

# 4

## Session Four: Using Names and the Formula Auditing Tools

To make no mistakes is not in the power of man; but from their errors and mistakes, the wise and good learn wisdom for the future.

*Plutarch (46 AD - 120 AD)*

This session introduces Excel's ability to apply a name to a range of cells, a single cell, a formula, a constant or a table. Some problems are almost impossible to solve without names. In this lesson, you'll use name-based techniques to address several common business scenarios.

This session also introduces Excel's superb auditing tools. These will allow you to check your work for mistakes or track down errors when you know that something is wrong. As Plutarch asserts, you *will* make errors when working with Excel (assuming that you are human of course).

By the end of this session, you'll be able to use all of the auditing tools to track down and repair workbook errors.

### Session Objectives

By the end of this session you will be able to:

- Automatically create single-cell range names
- Manually create single cell range names and named constants
- Use range names to make formulas more readable
- Automatically create range names in two dimensions
- Use intersection range names and the INDIRECT function
- Create dynamic formula-based range names using the OFFSET function
- Create table based dynamic range names
- Create two linked drop-down lists using range names
- Understand the #NUM!, #DIV/0! and #NAME? Error Values
- Understand the #VALUE!, #REF! and #NULL! Error Values
- Understand background error checking and error checking rules
- Manually check a worksheet for errors
- Audit a formula by tracing precedents
- Audit a formula by tracing dependents
- Use the watch window to monitor cell values
- Use Speak Cells to eliminate data entry errors