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Resistor Values; Identifying Resistor Values; Using Resistors; Capacitors; Using Capacitors; Diodes; Different Types of Diodes; Using Diodes; Light-Emitting Diodes; Using LEDs; Transistors; Using Transistors; Breadboards; Inputs and Outputs; Connecting a Light-Emitting Diode; Calculation; Software; Hardware; What Now?; Summary; Part II Standard Libraries; Chapter 4 The Arduino Language; I/O Functions; Digital I/O; pinMode(); digitalRead(); digitalWrite(); Analog I/O; analogRead(); analogWrite(); Generating Audio Tones; tone() noTone() Reading Pulses; pulseIn(); Time Functions; delay(); delayMicroseconds(); millis(); micros(); Mathematical Functions; min(); max(); constrain(); abs(); map(); pow(); sqrt(); random(); Trigonometry; sin(); cos(); tan(); Constants; Interrupts; attachInterrupt(); detachInterrupt(); noInterrupts(); interrupts(); Summary; Chapter 5 Serial Communication; Introducing Serial Communication; UART Communications; Baud Rate; Data Bits; Parity; Stop Bits; Debugging and Output; Starting a Serial Connection; Writing Data; Sending Text; Sending Data; Reading Data; Starting Communications Is Data Waiting? Reading a Byte; Reading Multiple Bytes; Taking a Peek; Parsing Data; Cleaning Up; Example Program; SoftwareSerial; Summary; Chapter 6 EEPROM; Introducing EEPROM; The Different Memories on Arduino; The EEPROM Library; Reading and Writing Bytes; Reading and Writing Bits; Reading and Writing Strings; Reading and Writing Other Values; Example Program; Preparing EEPROM Storage; Adding Nonvolatile Memory; Summary; Chapter 7 SPI; Introducing SPI; SPI Bus; Comparison to RS-232; Configuration; Communications; Arduino SPI; SPI Library; SPI on the Arduino Due; Example Program; Hardware Sketch

Sommario/riassunto

Master programming Arduino with this hands-on guide Arduino Sketches is a practical guide to programming the increasingly popular microcontroller that brings gadgets to life. Accessible to tech-lovers at any level, this book provides expert instruction on Arduino programming and hands-on practice to test your skills. You'll find coverage of the various Arduino boards, detailed explanations of each standard library, and guidance on creating libraries from scratch - plus practical examples that demonstrate the everyday use of the skills you're learning. Work on increasingly advanced programming
