient manner. After the constructors, destructors and access functions are presented, operator overloaded functions are discussed in the next two chapters. C++ Object Oriented Programming presents the basic operator functions first and in the next chapter, the copy constructor and assignment operator are illustrated along with the usage of dynamic memory allocated member data. Inheritance is similarly split into three chapters. The first chapter shows basic features and problems of inheritance while the second chapter expands into more complex situations that require virtual functions and abstract base classes. The third inheritance chapter is devoted to practical programming examples of inheritance. The next chapter of C++ Object Oriented Programming covers the handling of error situations, followed by a presentation of templates. In the real world, most company data bases are in binary format or in a database, not text files. So the next chapter of C++ Object Oriented Programming covers the principles of binary files. The final chapter of C++ Object Oriented Programming shows an easy technique for class instances to be written in binary format to a

file to achieve "persistence" of an object. The object must, of course, be able to also "read itself" back into a memory instance. C++ Object Oriented Programming has many complete programming examples. All of these sample programs accompany the book. Each chapter ends with a set of Review Questions and Stop Exercises as well as the expected Programming Problems. The Stop Exercises illustrate many of the common errors beginning OOP programmers make. Thus, if you spend the time to work out the Stop Exercises before beginning work on the actual programming problems, far fewer mistakes occur. The answers to these exercises are also provided. In summary, C++ Object Oriented Programming is a very readable text that grounds one well in object oriented programming and its techniques. It is very application oriented and not a theoretical rewritten language reference manual.
Introduction: What does it mean to be object-oriented, anyway? Object-orientation - Who ordered that? Object-oriented design notation. The basic notation for classes em methods. Inheritance and aggregation diagrams. The object-communication diagram. State-transition diagrams. Additional OODN diagrams. The principles of object-oriented design: Encapsulation and connascence. Domains, encumbrance, and cohesion. Properties of classes and subclasses. The perils of inheritance and polymorphism. Class interfaces. Appendix A: Checklist for an object-oriented design walkthrough. Appendix B: The Object-oriented design owner's manual. Appendix C: Blitz guide to object-oriented terminology.
Learn how to write object-oriented programs in R and how to construct classes and class hierarchies in the three object-oriented systems available in R. This book gives an introduction to object-oriented programming in the R programming language and shows you how to use and apply R in an object-oriented manner. You will then be able to use this powerful programming style in your own statistical programming projects to write flexible and extendable software. After reading Advanced Object-Oriented Programming in R, you'll come away with a practical project that you can reuse in your own analytics coding endeavors. You'll then be able to visualize your data as objects that have state and then manipulate those objects with polymorphic or generic methods. Your projects will benefit from the high degree of flexibility provided by polymorphism, where the choice of concrete method to execute depends on the type of data being manipulated. What You'll Learn Define and use classes and generic functions using R Work with the R class hierarchies Benefit from implementation reuse Handle operator overloading Apply the S4 and R6 classes Who This Book Is For Experienced programmers and for those with at least some prior experience with R programming language. /div
Purpose of the Book This book presents an approach to improve the standard object-oriented pro gramming model. The proposal is aimed at supporting a larger range of incre mental behavior variations and thus promises to be more effective in mastering the complexity of today's software. The ability of dealing with the evolutionary nature of software is one of main merits of object-oriented data abstraction and inheritance. Object-orientation allows to organize software in a structured way by separating the description of different kinds of an abstract data type into different classes and loosely connecting them by the inheritance hierarchy. Due to this separation, the soft ware becomes free of conditional logics previously needed for distinguishing between different kinds of abstractions and can thus more easily be incremen tally extended to support new kinds of abstractions. In other words, classes and inheritance are means to properly model variations of behavior related to the existence of different kinds of an abstract data type. The support for extensi bility and reuse with respect to such kind-specific behavior variations is among the main reasons for the increasing popularity of object-oriented programming in the last two decades. However, this popularity does not prevent us from questioning the real effec tiveness of current object-oriented techniques in supporting incremental vari ations. In fact, this popularity makes a critical investigation of the variations that can actually be performed incrementally even more important.

