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Nota di contenuto	Title Page; Copyright Page; Contents; Introduction; What Is an Arduino?; What You Will Learn; Parts You Will Need; Tools You Will Need; Software You Will Need; Other Useful Materials; What I Assume You Already Know; How This Book Is Organised; Conventions; The Companion Website; Reaching Out; Adventure 1: Setting Up Your Arduino; What You Need; Downloading and Installing the Arduino Software on Your Computer; Installing Arduino Software on a Mac; Installing Arduino Software on a Windows PC; Installing Arduino Software on a Linux Machine; Exploring the Arduino IDE Using Blink to Test That Everything Is Set Up Correctly Uploading Blink; Troubleshooting Common Problems; Building an LED Circuit; What You Need; Understanding Circuit Schematics; Using a Breadboard; Building Your First Circuit; Further Adventures with Arduino; Adventure 2: Reading from Sensors; What You Need; Adding More LEDs; Printing Messages to the Computer; Reading Data from a Potentiometer; Making Decisions in Code; Building a Status Message Sign; What You Need; Understanding the Circuit; Prototyping on a Breadboard; Writing the Code; Creating your Sign; Creating your Sign Cutting Holes for the Potentiometer and LEDs Adding the Status

Messages and Decorating the Sign; Soldering the Circuit; Inserting the Electronics; Further Adventures with Arduino; Adventure 3: Working with Servos; What You Need; Understanding Different Types of Motors; Controlling a Servo with Arduino; Repeating the Same Thing Over and Over; Digital Input with a Push Button; Building a Combination Safe; What You Need; Understanding the Circuit; Prototyping on a Breadboard; Writing the Code; Making the Safe; Soldering the Wires; Inserting the Electronics; Further Adventures with Arduino Adventure 4: Using Shift RegistersWhat You Need; Organising Your Code; Using Functions; Using for Loops; Getting More Outputs with Shift Registers; How a Shift Register Works; Clock; Data; Latch; Making the Connections for a Shift Register; Adding LEDs; Writing the Code; Adding More Shift Registers; Building Your Name in Lights; What You Need; Understanding the Circuit; Prototyping on a Breadboard; Writing the Code; Making the Lights; Soldering the Wires; Inserting the Electronics; Further Adventures with Shift Registers; Adventure 5: Playing Sounds; What You Need; Making a List Making Your Intentions KnownLooping Through an Array; Putting It Into Practice; Making Noise; Wiring the Circuit; Writing the Code; Building an Augmented Wind Chime; What You Need; Understanding the Circuit; Prototyping on a Breadboard; Writing the Code; Making the Wind Chime; Making the Base; Making the Chimes; Attaching the Chimes; Connecting the Electronics; Further Adventures with Sound; Adventure 6: Adding Libraries; What You Need; Analogue Out; Fading an LED; Mixing Light; Wiring the Circuit; Writing the Code; Capacitive Sensing; Adding a Library; Wiring the Circuit; Writing the Code Building a Crystal Ball

Sommario/riassunto

Go from beginner to Arduino™ developer with 9 amazing adventures Have a blast building and programming interactive electronic crafts with Arduino. Author Becky Stewart walks you step by step through 9 exciting projects geared toward the beginner. You will learn how to download and install Arduino for multiple operating systems (Windows, Mac or Linux), how to make the most of Arduino with basic programming concepts and much more, so you can start having fun right away watching your designs come to life. You'll start with simple creations and move toward more complex crafts as you master each
