

Daskalos

Daskalos is a computer program, which is used for introductory courses on OOP and OODB. It is programmed like a separate parcel of the system VisualWorks/Smalltalk version 7.4, which is free for tuition and research purposes.

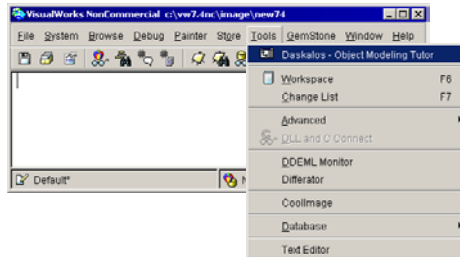


fig. 1. starting Daskalos from VisualWorks

In Daskalos it is possible to create classes, multiple objects with real data and to program methods. Daskalos can be used not only for teaching, but as a visual tool for the creation of data object classes for real applications.

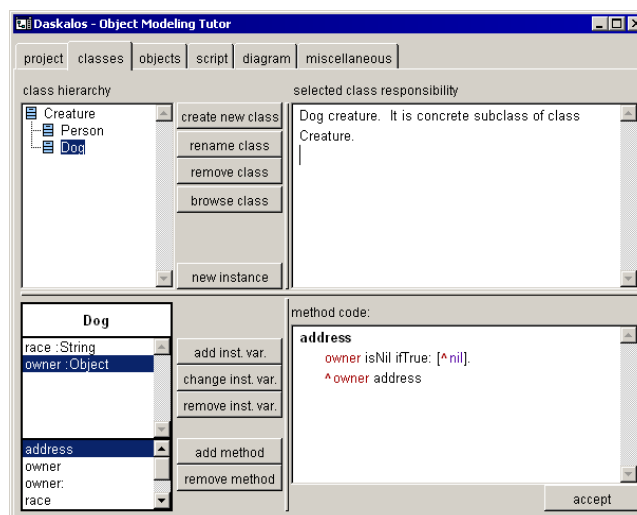


fig. 2. creation of classes and methods

Daskalos also allows the object testing. Objects and classes of objects are demonstrated according to standard UML which means that with the content of such a display we can work directly. It is possible to display objects in separate windows which means that we can send messages directly with a click to the displayed object or directly deal with attributes of objects with the method of drag and drop:

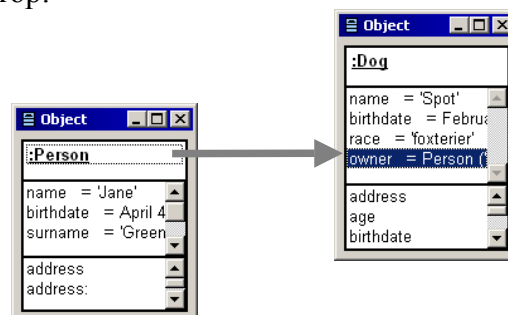


fig. 3. manipulation with objects

With more complicated applications with objects – for example setting queries for many of the objects – it is possible to use the working panel, in which we can evaluate expressions and work with their results:

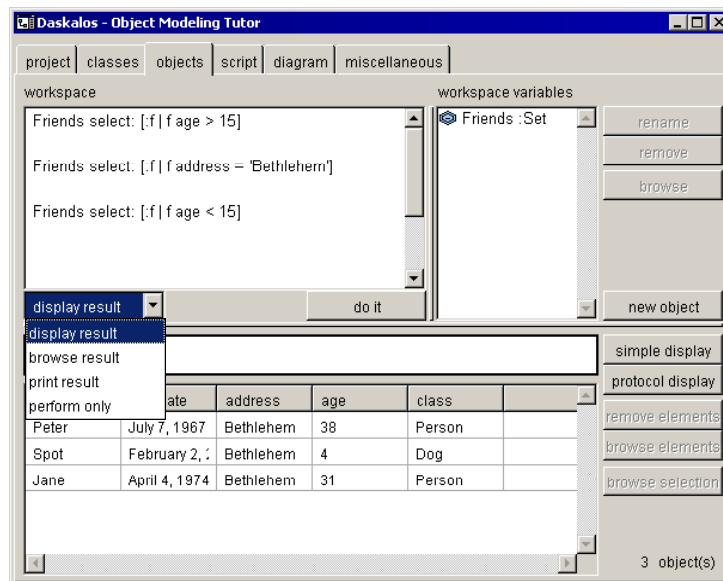
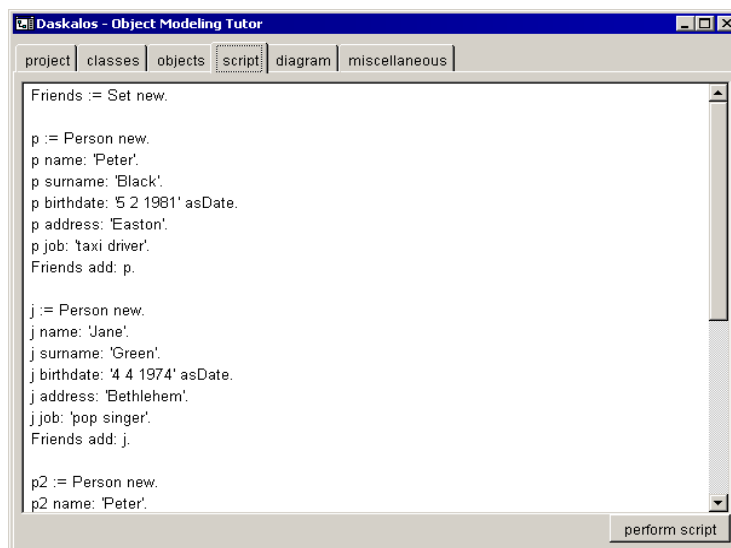


fig. 4. working panel

Objects which are necessary for testing can be used for generating not only in visual manner, but also from source code in more traditional way:



obr. 5. panel of source code

Classes and many of the objects, with which they are manipulated, are demonstrated in Daskalos with the form of class diagrams. The symbols of this diagram, their content and binding (linkage) between them are synchronized with actual content of the objects of the working panel. This means that the form of the diagram changes according to how it works with the objects in the working panel.

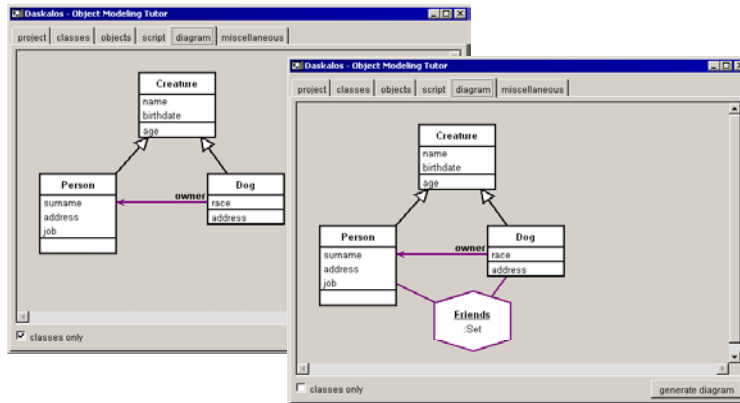


fig. 6. panel with diagram

Daskalos is mainly designed for the subject of OOP for beginners. For this reason the project is saved not only in the data file in XML format, but it is also generated by documentation of the included source code, data and also diagrams in HTML format.

fig. 7. dokumentation in HTML format demonstrated with web browser

This software has been used with good student feedback in academic year 2006/2007 IT courses at Czech Technical University in Prague (CTU), Faculty of Electrical Engineering, Dept. of Computer Science and Czech University of Agriculture in Prague (CUA), Faculty of Management, Dept. of Information Engineering.

Daskalos is used as the introductory tool in courses OODB (Gemstone) and OOP (Smalltalk), which have long tradition in the CZ. The author also uses this software for his invited lectures at Lehigh University, Bethlehem PA in the U.S. and University of Thessaly, Greece.

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URL: <http://paf.czu.cz/~merunka/projects/>

Version: opensource, freeware, realized as the Parcel of VW7.4NC

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