This book presents a survey of the state-of-the-art on techniques for dealing with aliasing in object-oriented programming. It marks the 20th anniversary of the paper The Geneva Convention On The Treatment of Object Aliasing by John Hogg, Doug Lea, Alan Wills, Dennis de Champeaux and Richard Holt. The 22 revised papers were carefully reviewed to ensure the highest quality.The contributions are organized in topical sections on the Geneva convention, ownership, concurrency, alias analysis, controlling effects, verification, programming languages, and visions.

This practice-oriented text explores the intricacies of Java language in the light of different procedural and object-oriented paradigms. It is primarily focussed on the Object-Oriented Programming (OOP) paradigm using Java as a language. The text begins with the programming overview and introduces the reader to the important object-oriented (OO) terms. It then deals with Java development as well as runtime environment set-up along with the steps of compilation and running of a simple program. The text explains the philosophy of Java by highlighting its core features and demonstrating its advantages over C++. Besides, it covers GUI through Java applets, Swing, as well as concurrency handling and synchronization through threads. A chapter is exclusively devoted to fundamental data structures and their applications in Java. The book shows how Unified Modeling Language (UML) represents objects, classes, components, relationships, and architectural design. This comprehensive and student friendly book is intended as a text for the students of computer science and engineering, computer applications (BCA/MCA), and IT courses.

Learning Object-Oriented Programming is an easy-to-follow guide full of hands-on examples of solutions to common problems with object-oriented code in Python, JavaScript, and C#. It starts by helping you to recognize objects from real-life scenarios and demonstrates that working with them makes it simpler to write code that is easy to understand and reuse. You will learn to protect and hide data with the data encapsulation features of Python, JavaScript, and C#. You will explore how to maximize code reuse by writing code capable of working with objects of different types, and discover the advantage of duck typing in both Python and JavaScript, while you work with interfaces and generics in C#. With a fair understanding of interfaces, multiple inheritance, and composition, you will move on to refactor existing code and to organize your source for easy maintenance and extension.

Learning Object-Oriented Programming will help you to make better, stronger, and reusable code.

Learn how to write scalable and concurrent programs in Scala, a language that grows with you. Key Features Get a grip on the functional features of the Scala programming language Understand and develop optimal applications using object-oriented and functional Scala constructs Learn reactive principles with Scala and work with the Akka framework Book Description Scala is a general-purpose programming language that supports both functional and object-oriented programming paradigms. Due to its concise design and versatility, Scala's applications have been extended to a wide variety of fields such as data science and cluster computing. You will learn to write highly scalable, concurrent, and testable programs to meet everyday software requirements. We will begin by understanding the language basics, syntax, core data types, literals, variables, and more. From here you will be introduced to data structures with Scala and you will learn to work with higher-order functions. Scala's powerful collections framework will help you get the best out of immutable data structures and utilize them effectively. You will then be introduced to concepts such as pattern matching, case classes, and functional programming features. From here, you will learn to work with Scala's object-oriented features. Going forward, you will learn about asynchronous and reactive programming with Scala, where you will be introduced to the Akka framework. Finally, you will learn the interoperability of Scala and Java. After reading this book, you'll be well versed with this language and its features, and you will be able to write scalable, concurrent, and reactive programs in Scala. What you will learn Get to know the reasons for choosing Scala: its use and the advantages it provides over other languages Bring together functional and object-oriented programming constructs to make a manageable application Master basic to advanced Scala constructs Test your applications using advanced testing methodologies such as TDD Select preferred language constructs from the wide variety of constructs provided by Scala Make the transition from the object-oriented paradigm to the functional programming paradigm Write clean, concise, and powerful code with a functional mindset Create concurrent, scalable, and reactive applications utilizing the advantages of Scala Who this book is for This book is for programmers who choose to get a grip over Scala to write concurrent, scalable, and reactive programs. No prior experience with any programming language is required to learn the concepts explained in this book. Knowledge of any programming language would help the reader understanding concepts faster though.

Liskov (engineering, Massachusetts Institute of Technology) and Guttag (computer science and engineering, also at MIT) present a component-based methodology for software program development. The book focuses on modular program construction: how to get the modules right and how to organize a program as a collection of modules. It explains the key types of abstractions, demonstrates how to develop specifications that define these abstractions, and illustrates how to implement them using numerous

examples. An introduction to key Java concepts is included. Annotation copyrighted by Book News, Inc., Portland, OR.

