

# C4 Me Personal Calculator

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for the Palm OS™



## Notice

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**Dmitri Vokhmine**  
**Box 7360,**  
**Perm,**  
**Russia, 614083**

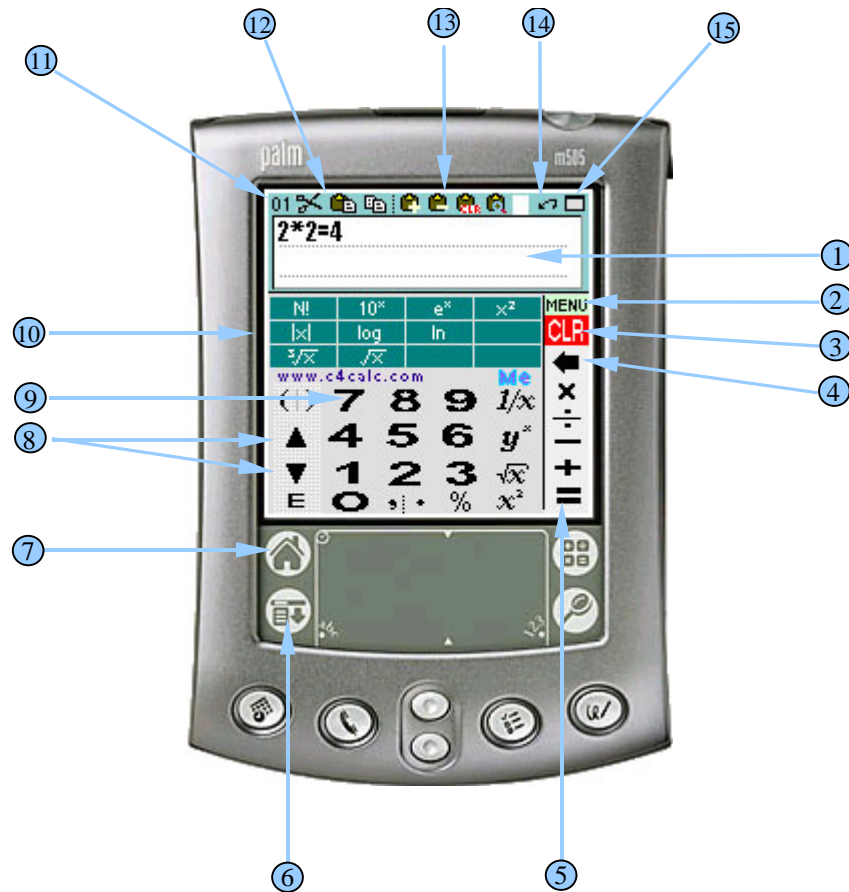
**E-mail: [c4@perm.raid.ru](mailto:c4@perm.raid.ru)**

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- |                          |                                   |
|--------------------------|-----------------------------------|
| 1. Edit Field            | 9. Number pad                     |
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| 3. Clear Edit Field.     | 11. Edit Field number             |
| 4. Backspace             | 12. Clipboard standard operations |
| 5. Arithmetic operations | 13. Clipboard extended operations |
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| 7. Application exit      | 15. Maximized Edit Field and log  |
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## Welcome to C4 Me.

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C4Me is a new generation calculator for Palm® Computing platform with the following features.

- Multi-line edit field with standard text editor convenience.
- With the multiple edit fields you can work with several problems simultaneously.
- Calculation Log let you choose previous problems and helps organize your calculations.
- Undo button provides easier editing process.
- Extended clipboard operations let you transform the standard clipboard to a convenient calculator's register.
- Category menu and Function pad let you use any of the Built-in functions almost instantly.
- Variables worksheet allows viewing, editing and saving your task variables.
- Internal reference helps view information about any function.

## Getting Started

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### System Requirements

- Palm OS™ 3.1 and later; go to “Version” form in the application launcher (Menu button (next to Graffiti area)→App→Info... tap “Version” button. Palm OS version appears at the top of the screen)
- 170Kb (we recommend 175Kb) memory (Menu button (next to Graffiti area)→App→Info... tap “Size” button. Free memory value appears at the top of the screen)

### Installing C4Me

Note: To install the application, the Palm Install Tool must be installed on your PC (Palm Install Tool is a part of Palm™ Desktop Organizer Software with your Palm connected organizer). We also recommend reading your Palm connected organizer manual.

