1. Record Nr.   UNINA9910457698903321

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    Titolo   The PIC microcontroller [[electronic resource]] : your personal
                        introductory course / / John Morton

    Pubbl/distr/stampa Amsterdam ; ; Boston, : Elsevier/Newnes, c2005

    ISBN   1-281-01653-5
                        9786611016531
                        0-08-047375-X

    Edizione   [3rd ed.]

    Descrizione fisica 1 online resource (239 p.)

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    Disciplina   629.8/9

    Soggetti   Programmable controllers
                        Integrated circuits - Design and construction
                        Microelectronics
                        Microcomputers - Circuits
                        Electronic books.

    Lingua di pubblicazione Inglese

    Formato   Materiale a stampa

    Livello bibliografico Monografia

    Note generali   Revised ed. of: PIC.

    Nota di contenuto   Front Cover; Dedication; The PIC Microcontroller: Your Personal
                        Introductory Course; Copyright Page; Table of Contents;
                        Acknowledgements; Preface to the third edition; Chapter 1.
                        Introduction; Some tips before starting; Initial steps; The file registers;
                        A program template; Chapter 2. Exploring the PIC5x series; Your first
                        program; Testing the program; Hardware; Using the testing
                        instructions; Timing; Seven-segment displays; The program counter;
                        Subroutines and the stack; Logic gates; The watchdog timer; Final
                        instructions; The STATUS file register; The carry and digit carry flags;
                        Pages
                        What caused the reset? Indirect addressing; Some useful (but not vital)
                        tricks; Final PIC5x program - 'Bike buddy'; Chapter 3. The PIC12F50x
                        series (8-pin PIC microcontrollers); Differences from the PIC16F54;
                        Example project: 'PIC dice'; Chapter 4. Intermediate operations using
                        the PIC12F675; The inner differences; Interrupts; EEPROM; Analogue to
                        digital conversion; Comparator module; Final project: Intelligent garden
                        lights; Chapter 5. Advanced operations and the future; Extra timers:

TMR1 & ...; Capture/Compare/PWM; USART: Serial communication; Programming tips
Chapter 6. A PIC development environment Chapter 7. Sample programs; Program A LedOn - Turns an LED on; Program B PushButton (1.0) - If a push button is pressed,turns on an LED; Program C PushButton (2.0) - Shorter version of PushButton 1.0; Program D Timing - LED states toggled every second, and buzzer on every five seconds; Program E Traffic - Pedestrian traffic lights junction is simulated; Program F Counter (1.0) - Counts signals from a push button,resets after 16; Program G Counter (2.0) - Stop reading button twice (otherwise, as Counter 1.0)
Program H Counter (3.0) - Solves button bounce (otherwise, as Counter 2.0)Program I StopClock - A stop clock displaying tenths of seconds to minutes; Program J LogicGates - Acts as the eight different gates; Program K Alarm - An alarm system which can be set or disabled; Program L BikeBuddy - A speedometer and mileometer for bikes; Program M PIC Dice - A pair of dice are simulated; Program N Quiz - Indicates which of three push buttons has been pressed first; Program O Phonecard - To act like a phonecard which decrements a file register Program P TempSense - Displays whether temperature is too hot, too cold or OKProgram Q; Appendix A: Specifications of some Flash PIC microcontrollers; Appendix B: Pin layouts of some Flash PIC microcontrollers; Appendix C: Instructions glossary; Appendix D: Number system conversion; Appendix E: Bit assignments of various file registers; Appendix F: If all else fails, read this; Appendix G: Contacts and further reading; Appendix H: PICKitTM 1 & BFMP Info; Appendix I: Answers to the exercises; Appendix J: Some BASIC commands in assembly; Index

| Sommario/riassunto | John Morton offers a uniquely concise and practical guide to getting up and running with the PIC Microcontroller. The PIC is one of the most popular of the microcontrollers that are transforming electronic project work and product design, and this book is the ideal introduction for students, teachers, technicians and electronics enthusiasts. Assuming no prior knowledge of microcontrollers and introducing the PIC Microcontroller's capabilities through simple projects, this book is ideal for electronics hobbyists, students, school pupils and technicians. The step-by-step explanation |