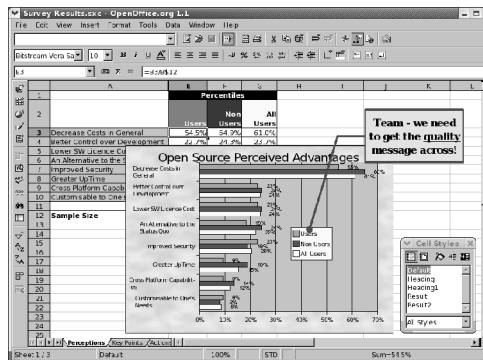


OpenOffice.org Calc



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- Screenshot © Erwin Tenhumberg, erwin.tenhumberg@Sun.COM

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- to make derivative works

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Quick Start

- File -> New -> Spreadsheet
- Tools -> Options
 - configure Spreadsheet & Chart
 - measurement units, what the Enter key does (move/switch to Edit mode), calculation accuracy, sort lists, change control, grid setup
- Tools -> Configure
 - what's on the status/function bar

Keyboard Shortcuts

- Backspace – deletes contents of cell
- F9 – recalculates the spreadsheet (Tools -> Cell Contents -> AutoCalculate)
- Home – move to first cell in row
- End – move to last cell in row, corresponding to the last column
- Shift+F4 – absolute & relative cell references
- Shift+F5/F6 – trace dependents/precedents
- Ctrl+PgUp/PgDown – move to previous/next sheet

File-format Compatibility

- Microsoft Excel files, Lotus 1-2-3, CSV based files, HTML based files as well as dBase files can be opened.
- Saving to all the formats listed above is allowed, except for Lotus 1-2-3.
- When importing CSV/Tab-separated files, its a little different in comparison to Excel (in terms of the delimiters used).

Entering Text & Numbers

Before applying line break

	A	B	C
1	This text runs across too wide		
2	This text runs across too wide		

- If text is wider, re-align it

- Right-click cell -> Format Cells
- Alignment -> Line Break
- Hyphenation as an option

After applying line break

- Filling

Use mouse to drag downwards

1
2
3
4
5
6
7

- exactly the same data
- incremented data

Selection Lists

- Displays all text entered within a column

Selection Lists
Lists
At
Work
At
Lists
Selection
Work

Right-click here

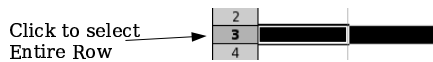
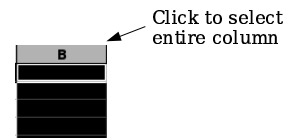
- As long as pre-requisite knowledge exists about spreadsheet usage, inserting into spreadsheets is not a new idea.

	A	B	C
1	13		
2			

Just type your numbers/text into an appropriate row/column

- Filling in exactly the same data, you just need to Control+click the cell, and drag in the direction you want to fill it in.
- If filling by incrementing data is the aim, click the bottom right-hand corner of the cell, and drag it down till you want the incremented data to stop.
- Selection Lists display all text entered within a column, for reuse. Right-click a cell, and choose Selection List. Now, you can input text that's already been inputted earlier (great for repetitive text).

Columns & Rows



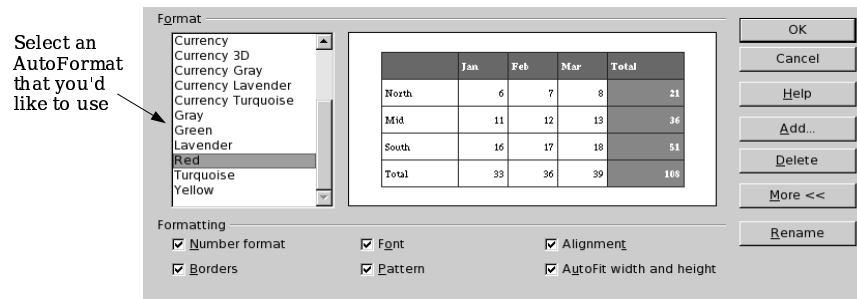
- Resizing rows/columns are done via clicking & dragging
- Insertion/Deletion of rows/columns happen by right-clicking the cell

Relative & Absolute Cell References

- A1 – relative reference, which is good for automatic fill across rows.
- \$A\$1 - absolute reference to the column and row, good for referencing cells that will never change location.
- \$A1 – absolute reference to the column and relative reference to the row.

