

## RedCrab - The Calculator, Update History

	Freeware	Shareware
<b>Version</b> <b>4.21</b> 26.06.2012	New features:  The Freeware can load data sheet which includes shareware programs and the worksheet is free to use. But the program code is read only and file saved is disabled.	Bug fix:  Invalid symbols in program code can freeze the program.  Bug in Undo function fixed.  Problem with saving of PHP files fixed.
	The display settings of FIX and FLT buttons, number of displayed digits and the EXP (exponent) are saved to data files. Reload of the files restores the settings.  New program modules for conversion of length, areas, volume etc.  Bug fix in display module	
<b>Version</b> <b>4.20</b> 16.06.2012	- Bugfixes - Insert function upgraded - Content of chart boxes can be zoomed	- Write your own functions in RedCrab's built-in programming language  - Writing and running PHP programs in RedCrab's integrated programming environment.  - Access to Microsoft Excel Tables - Access to database Microsoft Access - Access to database MySQL via TCP/IP - Import of data lists via text files, - Input of data list in text editor
<b>Version</b> <b>4.14</b> 20.05.2012	<b>New features:</b> <ul style="list-style-type: none"> <li>- <i>DTime</i> returns the <i>DateTime</i> value for date and time calculation</li> <li>- <i>DTimeF</i> formats <i>DateTime</i> in year, month, day, hour, minute and second</li> <li>- <i>DateTime</i> values can be displayed as formatted text in result boxes.</li> <li>- <i>Det</i> returns the determinant of a 2x2 or 3x3 matrix.</li> <li>- <i>Invx</i> inverse a 2x2 or 3x3 matrix.</li> <li>- In field-definition you can optionally specify the increment of a range.</li> <li>- Display of tables improved.</li> </ul>	

<b>Version 4.13</b> 12.04.2012	<b>New features:</b> <ul style="list-style-type: none"> <li>- Access to single cells in multidimensional fields.</li> <li>- Dim(x) returns the number of dimensions of data fields.</li> <li>- Cols(x) returns the number of columns of data fields.</li> <li>- Rows(x) returns the number of rows of data fields.</li> <li>- Input of binary- and octal numbers.</li> <li>- Output of binary- and octal numbers in result boxes.</li> </ul> <b>Bug-fixes:</b> <ul style="list-style-type: none"> <li>- Runtime error by invalid input of: <math>x=x[1..4]</math> fixed.</li> <li>- Flickering of function panel (right) by pressing of <b>Ctrl</b> + <b>Enter</b> fixed.</li> <li>- Runtime error by invalid option in result boxes fixed.</li> </ul>
<b>Version 4.12</b> 19.03.2012	<b>New features</b> By chart boxes, the option X/Y position allows the free definition of <i>X</i> and <i>Y</i> coordinates.  <b>Bug-fixes:</b> Run time error fixed in display module: problem happened when displayed single-column field or more chart boxes. Use of constant “e” results in a wrong error message.
<b>Version 4.11</b> 05.03.2012	<b>New features</b> <ul style="list-style-type: none"> <li>- The decimal key below the numeric keypad (point / comma) produces a decimal point always, regardless of the country setting.</li> <li>- For the function "SUM ()" you can use alternate the Greek letter "Σ".</li> </ul> <b>Bug-fixes</b> CPU freezes when subscript symbols were behind a number. Corrected error message when field definition is wrong [1..(a*b)].
<b>Version 4.10</b> 04.02.2012	<b>New features</b> for field and financial calculation  <i>AddIn, AddTo, AddOn, MulIn, MulTo, MulAd, Patt</i>  <b>Bug-fix:</b> When inserting columns, problems occurred when result was behind a formula. Mouse pointer showed wrong symbol when leaving text box. Runtime error under Linux OS / Wine fixed.
<b>Version 4.0</b> 18.12.2011	Difference to 4.0 beta, improvements in details, particularly in display of chart boxes and tables.
<b>Version 4.0.beta</b> 05.12.2011	<b>News in Version 4.0:</b>  Calculation with multidimensional data fields.

	<p>Chart boxes to display results graphically. Variable overload</p> <p>Standard Functions:</p> <p><b>Round</b> rounded to the nearest whole number. <b>Int</b> returns the integer part of a value. <b>Frac</b> returns the fractional part of an argument. <b>Rnd</b> returns a random integer number. <b>Abs</b> returns the absolute value of numbers and fields.</p> <p>Functions / operators of dynamic data fields:</p> <p><b>Join</b> connects one or two-dimensional fields with each other. <b>Fill</b> fills all elements of a field with a specified value. <b>Mulx</b> operator for multiplication of matrices. <b>Trans</b> producing the transpose of a matrix . <b>Min</b> return the minimum value of fields. <b>Max</b> return the maximum value of fields. <b>Count</b> returns the number of elements of fields. <b>Aver</b> returns the mean values of successive elements of fields. <b>URnd</b> fills a field with a series of unique random numbers.</p> <p>Statistic functions</p> <p><b>Sum</b> returns the sum of the elements in fields. <b>Prod</b> returns the product of all elements of fields. <b>Cusum</b> returns cumulative sum. <b>Sort</b> sorts field elements from low to high values. <b>DSort</b> sorts field elements from high to low values . <b>Median</b> returns the median value of fields . <b>Mean</b> returns the mean value of field. <b>Var i</b> returns the variance of data fields . <b>SVar i</b> returns the variance of an exsample. <b>StDev</b> returns the standard deviation of data fields. <b>SStDev</b> returns the standard deviation of examples. <b>Diff</b> returns the difference values of successive elements of fields. <b>LQuart</b> returns the value of the first quartile. <b>UQuart</b> returns the value of the third quartile. <b>QRan</b> returns the area from the 1<sup>st</sup> to 3<sup>rd</sup> quartiles.</p>
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