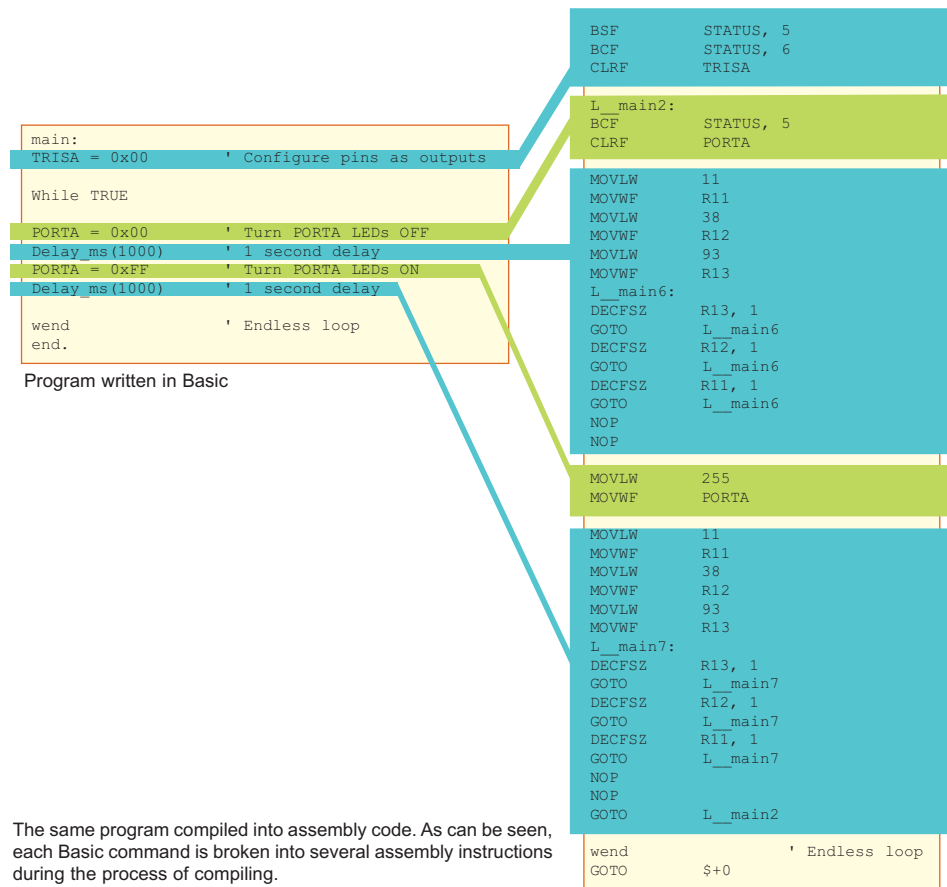


ADVANTAGES OF HIGH-LEVEL PROGRAMMING LANGUAGES

If you have any experience in writing programs for PIC microcontrollers in assembly language, then you are probably familiar with the other side of the medal of RISC architecture - the lack of instructions. For example, there is no appropriate instruction for multiplying two numbers. Of course, there is a way to solve this issue owing to mathematics which enables you to perform complex operations by breaking them into a number of simple ones. Accordingly, multiplication can be easily substituted by successive addition ($a \times b = a + a + a + \dots + a$). And here we are, just at the beginning of a very long story... Still there is no reason to be worried about as far as you use one of the high-level programming languages, such as Basic, as the compiler will automatically find a solution to these and similar issues. Simply write $a*b$.



The same program compiled into assembly code. As can be seen, each Basic command is broken into several assembly instructions during the process of compiling.