

# **User Mode Component**

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## Abstract

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A “user mode”, as 4D developers may be familiar with, is often useful to correct or modify records without the being held to the same application or business restrictions that an end-user faces. This tech note describes a component which allows adding such a user mode to databases.

## Introduction

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Similar to the User Mode of older versions' of 4D, the component allows creating, modifying or deleting records for all tables with functions to sort, order, import, export or use the report editor. This functionality can be provided even in built applications. Furthermore, it is possible to limit access; for example, allow the admin so see everything, but only able to modify some tables, while the designer has full access.

## Component in action

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With default settings, the component displays a list box for the first table with the first 50 fields. A popup in the toolbar allows changing the displayed table. A long click in a field switches to edit mode. The Delete, Order, Query, Show All/Show Selection and Report buttons are fully functional. The arrow beside the Report button allows opening the Export and Import dialog. Execute opens the formula editor, even allowing the use of methods specified by **SET ALLOWED METHODS**.

While most features are enabled by default, the New button is disabled as the component does not know which form to use (except if a form named "UserMode" exists, which is used by default as an input form).

ID_Customer	Company	Address	Zip	City	Country
1	ULYSSES JOHANSING	7932 3rd Avenue	97044	ODELL	OR
2	ALICIA REID	7295 13th Avenue	12160	SLOANSVILLE	NY
3	RUSSELL FOSSON	125 33th Avenue	76179	FORT WORTH	TX
4	SHILOH PETTIJOHN	1026 48th Avenue	00955	SAN JUAN	PR
5	BELKIS PYWELL	4899 2nd Avenue	56058	LE SUEUR	MN
6	CHRISTA ARCHBOLD	1119 38th Avenue	90044	LOS ANGELES	CA
7	LORRETTA PELUSE	7424 37th Avenue	31208	MACON	GA
8	EMILIO MORREAU	8496 12th Avenue	39736	ARTESIA	MS
9	MARGIE SMOOTS	4828 6th Avenue	33158	MIAMI	FL
10	LIDA SCALESE	1566 7th Avenue	07962	MORRISTOWN	NJ
11	LILA HAUSKINS	982 25th Avenue	77555	GALVESTON	TX
12	PROVIDENCIA GARET	8116 28th Avenue	20532	WASHINGTON	DC
13	ANDREW KRAUSS	3210 25th Avenue	63853	HOLLAND	MO
14	ROSE OFFERMANN	5844 12th Avenue	14867	NEWFIELD	NY
15	HERB CUADROS	4043 48th Avenue	65348	OTTERVILLE	MO
16	VERDELL DETAEYE	6160 5th Avenue	51449	LAKE CITY	IA
17	CHANEL LITZENBERG	2640 20th Avenue	23939	EVERGREEN	VA
18	DANUTA VETRI	4362 47th Avenue	15927	COLVER	PA
19	ELIZ MIGHTY	2311 12th Avenue	19507	BETHEL	PA
20	DEMETRA AILTS	1059 3rd Avenue	52752	GRANDVIEW	IA
21	BEE ZAISER	3968 39th Avenue	99558	ANVIK	AK
22	DELL WEATHERLY	6449 11th Avenue	37388	TULLAHOMA	TN
23	KEREN HERSHFELD	3999 41th Avenue	98370	POULSBOROUGH	WA
24	BUDDY SHOOPMAN	2293 23th Avenue	77340	HUNTSVILLE	TX

## Using the component

Install the component simply by dragging the component into the component folder of your structure. For details see the 4D Design Manual.

Do a quick test and execute the method "UserMode\_Show". You should see a form similar to the one printed above displaying records from a table in your database.

To allow using the component in a compiled application, add a button or a menu, available only for the administrator or designer, which calls the method UserMode\_Show and adjust settings if needed.

## Component methods

The component publishes 3 methods that may be called with optional parameters.

## UserMode\_Show

This is the main call. It opens a window and provides the functionality described above.

Parameter	Description
Table	Longint Table ID - Optional

If the method is called without a parameter, the first non-deleted table is displayed. The optional parameter allows starting with a different table.

## UserMode\_Access

The method allows control over access to the features.

Parameter	Description
Feature	Text: Show, Modify, New, Delete, Report, Import, Export, Execute
Enable	Ptr to Boolean Array, 1 element per Table, Yes/No

Depending on the user access rights, you may want to limit which features are available. Calling UserMode\_Access before opening the window with UserMode\_Show allows the disabling of buttons or functions.

The parameter, Feature, is a text constant defining which feature to control:

- **Show** Show or hide tables
- **Modify** Allows modifying records by long click in the list or per double click in a form if one was specified
- **New** Allows use of the New button; also requires specifying a form
- **Delete** Allows deletion of the selected records
- **Report** Allows opening the report editor, for printing and exporting records
- **Import** Allows opening the import editor
- **Export** Allows opening the export editor
- **Execute** Allows executing a formula on the current selection

The parameter, Enable, is a pointer to a boolean array, with a size fitting to the number of existing tables (as returned by **Get last table number**). Pass true for an element to enable the feature for this table ID, or false to disable it.

By default all features for all tables are enabled.

## UserMode\_Forms

The method defines input forms, to be used by double clicking or by using the New button. As this mode is designed to be a maintenance/test mode, it does not make much sense to use the normal forms which also handle business logic, as they may disallow the modification of some fields or automatically calculate their values.

For maintenance purposes, it is usually best to create a special form without any automatic action, except perhaps requiring some mandatory fields such as sequence numbers or time stamps. But even they should be modifiable. If a form named "UserMode" exists for the currently displayed table, it is automatically used for this purpose. This command allows you to specify other forms.

Parameter	Description
Form names	Ptr to Text Array, 1 element per Table, Form name

Pass a pointer to a text array, with a size fitting to the number of existing tables (as returned by Get last table number). Empty elements block the double click/new mode. Pass a form name to enable it.

## Conclusion

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This technical note described a simple to use component to include a "user mode" for maintenance and testing into your application. This user mode allows you to have access to your data without facing the business restrictions that users may be held to.