

A Definition of the Custom Formulas CF file format

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The Custom Formulas app for Android exports and imports formula groups in a semi-colon (;) delimited text format with each line starting with a keyword such as “GROUP”, “FORMULA”, “INPUT”, or “OUTPUT”. These lines are usually indented with tab characters to indicate the hierarchy, but this white space is optional.

The structure of CF files is shown below.

A formula group begins with the keyword “GROUP”. A formula group can contain one or more formulas, each of which can contain the definitions of zero or more input variables (usually the variables used on the right hand side of the expression that have not been defined in previous formulas), and one output variable (the variable on the left hand side of the equals sign).

GROUP;group_name;group_description

FORMULA;formula_name;sort_order;output_variable=expression

INPUT;variable_name;variable_description;sort_order;precision

INPUT;variable_name;variable_description;sort_order;precision

 ...

OUTPUT;variable_name;variable_description;sort_order;precision

FORMULA;formula_name;sort_order;output_variable=expression

INPUT;variable_name;variable_description;sort_order;precision

INPUT;variable_name;variable_description;sort_order;precision

 ...

OUTPUT;variable_name;variable_description;sort_order;precision

...

Example file:

GROUP;Compound interest;Computes the compound interest over a given time period

 FORMULA;;2;A=P * (1+(r/100)/n)^(n*t)

 INPUT;P;Principle (\$);1;2

 INPUT;r;Annual interest rate (%);2;4

 INPUT;n;Number of times compounding per year;3;4

 INPUT;t;Number of years;4;4

 OUTPUT;A;Amount accumulated after n years (\$);1;2