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Titolo	Beginning LEGO MINDSTORMS EV3 // by Mark Rollins
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ISBN	1-4302-6437-3
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (XVII, 280 p. 346 illus.)
Disciplina	004
Soggetti	Computer input-output equipment Computer hardware Hardware and Maker Computer Hardware
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Cover -- Contents at a Glance -- Contents -- About the Author -- About the Technical Reviewer -- Acknowledgments -- Introduction -- Chapter 1: What's New with LEGO MINDSTORMS EV3 -- Getting Started with LEGO MINDSTORMS EV3 -- The New Sensors and Motors of EV3 -- The EV3 Brick (6009996) -- Large Motor (6009430) -- Medium Motor (6008577) -- Ultrasonic Sensor (6008924) -- Gyro Sensor (6008916) -- Color Sensor (6008919) -- Touch Sensor (6008472) -- Infrared Sensor (6009811) and Infrared Beacon (6014051) -- Connector Cables -- A Basic Introduction to LEGO Technic Pieces -- Beams -- Axles -- Connector Pegs and Bushes -- Cross Blocks and Angle Elements -- Gears -- Levers -- Wings and Panels -- Wheels and Treads -- Where to Begin with your LEGO MINDSTORMS Kit -- LEGO Pick a Brick -- BrickLink -- Websites for LEGO Instructions -- The LEGO Official Site -- Peeron -- Brickfactory -- Summary -- Chapter 2: Programming with the EV3 Language -- The Four Basic Screens of the EV3 Brick -- Run Recent -- File Navigation -- Brick Apps -- Port View -- Motor Control -- IR Control -- Brick Program -- Settings -- The EV3 Software -- Creating a LEGO MINDSTORMS Program with the EV3 Software -- Using the Programming Palette -- Action (Green Area) Programming Blocks -- Medium Motor -- Large Motor -- Move Steering -- Move Tank -- Display, Sound, and Brick Status Light -- Orange Menu (Flow Control)

-- Start -- Wait -- Brick Buttons -- Color Sensor -- Reflected Light Intensity -- Ambient Light Intensity -- Gyro Sensor -- Infrared Sensor -- Motor Rotation -- Temperature Sensor -- Timer -- Touch Sensor -- Ultrasonic Sensor -- Energy Meter -- NXT Sound Sensor -- Messaging -- Time -- Loop -- Brick Buttons -- Color Sensor -- Reflected Light Intensity -- Ambient Light Intensity -- Gyro Sensor -- Infrared Sensor -- Motor Rotation -- Timer -- Touch Sensor -- Ultrasonic Sensor. Energy Meter -- NXT Sound Sensor -- Messaging -- Unlimited and Count -- Logic and Time -- Switch -- Brick Buttons -- Color Sensor -- Reflected and Ambient Light Intensity -- Gyro Sensor -- Infrared Sensor -- Motor Rotation -- Temperature Sensor -- Timer -- Touch Sensor -- Ultrasonic Sensor -- Energy Meter -- NXT Sound Sensor -- Messaging -- Text -- Logic and Numeric -- Loop Interrupt -- Summary -- Chapter 3: Creating a LEGO MINDSTORMS EV3 Vehicle -- Instructions for Making a Souped-up Driver's Base Vehicle -- Programming the Vehicle with the Yellow Programming Blocks -- Brick Buttons -- Color Sensor Steering -- Reflected Light Intensity -- Gyro Sensor -- Infrared Sensor -- Motor Rotation -- Temperature Sensor -- Timer -- Touch Sensor -- Ultrasonic Sensor -- Energy Meter and NXT Sound Meter -- Other Methods for Building Vehicles -- Rack-and-Pinion Steering -- Four-Wheel Steering with Four-Wheel Drive -- Tank Tread Model -- Summary -- Chapter 4: Creating Visuals, Making Sounds, and Using Data on the EV3 Brick -- Display Programming Block -- Text -- Shapes -- Line -- Circle -- Rectangle -- Point -- Image -- Reset Screen -- The Image Editor -- Sound Programming Block -- Stop -- Play Files -- Play Tone -- Play Note -- Make your own Sound -- Brick Status Light Programming Block -- The Data Operations Programming Blocks -- Variable -- Text -- Numeric -- Logic -- Numeric Array and Logic Array -- Constant -- Arrays -- Array Append -- Read at Index -- Write at Index -- Array Length -- Logic -- Logic AND -- Logic OR -- Logic XOR -- Not A -- Math -- Round -- Compare -- Range -- Text -- Random -- Summary -- Chapter 5: Data Logging and Advanced Programming Blocks -- Open a New Experiment -- Graph Area -- Configuration Panel -- Experiment Configuration -- DataSet Table -- DataSet Calculation -- Graph Programming -- Hardware Page -- Content Editor. Data Logging Toolbar -- Advanced Programming Blocks -- File Access -- Write -- Close -- Read -- Delete -- Data Logging -- On For Time -- On -- Single Measurement -- Stop -- Messaging -- Send -- Receive -- Compare -- Bluetooth Connection -- Keep Awake -- Raw Sensor Value -- Unregulated Motor -- Invert Motor -- Stop Program -- Summary -- Chapter 6: Special Construction Projects and Macros -- Swivel -- Project 6-1: The Swivel -- Programming the Swivel -- Forklift -- Project 6-2: The Forklift -- Programming the Forklift -- Scissorlift -- Project 6-3: The Scissorlift -- Programming the Scissorlift -- Make Me a Macro -- Summary -- Chapter 7: The LEGO MINDSTORMS EV3 Robot Arm -- Project 7-1: The Robot Claw -- Project 7-2: The Robot Elbow Base -- Programming the Robotic Elbow -- Programming the Robot Wrist -- Programming the Robotic Hand -- Summary -- Chapter 8: Thinking like a LEGO MINDSTORMS Creator and the Walking Robot -- Questions to Ask Before Building -- Example of the Walking Robot -- Project 8-1: The Left Leg -- Project 8-2: The Right Leg -- Project 8-3: The LEGO Robot Body -- Programming the Walking Robot -- Summary and Final Words -- Index.

Sommario/riassunto

Beginning LEGO MINDSTORMS EV3 shows you how to create new fun and fantastic creations with the new EV3 programmable brick along with other new EV3 pieces and features. You'll learn the language of the EV3 brick, and then go on to create a variety of programmable vehicles

using MINDSTORMS and Technic parts. You'll then move into creating robot parts, including robotic arms. You'll even learn how to make different types of MINDSTORMS walkers. Finally, you'll learn how to incorporate light and sound into your amazing EV3 creations. Whether you're a MINDSTORMS enthusiast wanting to know more about EV3, a robotics competitor, or just a LEGO fan who wants to learn all about what EV3 can do, Beginning LEGO MINDSTORMS EV3 will give you the knowledge you need. Note: the printed book is in black and white. The Kindle and ebook versions are in color (black and white on black and white Kindles).
