

MCalc

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REVISION HISTORY

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Chapter 1

MCalc

1.1 MCalc.guide

Welcome to MUIProCalc v1.1. This is a short description on how to use MUIProCalc and what possibilities it offers. Anyway, it is a quite powerful calculator, also suited for programmers who have to deal with different computer specific calculations and values.

MUIProCalc doesn't stand for MUI'Professional'Calc. It is meant to stand for MUI'Programmer'Calc...

MUIProCalc (MCalc) is (C) 1993 Kai Iske, GiftWare

The icon for MUIProCalc was taken from the ToolManager 2.0 distribution and was designed by Michael 'Mick' Hohmann.

MUI is Copyright (C) Stefan Stuntz

NOTE that you better set the stack size to at least 8192 bytes

Copyright

Copyright notice and status

Guarantee

What I guarantee

Evolution

Why did I write MUIProCalc

Thanks

Whom I must say 'thank you'

How to obtain updates

What am 'I' supposed to do

How to reach the author

This is my address

Installation

How to install MUIProCalc

Using MUIProCalc

Well, how to use it ?

Preferences

How to set up MUIProCalc

History

Program History

1.2 MCalc.guide/Copyright

Copyright

You are allowed to copy and spread this program but only if you do not make any commercial profit out of the program itself and all supported files. The source of MUIProCalc is considered teachware and the author claims the right to be the only one to produce and distribute new versions of MUIProCalc. Public Domain vendors are not allowed to sell MUIProCalc for more than the price of a regular disk, which should not be higher than 5 Dollars.

MUIProCalc is GiftWare, so if you like it and you you want to express your feelings, feel free to send me anything you think of being suited. Postcards, cookies, money, simply anything ;)

1.3 MCalc.guide/Guarantee

Guarantee

The author does not give any guarantee that the program MUIProCalc works perfectly. The program was tested and it is used every day, anyway nobody is perfect and that is why I can not take the responsibility for any damages occurred during the usage of MUIProCalc.

1.4 MCalc.guide/Evolution

Evolution

Due to the fact that I was still using Calc 3.0, written by Jimmy Yang, which wasn't that compatible to newer Kickstarts, I thought about writing a new one, since I couldn't find any calculator suited my needs. Not that Calc 3.0 was/is buggy, but it's just the fact that it isn't font adaptive. Furthermore I wanted to know how powerful MUI really was, so I thought it'd be a good idea to write it using MUI.

Taking Calc 3.0, I tried to implement the functionality of this calculator, putting it into a MUI-GUI. What is still missing is the plotter. This may change in a later release.

One word to the parser: The grammar might not be perfect. There's only a small amount of syntax checking, in order to minimize parser size. Float value error handling isn't perfect either, yet. I just wanted to have a calculator as soon as possible. All this will change in future releases, if there are enough of replies.

1.5 MCalc.guide/Thanks

Whom I must say 'thank you'

I would like to thank the following people

'Dirk Federlein'

For betatesting and suggestions

'Stefan Stuntz'

Especially for MUI and for answering all my questions...

'My girlfriend'

Who accepts what I'm doing

...and all the others I forgot

1.6 MCalc.guide/UpDates

How to obtain updates

MUIProCalc will be available on ADS, FRAS, FTP, and Fred Fish disks as soon as there's a new release available.

1.7 MCalc.guide/Address

How to contact the author

If you have any questions, suggestions, bug reports or anything else you want to tell me, you may contact me under one of these addresses.

Either use normal snail mail:

Kai Iske
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63452 Hanau
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Tel.: +49-(0) 6181-850181

or reach me using electronical mail

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FIDO: Kai Iske, 2:244/6302.11
ZNET: KAI@SWEET.ZER

1.8 MCalc.guide/Installation

Installing MUIProCalc

Installing MUIProCalc isn't that hard. First of all you should get hold of MUI (MagicUserInteface) and install it. MUIProCalc relies on MUI, since the complete User Interface was written using this great system.

Having installed MUI (if you haven't done so already), you may copy the program 'MCalc' and it's icon 'MCalc.info' to a place you like.

If you want to use the online help, you have to have AmigaGuide(C) installed. If so, move the supplied 'MCalc.guide' file to the same directory you moved the main program to.