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

This book constitutes the refereed proceedings of the 20th European Conference on Object-Oriented Programming, ECOOP 2006, held in Nantes, France in July 2006. 20 revised full papers, together with 3 keynote papers were carefully reviewed and selected. The papers are organized in topical sections on program query and persistence, ownership and concurrency, languages, type theory, types for object-oriented languages, tools, and modularity. 5 more papers celebrate the 20th anniversary of ECOOP.

This book presents a balanced and flexible approach to the incorporation of object-oriented principles in introductory courses using Python.

Familiarizes readers with the terminology of object-oriented programming, the concept of an object's underlying state information, and its menu of available behaviors. Includes an exclusive, easy-to-use custom graphics library that helps readers grasp both basic and more advanced concepts. Lays the groundwork for transition to other languages such as Java and C++. For those interested in learning more about object-oriented programming using Python.

Essay from the year 2015 in the subject Computer Science - Didactics, language: English, abstract: In this paper, we highlight the importance of teaching Object-Oriented Programming (OOP) to students. An analysis is carried out to determine if Mauritian Universities are emphasing sufficiently on teaching OOP to their students. The undergraduate courses consisting of at least one computer programming module were considered in the analysis. These courses were offered by the university of Mauritius (UOM) and University of technology (UTM) in 2015.

The Book

Object-Oriented Programming in C++

Object-oriented Design in Java
Powerful Object-Oriented Programming
13th European Conference Lisbon, Portugal, June 14-18, 1999 Proceedings
ECOOP - Object-Oriented Programming
Javascript: Object Oriented Programming
Statistical Programming for Data Science, Analysis and Finance
Learning Object-Oriented Programming
Introduction to Programming with Greenfoot
C++ Object Oriented Programming
Aliasing in Object-Oriented Programming

Enhance your programming skills by learning the intricacies of object oriented programming in C# 8 Key Features Understand the four pillars of OOP; encapsulation, inheritance, abstraction and polymorphism Leverage the latest features of C# 8 including nullable reference types and Async Streams Explore various design patterns, principles, and best practices in OOP Book Description Object-oriented programming (OOP) is a programming paradigm organized around objects rather than actions, and data rather than logic. With the latest release of C#, you can look forward to new additions that improve object-oriented programming. This book will get you up to speed with OOP in C# in an engaging and interactive way. The book starts off by introducing you to C# language essentials and explaining OOP concepts through simple programs. You will then go on to learn how to use classes, interfacesm and properties to write pure OOP code in your applications. You will broaden your understanding of OOP further as you delve into some of the advanced features of the language, such as using events, delegates, and generics. Next, you will learn the secrets of writing good code by following design patterns and design principles. You'll also understand problem statements with their solutions and learn how to work with databases with the help of ADO.NET. Further on, you'll discover a chapter dedicated to the Git version control system. As you approach the conclusion, you'll be able to work through OOP-specific interview questions and understand how to tackle them. By the end of this book, you will have a good understanding of OOP with C# and be able to take your skills to the next level. What you will learn Master OOP paradigm fundamentals Explore various types of exceptions Utilize C# language constructs efficiently Solve complex design problems by understanding OOP Understand how to work with databases using ADO.NET Understand the power of generics in C# Get insights into the popular version control system, Git Learn how to model and design your software Who this book is for This book is designed for people who are new to object-oriented programming. Basic C# skills are assumed, however, prior knowledge of OOP in any other language is not required.

The refereed proceedings of the 17th European Conference on Object-Oriented Programming, ECOOP 2003, held in Darmstadt, Germany in July 2003. The 18 revised full papers presented together with 2 invited papers were carefully reviewed and selected from 88 submissions. The papers are organized in topical sections on aspects and components; patterns, architecture, and collaboration; types; modeling; algorithms, optimization, and runtimes; and formal techniques and methodology.

