

## El Tutorial De Bluej

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 illustrated book teaches kids to write computer programs. Kids will learn basics of programming while creating such computer games as Tic-Tac-Toe, Ping-Pong and others. This book can be useful for three categories of people: kids from 10 to 18 years old, school computer teachers, parents who want to teach their kids programming.

The design and analysis of efficient data structures has long been recognized as a key component of the Computer Science curriculum. Goodrich, Tomassia and Goldwasser's approach to this classic topic is based on the object-oriented paradigm as the framework of choice for the design of data structures. For each ADT presented in the text, the authors provide an associated Java interface. Concrete data structures realizing the ADTs are provided as Java classes implementing the interfaces. The Java code implementing fundamental data structures in this book is organized in a single Java package, net.datastructures. This package forms a coherent library of data structures and algorithms in Java specifically designed for educational purposes in a way that is complimentary with the Java Collections Framework.

This book addresses the topic of exploiting enterprise-linked data with a particular focus on knowledge construction and accessibility within enterprises. It identifies the gaps between the requirements of enterprise knowledge consumption and “standard” data consuming technologies by analysing real-world use cases, and proposes the enterprise knowledge graph to fill such gaps. It provides concrete guidelines for effectively deploying linked-data graphs within and across business organizations. It is divided into three parts, focusing on the key technologies for constructing, understanding and employing knowledge graphs. Part 1 introduces basic background information and technologies, and presents a simple architecture to elucidate the main phases and tasks required during the lifecycle of knowledge graphs. Part 2 focuses on technical aspects; it starts with state-of-the art knowledge-graph construction approaches, and then discusses exploration and exploitation techniques as well as advanced question-answering topics concerning knowledge graphs. Lastly, Part 3 demonstrates examples of successful knowledge graph applications in the media industry, healthcare and cultural heritage, and offers conclusions and future visions.

Java programmers know how finicky Java can be to work with. An omitted semi-colon or the slightest typo will cause the Java command-line compiler to spew pages of annoying error messages across your screen. And it doesn't fix them--that's up to you: fix them, compile again, and hope that nothing goes wrong this time. Eclipse, the popular Java integrated development environment (IDE) provides an elegant and powerful remedy for this common, frustrating scenario. It doesn't just catch your errors before you compile, it also suggests solutions. All you need to do is point and click. And it's free--what could be better? Still, if you're like most programmers, mastering a new technology--no matter how productive it will make you in the long run--is going to take a chunk out of your productivity now. You want to get up to speed quickly without sacrificing efficiency. O'Reilly's new guide to the technology, Eclipse, provides exactly what you're looking for: a fast-track approach to mastery of Eclipse. This insightful, hands-on book delivers clear and concise coverage, with no fluff, that gets down to business immediately. The book is tightly focused, covering all aspects of Eclipse: the menus, preferences, views, perspectives, editors, team and debugging techniques, and how they're used every day by thousands of developers. Development of practical skills is emphasized with dozens of examples presented throughout the book. From cover-to-cover, the book is pure Eclipse, covering hundreds of techniques beginning with the most basic Java development through creating your own plug-in editors for the Eclipse environment. Some of the topics you'll learn about include: Using Eclipse to develop Java code Testing and debugging Working in teams using CVS Building Eclipse projects using Ant The Standard Widget Toolkit (SWT) Web development Developing Struts applications with Eclipse From basics to advanced topics, Eclipse takes you through the fundamentals of Eclipse and more. You may be an Eclipse novice when you pick up the book, but you'll be a pro by the time you've finished.