That's it. In order to get online help, simply position the mouse over the object you want to get help for and MUIProCalc will pop up a window containing the help text.

One word to the menu shortcuts : They might not be Style Guide compliant, but I think it'll work just fine, anyway ;)

NOTE that you better set the stack size to at least 8192 bytes

1.9 MCalc.guide/Usage

Using MUIProCalc

Well, it isn't that hard to use MUIProCalc. The main input window is divided into three areas, which are

Input/Output

Where you type and where you read

Function tables

Available functions

Input fields

Which numbers and characters to use

Menus

MUIProCalcs menus

Within the window's titlebar you'll see the currently selected output modes. The first char is for base, the second for size, the third for sign and the fourth entry is for angle settings.

1.10 MCalc.guide/InputOutput

The input/output area

=====

Within this area (the upper) you see a String gadget and a ListView gadget. The String gadget is used to enter the expressions you want to calculate.

Within the ListView you see a history of all entered expressions and results. Per default the left column of the ListView is used to display the expression, whilst the right one reflects the result. You may set the number of lines bufferd using the Preferences. Furthermore you may tell MUIProCalc how to format the entry, i.e. you may have four different output types. See

History settings

, to find out more about

history settings.

1.11 MCalc.guide/FuncTables

Function tables

=====

Within this area you'll find all the functions supported by MUIProCalc. Simply click on the function you want to be added to the expression. You will also notice a Cycle gadget. This one may be used to switch between two function tables. The first set is a more mathematical set, whilst the second might only be of use to programmers. There are functions for bit-manipulation etc.pp.

This Group may be hidden, thus leading to more space. See

Window layout
, to find out more about that.

1.12 MCalc.guide/Inputs

Input fields

=====

These are buttons probably known from any other calculator. Simply click on the digit/operator you want to add to your expression. The characters 'A-F' are used to enter hexadecimal values. The other characters 'X-Z' are memories. These can be set using an expression of the form

$$x = \text{sqrt} (2*3)$$

This expression will set memory 'X' to the result of 'sqrt (2*3)'. You may now use this value during other operations. You may even set a memory relative to another one, like

$$x = y + \text{sqrt} (2*3)$$

MUIProCalc supports four different value formats, these are :

'Decimal'

Decimal values are entered with no additional characters, like '2.12322'. You may even enter doubles using scientific notation, like '2.123e-2'

'Hexadecimal'

These values are preceded by a '\$'-sign or by '0x'

'Octal'

These values are preceded by a '\'-sign

'Binary'

These values are preceded by a '%'-sign

The '!' operator is used to calculate the factorial of a value. This one is limited to a value of !170.

The 'Exec' button may be used to 'start' the calculator. This can

also be done, by simply hittin RETURN from within the String gadget

'CLR' clears the current display.

'ACLR' will clear the display and all memories

This Group may be hidden, thus leading to more space. See

Window layout
, to find out more about that.

1.13 MCalc.guide/Menus

The menus

=====

MUIProCalc offers a set of menus. These are :

Project	The Project menu
History	Picking entries from the history
Display Bases	How to format the output
Size	Output value size
Sign	Signed/Unsigned output
Angle	How to interpret the angle

1.14 MCalc.guide/Project

Project

The Project menu offers three entries :

'Preferences...'
Will open the Preferences editor (see
Preferences

)

'About...'

Will display about messages

'Quit'

Will quit MUIProCalc

1.15 MCalc.guide/PickHistory

History

If you prefer to use your mouse or the menu shortcuts you may paste an entry from the history to the current cursor position from within this menu :

'Pick left entry'

Will pick the left entry from the list and paste it to the current cursor position. If only one column is shown, this will be used (see

Preferences
) .

'Pick right entry'

Will pick the right entry from the list and paste it to the current cursor position. If only one column is shown, this will be used (see

Preferences
) .

1.16 MCalc.guide/Bases

Display Bases

This menu may be used to set the display mode for output. You may have 'Decimal', 'Hexadecimal', 'Octal', or 'Binary' output.

In any other mode than 'Decimal' there will be no difference between 'Signed' and 'Unsigned' modes (see

Sign
) .

The default output type may be set using
Output settings

.

1.17 MCalc.guide/Size

Size

For the 'Hexadecimal', 'Octal', and 'Binary' modes (see

Display Bases

), you may set an output value size (number of bits).

