

# The IDE's Object Editor and Class Grid

### David Margolies (dm@franz.com)

Questions and comments to support@franz.com



### Topics

- What are the Object Editor and the Class Grid?
- When are they useful?
- How to create them?
- How to customize them?
- Tools like the class interface editor.

#### The examples come from

www.franz.com/support/documentation/currrent/doc/cg/cg-object-editor-andclass-grid.htm

The code is in

<allegro-directory >/examples/cg/object-editors-and-class-grids.cl



## The object-editor and class-grid display class instances and slot values

- Created originally as an interface to AllegroCache databases (<u>www.franz.com/products/allegrocache/</u>) but can be used with any class
- We use the example of a set of medical patients



### Here is the class-grid

## We see slot names across the top and each row is an instance:

	First Name	Family Name	Access	Birth Date	Unpaid Balance	Friendly?	Fave Color		Best Frien
1	Sarah	Somebody		1963/01/15	34.89	<b>.</b>	Blue	-	Anybody, Andy
2	Andy	Anybody	P	1971/03/02	. 09		Yellow	-	Loom, Alice
3	Alice	Loom	P	1967/05/17	729.95		Blue	-	Nurble, Helen
4	Helen	Nurble		1959/04/29	8844.22	V	Red	-	Nurby, Bill
5	Bill	Nurby		1948/04/29	42000.03	<b>.</b>	Red	-	Piggledy, Higgled
6	Higgledy	Piggledy	q	1968/06/12	123.45		Blue	-	Noof, Oof
7	Oof	Noof	P	1958/02/15	3600.00		Red	-	Somebody, Saral



### Here is the object-editor

# We have the same slots as in the class-grid plus a prescriptions slot:

💧 Test	st							
<u>Eirst</u> <u>Previous</u> <u>Next</u> <u>Last</u> <u>Select</u> <u>Search</u>								
F <u>i</u> rst N	ame Andy			Fave	C <u>o</u> lor	Yellow	•	
	F <u>a</u> mily Name Anybody A <u>c</u> cess 🌪			St <u>a</u> tic	Note	This description of Andy is s long that it may cause a		
				Best Friend Loom, Alice			-	
<u>B</u> irth I	Date 1971/03/0	2		Friend's	Bday	1967/05/17		
Unpaid Bala	ance 0.0	9						
	Friendly?							
Prescription	IS							
	Medication		Num Refills	Drug Price		Drug Warnings	Π.	Create
1	Dynamicine	-	0	299.00	May ir	May increase free time to kill.		Delete
2	Objectifin	-	Ø	29.95	Sometimes leads to modularity.			
3	Franzeril	-	0	1.95	May give Bill Gates a headache.			
4	Lispitol	-	1	23.89	Associated with computer addictio		n	
	<u>र</u>							
Sa <u>v</u> e	Revert		Ne <u>w</u>	Delete	C	o <u>m</u> mit <u>R</u> ollback		
								1.

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### Both tools display instances of a class

- A selected subset of the slots are displayed
- The class-grid is simple and quick, but does not easily display complex slot values (such as class instances which themselves have multiple slots)
- The object-editor, by using widgets to display slot values, is more complicated and powerful
- Both tools can serve as user interfaces to data



### **The Class Interface Editor**

- The Class Interface Editor is a dialog you can use when designing a form
- It works either with a Class Grid on a form or with an object-editor form
- It facilitates selecting the slots of interest and deciding how they will be displayed on the dialog associated with the form



## The Class Interface Editor works on forms in projects

- The project system is the IDE's application builder
- Windows and dialogs in projects are designed using forms
- The Class Interface Editor assists when designing a form
- If you do not use the project system, you must create class-grids and object-editors programmatically, mimicking example code



## **The Class Interface Editor**

date-of-birth favorite-color first-name friendly Past-name prescriptions static-note unpaid-balance	de Label Type ype <u>N</u> ame Variable Char ▼ xed-Width Font ■ New Col <u>u</u> mn
prescriptions static-note unpaid-balance	<u>x</u> ed-Width Font
Prima	Buttons
	Atient & Secondary Name Slots me Last
Move All Included Slots to the Top	me Select Search Save



### **Edited-slots property**

A key property when creating either tool is the edited-slots property. It specifies which slots to display and how they should be displayed:

```
:edited-slots
'((date-of-birth
   :edited-type (:date :yyyy/mm/dd)
   :label "Birth Date")
(favorite-color
   :edited-type (:single-choice (:red :green :blue :yellow)))
   :on-print capitalize-object
   :label "Fave Color")
(best-friend
   :edited-type (:class-instance patient)
   :width 140)
;;....
)
```



### When are these tools useful?

These tools provide dialogs which display information about class instances.

- They are suitable for providing an interface to a set of data.
- They have a standard model for display and so can be created quickly and easily.
- You can control content and appearance and also editability, so good for user information and user input.