AutoFormat

- Select the area, Format -> AutoFormat





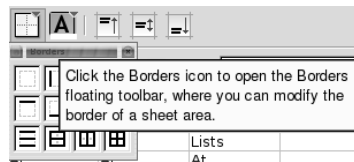
- AutoFormat only works when you have more than three rows and three columns. Anything less than that, and AutoFormat is disabled in the menu.
- Clicking More, shows the Formatting overrides that will be applied to the spreadsheet. If you feel that keeping the Font similar, un-tick the Font option, so that your fonts stay the same and will not get over-written by the AutoFormat.

Exercise: Create your own AutoFormat

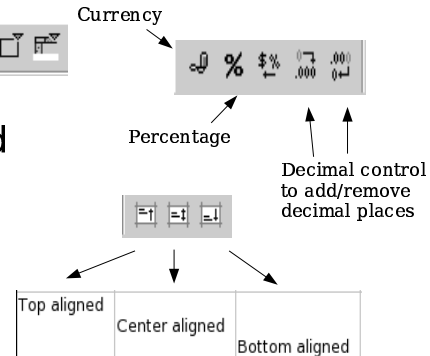
- Start by formatting a spreadsheet the way you want it to look. A tip is that no data needs to be included, just row, column and cell formatting (well, having data helps visualize it).
- Select the formatted area, choose Format -> AutoFormat. Click on Add, give it a name, and click OK. You will now have a new AutoFormat to use.

Cell Formatting

- Set the Font Color 
- Set the Background Color 
- Set Borders around cell



Quick number formatting to cells can be applied by clicking on the Currency or Percent icons on the Object bar.




- Select cells, right click them, and use the Format Cells option. Here you can control the cell attributes, like fonts, font effects, alignment, borders, and so on.
- An option to enable cell protection exists as well.

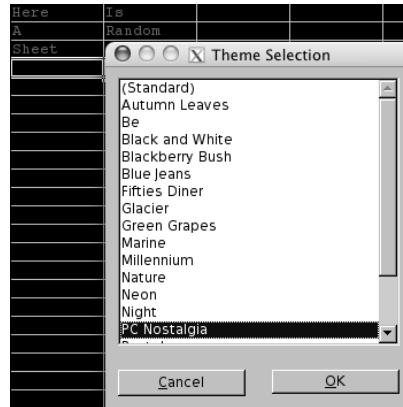
Page Setup & Breaks


- Format -> Page
 - Page options (like A4 size), etc...
- View -> Page Break Preview
- Non-scrolling horizontal/vertical regions
 - Select area, Window -> Freeze
- Splitting views
 - Select area, Window -> Split

- Splitting views can be handy in a large spreadsheet, or on a monitor with a very low resolution.
- Re-sizing the split window is performed by moving the cursor over the split line until it changes shape.

Styles

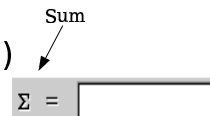
- Exists in Calc too
 - Cell Styles – all elements, cell formatting included
 - Page Styles – margins, borders, headers/footers
- Themes can be easily applied 



- The button for themes () can be found at the main toolbar.

Calculating & Manipulating Data

- Dmaths - <http://www.dmaths.com/>
 - Writing formulas & vectors simplified
- Remember, left-to right calculations, with algebraic ordering rules
 - $=5+15*2-12/3+4$ gives 15 or 35?
- Functions are powerful
 - $=A1+A2+A3+A4$ -> $=SUM(A1:A4)$
 - Click the Sum icon too



Some basic operators:

- = - all formula must begin with this ($=2+4$)
- ^ - exponent for power raising ($=10^2$)
- * - multiply
- / - divide
- + - add
- - subtract
- : - range of included cells ($=sum(A1:A5)$, means cells A1, A2, A3, A4, and A5)
- ; - non-consecutive range of cells ($=sum(A1;A4;A7)$, means sum of cell A1+A4+A7)

Remembering BODMAS (control via parentheses) is handy.

