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Titolo	Introductory Programs with the 32-bit PIC Microcontroller : A Line-by-Line Code Analysis and Reference Guide for Embedded Programming in C / / by Hubert Ward
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Note generali	Includes index.
Nota di contenuto	Chapter 1: Creating Our First C Program -- Chapter 2: Header Files and Delays -- Chapter 3 The Seven Segment Display -- Chapter 4: The LCD -- Chapter 5: The Dot Matrix Display -- Chapter 6: Communication -- Chapter 7: I2C Communication -- Chapter 8: Using Interrupts -- Chapter 9: The Real Time Clock -- Chapter 10: The RTC and the DS3231 -- Chapter 11: The RTCC Module of the 32 bit PIC -- Chapter 12: The Real Analogue World -- Chapter 13 The DHT11 Transducer -- Chapter 14 Creating a Square Wave.
Sommario/riassunto	Embark on a journey into the world of embedded programming. This book introduces you to the 32bit PIC and will teach you how the main functions of C programming work and can be used with a PIC micro. A one-stop reference for the would-be embedded programmer, you'll explore the electronics needed for a variety of programs as well as how to use different devices with the PIC. The book starts with downloading the environment and creating a simple project, one that uses different oscillators, Phase Lock Loop, and circuitry needed to create the different system clocks—an easy entry point to this exciting environment. You'll also review the MPLABX integrated development environment (IDE) and see how to program the 32Bit PIC, which can be adapted to different PICs. Throughout subsequent chapters, you’ll learn

how to use a range of programs that use PIC modules such as the SPI, I2C, UART communication modules, the ADC module, the Capture, Compare, and Pulse Width Modulation module, and the RTCC, Real Time Clock and Calendar Module. You will: Create a project in MPLABX Configure the different clock frequencies that are used in the 32bit PIC Build a variable delay subroutine to be used in a simple traffic lights program Use the MAX 7219 driver IC to control the 8by8 matrix display Program an I2C expander module to control the display on a LCD.