Learning Processing, Second Edition, is a friendly start-up guide to Processing, a free, open-source alternative to expensive software and daunting programming languages. Requiring no previous experience, this book is for the true programming beginner. It teaches the basic building blocks of programming needed to create cutting-edge graphics applications including interactive art, live video processing, and data visualization. Step-by-step examples, thorough explanations, hands-on exercises, and sample code, supports your learning curve. A unique lab-style manual, the book gives graphic and web designers, artists, and illustrators of all stripes a jumpstart on working with the Processing programming environment by providing instruction on the basic principles of the language, followed by careful explanations of select advanced techniques. The book has been developed with a supportive learning experience at its core. From algorithms and data mining to rendering and debugging, it teaches object-oriented programming from the ground up within the fascinating context of interactive visual media. This book is ideal for graphic designers and visual artists without programming background who want to learn programming. It will also appeal to students taking college and graduate courses in interactive media or visual computing, and for self-study. A friendly start-up guide to Processing, a free, open-source alternative to expensive software and daunting programming languages No previous experience required—this book is for the true programming beginner! Step-by-step examples, thorough explanations, hands-on exercises, and sample code supports your learning curve This is a book for those of us who believed that we didn’t need to learn Perl, and now we know it is more ubiquitous than ever. Perl is extremely flexible and powerful, and it isn’t afraid of Web 2.0 or the cloud. Originally touted as the duct tape of the Internet, Perl has since evolved into a multipurpose, multiplatform language present absolutely everywhere: heavy-duty web applications, the cloud, systems administration, natural language processing, and financial engineering. Beginning Perl, Third Edition provides valuable insight into Perl’s role regarding all of these tasks and more. Commencing with a comprehensive overview of language basics, you’ll learn all about important concepts such as Perl’s data types and control flow constructs. This material sets the stage for a discussion of more complex topics, such as writing custom functions, using regular expressions, and file input and output. Next, the book moves on to the

advanced topics of object-oriented programming, modules, web programming, and database administration with Perl's powerful database interface module, DBI. The examples and code provided offer you all of the information you need to start writing your own powerful scripts to solve the problems listed above, and many more. Whether you are a complete novice or an experienced programmer, Beginning Perl, Third Edition offers an ideal guide to learning Perl.

This book is for developers who want to work smarter so they can focus their efforts on the details that will give them the advantage. This book is tailor-made for developers who want to move from NetBeans and Eclipse to experience the power and functionality of IntelliJ IDEA.

The Deitels' groundbreaking How to Program series offers unparalleled breadth and depth of object-oriented programming concepts and intermediate-level topics for further study. This survey of Java programming contains an optional extensive OOD/UML 2 case study on developing and implementing the software for an automated teller machine. Here is an ideal textbook on software visualization, written especially for students and teachers in computer science. It provides a broad and systematic overview of the area including many pointers to tools available today. Topics covered include static program visualization, algorithm animation, visual debugging, as well as the visualization of the evolution of software. The author's presentation emphasizes common principles and provides different examples mostly taken from seminal work. In addition, each chapter is followed by a list of exercises including both pen-and-paper exercises as well as programming tasks.

Learn OpenGL will teach you the basics, the intermediate, and tons of advanced knowledge, using modern (core-profile) OpenGL. The aim of this book is to show you all there is to modern OpenGL in an easy-to-understand fashion, with clear examples and step-by-step instructions, while also providing a useful reference for later studies.

This book, written by one of the designers of generics, is a thorough explanation of how to use generics, and particularly, the effect this facility has on the way developers use collections.

If you would ask us, whether this is just another book about modeling, we would probably feel inclined to say: yes and no. Yes, it is a lot about modeling, but no, it is also about programming, methodological software design, and rapid prototyping via methods from model driven engineering. It will also be one of the first complete references and teaching guides for Story Driven Modeling. Story Driven Modeling is an agile software development method using objects and scenarios and special modeling steps to facilitate system analysis and design. Most parts of this book can be done with pencil and paper and with standard UML tools and standard software development environments. However, some steps are best supported by the rapid prototyping tool Fujaba or the Story Driven Modeling library SDMLib. The title of this book does not include Object Oriented Modeling on purpose. Object Orientation, Object Oriented Design, Object Oriented Analysis, and other object oriented methods all refer somehow to class diagrams and inheritance. Instead of this, we will actively use objects for modeling, analysis, and design. We will learn to think in objects. This book is foremost planned to be a textbook for software modeling courses. It offers a very interactive and agile approach to modern software design. In this book, we introduce the Objects First principle which is the foundation of the Story Driven Modeling development method. This is not to be mistaken with an object oriented development method. You will see that the Object First method slightly differs from traditional object oriented methods. With this book, we address a majority of readers dealing with or wanting to learn software development. This includes teachers and students for introduction to Object Orientation, Systems Modeling, Object Oriented Design, or Model Driven Engineering. This book should also be insightful for people interested in modeling and program design and beginning programmers. We expect from the reader some very basic programming skills, preferable in Java, though most of the presented concepts in this book can be also applied in any other object oriented language. However, all the examples presented in this book focus on Java as the example language.