1. Make sure that you have enough memory on your Palm to install C4Me (see System Requirements).
2. Unzip C4Me.zip file.
3. Double-click on C4Me.prc file.
4. Double-click on MathLib.prc file (if you do not have it on your Palm).
5. Tap “Done” or “Exit” button, to close Palm Install Tool window.
6. Perform a HotSync (HotSync Manager must be running).

**Installation complete.**



- for black and white devices.



- for color devices.

Click the application icon to run it.


### Uninstalling C4Me.

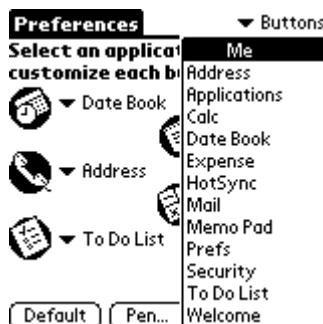
1. Go to “Delete” form in the application launcher (on your Palm). (Menu button (next to Graffiti area)→App→Delete...)
2. In the list choose “C4 Me” and tap “Delete...” button
3. Confirm deleting. Tap “Yes”.
4. Tap “Done” to complete deleting and return to the application launcher.

**C4Me application is uninstalled.**

### Set C4Me as the default calculator on your Palm.

1. Go to the system applications folder. Choose “System” pop-up menu item in the application launcher (upper right corner)
2. Tap “Prefs” to start “Preferences” application.

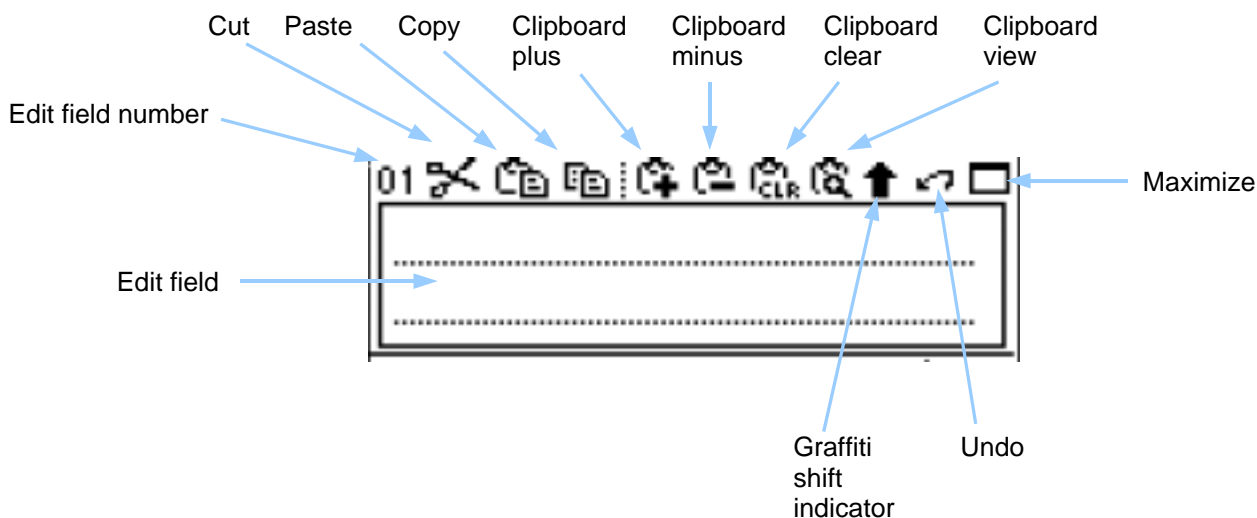
3. In the Preferences application choose “Buttons” worksheet.
4. Choose “ Me” from the pop-up list next to the calculator icon. 



In order to set the default Palm OS calculator back choose “Calc” from the pop-up list.

