What are microcontrollers, anyway? Electronics built into one single chip capable of controlling a small submarine, a crane, an elevator… It's up to you to decide what you want them to do and dump a program with the appropriate instructions into the chip. You're probably wondering what you need for it? Just a PC, a program for compiling and a simple device to transfer your code from the PC to the chip itself. Is it complicated? Absolutely not!

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**Reader reviews**

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“This book is excellent and is a very practical way of taking theory and showing how it is useful when put to practice in many really great applications. The colors are wonderful and the illustration is about the best I have ever seen in any technical book. I teach technical writing at a major university so I ought to know.”

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“For a beginner on PIC C programming like me, this is really an excellent book. It teaches basics of microcontrollers, C language programming, helping the reader to create an entire program (step-by-step). Also, the reader can understand the PIC architecture and learn how use a mikroC PRO for PIC compiler. Finally, the reader can create numerous projects using microcontrollers. I recommend this book to anyone who is thinking to get into world of microcontrollers and embedded programming.”

**“A very good book for beginner learning” by Mike Lawson**
"A very good handbook for beginner learning of PIC microcontroller programming. This book is based on mikroC PRO for PIC compiler, a step-by-step guide for programming PIC in C to project planning."

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Programming PIC Microcontrollers: PIC microcontrollers are a very useful and versatile tool for use in many electronic projects. They are very inexpensive and easy to find. They are also very powerful and many are capable of speeds up to 64 MIPS using the internal oscillator block. Before doing any programming the first step is to build the hardware. Although the PIC18F portfolio is very large, many of the chips have several commonalities. For more detailed information see the “Guidelines for Getting Started with PIC18Fxxxx Microcontrollers” section in your devices datasheet. For detailed pin-outs of the PIC microcontroller see the “Pin Diagram” section in your devices datasheet. Note: VDD = Positive Voltage and VSS = Ground. Connect the MCLR pin through a 1kΩ resistor to VDD.