

Programming Errors

Compilation: The process of converting the program code written by a programmer (English-like language) into information the computer can understand (machine language).

Logic: A particular sequence of instructions. The relationship of a series of events.

Syntax: A set of rules that establish how program code must be written.

Syntax Error (also known as a Compilation or Compile Error)

Visual Basic has rules for how program code must be written. In order for Visual Basic to convert the English-like instructions (the program code that you write) into machine language the computer can understand, the rules must be followed. If the rules are not followed, Visual Basic will not be able to compile the code (convert the code to machine language).

When you, as the programmer, write a statement of code that violates one of the syntax rules a blue wavy line will appear beneath the incorrectly written code. Letting your pointer hover overtop the statement will display help text (a description of the rule violation).

Logic Error (also known as a Semantic Error)

Sometimes a program compiles and runs as expected but produces unexpected or undesired results; because although you wrote your program correctly (you followed all the syntax rules) the order in which you placed the instructions or statements is incorrect.

Although Visual Basic has many helpful tools, you as the programmer are the only way to find a logic error. To find the error you must carefully read through your program code and test the different statements (sometimes one statement at a time) until you locate the error.

Run-Time Error (also known as an Exception)

As its name indicates, a Run-Time error happens while the program is running. It occurs when the program code instructs the computer to do something it is not capable of doing (violates the rules of the computer). When this happens, the program stops running (“crashes”) and a message box appears informing the program user of the issue. As a programmer, you can prevent many of these errors by using “exception handling” within your code; such as Try...Catch statements.