This book contains papers in the fields of Interactive, Collaborative, and Blended Learning; Technology-Supported Learning; Education 4.0; Pedagogical and Psychological Issues. With growing calls for affordable and quality education worldwide, we are currently witnessing a significant transformation in the development of post-secondary education and pedagogical practices. Higher education is undergoing innovative transformations to respond to our urgent needs. The change is hastened by the global pandemic that is currently underway. The 9th International Conference on Interactive, Collaborative, and Blended Learning: Visions and Concepts for Education 4.0 was conducted in an online format at McMaster University, Canada, from 14th to 15th October 2020, to deliberate and share the innovations and strategies. This conference's main objectives were to discuss guidelines and new concepts for engineering education in higher education institutions, including emerging technologies in learning; to debate new conference format in worldwide pandemic and post-pandemic conditions; and to discuss new technology-based tools and resources that drive the education in non-traditional ways such as Education 4.0. Since its beginning in 2007, this conference is devoted to new learning approaches with a focus on applications and experiences in the fields of interactive, collaborative, and blended learning and related new technologies. Currently, the ICBL conferences are forums to exchange recent trends, research findings, and disseminate practical experiences in collaborative and blended learning, and engineering pedagogy. The conference bridges the gap between pure scientific research and the everyday work of educators. Interested readership includes policymakers, academics, educators, researchers in pedagogy and learning theory, school teachers, industry-centric educators, continuing education practitioners, etc.

Develop and deploy fully functional applications and microservices utilising Tomcat, Glassfish servers, Cloud and docker in Java EE 8 Key Features Explore the complete workflow of developing enterprise Java applications Develop microservices with Docker Container and deploy it in cloud Simplify Java EE application development Book Description Java EE is one of the most popular tools for enterprise application design and development. With recent changes to Java EE 8 specifications, Java EE application



development has become a lot simpler with the new specifications, some of which compete with the existing specifications. This guide provides a complete overview of developing highly performant, robust and secure enterprise applications with Java EE with Eclipse. The book begins by exploring different Java EE technologies and how to use them (JSP, JSF, JPA, JDBC, EJB, and more), along with suitable technologies for different scenarios. You will learn how to set up the development environment for Java EE applications and understand Java EE specifications in detail, with an emphasis on examples. The book takes you through deployment of an application in Tomcat, GlassFish Servers, and also in the cloud. It goes beyond the basics and covers topics like debugging, testing, deployment, and securing your Java EE applications. You'll also get to know techniques to develop cloud-ready microservices in Java EE. What you will learn Set up Eclipse, Tomcat, and Glassfish servers for Java EE application development Use JSP, Servlet, JSF, and EJBs to create a user interface and write business logic Create Java EE database applications using JDBC and JPA Handle asynchronous messages using MDBs for better scalability Deploy and debug Java EE applications and create SOAP and REST web services Write unit tests and calculate code coverage Use Eclipse MAT (Memory Analysis Tool) to debug memory issues Create and deploy microservices Who this book is for If you are a Java developer with little or no experience in Java EE application development, or if you have experience in Java EE technology but are looking for tips to simplify and accelerate your development process, then this book is for you. How can we capture the unpredictable evolutionary and emergent properties of nature in software? How can understanding the mathematical principles behind our physical world help us to create digital worlds? This book focuses on a range of programming strategies and techniques behind computer simulations of natural systems, from elementary concepts in mathematics and physics to more advanced algorithms that enable sophisticated visual results. Readers will progress from building a basic physics engine to creating intelligent moving objects and complex systems, setting the foundation for further experiments in generative design. Subjects covered include forces, trigonometry, fractals, cellular automata, self-organization, and genetic algorithms. The book's examples are written in Processing, an open-source language and development environment built on top of the Java programming language. On the book's website (<http://www.natureofcode.com>), the examples run in the browser via Processing's JavaScript mode.

This book reports on research and practice on computational thinking and the effect it is having on education worldwide, both inside and outside of formal schooling. With coding becoming a required skill in an increasing number of national curricula (e.g., the United Kingdom, Israel, Estonia, Finland), the ability to think computationally is quickly becoming a primary 21st century “basic” domain of knowledge. The authors of this book investigate how this skill can be taught and its resultant effects on learning throughout a student's education, from elementary school to adult learning.

