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		1.4 Microcontroller architectures 1.4.1 RISC and CISC; 1.5 Exercises; 2 The PIC microcontroller family; 2.1 12-bit instruction word; 2.2 14-bit instruction word; 2.3 16-bit instruction word; 2.4 Inside a PIC microcontroller; 2.4.1 Program memory (Flash); 2.4.2 Data memory (RAM); 2.4.3 Register file map and special function registers; 2.4.4 Oscillator circuits; 2.4.5 Reset circuit; 2.4.6 Interrupts; 2.4.7 The configuration word; 2.4.8 I/O interface; 2.5 Exercises; 3 PIC microcontroller project development; 3.1 Required hardware tools; 3.1.1 PC; 3.1.2 PIC microcontroller programmer device

3.1.3 Solderless breadboard 3.1.4 PIC microcontroller and minimum support components; 3.1.5 Power supply; 3.2 Required software tools; 3.2.1 Text editor; 3.2.2 PicBasic and PicBasic Pro compilers; 3.2.3 Programmer device software; 3.3 Bundled development systems; 3.4 Experimenter boards; 3.5 Example project development; 3.6 Other useful development tools; 3.6.1 Simulators; 3.6.2 In Circuit Emulators (ICE); 3.7 Exercises; 3.8 Links to useful web sites; 4 PicBasic and PicBasic Pro programming; 4.1 PicBasic language; 4.1.1 PicBasic variables; 4.1.2 PicBasic mathematical and logical operations 4.1.3 Pic Basic program flow control commands 4.1.4 Other PicBasic commands; 4.1.5 Recommended PicBasic program structure; 4.2 PicBasic Pro language; 4.2.1 PicBasic Pro variables; 4.2.2 Constants; 4.2.3 Comments; 4.2.4 Multi-statement lines; 4.2.5 INCLUDE; 4.2.6 DEFINE; 4.2.7 Line extension; 4.2.8 Accessing ports and other registers in PicBasic Pro; 4.2.9 Arithmetic operators; 4.2.10 PicBasic Pro commands; 4.3 Liquid crystal display (LCD) interface and commands; 4.3.1 Parallel LCDs; 4.3.2 Serial LCDs; 4.4 Interrupts; 4.5 Recommended PicBasic Pro program structure; 4.6 Using stepping motors 4.7 Using servomotors 4.8 Exercises; 5 PicBasic and PicBasic Pro projects; Project 1 - Simple flashing LED; Project 2 - Complex flashing LED; Project 3 - Flashing LED warning lights; Project 4 - Turning on odd numbered LEDs; Project 5 - Binary counting LEDs; Project 6 - Left scrolling LEDs; Project 7 - Right scrolling LEDs; Project 8 - Right-left scrolling LEDs; Project 9 - LED dice; Project 10 - 7-segment LED display counter; Project 11 - 7-segment LED dice; Project 12 - Dual 7-segment LED display; Project 13 - Dual 7-segment LED display counter; Project 14 - Dual 7-segment LED event counter - Project 15 - 4-digit display with serial driver - counter project

Sommario/riassunto	Covering the PIC BASIC and PIC BASIC PRO compilers, PIC Basic Projects provides an easy-to-use toolkit for developing applications with PIC BASIC. Numerous simple projects give clear and concrete examples of how PIC BASIC can be used to develop electronics applications, while larger and more advanced projects describe program operation in detail and give useful insights into developing more involved microcontroller applications. Including new and dynamic models of the PIC microcontroller, such as the PIC16F627, PIC16F628, PIC16F629 and PIC12F627, PIC Basic Projects is a thoroughly practical