Some Boolean operators:

- < - less than
- > - greater than ($=if(A5>B5;"This is going well";"Happy I am!")$)
- <= - less than or equal to
- >= - greater than or equal to
- <> - not equal to

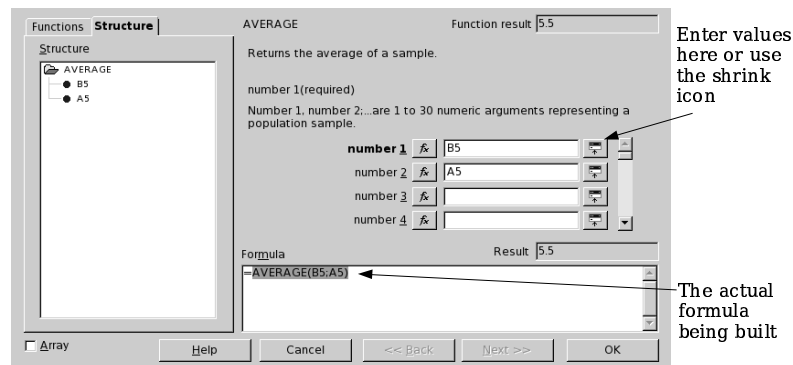
•Control + click to include non-adjacent cells while you're making use of the Sum icon.

Function AutoPilot

AutoPilot



- Wizard to help build formulas



- Great for prototyping functions, as the results are shown in the Function result field.
- The Functions tab lists all available functions, while the Structure tab shows the structure of the formula in question.
- The shrink icon is allows you to select cells via the mouse, rather than typing them in manually.

Sorting Data

- Select cells you want sorted
- Data -> Sort
- Set sort options, Sort!
- Can sort by one option, then by another (depending on how complicated the sort is)

Whom	Amount
Sander	29
Dan	18
Louis	32
Colin	19

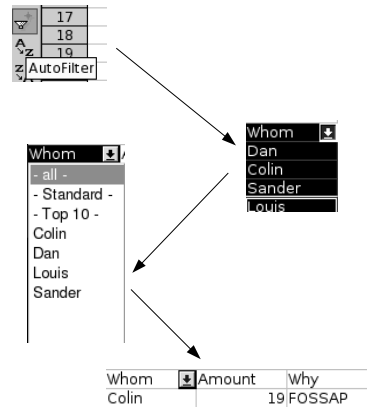
Apply the sorting by Amount, and use Ascending amounts in this example

Whom	Amount
Dan	18
Colin	19
Sander	29
Louis	32

- The Options tab has plenty of settings. Default sorts are case insensitive – turning this on if need be is an option.
- Changing the direction of sorting is also a useful option.

Filtering Data

- AutoFilter – displays only the data you want to see
- Select cells, click the AutoFilter icon, then click the drop down heading
- Select an option, and the data is filtered



- If the AutoFilter icon doesn't exist, Data -> Filter -> AutoFilter will perform exactly the same action.
- In the above example, the entire Whom column was selected, the AutoFilter was applied, upon choosing, the entry "Colin" was chosen, and the subsequently displayed data was "Colin 19 FOSSAP". All the other data gets "hidden", when the AutoFilter is in use.

Conditional Formatting

- Format -> Conditional Formatting
- Remember to set Styles for the formatting to work

Whom	Amount	Why
Dan	18	WWDC
Colin	19	FOSSAP
Sander	3229	OSWC
Louis	1	LA

Conditional Formatting has been applied with the Heading 1 style, and the text has changed.

The condition

Conditional Formatting

Condition 1

Cell value is 20

Cell Style

What to do?

Combining cells

- Simple concatenation:

Age: 54

 - ="Age: "&B1
- More "advanced" usage includes:
 - =CONCATENATE("He is ";B1;" now, and will be ";SUM(B1+1);" next year.")

54	
He is 54 now, and will be 55 next year.	A call to SUM() was performed.
- When would you merge cells?

- Concatenation is one of the functions that Calc offers.

