

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:

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



Here is the object-editor

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

💧 Test								
<u>F</u> irst	Previous	Ne	t Las	st st	S <u>e</u> lect	Search		
F <u>i</u> rst N	ame Andy			Fave	C <u>o</u> lor	Yellow	-	
F <u>a</u> mily N Act	ame Anybody			Static Note This description of Andy is so long that it may cause a			· ▲	
-	Ľ	Best Friend Loom, Alice			-			
<u>B</u> irth	Date 1971/03/0	Friend's Bday 1967/05/17						
Unpaid Balance 0.09								
	Friendly?							
Prescription	15							
	Medication		Num Refills	Drug Price		Drug Warnings		Create
1	Dynamicine 🔻		0	299.00	May increase free time to kill.			Delete
2	2 Objectifin <		Ø	29.95	Some	etimes leads to modularity.		
3	Franzeril	-	0	1.95	May give Bill Gates a headache.			
4	Lispitol	-	1	23.89	Associated with computer addiction			
	र							
Sa <u>v</u> e	Revert		Ne <u>w</u>	Delete	C	o <u>m</u> mit <u>R</u> ollback		
								1.

5



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

Slots Up Down Widg access best-friend □ Ind date-of-birth favorite-color □ Ind first-name friendly □ Ind Prescriptions static-note □ Ind unpaid-balance □ Ind □ Ind Class Prima □ Ind Ind □ Ind □ Ind	de Label Type ype <u>N</u> ame Variable Char ▼ xed-Width Font ■ New Column
rescriptions static-note unpaid-balance	<u>x</u> ed-Width Font
Class Pri <u>m</u> a Iast-r	Buttons
	atient & Secondary Name Slots me Mext Last Control
Move All Included Slots to the Top	me Select Search



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 object-editor 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):

🚯 Form5		
	Application Class to Edit	¥
		<u> </u>
	et a transfer in the medication	
	patient	
	prescription	
	test same	
	test-person	
	Other Class	
	Ouler Glass	
	• • • • • • • • • • • • • • • • • • • •	
	· · · · · · · · · · · · · · · · · · ·	
	OK Cancel	
		



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 Bedo Layout	
Selective Undo Edit Code File Edit Class Interface Update Layout Bedo Layout	-
Edit Code File Edit Class Interface Update Layout Redo Layout	
Edit Class Interface Update Layout Redo Layout	
Edit Class Interface Update Layout Redo Layout	
Edit Class Interface Update Layout Redo Layout	
Update Layout Redo Layout	
Redo Layout	
Redo Lavout	
Itedo Edifode	
Desta Cantral	
Paste Control	
Run Project	
Run Form	
	- 12222
Add Component	
·····	
Add Menu Bar	11111
Kemove Meliu bar	
Set Tab Order	1111
Construction of the second sec	
Show Alignment	
Show Alighthere	



The Class Interface Editor

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



The object-editor again

K Test <u>F</u> irst	Previous	Ne	₫ Las	it	S <u>e</u> lect <u>S</u> earch	<u>-0×</u>	Not what
F <u>i</u> rst N	ame Andy			Fave	Color Yellow	•	editor on
F <u>a</u> mily Name Anybody				St <u>a</u> tic	Note This description of Andy is so		slide
Ac	cess 🧧				scrolling.static-text.widget.ths	<u></u>	would
Birth	Date 1971/03/02	2		<u>B</u> est F	riend Loom, Alice	<u>-</u>	create,
<u>U</u> npaid Bala Pres <u>c</u> riptior	ance 0.0 Frie <u>n</u> dly?	9		Filends	Buay 1 17017 037 11		showing choices (buttons,
	Medication Num		Num Refills	Drug Price	Drug Price Drug Warnings Create		
1	Dynamicine	-	0	299.00	May increase free time to kill.	Delete	
2	Objectifin	•	0	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 addiction		
	T						
Sa <u>v</u> e	Revert		Ne <u>w</u>	<u>D</u> elete	Commit Rollback		
						1	



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 unpaid-balance access best-friend favorite-color friendly prescriptions	Widget Include Label Data Type Type Name Variable Char Image: Type Name Image: Type Name Variable Char Image: Type Name Image: Type Name Variable Char Image: Type Name Image: Type Name
	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 Frien
1	Sarah	Somebody		1963/01/15	34.89	V	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	N	Red	-	Nurby, Bill
5	Bill	Nurby		1948/04/29	42000.03	.	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, Sarah



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



The IDE's Object Editor and Class Grid

David Margolies (dm@franz.com)

Questions and comments to support@franz.com