### **Edit field.**

The edit field is the main part of the application where you can enter data and see the result. Each symbol shown here has a special meaning.



Edit field is an area where you see numbers or letters you enter and the result of your calculations.

Edit field number shows current active edit field.

Copy, Paste and Cut are standard clipboard operations.

Clipboard plus and minus let you add or subtract selected area to the clipboard.

Clipboard clear is a button to clear the clipboard.

Clipboard view shows the clipboard content window.

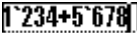


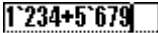

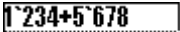


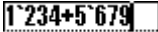
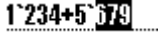

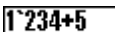

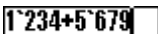













Undo removes your last action.

Maximize button switches regular edit field mode to full screen edit mode. A log with the previous calculations becomes available.


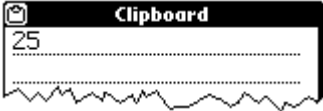







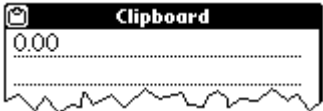



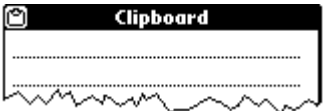

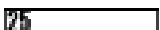
## Editing.

Editing in C4Me is simple and quite similar to editing in a regular text editor for the Palm OS™ platform.

The following are standard editing examples.

Keys/Actions:	Display:	Description:
1234+5678		Enter data
		Backspace.
9		Enter a number
		Undo
		Undo
+5679		Enter data
Move pen		Select
		Cut selected text to the clipboard
		Paste text from the clipboard
Move pen		Select 679 numbers
		Copy selected text
Tap the end of line		Move cursor
		Paste text from the clipboard
		Clear text
25		Enter data
		Clipboard addition (Notice:  →  )


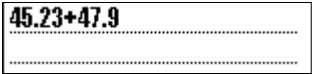
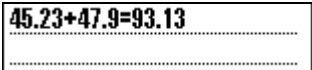


Keys/Actions:	Display:	Description:
		Look up clipboard content
		Close clipboard window (  )
		Clipboard subtraction (  )
		Look up clipboard content
		Clear clipboard
		Look up clipboard content. It is empty.
		Return back to the edit field.

## Calculations.

Below you can find a brief introduction to C4Me arithmetic. Calculations in C4Me resemble handwriting on a sheet of paper. Imagine that a magic sheet of paper understands your math writing and automatically solves it. That is the way C4Me works.

In order to calculate  $45.23 + 47.9$ :

Keys/Actions:	Display:	Description:
 $45.23 + 47.9$		
=		End of the calculation.

In order to perform an action with the just obtained result, you can continue entering data. In this case the left part of the previous calculation will disappear.

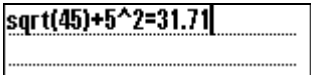
Keys/Actions:	Display:	Description:
+123	93.13+123	
=	93.13+123=216.13	End of the calculation.

Another examples:  $\sqrt{45} + 5^2$

Keys/Actions:	Display:	Description:
<b>CLR</b> 4 5	45	
$\sqrt{x}$	6.70820393249937	Square root of 45
+ 5	6.70820393249937+5	
$x^2$	6.70820393249937+25.00	Square of 5
=	6.70820393249937+25.00=31.71	End of the calculation.

Calculate  $\sqrt{45} + 5^2$  using another technique, by using Function Pad.

Keys/Actions:	Display:	Description:
MENU	Math Variables Trigonometry	Choose 'Math' category if necessary.
<b>CLR</b> $\sqrt{x}$	sqrt(	Tap square root button
45 ) + 5 $x^2$	sqrt(45)+5^2	

Keys/Actions:	Display:	Description:
=		End of the calculation.

### The percent key.

The % key has two functions: finding a percentage and adding or subtracting a percentage.