This will reduce/increase maximum numbers.

The default output type may be set using

Output settings

.

1.18 MCalc.guide/Sign

Sign

For 'Decimal' output (see

Display Bases

), you may have signed or

unsigned results, when you enter 'Hexadecimal', 'Octal', or 'Binary' values.

The default output type may be set using

Output settings

.

1.19 MCalc.guide/Angle

Angle

For trigonometrical functions you may set the type of angle you've entered. If you set 'RAD', the values will be interpreted as of type radiant, but if you set 'DEG' angles will be interpreted as of type degree.

The default output type may be set using

Output settings

.

1.20 MCalc.guide/Prefs

Preferences

Within the Preferences window you may configure some of MUIProCalc's default values. These are :

```

Window layout
    How the main window should be set up

Output settings
    Default output modes

History settings
    Set up history ListView

Misc
    Miscellaneous
  
```

Furthermore the active function table, set with the 'Functions' cycle gadget within the main window, will be taken into account.

'Use'
will use the current settings and store them temporarily, so if you restart MUIProCalc, these settings will be used again.

'Save'
will save/store the settings on disk.

'Cancel'
will restore the previously used values.

1.21 MCalc.guide/Layout

Window layout =====

Within this group there are two CheckBox gadgets. if the 'No Functions' CheckBox is set, the main window will not contain the function tables. If not the function tables will be displayed. If you set 'No Input' the input fields will not be displayed. If you clear this CheckBox, the lower gadget group will be displayed.

Using the 'In/Out Order' gadget you may control the ordering of the input String gadget and the output ListView gadget. When 'Input then

'Output' is selected, the String gadget will appear 'on top' of the ListView. Otherwise ('Output then Input') it will appear underneath the ListView.

1.22 MCalc.guide/Output

Output settings

=====

You may set the default values for 'Display Bases', 'Size', 'Sign' and 'Angle' here.

See

Display Bases

Size

Sign

Angle

1.23 MCalc.guide/History

History settings

=====

Using the 'Lines' Slider gadget you may adjust the maximum number of lines to capture during a session.

With the 'Entries' Cycle gadget you may set the output format for the history. You may choose from the following formats :

'Input & Ouput'

Within the left column you'll see the expression entered. In the right column there'll be the result for that expression.

'Output & Input'

Is the opposite to the above

'Input'

Will only show your input expression

'Output'

Will only show the result

1.24 MCalc.guide/Misc

Misc

====

The 'Flush memory' CheckBox gadget may be used to tell MUIProCalc to flush all unused libraries (including unused MUI-Classes) from memory on exit, thus freeing all that precious memory used up by MUIProCalc.

1.25 MCalc.guide/PrgHistory

Program history

Revision V1.1

created on Tuesday, 12.10.93 01:50:26 by Kai Iske. LogMessage :
-* changed on Sunday, 17.10.93 15:03:10 by Kai Iske. LogMessage :
- Save and Use gadgets weren't arranged as proposed
by the AUISG. (Reported by: Stefan Stuntz)
- Changed layout of Prefs window a bit
(Suggested by: Stefan Stuntz)
-* changed on Friday, 15.10.93 18:39:50 by Kai Iske. LogMessage :
- NOT operator didn't behave as expected ;) It was a simple
negate... (Reported by : Top on IRC)
-* changed on Thursday, 14.10.93 18:01:32 by Kai Iske. LogMessage :
- Hex-Values may be entered using 'C'-Style now (e.g. 0xff)
-* changed on Thursday, 14.10.93 00:34:55 by Kai Iske. LogMessage :
- One can use the faktorian '!' behind numbers now, too.
(Suggested by : Top on IRC)
-* changed on Thursday, 14.10.93 00:28:52 by Kai Iske. LogMessage :
- One could accidentally change the ordering of the
functions and input-gadgets groups by using
'No Functions' and 'No Input' (reported by: Top on IRC)
-* created on Tuesday, 12.10.93 01:50:26 by Kai Iske. LogMessage :
- Order of Input and Ouput gadgets (String + ListView) may be
set now, ie. the input string may show up underneith the
ListView and vice versa (Requested by Dirk Federlein)

Revision V1.0

created on Saturday, 02.10.93 02:12:50 by Kai Iske. LogMessage :
--- Initial release ---