"I don't even feel like I've scratched the surface of what I can do with Python" With Python Tricks: The Book you'll discover Python's best practices and the power of beautiful & Pythonic code with simple examples and a step-by-step narrative. You'll get one step closer to mastering Python, so you can write beautiful and idiomatic code that comes to you naturally. Learning the ins and outs of Python is difficult-and with this book you'll be able to focus on the practical

skills that really matter. Discover the "hidden gold" in Python's standard library and start writing clean and Pythonic code today. Who Should Read This Book: If you're wondering which lesser known parts in Python you should know about, you'll get a roadmap with this book. Discover cool (yet practical!) Python tricks and blow your coworkers' minds in your next code review. If you've got experience with legacy versions of Python, the book will get you up to speed with modern patterns and features introduced in Python 3 and backported to Python 2. If you've worked with other programming languages and you want to get up to speed with Python, you'll pick up the idioms and practical tips you need to become a confident and effective Pythonista. If you want to make Python your own and learn how to write clean and Pythonic code, you'll discover best practices and little-known tricks to round out your knowledge. What Python Developers Say About The Book: "I kept thinking that I wished I had access to a book like this when I started learning Python many years ago." - Mariatta Wijaya, Python Core Developer "This book makes you write better Python code!" - Bob Belderbos, Software Developer at Oracle "Far from being just a shallow collection of snippets, this book will leave the attentive reader with a deeper understanding of the inner workings of Python as well as an appreciation for its beauty." - Ben Felder, Pythonista "It's like having a seasoned tutor explaining, well, tricks!" - Daniel Meyer, Sr. Desktop Administrator at Tesla Inc.

Mitchell Waite Signature Series: Object-Oriented Design in Java takes a tutorial approach and teaches in a new way: by offering the Java code first and the design representations and explanations later. No other programming-level book on the market deals with design of Java software. There's nothing aimed at the in the trenches Java programmer. Nor can the Java programmer turn to general books on software design. These, with few exceptions, are abstract and academic, either incomprehensible or irrelevant from the perspective of the working programmer. This book targets the needs of Java application programmers, using an experience-based, hands-on approach.

Object-Oriented Programming in C++ begins with the basic principles of the C++ programming language and systematically introduces increasingly advanced topics while illustrating the OOP methodology. While the structure of this book is similar to that of the previous edition, each chapter reflects the latest ANSI C++ standard and the examples have been thoroughly revised to reflect current practices and standards. Educational Supplement Suggested solutions to the programming projects found at the end of each chapter are made available to instructors at recognized educational institutions. This educational supplement can be found at www.prenhall.com, in the Instructor Resource Center.

Even bad code can function. But if code isn’t clean, it can bring a development organization to its knees. Every year, countless hours and significant resources are lost because of poorly written code. But it doesn’t have to be that way. Noted software expert Robert C. Martin presents a revolutionary paradigm with Clean Code: A Handbook of Agile Software Craftsmanship . Martin has teamed up with his colleagues from Object Mentor to distill their best agile practice of cleaning code “on the fly” into a book that will instill within you the values of a software craftsman and make you a better programmer–but only if you work at it. What kind of work will you be doing? You’ll be reading code–lots of code. And you will be challenged to think about what’s right about that code, and what’s wrong with it. More importantly, you will be challenged to reassess your professional values and your commitment to your craft. Clean Code is divided into three parts. The first describes the principles, patterns, and practices of writing clean code. The second part consists of several case studies of increasing complexity. Each case study is an exercise in cleaning up code–of transforming a

code base that has some problems into one that is sound and efficient. The third part is the payoff: a single chapter containing a list of heuristics and “smells” gathered while creating the case studies. The result is a knowledge base that describes the way we think when we write, read, and clean code. Readers will come away from this book understanding How to tell the difference between good and bad code How to write good code and how to transform bad code into good code How to create good names, good functions, good objects, and good classes How to format code for maximum readability How to implement complete error handling without obscuring code logic How to unit test and practice test-driven development This book is a must for any developer, software engineer, project manager, team lead, or systems analyst with an interest in producing better code.

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

This introductory programming textbook integrates BlueJ with Java. It provides a thorough treatment of object-oriented principles.

Clean Code
The Concepts of Object-oriented Programming
An Accessible Approach Using Java
Beginning Object-Oriented Programming with C#
An Information Systems Approach to Object-Oriented Programming Using Microsoft Visual C# . Net

Object-oriented Programming in Java with Games and Simulations
20th European Conference, Nantes, France, July 3-7, 2006, Proceedings
A Practical Introduction Using BlueJ
Object-oriented Programming in Python