CHAPTER 4: SPREADSHEET SOFTWARE

CHAPTER OUTLINE

I. What Is a Spreadsheet?
   A. Computerized version of an accountant's worksheet
   B. Spreadsheets can calculate totals and perform other mathematical functions automatically
   C. Spreadsheets can multiply, divide, add, subtract, and perform complex calculations such as standard deviation, averages, square roots, and present values
   D. Spreadsheet users can take advantage of "what if" analysis

II. Spreadsheet Structure and Organization
   A. Rows and columns
      1. Row: an area that extends across a page horizontally
      2. Column: an area that extends down a page vertically
   B. Cells and cell addresses
   C. The elements of a spreadsheet screen
      1. Pointer
      2. Current cell indicator and formula bar
      3. Data input area
      4. Status bar
      5. Menus, toolbars, and ribbons
      6. Horizontal and vertical scroll bars
      7. Multiple spreadsheets in one file
      8. WYSIWYG

III. Spreadsheet Fundamentals
   A. Menus/ribbon bar
   B. Inputting data
      1. Text
      2. Values
      3. Formulas
         a. Entering formulas by using arithmetic operators
            =C10+C11+C12+C13
            i. + Addition
            ii. - Subtraction
            iii. * Multiplication
            iv. / Division
         b. Entering formulas by using function commands
            =SUM(C10:C13)
            i. =SUM Sums or adds a list of values
ii.  =AVG  Averages a list of values
iii. =MAX  Finds the maximum value
iv.  =STD  Calculates the standard deviation of a list of values
v.  =COUNT  Counts the nonblank cells in a list of values

c.  Entering formulas by using both arithmetic operators and 
function commands - =SUM(C10:C13)/2

C.  Other spreadsheet features. Spreadsheets have many other commands that you 
can use to perform tasks, including changing cell widths, copying and moving 
data and formulas, and sorting data.
1.  Changing column width
2.  Copying data
3.  Copying formulas
   a.  Absolute cell references - =$C$10+$C$11+$C$12+$C$13
   b.  Relative cell references - =D10+D11+D12+D13
4.  Moving data
5.  Inserting rows and columns
6.  Sorting data
7.  Formatting cells
8.  Saving and retrieving files
9.  Printing reports
10. Macros
11. Charting and graphing
   a.  Bar/column graphs
   b.  Line graph
   c.  Pie chart
   d.  Stacked bar graph

D. Planning a spreadsheet
1.  Keep your spreadsheet simple
2.  Always document your spreadsheet
3.  Make a template of your spreadsheet
4.  Leave room in the upper left corner
5.  Use cell widths wisely
6.  Be careful inserting rows and columns
7.  Rigorously test your spreadsheet
8.  Occasionally read the spreadsheet manual

IV.  Spreadsheets in the Legal Environment
A.  Calculating damages
B.  Legal organization budgeting
C.  Real estate law
D.  Tax planning
E.  Tax preparation
F.  Graphs and charts
G.  Family law
H.  Statistical analysis
I. Tracking investments for trusts and estates

V. Ethical Considerations
   A. Accuracy and competence. Some studies show a normal spreadsheet error rate of 5%.
   B. Ideas for limiting spreadsheet errors
      1. Double-check all numbers for accuracy
      2. Triple-check every formula and use the Formula Auditing command
      3. Use the Comments feature
      4. Create notes at the bottom of a spreadsheet to document assumptions
      5. Be extremely careful when inserting rows or columns where a formula already exists and always go back and double-check the formula for accuracy after you have inserted something
      6. Have a peer review your spreadsheet calculations
      7. Hire an expert if you are not sure if your spreadsheet methodology is correct
      8. Before using a new function, a user should completely understand what the function does
      9. Use a calculator to spot-check the spreadsheet to insure formulas are accurate
     10. Use the Protect function to protect cells from being accidentally deleted, particularly ones with complex calculation
     11. Password-protect spreadsheet files that are confidential or important
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