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Nota di contenuto	Intro -- Scratch 1.4 Beginner's Guide -- Table of Contents -- Scratch 1.4 Beginner's Guide -- Credits -- About the Author -- About the Reviewer -- Preface -- What this book covers -- What you need for this book -- Who this book is for -- Conventions -- Reader feedback -- Customer support -- Downloading the example code for the book -- Errata -- Piracy -- Questions -- 1. Welcome to Scratch! -- What is Scratch? -- 21st century learning skills -- How to use Scratch? -- Programming concepts -- Programming limitations -- Scratch anatomy -- Building blocks -- Write the script -- Watch the story -- Built-in image editor -- Interface promotes tinkering -- Learning Scratch -- Welcome to Scratch! -- Installation -- Start Scratching -- Graphics and Slideshows -- Storytelling -- Arcade Games -- Games of Fortune -- Math and Finance -- Share! -- Real-world stimuli -- Summary -- 2. Installation -- Install Scratch -- Windows -- Run Scratch from flash

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-- What just happened? -- Position on the grid -- Pop quiz -- Pointed in the right direction -- Time for action - turn to the left -- What just happened? -- Degrees of direction -- Sound effects -- Time for action - hit the cymbals -- What just happened? -- Select an instrument -- Time for action - applause, please -- What just happened? -- Play a note -- Have a go hero -- Pop quiz -- Piece the dog scene together -- Time for action - joke, please -- What just happened? -- Have a go hero -- Control the story -- Time for action - hide TOC -- What just happened? -- Have a go hero -- Time for action - enter dog -- What just happened? -- Time for action - exit dog -- What just happened? -- Have a go hero -- Time for action - show TOC -- What just happened? -- Have a go hero -- Build sequence -- Have a go hero -- Next steps -- Summary -- 6. Arcade Games.

Troll pong -- Time for action - open the sample pong project -- What just happened? -- Dynamic interaction -- Variables -- Time for action - change direction -- What just happened? -- Time for action - remove the random turn -- What just happened? -- Have a go hero -- Customize the sprites -- Time for action - beach ball pong -- What just happened? -- Have a go hero -- Time for action - add new paddle controls -- What just happened? -- Play theme music, forever -- Time for action - add background music -- What just happened? -- Do something, forever -- Working with sound -- Have a go hero -- Pop quiz -- Forever, on one condition -- Time for action - paddle meets ball -- What just happened? -- Start single stepping -- What just happened? -- Conditional statements -- Pop quiz -- What's the score? -- Time for action - add a score variable -- What just happened? -- For all sprites -- For this sprite only -- Time for action - count the paddle's steps -- What just happened? -- Global versus local variables -- Have a go hero -- Add a second level -- Time for action - reach for a new level -- What just happened? -- Comparisons -- Troubleshooting -- Time for action - fix the script -- What just happened? -- Using Boolean logic -- Pop quiz -- Add levels -- Time for action - count the levels -- What just happened? -- Have a go hero -- Time for action - enter project notes -- What just happened? -- Next steps -- Summary -- 7. Games of Fortune -- Fortune-teller -- Time for action - create a list of questions -- What just happened? -- Have a go hero -- Work with an item in a list -- Import a list -- Time for action - import a list of fortunes -- What just happened? -- Reasons to import -- Export a list -- Pop quiz -- Your fortune is ... -- Time for action - tell me a fortune -- What just happened? -- Time for action - force a positive fortune -- What just happened?.