**Finding a Percentage.** In this case you use a '×' sign prior to the number; % divides a number by 100.


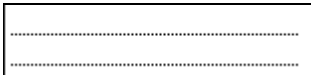
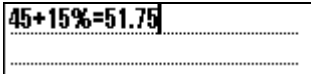
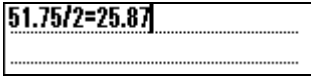
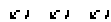
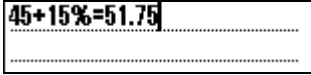
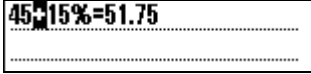

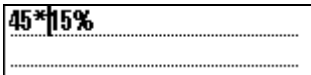
For example:

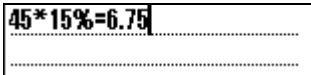
$$10 \% = 0.1$$

$$200 \times 10 \% = 20$$

**Adding or subtracting a percentage.** In this case you use plus or minus signs prior to the number. For example, to increase 200 by 10%, just enter  $200 + 10\% =$ . (Result is 220)

Tips calculations. Imagine you and your friend after dinner in a restaurant having gotten a bill of \$45. All your expenses are equal. You have decided to pay 15% tip. How much should each of you pay? What is the clear tip amount?

Keys/Actions:	Display:	Description:
		Lets clear the edit field.
$45 + 15 \% =$		You and your friend have to pay \$51.75 .
$\div 2 =$		Each of you have to pay \$25.87
		Undo the 3 last actions.
Select '+' (between 45 and 15%)		
		Change '+' to '*'

Keys/Actions:	Display:	Description:
=		The clear 15% tip amount for \$45 is \$6.75

### ***Apostrophe as thousand separator. Why?***


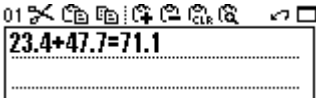

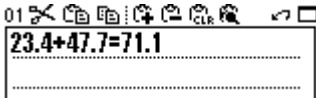

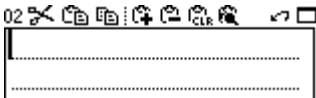

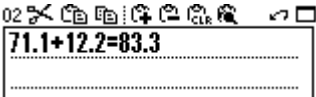

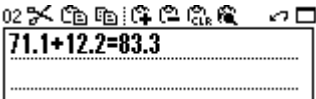

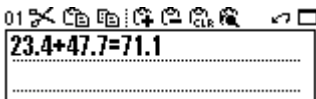
Why does C4Me use the apostrophe as a thousands separator? (1'000'000 vs. 1,000,000?)

Because C4Me allows entering functions in the edit field and these functions can have more than one argument.

### ***Multiple edit field.***

C4Me maintains a multiple edit field scheme. It is as if you had a few calculators in your hands and were able to exchange data among them. For example, you can do some calculations on the first calculator then switch to the second calculator, make other necessary calculations then switch back to the first calculator and use the result from the second calculator. Now imagine 3 calculators.

Below you can find an example of how to use two edit fields simultaneously.

Keys/Actions:	Display:	Description:
 23.4+47.7=		Do the first calculation.
		Put result (71.1) to the clipboard. Notice an edit field number at the upper left corner.
		Go to next edit field. Look at the edit field number: it is "02" now.
 +12.2=		Do the second calculation.
		Put the second result in the clipboard.
		Go back to the previous calculations in the first edit field.

Keys/Actions:	Display:	Description:
+  =		End of the calculation.
or  , Options → Clear Unused Edit fields		If you wish you could switch to some other edit field to do calculations and keep the data in this indicator as long as you want.
Tap 'Yes'.		You decided that you do not need all of the calculations except the currently active one and would like to clear memory.
		Confirm the deletion.

## Category Menu and Function pad.

C4Me has two menus: category menu ( MENU) and application menu ( or ).

By using the application menu you get access to editing functions (copy, cut and so on) and special functions (preferences, functions reference and so on).

By using the category menu you get access to different function categories. For example: math or trigonometry functions.

Let's take a look at this menu. Tap MENU button.

Function categories Worksheets.







