

## tabulata by example

tabulata calculates and aggregates list-based data. Its expressions are versatile and easy to read and use.

The budgeting example displayed to the right introduces the terminology and showcases the way tabulata lets you manipulate list values and expressions. The expressions are editable when a field is selected. On the example to the right, they are displayed with orange borders next to the calculated values.

A block (1) is a collection of singulars (2) and lists (3). It is displayed on the home screen in condensed form.

A singular has a name (4) and an expression (5). When the singular is starred (6), it appears on the condensed block on the home screen.

Columns are referenced using the notation ListName.ColumnName, they represent objects on which functions like count and select can be invoked.

A list is named (7) and consists of columns. A column contains either values (8) or an expression (9). Columns and rows can be added using the „+“-button (10).

In an column expression, just the column name is used to access the corresponding value in the same row, or ColumnName.above to access the value one row above (11).

A list aggregation is created using a column expression which renders a list, here „uniques“ gives each values once. Aggregated data then can be calculated in the other columns by using „select“ and „sum“ over the other tables.

Column	Expression
Category	Transactions.Category.uniques
Budgeted	Budget.CategoryBudget.select(Category == Budget.Category).sum
Actual	Transactions.Price.select(Category == Transactions.Category).sum
Difference	Budgeted - Actual

The screenshot displays the tabulata application interface with several numbered annotations (1-11) highlighting key features:

- 1**: A block containing singulars and lists.
- 2**: A singular with a name and an expression.
- 3**: A list named 'Transactions' containing columns.
- 4**: A column name 'Total Spent'.
- 5**: An expression 'Transactions.Price.sum'.
- 6**: A star icon indicating a starred singular.
- 7**: A list named 'Transactions'.
- 8**: A column containing values (e.g., 25, 18, 5, 105, 3,5).
- 9**: A column containing expressions (e.g., 'Price \* TaxRate').
- 10**: A '+' button used to add columns or rows.
- 11**: An expression 'PriceSum.above + Price' accessing data from the previous row.

The interface shows a 'Budget' block with a table of transactions and a 'Transactions' block with a table of budgeted and actual values.

Category	Item	Price	Tax	Price Sum	When
Food	Dinner	25	2	25	2012-03-12T14:...
Fun	Cinema	18	1.44	43	2011-03-12T14:...
Food	Pizza	5	0.4	48	2012-03-12T14:...
Car	Gasoline	105	8.4	153	2012-03-12T14:...
Food	Ice Cream	3,5	0.28	156.5	2011-03-12T14:...

Category	Budgeted	Actual	Difference
Car	100	105	-5
Food	20	33.5	-13.5
Fun	20	18	2