

Abstract: Proof toys Demonstration

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Abstract Proof toys is the product of a series of experiments with user experience in interactive theorem proving. Its goals are ease of learning and ease of use for persons who may be new to automated deduction or even to logic itself. Deduction in Proof toys is based on a small set of concepts familiar to students of elementary algebra, essentially replacement of terms by equal terms and substitution, as extended for simple type theory in the logic Q0. It adds automated matching to support rewriting and similar rules.

The system presents itself through a visual, Web-based "proof editor". Typically the user selects a step or term in a step and selects an action from a menu that operates on that step or term, taking advantage of the cognitive principle that recognition is easier than memorization. This demonstration will show the logical and user interface principles of Proof toys at work in some representative scenarios.