Debugging

Break Mode: An automatic or manual interruption in the program operation (program execution has stopped) during debugging. When the program stops, the Visual Basic IDE is displayed with a Watch Window.

Bug: An error in a program's code is referred to as a "bug"; such as "I have a bug in my program." The process of locating and correcting any bugs in a program is called debugging.

Exception Handler: A Try…Catch structure.

Message Box: A predefined dialog box that displays a message for the user; often used to alert the user of invalid data.

Programmer Debugging: Fixing existing errors in program code.

Program Debugging: Writing code that will allow unexpected input from a user.

Breakpoint

A breakpoint allows you, as the programmer, to manually enter "break mode" (stop your program during run-time) for the purpose of reviewing how your code is being executed. Being able to isolate code and step through line by line in this way is very helpful when attempting to locate logic errors.

Watch Window

The watch window, available only during break mode, allows you, as the programmer, to monitor the value of variables or expressions as you step through your code. Used in conjunction with the breakpoint, the watch window is a very effective tool for locating logic errors.

Try…Catch

As you gain more programming experience you will be able to anticipate possible run-time errors (exceptions). Try…Catch statements are helpful with handling these exceptions and preventing your program from "crashing". The Try…Catch works by "trying to run" a statement or a set of statements within a "Try" block. If any of the statements being "tried" produce a run-time error (an exception), the run-time error will be "caught" using code you provide within a "Catch" block; this "Trying" and "Catching" is known as "exception handling".