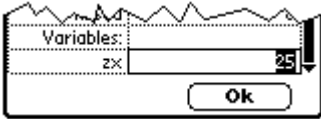
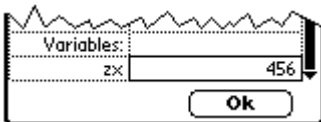
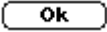
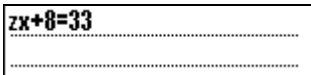
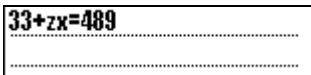
Choosing one of the function categories directly affects the Function pad appearance. One of the items in the list (Variables) does not affect the Function pad, but will call corresponding forms (worksheets).

Here is the function pad example for the Math category.

N!	10 <sup>x</sup>	e <sup>x</sup>	x <sup>2</sup>
x	log	ln	
$\sqrt[3]{x}$	$\sqrt{x}$		

## Variables.

C4Me lets you use variables.

Keys/Actions:	Display:	Description:
 zx=25		Enter variable "zx" and its value
=		Variable is entered and ready to use. Field is ready to start new calculation.
zx+8=		Use stored variable.
MENU		
Tap "Variables" line and scroll the list down.		Look at "zx" variable.
Tap the '25' number		
456		Enter new number.
		Go to the main screen.
+zx=		Use new value of 'zx' variable.

## Clipboard.

In C4Me you can use the clipboard not just to copy and paste as a regular clipboard does, but also to do calculations inside it.

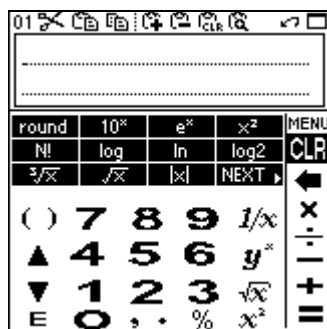
In order to perform a calculation inside the clipboard, select and copy an expression to the Palm clipboard from any worksheet or form, or from another application. Go to C4Me Clipboard window by tapping '📄'.



You can see, but not edit, your expression inside. Tap  to calculate it and substitute its number equivalent. Tap Ok to close the clipboard and use this number in your next computation.

## Maximized edit field and log.

C4Me lets you edit long math expressions up to 255 symbols. In order to do that you can switch to the maximized edit field. Functionality of this field is absolutely the same as the edit field on the main screen, except for the function and numerical pad. You should use the Graffiti® area or the on-screen keyboard.



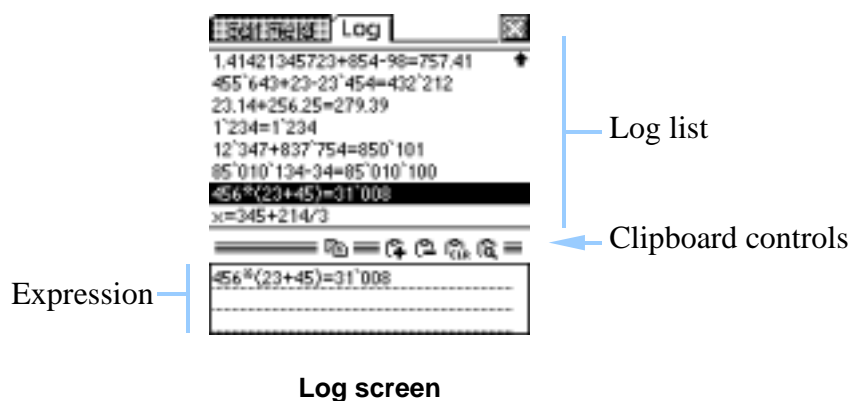
Regular screen



Maximized screen

You can go from the regular edit field to the maximized edit field by tapping '☐', to go back tap '☒' (close maximized edit field).

As you see the maximized edit field has two tabs "Edit field" and "Log". You can easily switch from the edit field to the log screen. Please notice, the maximized edit field and log screen are extended options for the regular edit field screen and when you press '☒' you always go back to the main screen and the chosen bookmark will be remembered. Next time, by tapping '☐' you will get to the screen you left (either maximized edit field or log).