Counters -- Keep track of intervals with mod -- Have a go hero -- If/else -- Pop quiz -- Repeat the fortune -- Time for action - my fortune is what? -- What just happened? -- Holding text in a variable -- Do you have a question? -- Time for action - ask your question -- What just happened? -- Add the question to the list -- Time for action - add it to the list -- What just happened? -- Join two text phrases -- Time for action - join two sentences -- What just happened? -- Nest join blocks -- Additional string operations -- Next steps -- Summary -- 8. Math and Finance -- Double it or lump sum? -- Double it -- Time for action - calculate the double amount -- What just happened? -- Have a go hero -- Time for action - set user-defined variables -- What just happened? -- Start single stepping -- Time for action - slow it down -- Graph the values -- Time for action - set the graph's origin -- What just happened? -- Time for action - draw a graph -- What just happened? -- Mathematical functions -- Create patterns with stamp -- Pop quiz -- Connect the dots -- Time for action - connect the dots -- What just happened? -- Time for action - fix the graph -- Follow a

sprite with the go to block -- Draw with the pen tool -- Time for action - draw the x and y axis of the grid -- What just happened? -- Have a go hero -- Label the newAmount value -- Time for action - label newAmount -- What just happened? -- Pop quiz -- Find the interest earned on a lump sum -- Time for action - calculate interest on lump sum -- What just happened? -- Have a go hero -- Round to nearest whole number -- Have a go hero -- Next steps -- Summary -- 9. Share! -- Share with the Scratch community -- Reduce file size -- Time for action - compress media files -- What just happened? -- Share! -- Time for action - share! -- What just happened? -- Tag it -- Update a project -- Trouble?.

Firefox display problems.

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Learn to program while creating interactive stories, games, and multimedia projects using Scratch

Key Features

- Create interactive stories, games, and multimedia projects that you can reuse in your own classroom
- Learn computer programming basics ñ no computer science degree required
- Connect with the Scratch community for inspiration, advice, and collaboration
- Provides hands-on projects that help you learn by experiment and play

Book Description

If you have the imaginative power to design complex multimedia projects but can't adapt to programming languages, then Scratch 1.4: Beginner's Guide is the book for you. Imagine how good you'll feel when you drag-and-drop your way to interactive games, stories, graphic artwork, computer animations, and much more using Scratch even if you have never programmed before. This book provides teachers, parents, and new programmers with a guided tour of Scratch's features by creating projects that can be shared, remixed, and improved upon in your own lesson plans. Soon you will be creating games, stories, and animations by snapping blocks of "code" together. When you program you solve problems. In order to solve problems, you think, take action, and reflect upon your efforts. Scratch teaches you to program using a fun, accessible environment that's as easy as dragging and dropping blocks from one part of the screen to another. In this book you will program games, stories, and animations using hands-on examples that get you thinking and tinkering. For each project, you start with a series of steps to build something. Then you pause to put our actions into context so that you can relate our code to the actions on Scratch's stage. Throughout each chapter, you'll encounter challenges that encourage you to experiment and learn. One of the things you're really going to love is that, as you begin working through the examples in the book, you won't be able to stop your imagination and the ideas will stream as fast as you can think of them. Write them down. You'll quickly realize there are a lot of young minds in your home, classroom, or community group that could benefit from Scratch's friendly face. Teach them, please.

What you will learn

- Design user interfaces, including sequence, characters, and controls.
- Think critically and make decisions ñ based on need, program limitations and knowledge level.
- Get to know the concepts of scratch programming such as loops, conditional statements, variables, arrays, Boolean logic, dynamic interaction, coordination, synchronization, threads, and event handling, and apply it later to other programming languages.
- Develop a barnyard humor that let s you shine as a storyteller.
- Debug problems in your design and code.
- Revise your projects to fix problems and add functionality.
- Collaborate with the Scratch community by remixing and sharing projects so that you can learn from each other.
- Communicate with peers and students about the details of your projects.
- Capture sound, light, touch, and resistance via an external PicoBoard and use it as input for your Scratch projects.

Who this book is for

Scratch is a teaching

language, so it's ideal for people who want to learn how to program or teach others how to program. Educators and parents will learn how to program using Scratch, so they can use Scratch to teach the latest learning skills to their students and children. No previous computer programming knowledge is required. You only need to know how to perform basic tasks on a computer and this book will teach the rest. You can then use it as a platform to learn more advanced programming languages. Parents, stuck with a child who wants to
