

1. Record Nr.	UNINA9910438100903321
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Titolo	Processing : creative coding and generative art in Processing 2 // Ira Greenberg, Dianna Xu, Deepak Kumar
Pubbl/distr/stampa	[Berkeley, CA], : Friends of ED / Apress, c2013
ISBN	9781430244653 1430244658
Edizione	[2nd ed. 2013.]
Descrizione fisica	1 online resource (459 pages)
Altri autori (Persone)	XuDianna KumarD (Deepak)
Disciplina	776
Soggetti	Processing (Computer program language) Computer graphics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Cover; Title Page; Copyright Page; Contents at a Glance; Table of Contents; Foreword; About the Authors; About the Technical Reviewer; About the Cover Image Artist; Acknowledgments; Introduction; Resources; In the Book; Chapter 1 Diving into the Shallow End; Programming vs. Computer Science; Art + Science = Creative Coding; MIT Media Lab; What Is Processing?; Bits and Bytes; Mnemonics; Java; Processing; Quick Tour; Processing Menu System; Edit Menu; Sketch Menu; Tools Menu; Help Menu; Additional Menus; Summary; Chapter 2 Art by Numbers; Algorithms; Pseudocode Example; Generative Algorithm Drawing with CodePrimitives; Code Comments; Coordinate Systems; Algorithmic Face; Primitive Variables; Naming Rules and Conventions; Strict Typing; Face Implementation; Quick Math Refresher; Summary; Chapter 3 Processing Boot Camp; Functions; Reimplementing rect(); Local Variables and Scope; Adding Some Logic; Switch and Ternary; Switch Statement; Ternary Operator; Moving Beyond the Primitives; Yet Another Rectangle; Expanding the API; Polygon Implementation; Improved Polygon; Transformations; Perfected Polygon; Loops; Compound Operators; Putting It All Together; Having Some Polygonal Fun Polygonal WallpaperPushing and Popping the Matrix; Star Mandala

Table; Honing Your Coding Craft; A Simple Mandala; Create a Mandala Table; Summary; Chapter 4 Creating Across Time and Curved Space; Keep It Local; Examining the Variables; Thinking About Memory; Returning Value; Prime Time; Making Things Move; Moving and Rotating; Adding Simple Collision; Progress, Not Perfection; Calculating a Dynamic Radius; Introducing Curves; Processing's Curve Functions; Controlling Curves; quadraticVertex(); Closed Quadratic Curve; bezierVertex(); curveVertex(); curveVertex() Ellipse; Summary Chapter 5 Expressive Power of DataArrays; Indexing, Size, and Loops; Example: A Simple Bar Graph; Array Operations; Printing; Min, Max, and Sorting; Example: A Better, Interactive curveVertex; Primitive and Reference Types; Arrays As Parameters; Time Series Visualization; Simple Data Modeling; Data Visualization; Mapping Numbers; Basic Plots; Time Series; Heat Maps; Proportional Symbols; Algorithms and Issues of Space and Time; Summary; References; Chapter 6 Organizing Chaos; Objects: Attributes and Behavior; Classes: Object Factories; Object-Oriented Programming in Processing Customizing Instances A Useful Keyword: this; Tabs: Organizing Code; Defining Additional Behaviors: Motion; OOP and Encapsulation in Processing; PVector Class in Processing; Ball in a Box; Composition: Has-a Relationships; Simulated Physics: Verlet Motion; Two Balls and a Stick: An Application of Verlet Integration; Inheritance: Is-a Relationships; Interfaces Are Doable; Summary; Chapter 7 Creative Abstraction; Strings; String Methods; Working with Strings; Text Visualization: Creating Word Clouds; Acquiring the Data; Parsing the Data; Filtering the Data; The ArrayList Class Filtering Function Words and Stop Words

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## Sommario/riassunto

Processing: Creative Coding and Generative Art in Processing 2 is a fun and creative approach to learning programming. Using the easy to learn Processing programming language, you will quickly learn how to draw with code, and from there move to animating in 2D and 3D. These basics will then open up a whole world of graphics and computer entertainment. If you've been curious about coding, but the thought of it also makes you nervous, this book is for you; if you consider yourself a creative person, maybe worried programming is too non-creative, this book is also for you; if you want to learn about the latest Processing 2.0 language release and also start making beautiful code art, this book is also definitely for you. You will learn how to develop interactive simulations, create beautiful visualizations, and even code image-manipulation applications. All this is taught using hands-on creative coding projects. Processing 2.0 is the latest release of the open-source Processing language, and includes exciting new features, such as OpenGL 2 support for enhanced 3D graphics performance. Processing: Creative Coding and Generative Art in Processing 2 is designed for independent learning and also as a primary text for an introductory computing class. Based on research funded by the National Science Foundation, this book brings together some of the most engaging and successful approaches from the digital arts and computer science classrooms. Teaches you how to program using a fun and creative approach. Covers the latest release of the Processing 2.0 language. Presents a research based approach to learning computing.

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