How to create class-grids and objecteditors

# Mimic the code in the examples Use the Class Interface Editor dialog



### **Dialog customization options**

- A class-grid is a grid-widget so grid-widget options work for it (except column-sections and row-sections are computed and should not be modified)
- Standard dialog properties work for both the object-editor and the class-grid



### Some special class-grid properties

These special properties allow you to control certain row and column properties:

- row-header-font
- column-header-font
- body-row-height
- default-column-width
- row-header-width
- column-header-height
- row-header-justification
- row-header-value-type
- rows-are-movable
- rows-are-resizable
- rows-are-selectable



### **Displaying the Class Interface Editor**

# Create an *object-editor* dialog form or a regular *dialog* form on which you put a class-grid (File | New Form):

🚯 New Form	×
Window <u>N</u> ame (a symbol)	
:form5	
Window <u>C</u> lass	New Window Subclass
bitmap-window dialog frame-window lisp-edit-window non-refreshing-window <b>object-editor</b> rich-edit-dialog text-edit-window	Optionally enter the name for a new subclass of the class that is selected to the left, rather than using that class directly. This allows adding methods that are specific to the new class.
	New <u>B</u> ubclass Name (a symbol)
<u>O</u> K Cancel	



## **Displaying the Class Interface Editor 2**

# For an object-editor, you are asked for a class to edit (choose patient for our example):

A rear	
No Form5	
	Application Class to Edit
	Application Class to Edit
	medication
	patient
	prescription
	prescription
	test person
	test-person
	Other Class
	OK Consel
	OK Cancel
· · · · · · · · · · · · · · · · · · ·	<del> </del>



### **Displaying the Class Interface Editor 3**

## Then choose Edit Class Interface from the right button menu:

Selective Undo Edit Code File Edit Class Interface Update Layout Redo Layout Paste Control Run Project Run Form
Update Layout Redo Layout Paste Control Run Project
Run Project
Add Component Add Menu Bar Remove Menu Bar
Set Tab Order Space Equally Show Alignment



## **The Class Interface Editor**

🚯 Class Interface Editor - patient		×
Slots Up Down	Widget	
access best-friend date-of-birth favorite-color first-name friendly Plast-name prescriptions static-note unpaid-balance	□ Include     Label       □ Data Type	
	Class patient Pri <u>m</u> ary & Secondary Name Slots	New Column Buttons First Previous
Move All Included Slots to the Top	Iast-name	Next Last Select Search Save Revert New
<u>O</u> K <u>C</u> ancel	☐ <u>R</u> edo Entire Widget Layout	Delete Commit



## The object-editor again

<b>K Test</b> <u>F</u> irst				it S	S <u>e</u> lect <u>S</u> earch		Not what
F <u>i</u> rst N	F <u>i</u> rst Name Andy F <u>a</u> mily Name Anybody			Fave	Color Yellow	•	editor on
F <u>a</u> mily N				St <u>a</u> tic	Note This description of Andy is so		previous slide
Ac	A <u>c</u> cess @			long that it may cause a		would	
<u>B</u> irth I	Date 1971/03/02	2			riend Loom, Alice	•	create, but
	Unpaid Balance 0.09 Friendly? Prescriptions			Filends	Bday <b>1967/05/17</b>		showing choices (buttons etc.)
	Medication		Num Refills	Drug Price	Drug Warnings	Create	010.)
1	Dynamicine	-	Ø	299.00	May increase free time to kill.	Delete	
2	Objectifin	•	G	29.95	Sometimes leads to modularity.		
3	Franzeril	•	Ø	1.95	May give Bill Gates a headache.		
4	Lispitol	-	1	23.89	Associated with computer addiction		
	<b>T</b>						
Save	Revert		Ne <u>w</u>	<u>D</u> elete	Commit Rollback		
						//	



### You choose which slots to include

- You select a slot from the list of the left (access is selected)
- You click on the **Include** check box
- You add information about what is displayed and how for that slot



### For a class-grid:

- You create a dialog form
- You add a class grid from the widget palette
- You specify the class to display
- Right click over the class grid to display the object editor



### The Class Interface Editor for the classgrid has fewer options

👫 Class Interface Editor - patient	×
Stots       Up       Down         date-of-birth       first-name         first-name       static-note         uppaid-balance       access         best-friend       favorite-color         friendly       prescriptions	Widget         Image: Include       Label         Data Type         Type Name         Variable Char         Image: Ima
	14



### **Class-grid again**

# Again, just to show what the choices are, not what previous slide would produce:

	First Name	Family Name	Access	Birth Date	Unpaid Balance	Friendly?	Fave Color		Best Frier
1	Sarah	Somebody		1963/01/15	34.89	~	Blue	-	Anybody, Andy
2	Andy	Anybody	P	1971/03/02	. 09		Yellow	-	Loom, Alice
3	Alice	Loom	P	1967/05/17	729.95		Blue	-	Nurble, Helen
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7	Oof	Noof	P	1958/02/15	3600.00		Red	-	Somebody, Sara



### **Documentation**

- www.franz.com/support/documentation/current/doc/cg/cg-object-editorand-class-grid.htm
- Pages for class-grid and object-editor classes (www.franz.com/support/documentation/current/doc/classes/cg/class-grid.htm and www.franz.com/support/documentation/current/doc/classes/cg/object-editor.htm)
- Page for Class Interface Editor (www.franz.com/support/documentation/current/doc/ide-menusand-dialogs/class-interface-editor-dialog.htm)
- Pages for properties of the classes



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