Historically, grief and spirituality have been jealously guarded as uniquely human experiences. Although non-human animal grief has been acknowledged in recent times, its potency has not been recognised as equal to human grief. Anthropocentric philosophical questions still underpin both academic and popular discussions. In *Enter the Animal*, Teya Brooks Pribac examines what we do and don't know about grief and spirituality. She explores the growing body of knowledge about attachment and loss and how they shape the lives of both human and non-human animals. A valuable addition to the vibrant interdisciplinary conversation about animal subjectivity, *Enter the Animal* identifies conceptual and methodological approaches that have contributed to the prejudice against nonhuman animals. It offers a compelling theoretical base for the consideration of grief and spirituality across species and highlights important ethical implications for how humans treat other animals.

This Handbook describes the extent and shape of computing education research today. Over fifty leading researchers from academia and industry (including Google and Microsoft) have contributed chapters that together define and expand the evidence base. The foundational chapters set the field in context, articulate expertise from key disciplines, and form a practical guide for new researchers. They address what can be learned empirically, methodologically and theoretically from each area. The topic chapters explore issues that are of current interest, why they matter, and what is already known. They include discussion of motivational context, implications for practice, and open questions which might suggest future research. The authors provide an authoritative introduction to the field and is essential reading for policy makers, as well as both new and established researchers.

Introduction to Programming with Greenfoot Object-oriented Programming in Java with Games and Simulations Prentice Hall

The Java EE 7 Tutorial: Volume 2, Fifth Edition, is a task-oriented, example-driven guide to developing enterprise applications for the Java Platform, Enterprise Edition 7 (Java EE 7). Written by members of the Java EE documentation team at Oracle, this book provides new and intermediate Java programmers with a deep understanding of the platform. This guide includes descriptions of platform features and provides instructions for using the latest versions of NetBeans IDE and GlassFish Server Open Source Edition. The book introduces Enterprise JavaBeans components, the Java Persistence API, the Java Message Service (JMS) API, Java EE security, transactions, resource adapters, Java EE Interceptors, Batch Applications for the Java Platform, and Concurrency Utilities for Java EE. The book culminates with three case studies that illustrate the use of multiple Java EE 7 APIs.

Are you looking for a deeper understanding of the Java™ programming language so that you can write code that is clearer, more correct, more robust, and more reusable? Look no further! *Effective Java™*, Second Edition, brings together seventy-eight indispensable programmer's rules of thumb: working, best-practice solutions for the programming challenges you encounter every day. This highly anticipated new edition of the classic, Jolt Award-winning work has been thoroughly updated to cover Java SE 5 and Java SE 6 features introduced since the first edition. Bloch explores new design patterns and language idioms, showing you how to make the most of features ranging from generics to enums, annotations to autoboxing. Each chapter in the book consists of several “items” presented in the form of a short, standalone essay that provides specific advice, insight into Java platform subtleties, and outstanding code examples. The comprehensive descriptions and explanations for each item illuminate what to do, what not to do, and why. Highlights include: New coverage of generics, enums, annotations, autoboxing, the for-each loop, varargs, concurrency utilities, and much more Updated techniques and best practices on classic topics, including objects, classes, libraries, methods, and serialization How to avoid the traps and pitfalls of commonly misunderstood subtleties of the language Focus on the language and its most fundamental libraries: `java.lang`, `java.util`, and, to a lesser extent, `java.util.concurrent` and `java.io` Simply put, *Effective Java™*, Second Edition, presents the most practical, authoritative guidelines available for writing efficient, well-designed programs.

This encyclopedia aims to offer researchers an indication of the breadth and importance of information systems in education, including the way IT is being used, and could be used to enable learning and teaching. The encyclopedia covers all aspects of the interaction between education and information technologies, including IT in kindergartens, primary and secondary schools, universities, training colleges, industry training, distance education and further education. It also covers teaching and computing, the use of IT in many different subject areas, the use of IT in educational administration, and national

policies of IT and education.

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

A guide for intermediate to advanced developers covers core Java fundamentals, advanced language features, classes, interfaces, class design, threading, and language statements.

