

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

The budget example to the right introduces the terminology and showcases the way tabulata lets you manipulate **lists**, **values** and **expressions**. By default calculated values are displayed, the expression generating the value can be edited when the calculated value is selected. In the example, the expressions are printed overlaid with orange borders.

A **block** (1) is a collection of **lists** (2) and **singulars** (3). It is displayed on the **home screen** in condensed form, as shown here. Selecting the block opens it for editing.

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

A list is named (7) and consists of columns. A **column** contains either values (8) or an expression (9). Columns and rows are appended using the „+“-buttons (10).

In an expression, `ListName.ColumnName` references the contained or calculated data in list form. On that **list object** functions like `sum`, `count` and `select` are called using `ListName.ColumnName.functionName`.

A **column expression** is calculated for each row of the list. `ColumnName` accesses the corresponding value in the same row, `ColumnName.above` the value one row above (11). Singulars can be referenced (9).

A **list aggregation** is created with an expression which returns a list in the first column. In the example (12) `uniques` returns a list with each value of the referenced column contained once. Aggregated data is then calculated in the other columns by using `select` and `sum` over the other table columns.

| Column     | Expression  |
|------------|---|
| Category   | <code>Transactions.Category.uniques</code>                                    |
| Budgeted   | <code>Budget.CategoryBudget.select(Category == Budget.Category).sum</code>    |
| Actual     | <code>Transactions.Price.select(Category == Transactions.Category).sum</code> |
| Difference | <code>Budgeted - Actual</code>  |

1

Budget

Control • Budget • Transactions

2

Total Spent156.5

Total Budgeted140

Number Of Transactions5

Spent In Categories Over Budget138.5

HomeBudget

★ Total Spent4156.5Transactions.Price.sum5

★ Total Budgeted6140Budget.CategoryBudget.sum

★ Number Of Transactions5Transactions.count

★ Tax Rate0.080.08

★ Spent In Categories Over Budget138.5Control.Actual.select(Control.Difference < 0).sum

+

ControlBudgetTransactions7+ New

CategoryItemPrice8Tax9Price SumWhen

FoodDinner252252012-03-12T14:10

FunCinema181.44432011-03-12T14:11

FoodPizza50.4482012-03-12T14:4

CarGasoline1058.41532012-03-12T14:4

FoodIce Cream3,50.28156.52011-03-12T14:4

+

ControlBudgetTransactions

CategoryCategory Budget

Food20+

Fun20

Car100

+

ControlBudgetTransactions

CategoryBudgetedActualDifference

Car100105-5+

Food2033.5-13.5

Fun20182