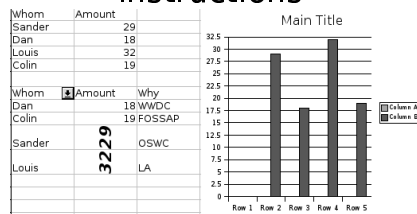
Exercise: Merging cells

- Input some data, that you concatenated before – using the example above is fine.
- Select the cells, Format -> Merge Cells -> Define. Notice now that the value becomes text?
- Un-merging via Format -> Merge Cells -> Remove will not bring the formula back for you!
- This is a warning to show that merging cells where there are active formulas is probably a bad idea.

Charts



- Select cells, click Insert Chart
 - Give it a position; follow on-screen instructions
- Double-click chart to go into Edit mode
- Right-click on chart
 - Chart wall & area
 - AutoFormat Chart Wizard



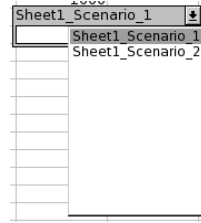
- When inserting a chart, the process is rather simple. First give it a position, by clicking anywhere in the spreadsheet (it can be in another Sheet as well). The AutoFormat chart pop-up appears, showing the selected range. You might want to make sure the First column as label and the First row as label options are ticked (so you get a “nice” legend”). Select the type of chart (scatter, pie, bar, etc...), select where grid lines should be, give it a title, and voila! you have just created a chart.
- The toolbar for Edit mode is displayed in the left hand side.
- The AutoFormat Chart Wizard is very useful – you can make extensive changes to the chart here, including changing the type of chart, backgrounds, and others.

Protecting cells

- Tools -> Protect Document -> Sheet/Document
 - Enter a password (and remember it)
- Right-click on the cell(s), Format Cells, and in the Cell Protection tab, tick "Protect"

Scenarios

- Select cells
- Tools -> Scenarios
 - Give it a name
 - Click OK
 - Value can now be changed within the sheet
 - Repeat to add more scenarios
- Scenarios are viewable in the Navigator



Goal Seek

Setup the formula

- Finds unknown variables
- Tools -> Goal Seek

Enter expected target value

When it runs, it finds an appropriate figure if successful

	A	B	C	D	E	F
1	Company	Lots	Purchase	Sell	Value	
2	OpenOffice.org	100	1.54		=(D2-C2)*B2	

Goal Seek dialog box settings:

- Formula cell: \$E\$2
- Target value: 5500
- Variable cell: \$D\$2

Success message: Goal Seek successful. Insert result (56.54) into current cell?

Company	Lots	Purchase	Sell	Value
OpenOffice.org	100	1.54	56.54	5500

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- Used when trying to achieve a goal. In the example provided, with an expected value from the lots you own, to make a profit, the formula is setup in F2. Since the aim is to make a profit, you need to know the value to dump the lots at – so this is the variable cell. The target value is what you hope to achieve (profit).

Other stuff...

- Revision control is like Writer
- Inserting Notes
 - Click cell, Insert -> Note
 - Type away
 - Help -> Tips must be enabled
 - Else note is not visible

Red dot
denotes
note

Why
WWDC
FOSSAP
OSWC

On mouse over,
the note is
displayed

FOSSAP
Consultations
Why
WWDC
FOSSAP
OSWC

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- Remember, to put all data in a separate cell.
- The logical break up of information in spreadsheets is essential.
- If calculated values are incorrect, check all entered values correctly; if it involves formulas, make sure you check the parentheses usage.
- Use Value Highlighting to see different sets of elements within a spreadsheet – View -> Value Highlighting

Company	Lots	Purchase	Sell	Value
OpenOffice.org	100	1.54	56.54	5500

Printing

- Many options to control
- Repeating rows across pages
 - select row to repeat
 - Insert -> Names -> Define
 - give it a name, and select “Repeat row”
 - Format -> Print Ranges -> Edit
 - under the “Rows to repeat” section, choose the name provided earlier

Things you can change include:

- Page style window – Format -> Page Style
- Print Options window
- Cell Attributes window (like keeping protected cells from being printed)
- Print Ranges – Format -> Print Ranges
- Page breaks

Thank You!

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