Following the bestselling success of Just Java, this book explores all the features of the latest version of Java, including the Swing toolkit and the JFCs.

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: 0133437302/ISBN-13: 9780133437300. That package includes ISBN-10: 0133360903/ISBN-13: 9780133360905 and ISBN-10: 0133379787/ISBN-13: 9780133379785.

MyProgrammingLab should only be purchased when required by an instructor. Building Java Programs: A Back to Basics Approach, Third Edition, introduces novice programmers to basic constructs and common pitfalls by emphasizing the essentials of procedural programming, problem solving, and algorithmic reasoning. By using objects early to solve interesting problems and defining objects later in the course, Building Java Programs develops programming knowledge for a broad audience. NEW! This edition is available with MyProgrammingLab, an innovative online homework and assessment tool. Through the power of practice and immediate personalized feedback, MyProgrammingLab helps students fully grasp the logic, semantics, and syntax of programming.

When you need quick answers for developing or debugging Java programs, this pocket guide provides a handy reference to standard features of the Java programming language and its platform. You'll find helpful programming examples, tables, figures, and lists, as well as Java 8 features such as Lambda Expressions and the Date and Time API. It's an ideal companion, whether you're in the office, in the lab, or on the road. This book also provides material to help you prepare for the Oracle Certified Associate Java Programmer exam. Quickly find Java language details, such as naming conventions, types, statements and blocks, and object-oriented programming. Get details on the Java SE platform, including development basics, memory management, concurrency, and generics. Browse through information on basic input/output, NIO 2.0, the Java collections framework, and the Java Scripting API. Get supplemental references to fluent APIs, third-party tools, and basics of the Unified Modeling Language (UML).

Create media-rich client applications using JavaFX 9 and the Java 9 platform. Learn to create GUI-based applications for mobile devices, desktop PCs, and even the web. Incorporate media such as audio and video into your applications. Interface with hardware devices such as Arduino and Leap Motion. Respond to gesture control through devices such as the Leap Motion Controller. Take advantage of the new HTTP2 API to make RESTful web requests and WebSockets calls. New to this edition are examples of creating stylized text and loading custom fonts, guidance for working with Scene Builder to create visual layouts, and new content on developing iOS and Android applications using Gluon mobile. The book also covers advanced topics such as custom controls, JavaFX 3D, gesture devices, printing, and animation. Best of all, the book is full of working code that you can adapt and extend to all your future projects. Is your goal to develop visually exciting applications in the Java language? Then this is the book you want at your side. JavaFX 9 by Example is chock-full of engaging, fun-to-work examples that bring you up to speed on the major facets of JavaFX 9. You'll learn to create applications that look good, are fun to use, and that take advantage of the medium to present data of all types in ways that engage the user and lead to increased productivity. The book: Has been updated with new content on modular development, new APIs, and an example using the Scene Builder tool. Is filled with fun and practical code examples that you can modify and drop into your own projects. Includes an example using Arduino and an accelerometer sensor to track motion in 3D. Helps you create JavaFX applications for iOS and Android devices. What You'll Learn: Work with touch-based interfaces. Interpret gesture-based events. Use shapes, color, text, and UI controls to create a simple click and point game. Add audio and video to your projects. Utilize JavaFX 3D. Create custom controls using CSS, SVG, and Canvas APIs. Organize code into modules using Java Platform Module System (Project Jigsaw). Who This Book Is For: Java developers developing visual and media-rich applications to run on PCs, phones, tablets, Arduino controllers, and more. This includes developers tasked with creating visualizations of data from statistical analysis and from sensor networks. Any developer wanting to develop a polished user-interface in Java will find much to like in this book.

This textbook presents both a conceptual framework and detailed implementation guidelines for computer science (CS) teaching. Updated with the latest teaching approaches and trends, and expanded with new learning activities, the content of this new edition is clearly written and structured to be applicable to all levels of CS education and for any teaching organization. Features: provides 110 detailed learning activities; reviews curriculum and cross-curriculum topics in CS; explores the benefits of CS education research; describes strategies for cultivating problem-solving skills, for assessing learning processes, and for dealing with pupils' misunderstandings; proposes active-learning-based classroom teaching methods, including lab-based teaching; discusses various types of questions that a CS instructor or trainer can use for a range of teaching situations; investigates thoroughly issues of lesson planning and course design; examines the first field teaching experiences gained by CS teachers.