The Log screen is a very powerful instrument to look up at the calculations you have done. It keeps up to 30 solved lines (lines that contain the '=' symbol). You can choose any of the previous calculations by using the log list. Select any part of an expression (or the whole expression) and copy the selected part to the clipboard. Notice, there is no paste or cut buttons. This field is editable, but not savable.

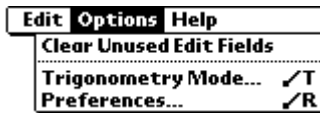
Double tapping on any item in the Log list copies it into the currently active edit field.



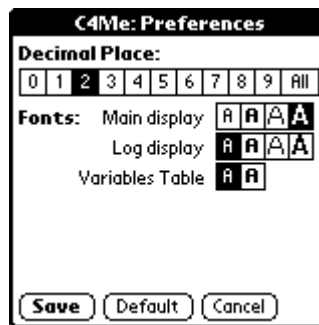
## Preferences.

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Access to the preference panel is available via application menu “Options → Preferences...” or via shortcut “✓ R”.



Notice the preference panel has more than one page. You can go through them by using ‘◆’ keys.



Tap “Save” to save preferences and close the window or “Cancel” to leave them unchanged.

Tap “Default” to set all preferences in a default condition; in this case “Preferences” panel will not be closed.

### The first page.

“**Decimal Place**” allows you to format numbers. To change the number of displayed decimal places, choose one of the numbers (0-9). The ‘All’ option gives you an opportunity see a number as precisely as possible (up to 14 numbers).

“**Fonts**” allows you to choose fonts for some worksheets and tables. Play with these font settings and find the most convenient configuration.

## Math.

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No complex numbers and lists are supported.  
Choose 'Math' from the category menu.

$N!$	$10^x$	$e^x$	$x^2$
$ x $	$\log$	$\ln$	
$\sqrt[3]{x}$	$\sqrt{x}$		

Functions you can use:

**+**, **-**, **×**, **÷**

Addition, subtraction, multiplication and division with real numbers.  
Use '-' (minus) before a number to make it negative.

**-2+3=1.00**

**$y^x$** ,  **$x^2$** ,  **$\sqrt[3]{x}$** ,  **$\sqrt{x}$** , **sqrt(x)**,  **$\sqrt[3]{x}$** , **cbrt(x)**.

Power, square, square root and cube root with real numbers.

**1/x**, **recip(x)**

Inverse or reciprocal function with real numbers.

**recip(5)=0.20**

**$10^x$** , **log**, **log(x)**, **ln**, **ln(x)**,

Power of 10, base 10 logarithm (log), natural logarithm (ln) with real numbers.

**$e^x$** , **exp(x)**

Exponential function of x,  $e^x$ .

**exp(2+3)=148.41**

**|x|**, **abs(x)**

Absolute value of x.

**N!**, **x!**



Factorial of x. You can use factorial with positive real numbers.

## Trigonometry.

---

Choose 'Trigonometry' in category menu.

sin	cos	tan	
asin	acos	atan	

C4Me gives you the ability to work with basic trigonometric and hyperbolic functions. You can use them in expressions, equations and formulas. Before using these functions set "Trigonometry Mode" in the application menu ( or  → Options → Trigonometry Mode...) to either "Radians" or "Degrees".

Trigonometric functions.

**sin**, sin(x)      sine.  
sin(45)=0.70711

**cos**, cos(x)      cosine.  
cos(0)=1

**tan**, tan(x)      tangent.  
tan(20)=0.36397

**asin**, asin(x)      arcsine.  
asin(0.3)=17.4576

**acos**, acos(x)      arccosine.  
acos(0.25)=75.52249

**atan**, atan(x)      arctangent.  
atan(0.1)=5.71059

## Contacting C4Me developers

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- **Web:** [www.c4calc.com](http://www.c4calc.com)
- **Email:** [c4@perm.raid.ru](mailto:c4@perm.raid.ru)
- **Mail:** Box 7360, Perm, Russia 614083.

## Credits.

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**Dmitri Vokhmine** - project manager, interface, financial calculations.

**Evgueni Kholzakov** – calculator's engine, equation solver, math functions.

## Special thanks.

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**Macdonald R. Phillips**

**Gary Kinsman**

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