In his friendly, easy-to-understand style, the bestselling author of Java 2 For Dummies shows developers how to get up to speed fast on this popular Java IDE Eclipse, an open source product originally developed by IBM, has an estimated 500,000 users—a 45 percent market share among Java IDEs. Shows Java developers how to maximize programming productivity with Eclipse, covering all the basics as well as advanced techniques such as using Ant, developing new Eclipse plug-ins, and working with Javadoc's JAR files.

Welcome to the Django Girls Tutorial! We are happy to see you here: ) In this tutorial, we will take you on a journey under the hood of web technologies, offering you a glimpse of all the bits and pieces that need to come together to make the web work as we know it. As with all unknown things, this is going to be an adventure - but no worries, since you already worked up the courage to be here, you'll be just fine: )

Cay Horstmann offers readers an effective means for mastering computing concepts and developing strong design skills. This book introduces object-oriented fundamentals critical to designing software and shows how to implement design techniques. The author's clear, hands-on presentation and outstanding writing style help readers to better understand the material. · A Crash Course in Java · The Object-Oriented Design Process · Guidelines for Class Design · Interface Types and Polymorphism · Patterns and GUI Programming · Inheritance and Abstract

Classes· The Java Object Model· Frameworks· Multithreading· More Design Patterns

Written to appeal to both novice and veteran programmers, this complete and well-organized guide to the versatile and popular object-oriented programming language Java shows how to use it as a primary tool in many different aspects of one's programming work. It emphasizes the importance of good programming style—particularly the need to maintain an object's integrity from outside interference—and helps users harness the power of Java in object-oriented programming to create their own interesting and practical every-day applications. Discusses the basics of computer systems, and describes the fundamental elements of the Java language, with complete instructions on how to compile and run a simple program. Introduces fundamental object-oriented concepts, and shows how simple classes may be defined from scratch. Explores Java's exception-handling mechanism, and investigates Java's interface facility (i.e., polymorphism). Covers all Java applications, including use of the Abstract Windowing Toolkit, graphical programming, networking, and simulation. Includes numerous exercises, periodic reviews, case studies, and supporting visuals. For those in the computer science industry.

Big Java: Early Objects, 7th Edition focuses on the essentials of effective learning and is suitable for a two-semester introduction to programming sequence. This text requires no prior programming experience and only a modest amount of high school algebra. Objects and classes from the standard library are used where appropriate in early sections with coverage on object-oriented design starting in Chapter 8. This gradual approach allows students to use objects throughout their study of the core algorithmic topics, without teaching bad habits that must be unlearned later. The second half covers algorithms and data structures at a level suitable for beginning students. Choosing the enhanced eText format allows students to develop their coding skills using targeted, progressive interactivities designed to integrate with the eText. All sections include built-in activities, open-ended review exercises, programming exercises, and projects to help students practice programming and build confidence. These activities go far beyond simplistic multiple-choice questions and animations. They have been designed to guide students along a learning path for mastering the complexities of programming. Students demonstrate comprehension of programming structures, then practice programming with simple steps in scaffolded settings, and finally write complete, automatically graded programs. The perpetual access VitalSource Enhanced eText, when integrated with your school's learning management system, provides the capability to monitor student progress in VitalSource SCORECenter and track grades for homework or participation. \*Enhanced eText and interactive functionality available through select vendors and may require LMS integration approval for SCORECenter.

This book constitutes the refereed post-conference proceedings of the IFIP TC 3 Open Conference on Computers in Education, OCCE 2018, held in Linz, Austria, in June 2018. The 24 revised full papers and 3 short papers included in this volume were carefully reviewed and selected from 63 submissions during two rounds of reviewing. The papers discuss key emerging topics and evolving practices in the area of educational computing research. They are organized in the following topical sections: computational thinking; programming and computer science education; teachers' education and professional development; games-based learning and gamification; learning in specific and disciplinary contexts; learning in social networking environments; and self-assessment, e-assessment and e-examinations.

An overview of the programming language's fundamentals covers syntax, initialization, implementation, classes, error handling, objects, applets, multiple threads, projects, and network programming.

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